

# IN THE SUPREME COURT OF TEXAS

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No. 95-1159

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UNIROYAL GOODRICH TIRE COMPANY, PETITIONER

v.

ROBERTO O. MARTINEZ AND JUANITA MARTINEZ, INDIVIDUALLY AND AS NEXT  
FRIENDS OF ROBERT MARTINEZ, JR., AND JOHN MATHEW MARTINEZ, MINORS,  
RESPONDENTS

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ON APPLICATION FOR WRIT OF ERROR TO THE  
COURT OF APPEALS FOR THE FOURTH DISTRICT OF TEXAS

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Argued October 2, 1996

CHIEF JUSTICE PHILLIPS delivered the opinion of the Court, in which JUSTICE GONZALEZ, JUSTICE SPECTOR, JUSTICE ABBOTT and JUSTICE HANKINSON join.

JUSTICE HECHT filed a dissenting opinion, in which JUSTICE ENOCH and JUSTICE BAKER join, and in which JUSTICE OWEN joins in all but Part II.

Petitioner's motion for rehearing is overruled. We withdraw our opinion of July 3, 1998, and substitute the following opinion.

We must decide whether a manufacturer who knew of a safer alternative product design is liable in strict products liability for injuries caused by the use of its product that the user could have avoided by following the product's warnings. The court of appeals held that the mere fact that a product bears an adequate warning does not conclusively establish that the product is not defective.

928 S.W.2d 64. Because we agree, we affirm the judgment of the court of appeals.

Roberto Martinez, together with his wife and children, sued Uniroyal Goodrich Tire Company (“Goodrich”), The Budd Company, and Ford Motor Company for personal injuries Martinez suffered when he was struck by an exploding 16" Goodrich tire that he was mounting on a 16.5" rim. Attached to the tire was a prominent warning label containing yellow and red highlights and a pictograph of a worker being thrown into the air by an exploding tire. The label stated conspicuously:

## DANGER

NEVER MOUNT A 16" SIZE DIAMETER TIRE ON A 16.5" RIM. Mounting a 16" tire on a 16.5" rim can cause severe injury or death. While it is possible to pass a 16" diameter tire over the lip or flange of a 16.5" size diameter rim, it cannot position itself against the rim flange. If an attempt is made to seat the bead by inflating the tire, the tire bead will break with explosive force.

...

NEVER inflate a tire which is lying on the floor or other flat surface. Always use a tire mounting machine with a hold-down device or safety cage or bolt to vehicle axle.

NEVER inflate to seat beads without using an extension hose with gauge and clip-on chuck.

NEVER stand, lean or reach over the assembly during inflation.

...

Failure to comply with these safety precautions can cause the bead to break and the assembly to burst with sufficient force to cause serious injury or death.

Unfortunately, Martinez ignored every one of these warnings. While leaning over the assembly, he attempted to mount a 16" tire on a 16.5" rim without a tire mounting machine, a safety cage, or an extension hose. Martinez explained, however, that because he had removed a 16" tire from the 16.5" rim, he believed that he was mounting the new 16" tire on a 16" rim. Moreover, the evidence revealed that Martinez’s employer failed to make an operable tire-mounting machine available to

him at the time he was injured, and there was no evidence that the other safety devices mentioned in the warning were available.

In their suit, the Martinezes did not claim that the warnings were inadequate, but instead alleged that Goodrich, the manufacturer of the tire, Budd, the manufacturer of the rim, and Ford, the designer of the rim, were each negligent and strictly liable for designing and manufacturing a defective tire and rim. Budd and Ford settled with the Martinezes before trial, and the case proceeded solely against Goodrich.

At trial, the Martinezes claimed that the tire manufactured by Goodrich was defective because it failed to incorporate a safer alternative bead design that would have kept the tire from exploding. This defect, they asserted, was the producing cause of Martinez's injuries. Further, they alleged that Goodrich's failure to adopt this alternative bead design was negligence that proximately caused Martinez's injury.

The bead is the portion of the tire that holds the tire to the rim when inflated. A bead consists of rubber-encased steel wiring that encircles the tire a number of times. When the tire is placed inside the wheel rim and inflated, the bead is forced onto the bead-seating ledge of the rim and pressed against the lip of the rim, or the wheel flange. When the last portion of the bead is forced onto this ledge, the tire has "seated," and the air is properly sealed inside the tire. The bead holds the tire to the rim because the steel wire, unlike rubber, does not expand when the tire is inflating. The tire in this case was a 16" bias-ply light truck tire with a 0.037" gauge multi-strand weftless bead, or tape bead, manufactured in 1990. A tape bead consists of several strands of parallel unwoven steel wires circling the tire with each layer resting on top of the last, similar to tape wound on a roll. After a number of layers have been wound, the end of the bead is joined, or spliced, to the

beginning of the same bead to form a continuous loop.

The Martinezes' expert, Alan Milner, a metallurgical engineer, testified that a tape bead is prone to break when the spliced portion of the bead is the last portion of the bead to seat. This is commonly called a hang-up. Milner testified that an alternative bead design, a 0.050" gauge single strand programmed bead, would have prevented Martinez's injuries because its strength and uniformity make it more resistant to breaking during a hang-up. Milner explained that the 0.050" single strand programmed bead is stronger because it is 0.013" thicker and that it is uniform because it is wound, or programmed, by a computer, eliminating the spliced portion of the bead that can cause the tire to explode during a hang-up.

According to Milner, Firestone was the first to document that tape beads were prone to break during hang-ups in a 1955 patent application. This application, which was granted three years later, stated in part:

It has developed that in tires of the type now in common use that the grommet of wire used becomes ruptured or broken too frequently at or near the end of the wire splice when the tire bead is forced onto the rim bead seat during mounting of the tire. Applicant has discovered that such breaking of the bead wire occurs most frequently when the spliced portion of the bead wire grommet is located in the last portion of the tire bead to be seated on the rim, and they have noted that when an end of the said wire ribbon was disposed on the radial inner surface of the bead grommet that the break started at or adjacent to that point.

Milner testified that the design of the bead in the Goodrich tire in question was the same design criticized in the patent. Milner also testified, relying on an internal memorandum that was admitted into evidence, that in 1971 General Tire, one of Goodrich's competitors, knew its tape bead design was prone to break during hang-ups.

In 1966, 16.5" wheel rims were first introduced into the American market.<sup>1</sup> Milner testified that Uniroyal, Inc. and B.F. Goodrich Company, who in 1986 merged to form Goodrich, soon became aware that mismatching their 16" tires with the new wheel rims often caused hang-ups that resulted in broken beads. The minutes of a 1972 meeting of the Rubber Manufacturers Association ("RMA"), of which both Uniroyal, Inc. and B.F. Goodrich were members, provided:

Mounting of LT [light truck] tires. Attention was drawn to reports that there have been instances where 16" LT tires have been mounted on 16.5" rims and 14" tires on 14.5" rims. It was proposed and approved to request the Service Managers Committee to add a cautionary statement to RMA documents.

Similarly, the minutes from a 1972 meeting of the Tire and Rim Association, of which Uniroyal, Inc. and B.F. Goodrich were both members, provided:

It was reported that there have been incidents where 14" and 16" tires have been mounted on 14.5" and 16.5" rims that have resulted in broken beads. The Rim Subcommittee of the Technical Advisory Committee was requested to consider some method of marking 15" Drop Center rims and wheels to avoid this practice.

Finally, Milner testified that B.F. Goodrich's own testing department was aware by at least 1976 that a 16" tire mounted on a 16.5" rim would explode during a hang-up. A B.F. Goodrich "test request" of that year was entered into evidence indicating that a 16" tire would explode when mounted on a 16.5" rim at 73 psi (pounds of pressure per square inch). The test request further indicated that "inspection revealed break was at [illegible] ends of bottom layer of [bead] wires as anticipated." The stated "Object of Test" was: "To develop demonstrative evidence & data for use in lawsuits involving broken beads."

Milner explained that the computer technology required to manufacture the programmed bead

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<sup>1</sup> The rim involved in this case was manufactured in 1979. The Budd Company ceased manufacturing 16.5" rims in 1983.

was developed in 1972 and widely available by 1975. Milner testified that Goodyear began using a 0.051" gauge single strand programmed bead in its radial light truck tires in 1977, and that Yokohama began using a single strand programmed bead in its radial light truck tires in 1981. Milner also testified that General Tire began using a single strand programmed bead in its bias-ply light truck tires in 1982. Finally, Milner testified that Goodrich itself began using the single strand programmed bead in its 16" radial light truck tires in 1991.<sup>2</sup> Based upon this evidence and his expert opinion, Milner testified that the tire manufactured by Goodrich with a tape bead was defective and unreasonably dangerous. Because Goodrich had also been sued in thirty-four other lawsuits alleging accidents caused by mismatching Goodrich tires, Milner asserted that Goodrich was grossly negligent in failing to adopt the 0.050" single strand programmed bead in its bias-ply 16" light truck tires.

Milner also testified that the rim designed by Ford and manufactured by Budd was defective because its size was not clearly marked on it and because it could have been redesigned to prevent a 16" tire from passing over its flange.

The jury found that Goodrich's conduct was the sole proximate cause of Martinez's injuries and that Goodrich was grossly negligent. Furthermore, the jury found that the tire manufactured by Goodrich was defective, while the wheel rim designed by Ford and manufactured by Budd was not defective. The jury allocated 100% of the producing cause of Martinez's injuries to the acts and omissions of Goodrich.

The jury awarded the Martinezes \$5.5 million in actual damages and \$11.5 million in punitive damages. After reducing the award of actual damages by \$1.4 million pursuant to a

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<sup>2</sup> Goodrich has ceased manufacturing bias-ply light truck tires.

settlement agreement between the Martinezes, Ford, and Budd, reducing the punitive damages to the amount of actual damages pursuant to a pretrial agreement between Goodrich and the Martinezes, and awarding prejudgment interest, the trial court rendered judgment for the Martinezes for \$10,308,792.45.

The court of appeals affirmed the award of actual damages, holding that there was legally sufficient evidence to support the finding of a design defect based upon its examination of the following factors: (1) the availability of safer design alternatives; (2) similar accidents involving the same product; (3) subsequent changes or modifications in design; (4) out-of-court experiments indicating Goodrich's knowledge of a design defect; and (5) expert testimony claiming a design defect. 928 S.W.2d at 70. The court rejected Goodrich's argument that Martinez's failure to heed the product's warnings was a complete defense to the product defect claim. However, the court of appeals reversed and rendered the award of punitive damages, holding that there was no evidence to support the jury's finding of gross negligence.

Only Goodrich applied to this Court for writ of error. As in the court of appeals, Goodrich's principal argument here is that no evidence supports the jury finding that the tire was defective because "the tire bore a warning which was unambiguous and conspicuously visible (and not claimed to be inadequate); the tire was safe for use if the warning was followed; and the cause of the accident was mounting and inflating a tire in direct contravention of those warnings."

We will sustain a no evidence point of error when (1) the record discloses a complete absence of evidence of a vital fact; (2) the court is barred by rules of law or of evidence from giving weight to the only evidence offered to prove a vital fact; (3) the evidence offered to prove a vital fact is no more than a mere scintilla; or (4) the evidence establishes conclusively the opposite of the vital fact.

*See Juliette Fowler Homes, Inc. v. Welch Assocs., Inc.*, 793 S.W.2d 660, 666 n.9 (Tex. 1990) (citing Calvert, “No Evidence” and “Insufficient Evidence” Points of Error, 38 TEX. L. REV. 361, 362-363 (1960)).

## II

### A

This Court has adopted the products liability standard set forth in section 402A of the Restatement (Second) of Torts. *See Firestone Steel Prods. Co. v. Barajas*, 927 S.W.2d 608, 613 (Tex. 1996); *McKisson v. Sales Affiliates, Inc.*, 416 S.W.2d 787, 788-89 (Tex. 1967). Section 402A states:

(1) one who sells any product in a defective condition unreasonably dangerous to the user or consumer or to his property is subject to liability for physical harm thereby caused to the ultimate user or consumer, or to his property, if

(a) the seller is engaged in the business of selling such a product, and

(b) it is expected to and does reach the user or consumer without substantial change in the condition in which it is sold.

RESTATEMENT (SECOND) OF TORTS § 402A (1965). A product may be unreasonably dangerous because of a defect in manufacturing, design, or marketing. *See Caterpillar, Inc. v. Shears*, 911 S.W.2d 379, 382 (Tex. 1995); *Technical Chem. Co. v. Jacobs*, 480 S.W.2d 602, 604-05 (Tex. 1972). To prove a design defect, a claimant must establish, among other things, that the defendant could have provided a safer alternative design. *See Caterpillar*, 911 S.W.2d at 384 (“[I]f there are no safer alternatives, a product is not unreasonably dangerous as a matter of law.”). Implicit in this holding is that the safer alternative design must be reasonable, *i.e.*, that it can be implemented without destroying the utility of the product. *See id.* (“Texas law does not require a manufacturer to destroy

the utility of his product in order to make it safe.”) (quoting *Hagans v. Oliver Mach. Co.*, 576 F.2d 97, 101 (5<sup>th</sup> Cir. 1978)).<sup>3</sup>

The newly released Restatement (Third) of Torts: Products Liability carries forward this focus on reasonable alternative design. *See* RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY § 2(b). Section 2(b) provides:

A product . . . is defective in design when the foreseeable risks of harm posed by the product could have been reduced or avoided by the adoption of a reasonable alternative design by the seller or other distributor, or a predecessor in the commercial chain of distribution, and the omission of the alternative design renders the product not reasonably safe.

To determine whether a reasonable alternative design exists, and if so whether its omission renders the product unreasonably dangerous (or in the words of the new Restatement, not reasonably safe), the finder of fact may weigh various factors bearing on the risk and utility of the product. *See Caterpillar*, 911 S.W.2d at 383-84; *Turner v. General Motors Corp.*, 584 S.W.2d 844, 848 (Tex. 1979).<sup>4</sup> One of these factors is whether the product contains suitable warnings and instructions. *See Turner*, 584 S.W.2d at 847. The new Restatement likewise carries forward this approach:

A broad range of factors may be considered in determining whether an alternative design is reasonable and whether its omission renders a product not reasonably safe. The factors include, among others, the magnitude and probability of the foreseeable risks of harm, *the instructions and warnings accompanying the product*, and the nature and strength of consumer expectations regarding the product, including expectations arising from product portrayal and marketing. . . . The relative advantages and disadvantages of the product as designed and as it alternatively could

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<sup>3</sup> Although not applicable to the present case, the Texas Legislature has recently codified the “reasonably safe alternative” requirement. TEX. CIV. PRAC. & REM. CODE § 82.005 (safer alternative design must be shown by preponderance of the evidence in design defect case).

<sup>4</sup> While there is language in *Turner* suggesting that whether a safer alternative design exists is merely one of the factors to be weighed by the jury, *see* 584 S.W.2d at 846-47, we made clear in *Caterpillar* that a safer alternative is a prerequisite to a finding of design defect, *see* 911 S.W.2d at 384. Our approach in *Caterpillar* is reflected in the new Restatement.

have been designed may also be considered. Thus, the likely effects of the alternative design on production costs; the effects of the alternative design on product longevity, maintenance, repair, and esthetics; and the range of consumer choice among products are factors that may be taken into account. . . .

RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY § 2 cmt. f (emphasis added).

Goodrich urges this Court to depart from this standard by following certain language from Comment j of the Restatement (Second) of Torts. Comment j provides in part:

Where warning is given, the seller may reasonably assume that it will be read and heeded; and a product bearing such a warning, which is safe for use if it is followed, is not in defective condition, nor is it unreasonably dangerous.

RESTATEMENT (SECOND) OF TORTS § 402A cmt. j (1965). The new Restatement, however, expressly rejects the Comment j approach:

Reasonable designs and instructions or warnings both play important roles in the production and distribution of reasonably safe products. In general, when a safer design can reasonably be implemented and risks can reasonably be designed out of a product, adoption of the safer design is required over a warning that leaves a significant residuum of such risks. For example, instructions and warnings may be ineffective because users of the product may not be adequately reached, may be likely to be inattentive, or may be insufficiently motivated to follow the instructions or heed the warnings. However, when an alternative design to avoid risks cannot reasonably be implemented, adequate instructions and warnings will normally be sufficient to render the product reasonably safe. *Compare* Comment e. *Warnings are not, however, a substitute for the provision of a reasonably safe design.*

RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY § 2 cmt. l (emphasis added). The Reporters' Notes in the new Restatement refer to Comment j as "unfortunate language" that "has elicited heavy criticism from a host of commentators." RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY § 2, Reporters' Note, cmt. l (citing Latin, *Good Warnings, Bad Products, and Cognitive Limitations*, 41 U.C.L.A. L. REV. 1193 (1994) (utilizing the work of cognitive theorists to demonstrate that warnings should only be used as a supplement to a design that already embodies reasonable safety

and not as a substitute for it); Twerski, *et al.*, *The Use and Abuse of Warnings in Products Liability: Design Defect Comes of Age*, 61 CORNELL L. REV. 495, 506 (1976)). Similarly, this Court has indicated that the fact that a danger is open and obvious (and thus need not be warned against) does not preclude a finding of product defect when a safer, reasonable alternative design exists. *See Caterpillar*, 911 S.W.2d at 383. (“A number of courts are of the view that obvious risks are not design defects which must be remedied. (citations omitted). However, our Court has held that liability for a design defect may attach even if the defect is apparent.”).

The drafters of the new Restatement provide the following illustration for why courts have overwhelmingly rejected Comment j:

Jeremy’s foot was severed when caught between the blade and compaction chamber of a garbage truck on which he was working. The injury occurred when he lost his balance while jumping on the back step of the garbage truck as it was moving from one stop to the next. The garbage truck, manufactured by XYZ Motor Co., has a warning in large red letters on both the left and right rear panels that reads “DANGER — DO NOT INSERT ANY OBJECT WHILE COMPACTION CHAMBER IS WORKING — KEEP HANDS AND FEET AWAY.” The fact that adequate warning was given does not preclude Jeremy from seeking to establish a design defect under Subsection (b). The possibility that an employee might lose his balance and thus encounter the shear point was a risk that a warning could not eliminate and that might require a safety guard. Whether a design defect can be established is governed by Subsection (b).

RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY § 2 cmt. 1, illus. 14.<sup>5</sup> In fact, Goodrich recognized at trial that warnings are an imperfect means to remedy a product defect. In response to a question posed by the Martinezes’ attorney, Goodrich engineer Stanley Lew answered:

Q: Is that why designs of a product are more important than warnings on a product because people may not see warnings but they are always going to encounter the design?

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<sup>5</sup> This illustration is based on *Uloth v. City Tank Corp.*, 384 N.E.2d 1188 (Mass. 1978).

A: Yes, that's correct. It's the products they deal with.

For these reasons we refuse to adopt the approach of Comment j of the superseded Restatement (Second) of Torts section 402A.

## B

We do not hold, as the dissenting justices claim, that "a product is defective whenever it could be more safely designed without substantially impairing its utility," *post* at \_\_\_\_, or that "warnings are irrelevant in determining whether a product is reasonably safe." *Post* at \_\_\_\_. Rather, as we have explained, we agree with the new Restatement that warnings and safer alternative designs are factors, among others, for the jury to consider in determining whether the product as designed is reasonably safe. *See* RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY § 2 cmt. f. While the dissenting justices say that they also agree with the Restatement's approach, they would, at least in this case, remove the balancing process from the jury. Instead, they would hold that Goodrich's warning rendered the tape bead design reasonably safe as a matter of law.

The dissenting justices first argue that Goodrich's warning was clear and that it could have been followed, and consequently Martinez was injured only by "[i]gnoring . . . his own good sense." *Post* at \_\_\_\_. Even if this were true,<sup>6</sup> it is precisely because "it is not at all unusual for a person to fail to follow basic warnings and instructions," *General Motors Corp. v. Saenz*, 873 S.W.2d 353, 358 (Tex. 1993), that we have rejected the superseded Comment j. The dissent also notes that there have been few reported mismatch accidents involving tires with this particular warning label. While this is certainly relevant, and perhaps would persuade many juries, we cannot say that it conclusively establishes that the tire is reasonably safe when weighed against the other evidence. The jury heard

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<sup>6</sup> As discussed in part V of this opinion, we uphold the jury's finding that Martinez was not negligent.

firsthand how an accident can occur despite the warning label, and how a redesigned tire would have prevented that accident. The jury also heard evidence that Goodrich's competitors had incorporated the single strand programmed bead by the early 1980s, and that Goodrich itself adopted this design in 1991, a year after manufacturing the tire that injured Martinez. Under these circumstances, there is at least some evidence supporting the jury's finding of product defect.

### III

Goodrich argues that even if its Comment j argument does not prevail, it is still entitled to judgment as a matter of law because no safer alternative was available. In response, the Martinezes point to the evidence that Goodrich's competitors, and eventually Goodrich itself, adopted the safer 0.050" single strand programmed bead. Goodrich counters that this alternative design is not in fact safer because if the tire is matched to the wrong size rim the bead will never seat on the rim and it will inevitably explode during use.

We agree with the general proposition that a manufacturer should not be liable for failing to adopt an alternative design that would, under other circumstances, impose an equal or greater risk of harm. To prevail in a design defect case, a plaintiff should be required to show that the safety benefits from its proposed design are foreseeably greater than the resulting costs, including any diminished usefulness or diminished safety. *See Owen, Toward a Proper Test for Design Defectiveness: "Micro-Balancing" Costs and Benefits*, 75 TEX. L. REV. 1661, 1690 (1997). As the new Restatement explains:

When evaluating the reasonableness of a design alternative, the overall safety of the product must be considered. It is not sufficient that the alternative design would have reduced or prevented the harm suffered by the plaintiff if it would also have introduced into the product other dangers of equal or greater magnitude.

RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY § 2 cmt. f.

The Martinezes, however, offered some evidence that their alternative design not only would have prevented the injury to Martinez, but also that it would not have introduced other dangers of equal or greater magnitude. It is undisputed that the single strand programmed bead is more resistant to breaking in mismatch situations. Goodrich expert Tom Conner testified that in a mismatch situation the tape bead may break at 60 psi, while a single strand bead will not break until at least 130 psi. Conner also testified that he has never heard of a single strand bead breaking during the inflating of a mismatched tire. Goodrich representative Stanley Lew testified that the single strand bead is more resistant in a mismatch situation. Lew also testified that if the tire inflated by Martinez had a single strand bead it would not have exploded. Both Conner and Lew testified that they would prefer a tire inflated by their loved one to have a single strand bead.

It is true that Goodrich also offered some evidence that the single strand programmed bead would have introduced other dangers of equal or greater magnitude because of the risk of “in service” blow-outs. Lew testified that even if a 16" tire was successfully mounted on a 16.5" rim, the tire will fail when used on the road. Conner, a forensic scientist, also stated that both laboratory and road testing revealed that if a 16" tire was mounted on a 16.5" rim the tire will blow out when driven on the road. However, Conner testified that in his 25 years of experience in the tire industry he has never heard of a “single person in the world” that has been hurt by a 16" tire on a 16.5" rim “out in service.” Lew testified on direct examination:

Q: Have you personally seen any examples of where the Goodyear programmed single strand bead used in some but not all of its tires failed in service on the wrong sized wheel?

A: No; I haven't seen any.

Lew further testified:

Q: Tell me one person's name from any tire you have ever seen where it's failed in service when a 16's mounted on a 16.5.

A: Fine and I told you at my deposition that no; I don't know a single name.

Q: All right. Tell me one single name of a persons [sic] that's been injured in a mismatch explosion of a single strand bead?

A: Again, I don't know of any.

This evidence does not conclusively prove that the programmed bead would have introduced into the product other dangers of equal or greater magnitude. There was thus a fact issue regarding whether a reasonable alternative design existed, which the jury resolved in favor of the Martinezes.

#### IV

Goodrich next asserts that the evidence conclusively establishes that the tire rim designed by Ford Motor Company and manufactured by the Budd Company was defective and that such defect contributed to Martinez's injuries, so that the court of appeals erred in affirming the trial court's judgment based on the jury's answers that the rim was not defective and did not contribute to the injury. Goodrich points to Milner's undisputed testimony that the rim was defective because it could have been redesigned to prevent a 16" tire from passing over its flange.

The general rule is that opinion testimony, even when uncontroverted, does not bind the jury unless the subject matter is one for experts alone:

[T]he judgments and inferences of experts or skilled witnesses, even when uncontroverted, are not conclusive on the jury or trier of fact, unless the subject is one for experts or skilled witnesses alone, where the jury or court cannot properly be assumed to have or be able to form correct opinions of their own based upon evidence as a whole and aided by their own experience and knowledge of the subject of inquiry.

*McGalliard v. Kuhlman*, 722 S.W.2d 694, 697 (Tex. 1986) (citing *Coxson v. Atlanta Life Ins. Co.*, 179 S.W.2d 943, 945 (Tex. 1944)). *See also* TEX. R. CIV. P. 166a(c) (uncontroverted expert testimony may establish right to summary judgment only “as to subject matter concerning which the trier of fact must be guided by the opinion testimony of experts”). Goodrich argues that this subject matter is for experts alone because the jury could not have determined, without the benefit of expert testimony, that a safer, feasible, alternative design existed.

We agree that expert testimony was probably necessary to show the feasibility of the alternative rim design which would have prevented a mismatched tire from passing over the rim flange. Once a feasible alternative design was shown, however, the question remained whether the rim as designed was unreasonably dangerous. *See* RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY § 2(b) (product is defective in design when risks could have been reduced by adoption of reasonable alternative design *and* omission of the alternative design renders the product not reasonably safe). We conclude that the jury could properly determine whether the rim as designed was unreasonably dangerous, and that it was not required to follow expert testimony on this issue. Milner’s expert testimony thus does not conclusively establish that the rim was defective. *Cf. McGalliard*, 722 S.W.2d at 697 (house repairs); *Broussard v. Moon*, 431 S.W.2d 534, 537 (Tex. 1968) (dishwasher repairs); *Coxson*, 179 S.W.2d at 945 (sound health of insured at time policy was issued).

The dissent argues that, even if the jury was not required to accept the *expert* testimony of rim defect, it was required to accept the lay opinion of Martinez and Martinez's co-worker on this issue. Of course, the fact that the dissent places such weight on this lay testimony supports our conclusion that the subject matter is not solely for experts. Moreover, where the subject matter is

not solely for experts, uncontroverted opinion testimony is not conclusive, regardless of whether it comes from an expert or a lay witness. The rule of *McGalliard* quoted above--that expert testimony is generally not conclusive---follows not because the testimony is from an expert, but because it is *opinion* testimony. Unless the subject matter is solely for experts, jurors are capable of forming their own opinions from the record as a whole. See *Coxson*, 179 S.W.2d at 945 (expert testimony is conclusive only where jurors "cannot properly be assumed to have, or be able to form, correct opinions of their own based upon the evidence as a whole and aided by their own experience and knowledge of the subject of inquiry"). Thus, the jury was entitled to reject the opinion testimony that the rim was defective, regardless of whether it was from an expert, Martinez, or Martinez's co-worker.

The dissent also argues that, even without any opinion testimony, the record conclusively establishes that the rim was defective. Milner testified that the rim could have been redesigned to prevent a 16" tire from being mounted on it, possibly by filling the wheel well so that it was not as deep. However, while this is some evidence of a feasible alternative design, it is not conclusive evidence of an unreasonably dangerous product, given the factors that a jury must balance under the Restatement. See RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY § 2 cmt. f. For example, there was no evidence of whether the alternative design would affect production costs, the rim's road characteristics, or the relative ease of mounting and dismounting the *correct* size tire.

The dissent also argues that the rim is defective as a matter of law because its size was not prominently marked on it. Milner and Conner both testified that the rim's size should be displayed close to the valve stem to reduce the risk of an accidental mismatch. Milner further testified that the size should also be displayed in the wheel well, as some other manufacturers had done. Milner

pointed out, however, that "this wheel's probably been cleaned since [the accident] so that the existence of [a size marking] wouldn't necessarily mean that [Martinez] would see it." Indeed, Martinez's co-worker testified that at the time of the accident the wheel was so covered with caliche that "it looked white." Based on this evidence, the jury could have concluded that a size marking near the valve stem would have been obscured, and would not have been seen by Martinez. Similarly, the jury was entitled to conclude that Martinez would not have seen a size marking or warning in the well of the wheel while he was in the process of mounting a tire on the wheel. Thus, even if the dissent were correct that the rim was defective as a matter of law because its size was not clearly marked, the evidence does not conclusively establish that any such defect was a producing cause of Martinez's injury. Because the issues of rim defect and producing causation were both submitted to the jury in one broad-form question, the jury's negative answer to that question is not contrary to the conclusive evidence.

## V

Goodrich also argues that the evidence conclusively establishes that Martinez was negligent and that he contributed to his own injuries. Specifically, Goodrich argues that unless some defect in the warning hinders a plaintiff's ability to see and heed it, the failure to see and heed a warning is conclusive proof of contributory negligence.

In reviewing a conclusive evidence point, we must determine whether the proffered evidence as a whole rises to a level that reasonable people could not differ in their conclusions. *Transportation Ins. Co. v. Moriel*, 879 S.W.2d 10, 25 (Tex. 1994); Powers & Ratliff, *Another Look at "No Evidence" and "Insufficient Evidence,"* 69 TEX. L. REV. 515, 523 (1991) ("Ultimately, the

test for 'conclusive evidence' . . . is similar to the test for 'no evidence' . . . ; the court asks whether reasonable minds could differ about the fact determination to be made by the jury.”). The jury was asked to decide whether Martinez was negligent, that is, whether he failed to exercise ordinary prudence. Both Martinez and his co-worker Ramundo Regalado testified that, because they had removed 16" tires from the rims on which they were working, they assumed that the rims were also 16". Also, although there was a tire-changing machine on the premises, the evidence was conflicting as to whether Martinez could have used it to secure the tire. Rene Vera, Martinez and Regalado's employer, testified that the tire-changing machine, although inoperable for dismounting tires, could have nonetheless been used to secure the tire during inflation. Regalado testified, however, that the tire-changing machine did not work, despite his repeated requests to the safety foreman to have it repaired, and that had it worked he and Martinez would have been using it on the day of the accident to secure the tire. Thus, Uniroyal failed to conclusively prove that Martinez was negligent in failing to use the machine. There is no evidence that the other safety devices referenced in the tire warning—a safety cage or an extension hose—were available to Martinez. Further, Goodrich offered no evidence as to whether it was practical or feasible under the circumstances for Martinez to bolt the rim to a vehicle axle in order to inflate the tire and seat the bead. Both Martinez and Regalado testified that the manner in which Martinez was inflating the tire was customary in their shop. Based upon this evidence, we cannot conclude that reasonable people could not differ about whether Martinez failed to exercise ordinary prudence under the circumstances.

Because we conclude that Goodrich did not conclusively establish that Martinez was negligent, we do not address Goodrich's argument that there is no evidence to support the jury's allocation of causation.

## VI

Goodrich next argues that even if it is not entitled to a rendition of judgment, it is entitled to a new trial because of three reversible evidentiary rulings. These rulings were: (1) the admission of evidence of thirty-four other lawsuits against Goodrich involving mismatched tires; (2) the admission of evidence that Goodrich had subsequently redesigned its radial light truck tires to incorporate the single strand programmed bead; and (3) the admission of a “time line” used by the Martinezes’ expert. To reverse a judgment based upon erroneously admitted evidence, the complaining party must show that the error was reasonably calculated to cause and probably did cause rendition of an improper judgment or was such that it prevented the complaining party from making a proper presentation of the case to the appellate court. *See Texas Dep’t of Human Servs. v. White*, 817 S.W.2d 62, 63 (Tex. 1991); *Gee v. Liberty Mut. Fire Ins. Co.*, 765 S.W.2d 394, 396 (Tex. 1989); TEX. R. APP. P. 61.1.

First, as to the other lawsuits, Goodrich asserts that thirty-three of these thirty-four lawsuits involved tires without pictographic warnings. Therefore, they were not substantially similar and were admitted without proper predicate. Evidence of earlier accidents that occurred under reasonably similar but not necessarily identical circumstances is admissible. *Missouri-Kansas-Texas R. Co. v. May*, 600 S.W.2d 755, 756 (Tex. 1980); *Missouri Pac. R.R. v. Cooper*, 563 S.W.2d 233, 236 (Tex. 1978); *see also Jackson v. Firestone Tire & Rubber Co.*, 788 F.2d 1070 (5th Cir. 1986) (applying Texas law). Like this case, the earlier accidents resulted from mounting a 16" Goodrich tire with a tape bead on a 16.5" rim. The absence of pictographic warnings on the tires does not render the accidents so dissimilar as to preclude their admission, but merely goes to the weight of the evidence. The trial court did not commit error by admitting evidence of the thirty-four earlier

accidents caused by mismatching Goodrich tires.<sup>7</sup>

Goodrich next complains that the trial court erred by admitting evidence that Goodrich subsequently redesigned its radial light truck tires to incorporate the single strand programmed bead, because radial tires are fundamentally different from the bias-ply tire that injured Martinez, and the bead change was not made in the radial tires for safety reasons. Goodrich first argues that, under these circumstances, the evidence regarding radial tires violates Texas Rule of Civil Evidence 407(a).

Rule 407(a) states:

Subsequent Remedial Measures. When, after an event, measures are taken which, if taken previously, would have made the event less likely to occur, evidence of the subsequent remedial measures is not admissible to prove negligence or culpable conduct in connection with the event. This rule does not require the exclusion of evidence of subsequent remedial measures when offered for another purpose, such as proving ownership, control or feasibility of precautionary measures, if controverted, or impeachment. *Nothing in this rule shall preclude admissibility in products liability cases based on strict liability.*

TEX. R. CIV. EVID. 407(a) (emphasis added). Goodrich argues that this rule only permits the admission of subsequent remedial measures involving the product at issue, and that such measures must have been made for safety reasons. However, the rule does not contain these limitations. Rather, under the express language emphasized above, Rule 407(a) simply does not apply in

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<sup>7</sup> We disagree with the dissenting justices that the trial court admitted evidence of these accidents "with no more predicate than counsel's argument that the claims are similar to the case in which they were offered." *Post* at \_\_\_\_\_. At the pretrial hearing on this issue, the Martinezes' counsel informed the court that Goodrich had identified these accidents in response to an interrogatory asking, "How many people do you acknowledge have been injured as a result of mounting or attempting to mount 16 inch diameter tires manufactured by you on a 16.5 inch diameter rim?" While the interrogatory itself may not be in our record, the Martinezes' counsel read it into the record at the pretrial hearing, and no one disputes its wording or that Goodrich identified the thirty-four accidents in response to it. Thus, the Martinezes established that each of the other accidents involved an injury resulting from mounting a 16" Goodrich tire on a 16.5" rim. Further, it was undisputed that each of the other accidents involved a tape bead like that involved in this accident. Under these circumstances, there was an adequate predicate on which to admit the other accidents.

products liability cases based on strict liability. Thus, the trial court did not violate Rule 407(a).<sup>8</sup>

Goodrich further argues that, because of the differences between radial tires and bias-ply tires, the evidence regarding the redesign of its radial tires is not relevant to the issue of design defect in its bias-ply tires. Goodrich appears to argue that it was harmed by this evidence because the jury could have improperly inferred that, because Goodrich incorporated the single strand programmed bead into its radial tires, such redesign was feasible and necessary for the bias-ply tire involved in this accident. However, there was independent evidence that the single strand programmed bead *was* feasible for bias-ply tires as early as 1982, when General Tire adopted that design, and that the programmed bead was safer. Under these circumstances, the trial court did not commit reversible error by admitting evidence of Goodrich's redesign of its radial tires.

Raising similar arguments, Goodrich also contends that the trial court erred by admitting evidence of Goodrich's redesign of its "space saver" spare tires. For the reasons discussed above regarding the radial tires, the trial court did not commit reversible error by admitting this evidence.

Goodrich's final evidentiary complaint is that the trial court committed reversible error by admitting a "time line" chart prepared by the Martinezes' expert and used by him during trial. Specifically, Goodrich complains that the time line contained a self-serving compilation of hearsay evidence both irrelevant to the issues in this lawsuit and unfairly prejudicial to Goodrich.

Charts and diagrams that summarize, or perhaps emphasize, testimony are admissible if the underlying information has been admitted into evidence, or is subsequently admitted into evidence. *See Speier v. Webster College*, 616 S.W.2d 617, 618-19 (Tex. 1981); *Cooper Petroleum Co. v.*

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<sup>8</sup> We thus need not address the court of appeals' conclusion that Goodrich failed to properly preserve this complaint. *See* 928 S.W.2d at 74.

*LaGloria Oil & Gas Co.*, 436 S.W.2d 889, 891 (Tex. 1969); *Champlin Oil & Ref. Co. v. Chastain*, 403 S.W.2d 376, 389 (Tex. 1965). In this case, Goodrich complains that the chart contained highly prejudicial hearsay evidence such as one line reading “numerous 16/16.5 mismatch explosions resulting in serious injury or death.” However, all the evidence contained on the chart was already in evidence, principally through Milner’s testimony, and Goodrich did not object to its introduction. The trial court did not err by admitting the time line.

## VII

Finally, Goodrich complains that the trial court committed reversible error by not bifurcating the liability and punitive damages phases of the trial as required by this Court’s subsequent decision in *Transportation Insurance Co. v. Moriel*, 879 S.W.2d 10 (Tex. 1994). The Martinezes argue that consideration of this point is unnecessary because the court of appeals reversed and rendered the jury’s punitive damage award, holding there was no evidence to support the verdict on those damages. However, in *Moriel* we instructed trial courts to bifurcate the liability and punitive damages phases of the trial because certain evidence admissible solely for the purpose of proving punitive damages “has a very real potential for prejudicing the jury’s determination of other disputed issues in a tort case.” *Id.* at 30. Thus, we must determine whether the trial court erred in refusing to bifurcate the punitive damages phase of the trial, and if so, whether the error was harmful.

In *Moriel* we held that “a trial court, if presented with a timely motion, should bifurcate the determination of the amount of punitive damages from the remaining issues.” *Id.* at 30. We stated further that bifurcation applies “to all punitive damages cases tried in the future.” *Id.* at 26. Shortly thereafter, in *Ellis County State Bank v. Kever*, 888 S.W.2d 790 (Tex. 1994), we applied *Moriel* retroactively. In *Kever*, we stated that “[a]lthough *Moriel* was decided after the court of appeals’

decision in this case, its holding should be applied to a pending case in which a party has preserved the complaint that the court of appeals failed to properly scrutinize a punitive damage award.” *Id.* at 799. Since Goodrich presented the trial court with a timely motion, the trial court, consistent with our ruling in *Keever*, should have bifurcated the determination of the amount of punitive damages from the remaining issues.

Having determined that the trial court erred in refusing to bifurcate the trial, we must determine whether the trial court’s error was reasonably calculated to cause and probably did cause rendition of an improper judgment. *See* TEX. R. APP. P. 61.1 The rationale given for bifurcation in *Moriel* was that “evidence of a defendant’s net worth, which is generally relevant only to the *amount* of punitive damages, by highlighting the relative wealth of a defendant, has a very real potential for prejudicing the jury’s determination of other disputed issues in a tort case.” *Moriel*, 879 S.W.2d at 30. Here, the jury was not presented with any evidence of Goodrich’s net worth. While we do not hold that net worth evidence is the only prejudice that may result from trying actual and punitive damage claims together, there is no prejudice in this case requiring a reversal of the judgment. Goodrich argues that the Martinezes were free to indulge in inflammatory argument for a high punitive damage award that would not have been permitted in the liability phase had bifurcation been granted. Specifically, Goodrich argues that it was severely prejudiced by the Martinezes’ plea for \$500,000 for each of the thirty-four other lawsuits filed against Goodrich so as to send a “message back to Akron.” Because the other suits were properly in evidence on the issue of liability, however, we conclude that this jury argument was not so prejudicial to the actual damages claim as to require a reversal.

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Because we conclude that there is some evidence to support the judgment of the court below on the theory of products liability, we need not consider Goodrich's claim that there is no evidence as to negligence. For the foregoing reasons, we affirm the judgment of the court of appeals.

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Thomas R. Phillips  
Chief Justice

Opinion delivered: October 15, 1998