

**DAVID SHOW and MARIA FEDERICI, Plaintiffs-Appellants,
v.
FORD MOTOR COMPANY, Defendant-Appellee.**

Nos. 10-2428, 10-2637

United States Court of Appeals, Seventh Circuit.

Argued December 2, 2010.
Decided September 19, 2011.

Before EASTERBROOK, Chief Judge, and MANION and WILLIAMS, Circuit Judges.

EASTERBROOK, Chief Judge.

While passing through an intersection at roughly 30 miles per hour, a 1993 Ford Explorer was struck by another car near the left rear wheel. The Explorer rolled over; David Show, the driver, and Maria Federici, a passenger, were injured. They sued in state court, contending that the Explorer was defective because its design rendered it unstable. The suit was removed under the diversity jurisdiction. The parties consented to final decision by a magistrate judge. See 28 U.S.C. §636(c). Come the close of discovery, Show and Federici had not designated an expert on the subject of the vehicle's design. The magistrate judge concluded that the suit could not proceed without expert testimony and granted summary judgment to Ford. 697 F. Supp. 2d 975 (N.D. Ill. 2010).

In products liability cases in which the plaintiff alleges a design defect, Illinois (whose law supplies the substantive rules) permits the claim to be established "in either of two ways. First, the plaintiff may introduce `evidence that the product failed to perform as safely as an ordinary consumer would expect when used in an intended or reasonably foreseeable manner.' This has come to be known as the consumer-expectation test. Second, the plaintiff may introduce `evidence that the product's design proximately caused his injury.' If the defendant thereafter `fails to prove that on balance the benefits of the challenged design outweigh the risk of danger inherent in such designs,' the plaintiff will prevail. This test, which added the balancing of risks and benefits to the alternative design and feasibility inquiries . . ., has come to be known as the risk-utility or risk-benefit test." [Mikolajczyk v. Ford Motor Co., 231 Ill. 2d 516, 526-27 \(2008\)](#) (citations omitted).

Plaintiffs concede that testimony by an engineer or other design expert is essential when a claim rests on the risk-utility approach. But they say that jurors, as consumers, can find in their own experience all of the evidence required for liability under the consumer-expectation approach. The district court rejected this contention, observing that in *Mikolajczyk* and other consumer-expectation cases plaintiffs have proffered experts. The Supreme Court of Illinois has not considered any design-defect suit involving a complex product, such as a car, in which the plaintiff declined to produce expert evidence, so they have not definitively held that such testimony is essential. Several intermediate appellate decisions in Illinois say that expert testimony is vital in design-defect suits when aspects of a product's design or operation are outside the scope of lay knowledge. See, e.g., [Baltus v. Weaver Division of Kidde & Co., 199 Ill. App. 3d 821, 834-36 \(1990\)](#); [Henry v. Panasonic Factory Automation Co., 396 Ill. App. 3d](#)

[321, 326-27 \(2009\)](#). The magistrate judge thought that the Supreme Court of Illinois is likely to concur when a suit finally presents the issue. See also [Smoot v. Mazda Motors of America, Inc., 469 F.3d 675, 680-82 \(7th Cir. 2006\)](#) (Wisconsin law).

The magistrate judge, like counsel for both sides, assumed that state law determines whether expert testimony is essential. The assumption rests on a belief that the quality of proof is part of the claim's substantive elements, which depend on state law under the *Erie* doctrine even when substantive doctrine is implemented through evidentiary rules. See [Barron v. Ford Motor Co., 965 F.2d 195, 199-201 \(7th Cir. 1992\)](#); cf. [Gasperini v. Center for Humanities, Inc., 518 U.S. 415 \(1996\)](#). Language in *Mikolajczyk* raises the question whether Illinois treats the risk-utility and consumer-expectations approaches as distinct legal doctrines, or as aspects of a more general theory of liability: that a product is unreasonably dangerous. After an extended discussion of its cases, the Supreme Court of Illinois wrote: "In [an earlier decision], we stated that a plaintiff 'may demonstrate that a product is defective in design, so as to subject a retailer and a manufacturer to strict liability for resulting injuries, in one of two ways.' We then set out the consumer-expectation test and the risk-utility test. These two tests, therefore, are not *theories of liability*; they are *methods of proof* by which a plaintiff 'may demonstrate' that the element of unreasonable dangerousness is met." [231 Ill. 2d at 548](#) (emphasis in original; citations omitted).

If the consumer-expectation test is not an independent theory of liability, perhaps federal rather than state law determines whether expert evidence is essential. Rules about jury control, and the allocation of tasks between judge and jury, are matters of forum law. See [Mayer v. Gary Partners & Co., 29 F.3d 330 \(7th Cir. 1994\)](#). Likewise the rules about expert evidence are found in the Federal Rules of Evidence, which like other rules adopted under the Rules Enabling Act control federal litigation notwithstanding contrary state law. See [Shady Grove Orthopedic Associates, P.A. v. Allstate Insurance Co., 130 S. Ct. 1431 \(2010\)](#); [Walker v. Armco Steel Corp., 446 U.S. 740 \(1980\)](#).

Federal law often requires expert evidence about consumers' knowledge and behavior, because jurors are supposed to decide on the basis of the record rather than their own intuitions and assumptions. In trademark litigation, for example, surveys conducted by experts may be needed to establish that consumers would be confused by particular packaging or messages. See [Libman Co. v. Vining Industries, Inc., 69 F.3d 1360, 1361 \(7th Cir. 1995\)](#); [Braun Inc. v. Dynamics Corp. of America, 975 F.2d 815, 828 \(Fed. Cir. 1992\)](#); [Lever Brothers Co. v. American Bakeries Co., 693 F.2d 251, 258 \(2d Cir. 1982\)](#). Similarly expert evidence often is vital under the Fair Credit Reporting Act or the Fair Debt Collection Practices Act to show that brochures would confuse an unsophisticated borrower. See [Pettit v. Retrieval Masters Creditor Bureau, Inc., 211 F.3d 1057, 1062 \(7th Cir. 2000\)](#); [Walker v. National Recovery, Inc., 200 F.3d 500 \(7th Cir. 1999\)](#); [Johnson v. Revenue Management Corp., 169 F.3d 1057, 1060-61 \(7th Cir. 1999\)](#). Many federal civil cases are resolved by six-person juries, and none by more than twelve. Fed. R. Civ. P. 48(a). That is too few to reveal what expectations consumers as a whole may have. Professional surveys of consumers' beliefs entail carefully designed questions put to hundreds of persons. See [DeKoven v. Plaza Associates, 599 F.3d 578, 580-81 \(7th Cir. 2010\)](#); [Muha v. Encore Receivable Management, Inc., 558 F.3d 623 \(7th Cir. 2009\)](#). If federal courts require expert evidence, rather than relying on jurors' experience, in trademark and credit suits, why not in product-design-defect cases? Jurors know less about product design than they know about what confuses people who buy toothpaste or borrow \$10,000.

Another passage in *Mikolajczyk* tells us that neither the risk-utility approach nor the consumer-expectations approach has "elements", and that both are just windows into a larger inquiry:

Although we have declined to adopt section 2 of the Products Liability Restatement as a statement of substantive law, we do find its formulation of the risk-utility test to be instructive. Under section 2(b), the risk-utility balance is to

be determined based on consideration of a "broad range of factors," including "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*," as well as "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." (Emphasis added.) Restatement (Third) of Torts: Products Liability §2, Comment *f*, at 23 (1998).

This formulation of the risk-utility test is an "integrated" test Under this formulation, consumer expectations are included within the scope of the broader risk-utility test. In addition, the test refines the consumer-expectation factor by specifically allowing for advertising and marketing messages to be used to assess consumer expectations.

. . .

Adoption of this integrated test resolves the question of whether the answer to the risk-utility test "trumps" the answer to the consumer-expectation test because the latter is incorporated into the former and is but one factor among many for the jury to consider.

[231 Ill. 2d at 555-56](#) (emphasis in original). Whether or not this implies that federal law determines what kind of evidence is required—a subject that we bypass, given the parties' shared assumption—it assuredly means that there is no sharp line between the risk-utility and consumer-expectations approaches. If, as plaintiffs concede, it takes expert evidence to establish a complex product's unreasonable dangerousness through a riskutility approach, it also takes expert evidence to establish a complex product's unreasonable dangerousness through a consumer-expectations approach.

Plaintiffs' argument that jurors should be able to rely on their own expectations as consumers reflects a belief that "expectations" are all that matters. Yet because under *Mikolajczyk* the consumer-expectations approach is just a means of getting at some issues that bear on the question whether a product is unreasonably dangerous, it is impossible to dispense with expert knowledge. Consider one vital question in this case: Did the design decisions that went into the 1993 Ford Explorer even contribute to the rollover? Causation is a question about physics, and design options are the province of engineers. Jurors own cars, but people own lots of products without being able to explain (or even understand) the principles behind their construction and operation. Christopher Chabris & Daniel Simons, *The Invisible Gorilla: And Other Ways Our Intuitions Deceive Us* 119-27 (2010), found that most people can't explain what makes a bicycle or toilet work. Cars are far more complex.

Counsel for the plaintiffs repeat the mantra that cars "just don't roll over in low-speed collisions" unless defectively designed. How do they know that? The record doesn't tell us even why *this* car rolled over, let alone what cars usually do in particular kinds of collisions—or what design changes could reduce the rollover rate, by how much. Plaintiffs say that the second car struck the Explorer near the left rear wheel. Perhaps this caused the Explorer to pivot, with the rear wheels suddenly moving to the right. Then the Explorer's body would be going in the same direction as before, but the car's wheels would be inclined 45 degrees, perhaps more, to the line of travel. The Explorer's own forward speed, not momentum transferred from the colliding vehicle, could cause a rollover. The wheels, now pointed at a steep angle to the line of travel, would cause the bottom of the car to decelerate rapidly (and the car as a whole to veer), while the top of the car retained its forward energy. When the wheels are pointed in the direction of travel, the car's center of gravity remains within the wheelbase during rapid deceleration and a rollover cannot occur; but when wheels are perpendicular to the line of travel, a tilt in the direction of travel can put the center of gravity

outside the wheelbase, and the car will roll over. Many articles available on the Internet discuss the physics of this process. See, e.g., <http://mb-soft.com/public/rollover.html>. Understanding requires some geometry and algebra; jurors' unguided intuitions will not solve the equations. Without an expert's assistance the decision would depend on speculation, which cannot establish causation—an issue on which plaintiffs bear both the burden of production and the risk of non-persuasion.

Because consumer expectations are just one factor in the inquiry whether a product is unreasonably dangerous, a jury unassisted by expert testimony would have to rely on speculation. This record does not show whether 1993 Explorers are unduly (or unexpectedly) dangerous, because it lacks evidence about many issues, such as: (a) under what circumstances they roll over; (b) under what circumstances consumers expect them to do so; (c) whether it would be possible to reduce the rollover rate; and (d) whether a different and safer design would have averted this particular accident. All of these are subjects on which plaintiffs bear the burden of proof. There are other issues too, such as whether the precautions needed to curtail the rate of rollovers would be costjustified. That is a topic on which Ford may have the burden under state law, but we needn't pursue how that burden is allocated.

The part of *Mikolajczyk* most helpful to plaintiffs is this sentence: "No evidence of ordinary consumer expectations is required, because the members of the jury may rely on their own experiences to determine what an ordinary consumer would expect." [231 Ill. 2d at 554](#). Once again we bypass the question whether state or federal law governs methods of proof in federal court. The sentence does not avail plaintiffs, even if state law governs, because it concerns only the question what ordinary consumers expect. Design-defect litigation under Illinois law requires many additional questions to be resolved; consumers' expectations are just factors "included within the scope of the broader risk-utility test" ([231 Ill. 2d at 555](#)); and the absence of expert evidence on these additional subjects, some of which we have mentioned, is fatal to plaintiffs' suit.

AFFIRMED.

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