

**In the**  
**United States Court of Appeals**  
**For the Seventh Circuit**

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No. 12-2616

PATRICIA FERRARO,

*Plaintiff-Appellant,*

*v.*

HEWLETT-PACKARD COMPANY,

*Defendant-Appellee.*

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Appeal from the United States District Court  
for the Northern District of Illinois, Eastern Division  
No. 08 C 3638—**Edmund E. Chang**, *Judge*.

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ARGUED JANUARY 24, 2013—DECIDED JULY 3, 2013

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Before MANION and WOOD, *Circuit Judges*, and BARKER,  
*District Judge*.\*

WOOD, *Circuit Judge*. Patricia Ferraro suffered serious burns on her arm after falling asleep next to the power adapter of her newly purchased Hewlett-Packard (HP)

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\* The Honorable Sarah Evans Barker, Judge of the United States District Court for the Southern District of Indiana, sitting by designation.

laptop computer. She filed a product liability suit against HP, alleging that her injury resulted from a design defect that allowed the power adapter to overheat. She also claimed that HP failed to include adequate warnings about the power adapter's propensity to overheat and that HP breached an implied warranty of merchantability. At the close of discovery, HP moved for summary judgment, which the district court granted in full.

The court concluded that Ferraro would be unable to show that the power adapter was "unreasonably dangerous," a required element of her design defect claim. Under Illinois law, there are two alternative methods of establishing that element: the "consumer-expectations test" or the "risk-utility test." The district court found Ferraro's evidence insufficient to meet her burden under either one of them. On appeal, Ferraro argues that the district court erred only in concluding that she would be unable to prove unreasonable dangerousness under the consumer-expectations test. She has not challenged the district court's determination that HP was entitled to summary judgment under the risk-utility test, nor has she appealed the district court's dismissal of her defective warning and implied warranty claims. This puts her in an impossible bind. Under Illinois law, the risk-utility test "trumps" in design defect cases if the two methods of establishing unreasonable dangerousness yield conflicting results. Because the district court's finding that she could not succeed under the risk-utility test furnished an independent and unchallenged ground for the decision, we affirm.

**I**

In May 2006, Ferraro purchased a new HP DV800 Notebook laptop from a local Best Buy store. One week later, while sitting on her sofa and using her laptop, she noticed that the battery was running low. Ferraro shut down the laptop, placed it on a nearby coffee table, and plugged the laptop's power cord into the wall. Midway along the cord is the power adapter, a brick-shaped plastic device housing a transformer, which converts AC electricity from the outlet into DC electricity used by the laptop. Ferraro propped the power adapter on the arm of her sofa, began reading a book, and fell asleep around 10:00 p.m.

At some point during the night, the power adapter slipped from the sofa's arm, falling between the cushions. As Ferraro slept, the exposed skin of her right forearm came to rest against one of the adapter's surfaces. It is unclear how long Ferraro's skin was in direct contact with the adapter, but she eventually awoke with painful blisters at the point of contact. Ferraro treated the burn with cold water and wrapped her arm with gauze, but she was unable to fall back asleep because of the pain. Ferraro, a Chicago police officer, reported to work early the next morning. She received some medical attention at a fire station while patrolling her beat and went to an emergency room at 3:00 p.m. once her shift ended. Doctors diagnosed her with second- and third-degree burns.

Ferraro filed suit against HP (and against Best Buy, which is no longer part of this dispute) in 2008, asserting

claims based on strict product liability and implied warranty of merchantability. For purposes of her strict product liability theory, she alleged that the laptop was defectively designed because it “overheat[ed] during normal and foreseeable use” and that it lacked “adequate or sufficient warnings.” During discovery, each side presented three expert witnesses, whose proffered testimony we now summarize.

Ferraro’s first expert was Peter Poczynok, a mechanical engineer and litigation consultant. After reviewing the power adapter, HP manuals, and deposition transcripts, Poczynok concluded that HP should have included additional warnings with the laptop or the adapter and that HP should have designed the adapter differently to reduce the amount of heat it generated. He suggested that the transformer could have been housed inside the laptop itself, as opposed to inside the external power adapter; that the adapter could have included a built-in fan to help vent heat; that the adapter could have been manufactured with a “heat shield”; and that the box housing the adapter could have been larger to allow for greater air circulation.

Nathaniel Johnson, an electrical engineer who measured the heat generated by the power adapter under various conditions, was Ferraro’s second expert. Johnson first took the power adapter’s temperature when it was operating on a flat tabletop surface; the adapter reached a temperature of 58.5 degrees Celsius (137.3 degrees Fahrenheit) after 90 minutes. Johnson then covered the top of the adapter with a cotton towel, and the

temperature rose to 77.2 °C (170.96 °F). Johnson opined that these temperatures posed severe burn risks, particularly since it is common practice for consumers to use laptop computers in bed or on a couch, where airflow around the power adapter might be restricted. He suggested that the six-foot power cord connecting the power adapter to the wall outlet could have been shortened (and that the segment linking the power adapter to the computer could have been lengthened by a corresponding amount), reducing the likelihood that a user would come into contact with the power adapter.

Finally, Dr. Robert Cucin, a doctor with board certifications in general surgery and plastic surgery, testified about burn injuries. Cucin explained that skin will burn after 50 minutes of direct contact with a surface that is 50 °C (122 °F). He also said that people sometimes incorporate “pain into their dreams and may not wake up from it right away,” citing examples of persons burned by sleeping pads.

HP’s three experts challenged many of these conclusions. Dr. Raphael Lee, a board-certified surgeon specializing in plastic surgery and burn care, testified that skin temperature of 46 °C (114.8 °F) is associated with severe pain and 52 °C (125.6 °F) is associated with second-degree burns. He concluded that, “under normal physiological conditions,” an individual whose skin is in contact with a power adapter like the one at issue here would feel severe pain within minutes and that “normal involuntary spinal reflexes would cause with-

drawal of the skin from the source of the pain in a matter of seconds.” Don Galler, an electrical engineer, testified that the HP power adapter was compliant with the relevant “international standard for safety,” which dictates a “maximum allowable temperature” of 95 °C (203 °F). Galler inferred, based on this relatively high temperature, that the industry standard does not contemplate continuous contact between the product and a consumer’s skin. Finally, Raina Shah, a human factors engineer and consultant, testified that HP was not required to provide users with additional warnings, given the international standard and the absence of similar warnings on the power adapters of most other manufacturers’ laptops. She explained that the device was designed to be placed on a flat surface (*i.e.*, the floor or a desk); that an ordinary user would cease contact before suffering any burns in the event of inadvertent contact; and that there was no history of severe burns associated with the HP laptop power adapter.

At the close of discovery, HP moved for summary judgment on all claims. To defeat the motion on her design defect claim, Ferraro needed to introduce evidence that would have supported a finding (among other things) that the power adapter was “unreasonably dangerous.” She could do so through one of two approaches: the consumer-expectations test or the risk-utility test. Under the consumer-expectations test, a plaintiff may show unreasonable dangerousness by demonstrating that the product “failed to perform as safely as an ordinary consumer would expect when used in an intended or reasonably foreseeable manner.” *Lamkin v.*

*Towner*, 563 N.E.2d 449, 457 (Ill. 1990). The district court concluded that no reasonable jury could find “unreasonable dangerousness” under this approach, since “fall[ing] asleep while using the computer . . . is not the intended use of a power adapter (powering the laptop and charging its battery), nor a use that is foreseeably similar to its intended use.” The court allowed the possibility that Ferraro was making “the more limited argument that an ordinary consumer would expect that the power adapter would not get so hot that it would *instantaneously* cause a burn,” but it explained that there was no evidence that this is what happened. Accordingly, the court concluded that “HP is entitled to summary judgment on the consumer-expectations liability-theory because no reasonable jury could find that the power adapter was unreasonably dangerous for its intended (or foreseeably similar) use.”

In the alternative, the district court rejected Ferraro’s argument that her evidence could establish “unreasonable dangerousness” under the risk-utility test. The risk-utility test requires a plaintiff to show that “the risk of danger inherent in the design of the product outweighs the benefits of the design.” *Sobczak v. General Motors Corp.*, 871 N.E.2d 82, 92 (Ill. App. Ct. 2007); *Calles v. Scripto-Tokai Corp.*, 864 N.E.2d 249, 257-63 (Ill. 2007). Illinois courts consider a broad range of factors in their risk-utility analysis, including the magnitude and probability of the foreseeable risks of harm; the instructions and warnings accompanying the product; the nature and strength of consumer expectations regarding the product, including expectations arising from product portrayal and market-

ing; the likely effects of any alternative designs on production costs; and conformity with industry standards, voluntary organization guidelines, and government regulation. See *Mikolajczyk v. Ford Motor Co.*, 901 N.E.2d 329, 335 (Ill. 2008); *Jablonski v. Ford Motor Co.*, 955 N.E.2d 1138, 1154 (Ill. 2011). The district court considered several of these factors, concluded that none tipped in Ferraro's favor, and held that "no reasonable jury could find for Ferraro (who bears the burden of proof) under the risk-utility test."

Finally, the district court rejected Ferraro's arguments that the power adapter was defective because it lacked adequate warnings and that HP breached an implied warranty of merchantability. Ferraro's failure-to-warn theory was unavailing, the district court reasoned, because there was no evidence that HP had special knowledge of the adapter's propensity to burn consumers or that the burn danger was non-obvious. See *Sollami v. Eaton*, 722 N.E.2d 215, 219 (Ill. 2002). The implied-warranty claim failed because it "require[d] a showing that the goods were . . . unfit for the ordinary purposes for which the goods are used," see *Maldonado v. Creative Woodworking Concepts, Inc.*, 342 Ill. App. 3d 1028, 1034 (Ill. App. Ct. 2003), and the court thought that Ferraro "d[id] not allege, let alone provide evidence, that HP's power adapter was unfit in fulfilling [its] purposes [of] provid[ing] power to the laptop and . . . charg[ing] the laptop battery." Accordingly, the court granted HP's motion for summary judgment and dismissed the case.



## II

In reviewing the grant of a motion for summary judgment, we construe the facts and draw all reasonable inferences in favor of the nonmoving party. *Sojka v. Bovis Lend Lease, Inc.*, 686 F.3d 394, 397 (7th Cir. 2012). Summary judgment is appropriate if there is no genuine dispute of material fact, and the movant is entitled to judgment as a matter of law. *Id.* Importantly, before this court Ferraro argues only that the district court erred in concluding that HP was entitled to summary judgment under the consumer-expectations test. She does not contest the district court's holding that no reasonable jury could find for her under the risk-utility test, nor does she assert that the district court erred in granting summary judgment on her failure-to-warn and implied warranty of merchantability claims.

It is unfortunate for Ferraro that we must leave the risk-utility analysis untouched. This is so because it would have taken center stage, given our inclination to agree with Ferraro's challenge to the district court's consumer-expectations analysis. The latter test asks whether a product is "unreasonably dangerous" in the sense that it was "unsafe when put to a use that is reasonably foreseeable considering its nature and function." *Mikolajczyk*, 901 N.E.2d at 352; IPI Civil (2006) No. 400.06. The district court believed that Ferraro would be unable to prevail under this standard, since "fall[ing] asleep while using the computer . . . is not the intended use of a power adapter." But we find this focus to be unduly narrow. It overlooks the fact that laptops are designed

precisely to be used in comfortable places, including sofas, beds, La-Z-Boys, or other places where people may nod off. By taking such a restricted view of the precise manner in which Ferraro's harm materialized, the court sidestepped the undisputed fact that, at the time of her injury, Ferraro was using the power adapter to do just what it was designed to do: charge her laptop. Ferraro is not arguing that the power adapter overheated when she tried to use it to heat her blanket, or that it made for a poor drink coaster or paperweight; rather, she asserts that it was unreasonably dangerous when used for its intended purpose. *Cf. Calles*, 864 N.E.2d at 256 ("We now consider whether the Aim N Flame meets the consumer-expectation test. The purpose of a lighter, such as the Aim N Flame, is to produce a flame.").

HP may be correct that Ferraro was not using the product in the precise manner intended by the manufacturer, insofar as the power adapter was designed to rest on a flat surface with ample ventilation, but this is beside the point. The appropriate inquiry for the consumer-expectations test is whether the product performed as safely as an ordinary consumer would expect when used in "an intended *or* reasonably foreseeable manner." *Lamkin*, 563 N.E.2d at 457 (emphasis added). The great virtue of a laptop is that it can be used on one's lap, while sitting on a sofa, or perhaps while in bed. Indeed, we note that the Facebook page for "Using the laptop in bed" (Mission: "Public awareness of the usage of laptops in bed") has nearly one million "Likes." See <https://www.facebook.com/pages/Using-the-laptop-in-bed/95445955714?fref=ts> (last visited June 28, 2013). Our analysis would be no

different if the power adapter had started a fire in the sofa while Ferraro was in the next room; in either case, the consumer's *use* of the product would be the same. A jury could conclude that Ferraro was using the power adapter in a "reasonably foreseeable" manner when the relevant harm occurred.

This is not to say that the district court's concerns about the manner in which Ferraro was injured are irrelevant under the consumer-expectations test: even if she were to succeed in showing "unreasonable dangerousness" under this approach, to prevail at trial Ferraro still would need to prove that the defective design proximately caused her injuries. See *Gilbertson v. Rolscreen Co.*, 501 N.E.2d 954, 957 (Ill. Ct. App. 1986) ("Even if we were to accept the plaintiff's argument that [the] 'product' was unreasonably dangerous, we would still be compelled to find for the defendants here, for the defendants have not been shown to be the legal cause of plaintiff's injury."); *Kleen v. Homak Mfg. Co., Inc.*, 749 N.E.2d 26, 31 (Ill. Ct. App. 2001) ("A plaintiff must prove that the alleged defect in the product was an actual [proximate] cause of the injuries rather than a mere condition.").

This is a separate inquiry under Illinois law, focused on whether the power adapter's defective design was a cause that "in natural or probable sequence, produced the injury complained of." IPI Civil (2006) No. 400.04 (Strict Liability—Proximate Cause—Definition). A jury might conclude that it was "natural or probable" for a dangerously hot power adapter to start a fire, but not "natural or probable" for it to burn a consumer who, for

whatever reason, failed to react when her skin came into direct contact with the hot surface. Liability might depend on how the jury resolved competing expert testimony regarding the incorporation of pain into one's dreams, or the jury's opinion of how unusual it is for consumers to use laptops "under [ab]normal physiological conditions" (e.g., under the influence of alcohol, prescription drugs, or sleeping aids). Proximate cause, however, "is generally a question of fact" to be resolved by the jury, not the court. *Young v. Bryco Arms*, 821 N.E.2d 1078, 1086 (Ill. 2004).

Whatever the merits of her arguments under the consumer-expectations test, however, Ferraro's failure to challenge the district court's risk-utility determination is fatal to her appeal. As we noted at the outset, there are two methods of proving unreasonable dangerousness under Illinois law, and a plaintiff may prevail under either the consumer-expectations test or the risk-utility test. As the Supreme Court of Illinois recently explained in *Mikolajczyk*, however, the existence of two tests raises the possibility that a "product could be found unreasonably dangerous under the consumer-expectation test, but risk-utility analysis could reveal that an alternative is not available, or that available alternatives are not feasible, or that the benefits of the design outweigh its inherent risks." 901 N.E.2d at 349. Where the two tests yield conflicting results, the *Mikolajczyk* court held, the risk-utility test "trumps," and the product is deemed not unreasonably dangerous (notwithstanding consumers' expectations that the product would be safer). *Id.* at 352. Unless "both parties' theories of the case are framed

entirely in terms of consumer expectations” (and Ferraro conceded at oral argument that this is not the case here), this “broader [risk-utility] test . . . is to be applied by the finder of fact.” *Id.*; IPI Civil (2006) No. 400.06A, Notes on Use.

The district court considered whether Ferraro could prevail under the risk-utility test and determined that “none of the risk-utility factors weigh in Ferraro’s favor.” As part of this analysis, the court acknowledged that two of Ferraro’s experts offered opinions regarding other potential designs for the power adapter, but it emphasized that neither expert “present[ed] any evidence discussing the *feasibility* of any of these alternatives.” The court also weighed “the magnitude and probability of the foreseeable risks of harm,” noted HP’s evidence of compliance with relevant regulatory standards, and highlighted the absence of any “history of severe burns associated with the HP power adapter.” This was enough for the district court to conclude that no reasonable jury could find for Ferraro under the risk-utility test.

As we said, we express no opinion on this part of the district court’s analysis. Ferraro’s “failure to advance on appeal any arguments with respect to this alternate ground means that any challenge to that ground is waived.” *Senese v. Chi. Area Int’l Bhd. of Teamsters Pension Fund*, 237 F.3d 819, 823 (7th Cir. 2001); *cf. Hess v. Reg-Ellen Mach. Tool Corp.*, 423 F.3d 653, 664-65 (7th Cir. 2005). Absent some argument to the contrary, we must accept that no reasonable jury could find for Ferraro under the

risk-utility test, which is the approach upon which HP would be entitled to insist at trial. HP thus remains entitled to summary judgment.

Because there is a sufficient and unchallenged ground of the district court's decision, we AFFIRM the judgment of the district court in favor of HP.

MANION, *Circuit Judge*, concurring. The district court ruled that the power adapter was not "unreasonably dangerous" under the risk-utility test, and as the court correctly concludes, the risk-utility test "trumps" the consumer-expectation test when the two tests yield conflicting results. *See Mikolajczyk v. Ford Motor Co.*, 901 N.E.2d 329, 349-53 (Ill. 2008). Because Ferraro did not appeal the district court's ruling on the risk-utility test, I agree with the court that we should affirm.

While I agree with the court's decision to affirm, I am not inclined to join with the court's discussion of the consumer-expectation test. Rather, I think that the district court correctly analyzed this issue. Under the consumer-expectation test, we examine whether the product "failed to perform as safely as an ordinary consumer would expect when used in an intended or reasonably foreseeable manner." *Lamkin v. Towner*, 563 N.E.2d

449, 457 (Ill. 1990). Ordinary consumers know that power adapters can become hot (including when laptops are used in beds and other comfortable places). Indeed, this common knowledge was demonstrated by Ferraro's daughter, who testified that her mother knew that power adapters can become hot. If HP's power adapter could become so hot that it would quickly cause a user to react and withdraw, a jury would likely be entitled to decide whether the power adapter is "unreasonably dangerous." But the power adapter in this case merely "performs as safely as an ordinary consumer would expect." Therefore, given the unusual circumstances that caused the injury in this case, a reasonable jury could not find that the power adapter is "unreasonably dangerous."