

Two of those jobs came from family. In the summer of 2014, Lackey took on remodeling his sister-in-law's house. *Id.* at 12. Remodeling, though, requires tools and there was one Lackey needed but did not have: a table saw. So Lackey's sister-in-law headed to Lowe's, where she picked out Robert Bosch Tool's SkilSaw 3310, a portable table saw that retails for around \$150. *Id.* at 12, 15. Lackey had used table saws before, but he read the SkilSaw's manual anyway. *Id.* at 9, 18–19. Confident he knew how to operate the saw, Lackey went to work cutting trim and window facings. *Id.* at 13, 18. After “a lot” of cuts, and four or five months on the job, Lackey wrapped things up at his sister-in-law's house. *Id.* at 14–15.

Up next was his sister's house. *Id.* at 3. For a while, this second job went as planned. Lackey set the SkilSaw up on the porch and used it to make dozens of cuts. *See id.* at 3, 14–15. But something went wrong on a chilly afternoon in February. *Id.* at 2–3, 23. Lackey had already used the saw several times that day. *Id.* at 23. Now he wanted to cut a pine board to frame a windowsill. *Id.* at 10, 24. But as Lackey pushed the board through the blade, he felt a bit of resistance and caught a waft of burning wood. R. 59-7 at 29 (Les Winter's deposition). Before he could react, the wood took off and his left hand slid under the guard and toward the blade, which made contact with his thumb and middle finger. R. 59-3 at 29.

The harm was done. Lackey's sister rushed him to a local hospital, and from there, Lackey was medevacked to the University of Kentucky. *Id.* at 4–5. Doctors did what they could, but there was only so much that could be done: Portions of Lackey's two fingers were amputated and only partially reattached, leaving nerve damage in his hand. R. 1-1 at 9–10 (complaint). To this day, Lackey says he cannot use a table saw because pushing wood with his left hand sends waves of pain up his injured thumb and into his hand. R. 59-3 at 31–32.

B.

Lackey has an idea about what went wrong. He says that the culprit was the SkilSaw's "self-aligning rip fence." See, e.g., R. 62 at 1. A rip fence is a metal bar that sits on the right side of the sawblade and serves as a guide against which the user slides the right edge of the wood as he cuts it. See R. 1-1 at 5; R. 59-5 at 3 (Les Winter's first expert report). Properly aligned, the fence helps keep the wood straight as it is fed through the saw. R. 59-5 at 3. But Lackey argues that the SkilSaw's rip fence has a flaw: It can be clamped to the front of the table and appear parallel with the blade even if not properly secured to the rear of the table. Id. Floating free in the back, the fence can skew relative to the sawblade during use, causing the wood to bind to the blade. R. 1-1 at 5; R. 59-5 at 3. That is what Lackey says happened here: The pine board suddenly stopped, he lost his grip, and his left hand flew forward toward the still-spinning blade. See R. 59-7 at 30.

Believing that a defect in the SkilSaw caused his injuries, Lackey sued Bosch Tool. R. 1-1.¹ As the parties do in these cases, Lackey and Bosch Tool lined up expert witnesses. Lackey retained Les Winter to opine on the saw's design and Dr. Nancy Grugle to testify about the warnings that accompanied it. To prove that his hand injury cost him future earnings, Lackey turned to economist Lawrence Lynch. Meanwhile, Bosch Tool hired engineering consultant Richard Otterbein to counter the testimony of Winter and Dr. Grugle.

The parties disagree over whether these proposed experts can satisfy the requirements of Federal Rule of Evidence 702. Lackey insists that Otterbein is not qualified to opine on the adequacy of the SkilSaw's warnings. See R. 52 (Lackey's Daubert motion). Bosch Tool says

¹ Lackey's complaint also named three Lowe's affiliates as defendants, but the Court granted summary judgment for those defendants after the parties agreed that Lackey would not pursue his claims against them. See R. 51 at 2.

the same about Dr. Grugle and adds that the testimony of all of Lackey's experts (Winter, Grugle, and Lynch) is too unreliable to put before a jury. See R. 58 (Bosch Tool's Daubert motion); R. 59 (memorandum in support). It is these challenges that occasion this opinion.

II.

When a party challenges an opponent's expert witness, the Court assumes the role of a gatekeeper to ensure that the witness's testimony is admissible. See *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 597 (1993); see also *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 149–50 (1999) (applying the Daubert inquiry to non-scientific testimony). Federal Rule of Evidence 702 guides the Court through this inquiry. Rule 702 specifies, first, that the witness must be “qualified as an expert by knowledge, skill, experience, training or education.” Fed. R. Evid. 702. If so qualified, the witness may testify in the form of an opinion provided, first, that his testimony is relevant, meaning that it will aid the jury, and second, that it is reliable, meaning it is grounded in sufficient data, reliable methods, and the facts of the case. Fed. R. Evid. 702(a)–(d); see also *In re Scrap Metal Antitrust Litig.*, 527 F.3d 517, 529 (6th Cir. 2008).

The Supreme Court in *Daubert* provided a list of factors for trial courts to consider as they evaluate the reliability of scientific testimony. *Daubert*, 509 U.S. at 593–94; see also *In re Scrap Metal*, 527 F.3d at 529. But that list is not exhaustive, nor any one factor dispositive. See *In re Scrap Metal*, 527 F.3d at 529. Rather, district courts have “considerable leeway” in determining whether expert testimony is admissible. See *Meridia Prods. Liab. Litig. v. Abbot Labs*, 447 F.3d 861, 868 (6th Cir. 2006) (quoting *Kumho Tire*, 526 U.S. at 152). But the burden remains on the proponent of the testimony to establish its admissibility by a preponderance of the evidence. *Pride v. Bic Corp.*, 218 F.3d 566, 578 (6th Cir. 2000).

Under normal circumstances, a district court may resolve a Daubert motion without holding a hearing. *Nelson v. Tenn. Gas Pipeline Co.*, 243 F.3d 244, 248–49 (6th Cir. 2001). A hearing is required only if the record is inadequate to decide the motion. See *Jahn v. Equine Servs., PSC*, 233 F.3d 382, 393 (6th Cir. 2000). In this case, the parties briefed the admissibility of the experts’ testimony and developed an extensive record that includes depositions. See *Nelson*, 243 F.3d at 249. Moreover, the parties agreed during a recent conference that the record and briefs are sufficient to resolve the Daubert challenges. R. 51 at 3. The Court concurs that a hearing is unnecessary to decide these issues. See *Barnette v. Grizzly Processing, LLC*, Civil No. 10-77-ART, 2012 WL 293305, at *2 (E.D. Ky. Jan. 31, 2012) (concluding under similar circumstances that there was an “adequate basis” from which to resolve the parties’ Daubert challenges without a hearing).

A.

First up is Lackey’s motion to exclude the warnings testimony of Richard Otterbein—the simplest of the four Daubert challenges presented. Bosch Tool hired Otterbein, a mechanical engineer, to review the safety of the SkilSaw 3310. Otterbein inspected the saw involved in Lackey’s accident, its product manual and safety labels, and Lackey’s deposition testimony. See R. 59-14 at 2–19. After all that, Otterbein offered a couple opinions. He concluded, first, that the rip fence was adequately designed and did not shift significantly when secured. R. 59-14 at 24. Second, Otterbein reasoned that additional warnings about proper operation of the fence would not have prevented Lackey’s injury because he read the manual, understood the instructions, and knew (how) to verify the fence’s alignment. *Id.* at 26, 29–30.

Lackey argues that this latter opinion is inadmissible. Lackey concedes that Otterbein’s engineering background qualifies him to assess the SkilSaw’s design. R. 52 at 3–4. But

Otterbein’s warnings testimony inspires a different tune. Lackey points out that his own expert, Dr. Grugle, has a Ph.D. in human factors and “has worked her entire career, researching, creating, and implementing warnings.” *Id.* at 3. By contrast, Otterbein would not even call himself an expert on warnings during his deposition. *Id.* at 6. Rightfully so, Lackey says: He has designed only six warnings and lacks “training on how individual users interpret warnings, where they expect to find them, and when extra warning is necessary.” *Id.* at 4.²

Despite Lackey’s protests, Otterbein is qualified to evaluate the SkilSaw’s warnings. Rule 702 “expressly contemplates that an expert may be qualified on the basis of experience.” *Dickenson v. Cardiac & Thoracic Surgery of E. Tenn., P.C.*, 388 F.3d 976, 980 (6th Cir. 2004) (quoting Fed. R. Evid. 702 advisory committee’s note (2000 Amendments)). To his credit, Otterbein has plenty of that. He has designed six safety warnings—for a table saw guard, for shapers and jointers, milling machines, and for pumps and rotating shafts. See R. 52-1 at 45; R. 61-2 ¶¶ 9–12. And he has an even longer track record evaluating safety warnings on power tools. As a consultant, Otterbein has performed at least eighteen safety evaluations for power-tools manufacturer Otto Martin. R. 61-2 ¶ 8. For the past sixteen years, too, Otterbein has served on the committee charged with overseeing the safety standard (ANSI/UL 987) that governs warnings on table saws like the SkilSaw 3310. *Id.* ¶¶ 12–15. Otterbein is also working through another committee to harmonize ANSI/UL 987 with international standards and, for a third task force, writing a section of a safety guide that addresses proper use of a rip fence. *Id.* ¶¶ 18, 20. Because he has written safety warnings, evaluated many more, and served for years

² Lackey also argues that Otterbein’s warnings testimony is unnecessarily cumulative because another of Bosch Tool’s experts will testify on the same subject. R. 52 at 4–5. This issue is best addressed at trial, after the Court has had an opportunity to observe what testimony the parties elicit. See, e.g., *Static Control Components, Inc. v. Lexmark Int’l, Inc.*, Civil Nos. 5:02-571, 5:04-84, 2007 WL 7083655, at *12 (E.D. Ky. May 12, 2007).

on committees that govern the warnings that should accompany table saws, it is safe to say that Otterbein has the knowledge necessary to testify regarding the SkilSaw's warnings.

Lackey makes much ado about Otterbein's modesty and lack of formal training, but neither disqualify him from evaluating the SkilSaw's warnings. Otterbein did not give away the farm at his deposition, as Lackey seems to think. Rather, he testified that he is "very comfortable" evaluating power tool warnings. R. 52-1 at 45 (Otterbein deposition). He only conceded (correctly) that it is the Court's job to determine whether he qualifies as an "expert." *Id.* As for his schooling, Otterbein does have less academic training in human-factors analysis than Dr. Grugle—a few undergraduate courses rather than a Ph.D. See *id.* at 44–45. But the Daubert inquiry is not a comparative one; the Court does not weigh one expert's qualifications against another, admitting only the witness with the shinier credentials. *Burgett v. Troy-Bilt LLC*, No. 12-25-ART, 2013 WL 3566355, at *3 (E.D. Ky. July 11, 2013). Nor is academic training the only way for a witness to gain the specialized knowledge required by Rule 702. In fact, courts have held in similar cases that engineers like Otterbein were qualified by experience to testify regarding product safety warnings even without academic specialization in the field of human factors. See *Nesbitt v. Sears, Roebuck & Co.*, 415 F. Supp. 2d 530, 541 (E.D. Pa. 2005); *Reynolds v. Crown Equip. Corp.*, No. 5:07CV00018, 2008 WL 2465032, at *16 (W.D. Va. June 16, 2008); cf. *Early v. Toyota Motor Co.*, 486 F. Supp. 2d 633, 637 (E.D. Ky. 2007) (holding mechanical engineer was not qualified to offer warnings opinion because he had never written or reviewed product manuals, let alone for the type of product at issue). The Court will deny Lackey's motion to exclude Otterbein's warnings testimony.

B.

Now, to Lackey’s experts. Dr. Nancy Grugle is a human-factors engineer with Robson Forensic, Inc. R. 62-10 at 1 (Dr. Grugle’s CV). Lackey retained Dr. Grugle to assess the safety instructions that accompanied the SkilSaw 3310—just as Bosch Tool did with Otterbein. Unlike Otterbein, though, Dr. Grugle concluded that the SkilSaw’s warnings were “incomplete and misleading.” R. 59-9 at 8. While the manual stressed that the rip fence must be aligned parallel to the blade, Dr. Grugle says that Bosch Tool should also have warned users to check whether the fence was properly clamped to the back of the table. *Id.* at 8–9. Bosch Tool’s failure to place a more explicit warning in the manual and a reminder on the fence itself, Dr. Grugle opines, rendered the saw defective and was a cause of Lackey’s injury. *Id.* at 9–10.

i.

Before even getting to Rule 702 and Daubert, Bosch Tool argues that the Court cannot consider one of Dr. Grugle’s reports because it was not properly disclosed. To explain, there was a problem with the alternative warning Dr. Grugle proposed in her first expert report. She suggested that Bosch Tool should have reminded users that the “[f]ront and rear clamps must be attached to set teeth before locking fence into position.” R. 59-8 at 9 (Dr. Grugle’s first expert report) (emphasis added). But the “set teeth” are actually located on the sawblade, and as Dr. Grugle later admitted, trying to attach the rip fence to the sawblade would be neither wise nor safe. See R. 59-10 at 16 (conceding this proposal was defective and unreasonably dangerous). By Dr. Grugle’s account, she meant “table,” not “set teeth.” See *id.* at 13, 15. And after one of Bosch Tool’s experts pointed out the mistake, Dr. Grugle fixed the “typo” by disclosing an amended report. See *id.* at 15; R. 59-9 (Dr. Grugle’s second expert report).

Bosch Tool says that this amendment came too late. In its view, by changing her proposed warning, Dr. Grugle issued a “new” opinion long after the window for making Rule 26(a)(2) disclosures had closed. See R. 59 at 14; see also R. 17 at 2 (setting disclosure deadlines). And while Federal Rule of Civil Procedure 26(e) sometimes requires parties to supplement their disclosures after that initial deadline has passed, it is not a backdoor for pressing new expert theories under the guise of supplementation. See R. 59 at 14 (citing *Solaia Tech. LLC v. ArvinMeritor, Inc.*, 361 F. Supp. 2d 797 (N.D. Ill. 2005)); see also *EEOC v. Freeman*, 778 F.3d 463, 467 n.7 (4th Cir. 2015). Bosch Tool therefore asks the Court to strike Dr. Grugle’s second report as untimely. *Id.*; see also Fed. R. Civ. P. 37(c)(1).³

The Court must decline the invitation. Rule 26(e) requires parties to “supplement or correct” a prior disclosure if they later learn that it was “incomplete or incorrect” in “some material respect.” Fed. R. Civ. P. 26(e)(1)(A). That is what happened here. Dr. Grugle discovered a mistake in her report—one at the heart of her alternative design—and she fixed it. See R. 59-10 at 15. Dr. Grugle’s amendments thus fall within the scope of what is permitted under Rule 26(e).

But even if that were not the case—and Dr. Grugle’s amendments amounted to an untimely “new” report—exclusion would still not be warranted. A party may use at trial information that it failed to timely disclose under Rule 26(a) or (e) if the late disclosure was “substantially justified” or “harmless.” Fed. R. Civ. P. 37(c)(1). Here, Bosch Tool was aware of Dr. Grugle’s error early on and examined her at length about the “typo” at her deposition.

³ Dr. Grugle’s second report was actually untimely regardless of whether it constituted proper supplementation. Per the Court’s scheduling order, any supplementation of expert disclosures was due August 15, 2016. R. 17. At the parties’ request, the Court extended the cut-off date for expert discovery to September 29. See R. 30 (motion); R. 32 (order). But that Order left the separate deadline for supplementation untouched. Compare R. 32, with R. 17. However, Bosch Tool chose not to raise this particular timeliness issue, so the Court will not address it now.

See R. 59-10 at 11–17. So Bosch Tool was able, well in advance of trial, to cure what little surprise accompanied Dr. Grugle’s mistake. See *Howe v. City of Akron*, 801 F.3d 718, 747–48 (6th Cir. 2015). Under these circumstances, the late disclosure of Dr. Grugle’s second report was harmless. See Fed. R. Civ. P. 37(c)(1); *Dickenson*, 388 F.3d at 983.

ii.

Back on the Daubert front, Bosch Tool first moves to exclude Dr. Grugle’s testimony on the ground that she is unqualified to offer it. See R. 59 at 14–18. While Dr. Grugle has a Ph.D. in human factors and experience designing product safety warnings, Bosch Tool argues that this general experience does not qualify her to answer the particular question in this case: whether the warnings that accompanied the SkilSaw 3310 were adequate. Dr. Grugle’s experience, Bosch Tool says, is limited to military hardware and software, not power tools, and she cannot easily leap between the two. *Id.* at 14–16. As proof, Bosch Tool points to Dr. Grugle’s reference to “set teeth” in her first proposed warning, arguing that it was less a typo than an indication that she fundamentally misunderstands how table saws work. *Id.* at 16–18.

Bosch Tool insists that Dr. Grugle cannot testify because she has no experience designing or evaluating safety warnings specific to table saws. See *id.* at 14–16. But that defines far too narrowly the expertise necessary for a witness to evaluate the safety warnings at issue in this case. Indeed, if Bosch Tool had its way, an experienced scientist could never testify consistently with Rule 702 if his opinions required him to apply the general principles of his field to a new iteration of the same type of problem that he had spent his career researching. That outcome would not square with the liberal manner in which courts construe Rule 702’s qualifications requirement in favor of admission. See *Pride*, 218 F.3d at 577. Instead, an expert (like Dr. Grugle) may bring her extensive knowledge of a field (say, human-

factors analysis) to bear on a range of scenarios (or, in this case, products). Provided, of course, that she applies those principles reliably to the facts of the case at hand. See, e.g., *Surles ex rel. Johnson v. Greyhound Lines, Inc.*, 474 F.3d 288, 294 (6th Cir. 2007); *Dilts v. United Grp. Servs., LLC*, 500 F. App'x 440, 444 (6th Cir. 2012); *Dewick v. Maytag Corp.*, 324 F. Supp. 2d 894, 897–98 (N.D. Ill. 2004) (rejecting an argument that a product safety expert was unqualified to testify because he had not “previously analyzed the specific safety issue of how a 10 month hold infant interacts with a broiler door,” because that argument took a “far too restrictive [] view of what Rule 702 calls for as to the scope of a witness’ expertise”).

Dr. Grugle is qualified to offer her warnings opinion testimony. She has a Ph.D. in human factors—i.e., “the study of human performance and behavior and the application of what we know about human performance and behavior to the design of products, systems, and environments.” R. 59-10 at 29.⁴ Dr. Grugle has also spent fifteen years as a practicing human-factors engineer. For eight of those years, she worked at Lockheed Martin developing human-factors evaluations and product-safety warnings for military communications gear, electronic equipment, and software. See R. 62-10; R. 62-11 at 2 (Dr. Grugle’s affidavit). Taken together, this academic training and professional experience has left Dr. Grugle well-versed in the areas of human-factors analysis and safety warning design. And that specialized knowledge is a sufficient foundation from which Dr. Grugle’s may evaluate the SkilSaw’s safety warnings.

⁴ For additional (similar) definitions, see William K. Holstein & Alphonse Chapanis, Human-Factors Engineering, Encyclopædia Britannica, <https://www.britannica.com/topic/human-factors-engineering> (last updated May 18, 2016), and Definitions of Human Factors and Ergonomics, Human Factors and Ergonomics Society, <https://www.hfes.org/Web/EducationalResources/HFEdefinitionsmain.html> (last visited Jan. 10, 2017).

But just because a witness is qualified to opine on a subject does not mean that her testimony will be reliable. Here, Bosch Tool takes on Dr. Grugle's opinions as much as her resume. In its view, Dr. Grugle's conclusion that inadequate warnings on the SkilSaw contributed to Lackey's injury is unduly speculative: Lackey said that he understood the saw's instructions and took steps to verify the rip fence was properly aligned, so how can Dr. Grugle say that more warnings would have altered how Lackey operated the saw? See R. 59 at 19. After all, she never tested whether her proposed warning would have worked. *Id.* at 19–20.

Dr. Grugle's testimony is not necessarily inconsistent with Lackey's account of his accident. Lackey has testified that he knew it was important to keep the rip fence parallel to the sawblade. See R. 59-3 at 7, 10. He was also aware that the clamp on the back of the fence had to be locked in place, and that he needed to check the fence's adjustment periodically—if he did not, things could go very wrong. See *id.* at 9, 16–18. The problem for Bosch Tool is that Lackey has also testified that he was not aware that he should have walked around the table to verify that the back clamp was in place and snug to the table. See *id.* at 16–18. As a result, Lackey checked the alignment from the front before his accident, but not the back. *Id.* at 18, 27. It remains possible, then, that another warning might have driven the point home and impressed upon Lackey the need to do more to ensure that the back clamp was secure.

The problem for Dr. Grugle is that this theory remains only that—and a highly speculative one to boot. Lackey has not demonstrated that Dr. Grugle has reliably applied the principles and methods of her discipline to the facts of this case, as it was his burden to do. See Fed. R. Evid. 702(d); *Pride*, 218 F.3d at 578. Dr. Grugle reached her opinion in the following fashion: She bought a used SkilSaw, reviewed its manual, adjusted some of its parts,

and then designed a safety warning to fit the specific accident scenario that Les Winter had described to her. See R. 62-11 at 2–3. But Dr. Grugle has done little to justify the inferences that she drew along the way: first, that Bosch Tool should have included additional warnings regarding the fence, and second, that these warnings would have prevented Lackey’s injury.

As for the first point, an expert in how humans interact with tools and safety warnings is certainly capable of explaining in a reliable manner why a product needed an additional warning. But the key is in the explanation. The expert must demonstrate how her general understanding of human-tool interaction reliably leads to the specific conclusion that the existing warnings on the product were inadequate. Dr. Grugle has not done that here. In her report and deposition, she cited factors to consider when designing product safety warnings. R. 59-9 at 6–8; R. 59-10 at 15. She also explained that there is a process that human-factors analysts use to determine which warnings take priority on a product. *Id.* at 21. However, Dr. Grugle neither explained how those criteria map onto this case nor applied that process here.

Nor has Dr. Grugle offered much in the way of explanation as to why the SkilSaw’s warnings were not sufficient. The SkilSaw manual already warned of the dangers posed by binding and kickback, and flagged that injury can occur if the fence is not kept parallel to the sawblade. R. 59-1 at 3, 40. More importantly, the manual even warned users to “[c]lamp [the] rip fence to check if it holds securely at front and rear,” told them to “verify if it self aligns and clamps tightly at the front and rear,” and explained how to tighten the fence’s clamping “if [the] rear is not clamped securely.” *Id.* at 40 (emphasis added). Dr. Grugle suggests that these warnings were inadequate—and thus, that the saw was defective—because they were not explicit enough and did not warn of the potential hazard at the moment the user interacts with the fence. See, e.g., R. 59-9 at 6–8; R. 59-10 at 19. But beyond those general (and seemingly

common sense) assertions, she offers no reasoned analysis or methodology. Dr. Grugle does not explain, for instance, why her proposed warnings, but not Bosch Tool's, were more explicit or comprehensible by the target audience—beyond the fact that they would appear on the rip fence itself. See R. 59-9 at 8. Nor does she explain how experienced users would have reacted to that additional warning, especially after using the saw dozens of times. The best she offers is that users need a reminder from time to time. See, e.g., R. 59-10 at 20. Perhaps. But when and why they need it, when that reminder will do the trick, Dr. Grugle does not explain.

With regard to the second inference, Dr. Grugle designed a proposed warning that she believes would have helped prevent Lackey's injury. See R. 59-9 at 9–10. But as things stand, that belief reflects more faith than science. If Dr. Grugle has not adequately explained why as a general matter the SkilSaw needed additional warnings, neither has she explained why their absence mattered in this particular case. Lackey testified that he read and understood all of the safety instructions in the SkilSaw's manual. See R. 59-3 at 18. As we know, that included warnings to verify that the fence was clamped securely in the front and rear, as well as instructions on how to tighten the clamping if it was not. R. 59-1 at 40. For her opinion to be reliable, Dr. Grugle again needed to offer some principled explanation for why these instructions were not sufficient to warn Lackey that he needed to verify that the fence was securely attached to the table. And again, she has not done so. Pointing out that Lackey got hurt without her warning will not do the trick; she needs to say why the principles of human-factors analysis tell her the additional warning would have worked here, not just point out that Lackey was injured in its absence. See *Rolen v. Hansen Beverage Co.*, 193 F. App'x 468, 473 (6th Cir. 2006). Nor is it helpful to stress, as Dr. Grugle has, that some users disregard or lose manuals, see R. 59-9 at 7, because Lackey did neither, see R. 59-3 at 18. Lackey used the

SkilSaw many times over a span of several months, and he knew the importance of verifying that the fence was clamped to both ends of the table. In the face of these facts, Dr. Grugle offers no reasoned basis for concluding that the extra warning would have been anything other than white noise to Lackey by the time of his accident. As a result, and to borrow from the Supreme Court, there is “simply too great an analytical gap between the data and the opinion” Dr. Grugle draws from it. *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997).

There are methods Dr. Grugle might have employed to shore up her opinion. She could have thoroughly familiarized herself with the SkilSaw and its operation. But Dr. Grugle’s “typo”—a substantial mistake that she repeated throughout her initial report, see R. 59-10 at 11–17—undermines the Court’s confidence that she did so. She could have reviewed other table saws and their manuals, or spoken to a range of table saw users; yet she reviewed only the SkilSaw 3310 and spoke only to Les Winter. See *id.* at 4–5, 8. Dr. Grugle could have examined the warnings that other table saws use and looked into whether they are associated with fewer rip fence malfunctions. She did neither. Or maybe Dr. Grugle could have tested her warning on focus groups—not a necessary step in every case, but one that would have given an empirical backbone to her testimony. Compare, e.g., *Dhillon v. Crown Corp.*, 269 F.3d 865, 870 (7th Cir. 2001), with *Pineda v. Ford Motor Co.*, 520 F.3d 237, 248 (3d Cir. 2008). Dr. Grugle ran no tests. Instead, her testimony returns to a common refrain: Her expertise can bridge the analytical gaps in her opinions because, as a human-factors expert, she knows how humans react to safety warnings. See, e.g., R. 59-10 at 19–20, 29. But assurances like these are not reassuring in a Daubert world. *Tamraz v. Lincoln Elec. Co.*, 620 F.3d 665, 671 (6th Cir. 2010) (“The ‘ipse dixit of the expert’ alone is not sufficient to permit the admission of an opinion.” (quoting *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997))).

Because Lackey has not bridged the gap between Dr. Grugle's general knowledge and her specific conclusions, she may not testify as to her evaluation of the SkilSaw's safety warnings.

This is not to say that Dr. Grugle may not testify at all. She may explain to the jury how, in the general course, human-factors principles inform the design of safety warnings. Knowing how manufacturers design and evaluate warnings will assist the jury in weighing the relative safety of the SkilSaw 3310. See Fed. R. Evid. 702(a). And Dr. Grugle has shown that such testimony would be grounded in the principles of her profession, in supporting literature, and in her professional experience. See, e.g., R. 59-9 at 7–8. Dr. Grugle may therefore testify generally about human-factors analysis and warning design, even though she may not opine on the adequacy of the SkilSaw's warnings or the role they played in Lackey's accident.

C.

Les Winter is an electrical engineer by training, but he knows a good deal about woodworking. R. 62-8 at 1. He owns his own woodworking shop, where he makes furniture, and he has operated table saws for a quarter of a century. *Id.* at 1–2. And for the past two decades, Winter has also served as an expert witness for Robson Forensic, where half of his practice now involves investigating injuries connected to woodworking machinery. *Id.* at 1.

Lackey asked Winter to investigate whether the SkilSaw 3310 was defectively designed. See R. 59-5 at 1. To facilitate that investigation, Lackey's counsel took possession of the SkilSaw and shipped it to Winter's office in New Jersey. See R. 59-3 at 21; R. 59-7 at 22; R. 59-14 at 25. Upon receipt, Lackey noted that the fence did not correctly engage the rear of the table, even when locked in the front. R. 59-5 at 3. As a result, the fence was, by Winter's measurement, raised 0.25" above the table and locked 0.25" skewed to the right. *Id.* at 3–4. Winter went on to test the fence's "self-aligning" features. He locked the rip fence down in

the front, applied five pounds of pressure to the back, and measured how much the fence shifted out of alignment—repeating the same measurements with each of several turns on the adjustment knob. See *id.* at 5–6. From all of this, Winter deduced that Lackey’s injury occurred when the fence, locked in the front but not secured in the back, shifted during use, causing the board to bind to the blade and Lackey to lose his grip. See *id.*; R. 59-7 at 30–31.

Bosch Tool calls Winter’s testimony unreliable. See R. 59 at 8–14. Three alleged flaws capture the company’s attention. First, Bosch Tool argues that Winter has not adequately tested how, if at all, the SkilSaw 3310’s rip fence “loosens up in ordinary use.” *Id.* at 10. Rather, he simply took a few measurements after forcing the fence out of alignment, something an ordinary user would not do. *Id.* at 10–11. Second, Winter refused to propose or test an alternative design for the rip fence. See *id.* at 11–12. And finally, Bosch Tool argues that Winter’s opinion that the condition of the fence had not changed between the time of the accident and his inspection is not based on sufficient facts or data. *Id.* at 12–14.

Winter may share with the jury his opinion that binding can result if the SkilSaw’s rip fence is not properly secured to the back of the table. Although Winter did not recreate the exact accident scenario at issue in this case, he physically examined and tested the fence’s operation. Like Otterbein, he took a hands-on approach, measuring the fence’s alignment as he increased the tension on the fence clamps. Compare R. 59-5 at 5–6, with R. 59-14 at 24–25. That method was sufficient under the circumstances to determine whether the fence can be locked without being secured in the rear and whether the fence will skew under moderate pressure as different levels of tension are applied to the clamps. Cf. *Mackenzie v. JLG Indus., Inc.*, No. 3:13-cv-01046-TBR, 2014 WL 7375546, at *6 (W.D. Ky. Dec. 29, 2014) (holding

expert was not required to recreate the subject accident involving a vertical lift because he physically examined the evidence and tested his malfunction theory by other means).

Of course, Bosch Tool disputes the accuracy and reproducibility of Winter's results: Otterbein says that Winter "introduced a forced bias on the fence before clamping it in position" and that he never measured the same degree of deflection as Winter. R. 59-14 at 25. But the Court may not assess the accuracy of an expert's opinion at this stage—only its relevance and reliability. *Daubert*, 509 U.S. at 594–95. If Bosch Tool believes Winter's calculations were off, it may raise those concerns through cross-examination. See *Jahn*, 233 F.3d at 392–93. What matters now is that the methodology behind Winter's first opinion is, even if imperfect, reasonably reliable and suited to the case. See *Best v. Lowe's Home Ctrs., Inc.*, 563 F.3d 171, 181 (6th Cir. 2009) ("Rule 702 does not require perfect methodology.").

But there are two aspects of Winter's testimony that he may not share at trial. First is his ultimate conclusion that the SkilSaw 3310 was defectively designed—i.e., that it was "unreasonably dangerous" and "defective and unsuited for its intended purpose." R. 59-5 at 8. To prove that a product is "unreasonably dangerous" as designed, Kentucky law requires a plaintiff to produce evidence that "a feasible alternative design" would have prevented the plaintiff's injuries. *Toyota Motor Corp. v. Gregory*, 136 S.W.3d 35, 42 (Ky. 2004). In this case, that evidence does not have to come from Winter; Lackey might have lined up other proof or another expert. Nor would it have been a problem, in and of itself, for Winter to embrace the ultimate issue of whether the SkilSaw is defective within the meaning of Kentucky law. See Fed. R. Evid. 704(a). The problem is instead that Winter's testimony that the saw is defectively designed implies that he knows of a safer way to design it. Yet Winter has refused

to propose an alternative design. See R. 59-7 at 27–29.⁵ He “[v]ery quickly” reviewed a Ryobi fence design at Home Depot, see *id.* at 28, and shared a few sketches from a book at his deposition, but he did not claim either represented his proposed alternative design, see *id.* at 27–29, 48–49. Without having proposed (and perhaps, tested) an alternative design, Winter cannot reliably opine that there was a feasible and safer way to design the SkilSaw’s rip fence. See, e.g., *Brown v. Raymond Corp.*, 432 F.3d 640, 648 (6th Cir. 2005).

Nor may Winter opine that the fence remained in the same condition from the time of the accident to its arrival at his office. Winter hints at this opinion in his first report, see R. 59-5 at 3, and Lackey defends it now, see R. 62 at 9–10. But there is little evidence in the record to justify confidence in this conclusion. See Fed. R. Evid. 702(b). Winter received the saw some ten months after the accident. R. 59 at 13; R. 59-7 at 21–22. In the interim, it passed through several hands and was stored in multiple locations. Even Lackey is not sure who moved the saw after the accident or what, if anything, they changed on it. See R. 59-3 at 6, 16, 21. For his part, Winter cannot recall exactly how the saw was shipped to him, or explain how its condition might have changed during transport. See R. 59-7 at 21–22. Not only that, but the rip fence was not even attached to the saw when Winter received it. *Id.* at 21. Winter even admitted during his deposition that the condition of the fence could have changed by the time he inspected it. *Id.* at 22. To allow Winter to now testify to the opposite conclusion, which he simply cannot know, would be to allow guesswork to masquerade before the jury as expert opinion. Dilts, 500 F. App’x at 445 (“An expert opinion must not rest purely on speculation.”).

⁵ Winter initially opined that the SkilSaw should have incorporated flesh-sensing (or SawStop) technology, see R. 59-5 at 6–7, but Lackey has since disavowed that claim, see R. 51.

D.

Last to the gate is Lawrence Lynch, Emeritus Professor of Economics at Transylvania University. R. 62-13 (Lynch's CV). At Lackey's request, Lynch has estimated the future earnings that Lackey lost as a result of his injury. R. 59-12 at 2. The arithmetic seems straightforward at first: Lackey's lost earnings are just his estimated annual earnings multiplied by the number of work years he lost as a result of his injury.⁶ See *id.* at 2–3. But like any formula, this one requires inputs. And two of those inputs—Lackey's work-life expectancy, both with and without his injury—are hard to track down.

Work-life expectancy is the average number of years someone in a given group will spend working (or actively looking for work) during the remainder of his or her life. See Edward M. Foster & Gary R. Skoog, *The Markov Assumption for Worklife Expectancy*, 17 *J. Forensic Econ.* 167, 167 (2004). To calculate that average in this case, Lynch used two pieces of data: the probability that a 29-year-old white male will survive each passing year (drawn from the National Vital Statistics Report) and the probability that same man will still be participating in the labor market as his age advances (drawn from the 2015 Gamboa-Gibson Worklife Tables). See R. 62-12 at 35–40 (Lynch deposition). Importantly, the Gamboa-Gibson tables offer labor participation rates for people with and without disabilities. See *id.*

With these data points in hand, Lynch returned to the math. Work life expectancy, he explained, is just the product of those two probabilities [$P(\text{survival}) \times P(\text{labor force})$], added together for each year there is a chance the person will be alive and working.⁷ See R. 62-12 at

⁶ Lynch employed the total offset method, which assumes that the rate of growth of income is identical to the discount rate. As a result, his model did not require adjustments for inflation or present-value calculations. See R. 59-12 at 2.

⁷ Meaning there is a year at some point in the future where the value becomes zero, either because there is no chance the person will still be alive, or more likely, because there is no chance the person will still be working at that age.

36. In this case, Lynch crunched the numbers two ways: first, as if Lackey had never been injured, and second, under the assumption that he has a “non-severe physical disability” within the meaning of the tables. See *id.* at 35–39; R. 59-12 at 3. The end result? Lynch determined that Lackey’s injury cost him between 10 and 11.7 years of his expected work life—depending on the future income bracket into which he fell. See *id.* at 3, tbl.1.⁸

Bosch Tool argues that the values Lynch plugged into his formula cannot be trusted. R. 59 at 24–25. The culprit? The Gamboa-Gibson tables. Bosch Tool alleges several problems: That the tables do not differentiate between minor and severe disabilities, nor between disabilities that affect a person’s ability to work and those that do not. *Id.* at 24. That those disabilities are also self-reported, not medically determined, and the tables do not factor in an individual’s type of employment. *Id.* at 25. And that the tables do not take into account people who self-report disabilities but later return to the workforce. *Id.* Finally, Bosch Tool points out, Lynch is not aware whether the tables have been peer reviewed, whether there is an error rate associated with their work-life projections, or even whether those projections can be tested. *Id.* All this, Bosch Tool argues, leaves Lynch’s calculation more of a blind guess than an informed estimate. See *id.* at 24–25.

The Gamboa-Gibson tables are apparently highly controversial. See, e.g., Thomas R. Ireland, *Why the Gamboa-Gibson Disability Work-Life Expectancy Tables Are Without Merit*, 15 J. Legal Econ. 105 (Apr. 2009).⁹ And even setting aside broader methodological concerns,

⁸ According to Lynch’s data, people with some college but no degree on average make more money and remain in the workforce longer than those with only a high school degree. As a result, Lynch’s work-life estimates differed slightly depending on assumptions about Lackey’s future education and income levels. See R. 59-12 at 3.

⁹ See also, e.g., Jerome M. Staller, *Problems with the ‘New Worklife Tables 2006’: Still Problematic Despite Changes*, Ctr. for Forensic Econ. Studies (Nov. 26, 2013), <http://cfes.com/problems-with-the-new-worklife-tables-2006-still-problematic-despite-changes/>.

it is not hard to see why Bosch Tool criticizes their application to this case: Lynch grouped Lackey with a wide range of “disabled” persons, with little to no regard for the type or permanency of the injury, work history, or the ability and intention to return to work. Then, Lynch compounded the problem by not considering Lackey’s own ability to return to work as a carpenter or to pursue a different field after he completes his college degree. Instead, Lynch ended up with a work-life projection that might, by his own concession, have worked equally well for Lackey and someone with a broken arm that will heal. See R. 62-12 at 78. So it would seem there is good reason to doubt the reliability of the tables and Lynch’s calculations.

As the party proffering Lynch’s testimony, Lackey was required to show by a preponderance of the evidence that the testimony is reliable. Nelson, 243 F.3d at 251. But Lackey fails to rebut the charges against Lynch’s use of the Gamboa-Gibson tables. Lackey begins his response by championing Lynch’s qualifications. R. 62 at 5–6, 12. But Bosch Tool does not challenge those qualifications. Next, Lackey says that “Lynch relies not only on Gibson Gamboa Life Tables, but numerous treatises and data from reliable sources, includ[ing] the Census Bureau.” Id. at 12. But Lackey does not identify those other sources, the data they yielded, or the role they played in Lackey’s calculation. As a result, the Court cannot tell whether those “reliable sources” make up for any of the alleged deficiencies in the Gamboa-Gibson tables. Nor does Lackey defend the reliability of the tables themselves: He instead distinguishes an older case that found the tables unreliable (that was an earlier version of the tables, he says) and cites a newer case that praises Dr. Gamboa’s qualifications. Id. at 12–13 (discussing Phillips v. Industrial Machine, 597 N.W.2d 377 (Neb. 1999), and Knitowski v. Gundy, No. A-5945-09T1, 2011 WL 5419859 (N.J. Super. Ct. App. Div. Nov. 10, 2011) (per curiam)). None of this, though, gives the Court confidence that the tables can be reliably

applied to the facts of this case. And that undercuts the admissibility of Lynch's testimony, because as Bosch Tool points out, the work-life projections Lynch took from the tables played a central role in each his lost earnings calculations. See R. 59-12 at 3; R. 62-12 at 35–39.

Perhaps there was a case to be made for the reliability of the Gamboa-Gibson tables and Lynch's calculations. But if there was, Lackey has not made it, and at the Daubert stage, the Court acts as gatekeeper, not advocate. It was not for want of opportunity: Lynch gave two reports and a deposition, and Lackey fully briefed the admissibility of Lynch's testimony. See R. 59-11; R. 59-12; R. 62-12; R. 62. Despite these chances, Lackey never adequately explained why the Gamboa-Gibson tables were a reliable basis for Lynch's work-life projections. The Court will thus grant Bosch Tool's motion to exclude Lynch's testimony.

III.

Accordingly, it is **ORDERED** as follows:

- (1) Lackey's motion to exclude the warnings testimony of Richard Otterbein, R. 52, is **DENIED**.
- (2) Bosch Tool's motion to exclude the testimony of Dr. Nancy Grugle, R. 58, is **GRANTED IN PART** and **DENIED IN PART**. Dr. Grugle may testify generally about human-factors analysis and how it informs the design of product safety warnings. But Dr. Grugle may not testify that (a) the warnings that accompanied the SkilSaw 3310 were inadequate or defective or (b) that the inadequacy of those warnings contributed to Lackey's injury.
- (3) Bosch Tool's motion to exclude the testimony of Les Winter, R. 58, is **GRANTED IN PART** and **DENIED IN PART**. Winter may testify as to his opinion that the SkilSaw's rip fence can shift during use, causing binding.

However, Winter may not testify that the rip fence was defectively designed or unreasonably dangerous. Nor may he testify that the condition of the rip fence remained unchanged between the time of the accident and his inspection.

- (4) Bosch Tool's motion to exclude the testimony of Lawrence Lynch, R. 58, is **GRANTED.**

This the 12th day of January, 2017.



Signed By:

Amul R. Thapar

AT

United States District Judge