

SUPREME COURT OF NORTH CAROLINA

State v. McGrady

368 N.C. 880 (2016) · No. No. 72PA14 · Decided June 10, 2016

SUMMARY

The Supreme Court of North Carolina held that the 2011 amendment to North Carolina Rule of Evidence 702(a) incorporated the federal Daubert standard, including the principles from Daubert, Joiner, and Kumho Tire. The Court affirmed the defendant’s first-degree murder conviction and concluded that the trial court did not abuse its discretion by excluding proposed expert testimony concerning the use of force and self-defense.

CASE DETAILS

COURT	Supreme Court of North Carolina
WRITING FOR THE COURT	Martin, Chief Justice
JURISDICTION	North Carolina
DECIDED	June 10, 2016
DOCKET	No. 72PA14
DISPOSITION	affirmed
PROCEDURAL POSTURE	Defendant sought discretionary review of a unanimous Court of Appeals decision finding no error in his first-degree murder conviction and sentence. The Supreme Court granted review to determine whether the 2011 amendment to North Carolina Rule of Evidence 702(a) incorporated the Daubert standard and whether the trial court abused its discretion by excluding defendant's proposed expert testimony concerning use of force, stress responses, and reaction times.
STANDARD OF REVIEW	The trial court's Rule 702(a) evidentiary ruling is reviewed for abuse of discretion. Factual findings supporting the ruling are binding on appeal if supported by evidence; the legal conclusion whether the testimony satisfies Rule 702(a)'s qualification, relevance, and reliability requirements is reviewed for abuse of discretion.
PRECEDENTIAL VALUE	Published precedential opinion of the Supreme Court of North Carolina
PARTIES	Charles Anthony McGrady v. State of North Carolina

TOPICS

expert testimony

daubert standard

evidence

standard of review

self defense

PRACTICE AREAS

criminal law

evidence

appellate procedure

QUESTIONS PRESENTED

1. Whether the 2011 amendment to North Carolina Rule of Evidence 702(a), which added requirements concerning sufficient facts or data and reliable principles, methods, and application, incorporated the federal Daubert standard and its related decisions.
2. Whether the trial court abused its discretion by excluding all of defendant's proposed expert testimony concerning use-of-force variables, sympathetic nervous system responses, and reaction times.

HOLDINGS

1. The 2011 amendment to North Carolina Rule of Evidence 702(a) incorporated the federal Daubert standard, including the principles articulated in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, *General Electric Co. v. Joiner*, and *Kumho Tire Co. v. Carmichael*.
2. Expert testimony is admissible under amended Rule 702(a) only if it satisfies the requirements of qualification, relevance, and reliability; the reliability inquiry requires consideration of whether the testimony is based on sufficient facts or data, is the product of reliable principles and methods, and applies those principles and methods reliably to the facts.
3. A trial court's decision to admit or exclude expert testimony under Rule 702(a) is reviewed for abuse of discretion.
4. The trial court did not abuse its discretion by excluding all of Cloutier's proposed expert testimony under Rule 702(a).

KEY QUOTATIONS

“In other words, North Carolina’s Rule 702(a) now incorporates the standard from the Daubert line of cases.” (Opinion at -11-)

“But the amendment did change the level of rigor that our courts must use to scrutinize expert testimony before admitting it.” (Opinion at -17-)

“In sum, our review of the record in this case demonstrates that the trial court properly fulfilled its gatekeeping role.” (Opinion at -29-)

FACTUAL BACKGROUND

Charles Anthony McGrady shot and killed his cousin James Allen Shore Jr. during an armed confrontation near their homes. McGrady admitted firing approximately seven shots, several of which struck Shore in the back, but claimed he acted in lawful defense of himself and his adult son. McGrady sought to present expert testimony

about use-of-force cues, the fight-or-flight response, and reaction times, but the trial court excluded the testimony under Rule 702(a).

PROCEDURAL HISTORY

Defendant was indicted for first-degree murder, tried noncapitally, convicted by a unanimous jury, and sentenced to life imprisonment without parole. The Court of Appeals found no error in the conviction and upheld the exclusion of the proposed expert testimony. The Supreme Court of North Carolina granted discretionary review and affirmed the Court of Appeals.

DISPOSITION

affirmed

CASES CITED

- Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993)
- General Electric Co. v. Joiner, 522 U.S. 136 (1997)
- Kumho Tire Co. v. Carmichael, 526 U.S. 137 (1999)
- Howerton v. Arai Helmet, Ltd., 358 N.C. 440, 597 S.E.2d 674 (2004)
- State v. Scoggin, 236 N.C. 19, 72 S.E.2d 54 (1952)
- State v. Smith, 312 N.C. 361, 323 S.E.2d 316 (1984)
- Weisgram v. Marley Co., 528 U.S. 440 (2000)
- United States v. Diaz, 300 F.3d 66 (1st Cir. 2002)
- Cooper v. Smith & Nephew, Inc., 259 F.3d 194 (4th Cir. 2001)
- United States ex rel. Miller v. Bill Harbert International Construction, Inc., 608 F.3d 871 (D.C. Cir. 2010), cert. denied, 563 U.S. 987 (2011)
- Burrell v. Sparkles Reconstruction Co., 189 N.C. App. 104, 657 S.E.2d 712, disc. rev. denied, 362 N.C. 469, 665 S.E.2d 738 (2008)
- State v. King, 366 N.C. 68, 733 S.E.2d 535 (2012)
- State v. Riddick, 315 N.C. 749, 340 S.E.2d 55 (1986)
- State v. Lasiter, 361 N.C. 299, 643 S.E.2d 909 (2007)
- White v. White, 312 N.C. 770, 324 S.E.2d 829 (1985)
- Cincinnati Butchers Supply Co. v. Conoly, 204 N.C. 677, 169 S.E. 415 (1933)
- Bourjaily v. United States, 483 U.S. 171 (1987)
- Krupski v. Costa Crociere S.p.A., 560 U.S. 538 (2010)
- Tome v. United States, 513 U.S. 150 (1995)
- State v. Jones, 359 N.C. 832, 616 S.E.2d 496 (2005)
- State ex rel. Cobey v. Simpson, 333 N.C. 81, 423 S.E.2d 759 (1992)
- State v. Hosey, 318 N.C. 330, 348 S.E.2d 805 (1986)

- State v. Bogle, 324 N.C. 190, 376 S.E.2d 745 (1989)
- State v. Chul Yun Kim, 318 N.C. 614, 350 S.E.2d 347 (1986)

OPINION

MARTIN, J.

IN THE SUPREME COURT OF NORTH CAROLINA No. 72PA14 Filed 10 June 2016 STATE OF NORTH CAROLINA v. CHARLES ANTHONY McGRADY On discretionary review pursuant to N.C.G.S. § 7A-31 of a unanimous decision of the Court of Appeals, 232 N.C. App. 95, 753 S.E.2d 361 (2014), finding no error after appeal of a judgment entered on 8 August 2012 by Judge R. Stuart Albright in Superior Court, Wilkes County.

Heard in the Supreme Court on 17 March 2015. Roy Cooper, Attorney General, by Gary R. Govert, Assistant Solicitor General, and Robert C. Montgomery, Senior Deputy Attorney General, for the State. M. Gordon Widenhouse Jr. for defendant-appellant. Zaytoun Law Firm, PLLC, by Matthew D. Ballew; Robert P. Mosteller, UNC Chapel Hill School of Law; Donald H. Beskind, Duke University School of Law; Patterson Harkavy LLP, by Burton Craige; and Office of the Appellate Defender, by John F. Carella, Assistant Appellate Defender, for North Carolina Advocates for Justice, amicus curiae.

McGuinness Law Firm, by J. Michael McGuinness, for National Association of Police Organizations, Southern States Police Benevolent Association, and North Carolina Police Benevolent Association, amici curiae. MARTIN, Chief Justice. This appeal arises from defendant Charles Anthony McGrady's first-degree murder conviction for the shooting death of his cousin James Allen Shore Jr. STATE V. MCGRADY Opinion of the Court Defendant admitted to shooting Mr. Shore.

The central issue at trial was whether defendant shot and killed Mr. Shore in lawful defense of himself and his adult son Brandon McGrady. Defendant sought to introduce expert witness testimony on this issue. We allowed discretionary review to address whether amended Rule 702(a) of the North Carolina Rules of Evidence now incorporates the standard set forth in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), and whether the trial court abused its discretion in excluding the testimony of defendant's expert under the amended rule.

I Defendant and his cousin Mr. Shore lived in mobile homes across the street from each other in Hays, North Carolina. Various other members of their family also lived nearby. The two men had a combative history, having engaged in multiple verbal and physical altercations. Defendant testified that, on the evening of 19 December 2011, Mr. Shore threatened to kill defendant and his family.

The following day, defendant was driving his golf cart between his home and his mailbox with his son Brandon in the passenger seat. Brandon had an AR-15 assault rifle with him, and defendant

had a 9-millimeter Beretta handgun in his pocket. Defendant was also carrying an audio cassette recorder.

After stopping at his mailbox and starting to drive toward Brandon's mailbox down the road, defendant saw Mr. Shore in the distance. Defendant testified that -2- STATE V. MCGRADY Opinion of the Court Mr. Shore began yelling at him and moving toward the golf cart. Defendant turned on the tape recorder and stopped the golf cart.

The tape recorder captured much of the argument that ensued between defendant and Mr. Shore. Defendant accused Mr. Shore of threatening to kill his family the night before. Mr. Shore accused defendant of shining a spotlight on him that same night. (A witness testified that defendant had previously shined an assault rifle's laser sight on Mr. Shore.) Defendant said to Mr. Shore, "You stole from me, you motherf---er!" After more arguing, Mr. Shore said to defendant, "Get over here and get you some!" Defendant responded, "I'll put you in the grave, man; I'll put you in the morgue, motherf---er!" Brandon testified that Mr. Shore then walked up to the golf cart, put his hands on the roof, and began shaking the cart.

According to defendant, as the argument continued, Mr. Shore threatened Brandon and defendant with a knife, causing defendant to ask Brandon to hand him the AR-15 in an attempt to "defuse the situation." Defendant testified that, as Brandon was handing the rifle to him, Mr. Shore dove into the golf cart, grabbed the rifle, and pulled it away from defendant.

Another witness testified that Mr. Shore tried to grab the rifle but did not take it from defendant. According to defendant, Brandon exited the golf cart and began moving toward Mr. Shore, who then pointed the rifle at Brandon's head. Defendant exited the golf cart, removed the Beretta pistol from his pocket, and fired it approximately seven times at Mr. Shore, hitting him four or five times in the front and side and twice in the back.

Defendant then said, "What -3- STATE V. MCGRADY Opinion of the Court about now, Bobo? What about now, motherf---er?"¹ Mr. Shore died from these gunshot wounds before he could be taken to the hospital. Defendant was indicted for first-degree murder and tried noncapitally. At trial, defendant claimed that he shot Mr. Shore in defense of himself and his son. He sought to call Dave Cloutier as an expert in "the science of the use of force" to testify in support of this claim.

The State objected, and the trial court held a voir dire hearing. After hearing Mr. Cloutier's voir dire testimony and reviewing his expert report, the trial court sustained the State's objection and ruled that Mr. Cloutier's expert testimony did not meet the standard for admissibility set forth in Rule 702(a) of the North Carolina Rules of Evidence. Following trial, the jury unanimously found defendant guilty of first-degree murder, and the trial court sentenced him to life in prison without the possibility of parole.

Defendant entered notice of appeal in open court. Before the Court of Appeals, defendant argued that the trial court ignored the liberal standard that Rule 702(a) establishes and abused its discretion in excluding Mr. Cloutier's proposed testimony. *State v. McGrady*, 232 N.C. App. 95, 103, 753 S.E.2d 361, 368 (2014).

The Court of Appeals held that the 2011 amendment to Rule 702(a) effectively adopted the standard set forth in *Daubert*, id. at 101, 753 S.E.2d at 1. It is somewhat unclear whether defendant called Mr. Shore "Bobo" or "Bozo." Defendant's own testimony is not consistent on this point.

We opt to use "Bobo" because defendant testified that "Bobo" was a nickname for James Shore, whom he also called Jimmy or Jimbo. -4- *STATE V. MCGRADY* Opinion of the Court 367, and that the trial court did not abuse its discretion in applying that standard, id. at 105-06, 753 S.E.2d at 369-70.

The Court of Appeals rejected defendant's arguments and found no error in defendant's conviction. Id. at 106, 110-11, 753 S.E.2d at 370, 373. We allowed defendant's petition for discretionary review and now affirm the decision of the Court of Appeals.² II Our first task is to determine the correct interpretation of Rule 702(a) of the North Carolina Rules of Evidence, as it was amended in 2011.

We hold that the 2011 amendment adopts the federal standard for the admission of expert witness testimony articulated in the *Daubert* line of cases. The General Assembly amended North Carolina's rule in 2011 in virtually the same way that the corresponding federal rule was amended in 2000. It follows that the meaning of North Carolina's Rule 702(a) now mirrors that of the amended federal rule.

The General Assembly has the power to create and modify rules of evidence for the superior and district courts. See N.C. Const. art. IV, § 13(2); *State v. Scoggin*, 236 N.C. 19, 23, 72 S.E.2d 54, 56-57 (1952) (deferring to the General Assembly for the 2. Defendant also argued before the Court of Appeals that the trial court erred in excluding testimony from another witness regarding Mr. Shore's "proclivity toward violence." Id. at 106, 753 S.E.2d at 370.

He further claimed that the exclusion of testimony from Mr. Cloutier and this other witness violated his Sixth Amendment right to present a defense. Id. at 106, 110-11, 753 S.E.2d at 370, 373. The Court of Appeals rejected these arguments. Id. Because defendant did not seek discretionary review of these issues, they are not before us. -5- *STATE V. MCGRADY* Opinion of the Court creation of a new rule of evidence); see also *State v. Smith*, 312 N.C.

361, 366, 323 S.E.2d 316, 319 (1984) (recognizing that the General Assembly can create new exceptions to the hearsay rule). When the General Assembly amended Rule 702(a) in 2011, its federal counterpart already had a settled meaning.

In 1993, the United States Supreme Court interpreted Rule 702 of the Federal Rules of Evidence in *Daubert*. See 509 U.S. at 588-98. The Court held that Rule 702 required federal district courts to determine, before they admitted expert testimony, “that any and all scientific testimony or evidence admitted is not only relevant, but reliable.” *Id.* at 589. This determination entailed “a preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid and of whether that reasoning or methodology properly can be applied to the facts in issue.” *Id.* at 592-93.

According to the Court, Rule 702 gave federal district courts a “gatekeeping role.” *Id.* at 597. The Court further clarified the *Daubert* standard in *General Electric Co. v. Joiner*, 522 U.S. 136 (1997), and *Kumho Tire Co. v. Carmichael*, 526 U.S. 137 (1999).

The Court indicated that these three cases established “exacting standards of reliability” for the admission of expert testimony. *Weisgram v. Marley Co.*, 528 U.S. 440, 455 (2000). In 2000, the Supreme Court adopted an amendment to Federal Rule 702. Amendments to Federal Rules of Evidence, 529 U.S. 1189, 1191, 1195 (2000). This amendment added three requirements governing the admission of expert testimony to the text of the rule: “(1) the testimony is based upon sufficient facts or data, (2) the -6- STATE V. MCGRADY Opinion of the Court testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.” *Id.* at 1195.

The new text did not expressly mention *Daubert*, *Joiner*, or *Kumho*, or use precise language from those three cases. But the note from the Advisory Committee on the Federal Rules of Evidence that accompanied the amendment stated that the federal rule was amended to incorporate the standard delineated by those cases.³ See Fed. R. Evid. 702 advisory committee’s note to 2000 amendment (“Rule 702 has been amended in response to *Daubert*... and to the many cases applying *Daubert*, including *Kumho*....”) (also citing, *inter alia*, *Joiner*).

And federal appellate courts confirmed that the changes to Rule 702 had precisely that effect. See, e.g., *United States v. Diaz*, 300 F.3d 66, 73 (1st Cir. 2002) (“The three numbered criteria were added to Rule 702 in a recent amendment codifying the Supreme Court’s decision in *Daubert*... and its progeny, including *Kumho*....”); *Cooper v. Smith & Nephew, Inc.*, 259 F.3d 194, 199 n.1 (4th Cir.

2001) (“As the Advisory Committee Notes indicate, the amendment to Rule 702 is consistent with the district court’s gatekeeping function as articulated in *Daubert* and *Kumho Tire*.”); see also *United States ex rel. Miller v. Bill Harbert Int’l Constr., Inc.*, 608 F.3d 871, 894 (D.C. Cir. 3 The United States Supreme Court has looked to advisory committee notes to help clarify ambiguities in the Federal Rules of Evidence and the Federal Rules of Civil Procedure.

See, e.g., *Krupski v. Costa Crociere S.p.A.*, 560 U.S. 538, 550-51 (2010) (using advisory committee notes to interpret Rule 15(c) of the Federal Rules of Civil Procedure); *Tome v. United States*, 513 U.S. 150, 160-63 (1995) (plurality opinion) (using advisory committee notes to interpret Rule 801 of the Federal Rules of Evidence). -7- *STATE V. MCGRADY* Opinion of the Court 2010) (per curiam) (“In 2000, the Supreme Court amended Rule 702 to reflect the Daubert line of cases, outlining general standards that the trial court must use to assess the reliability and relevance of testimony.”), cert. denied, 563 U.S. 987 (2011).

Thus, the meaning of the federal rule as amended was clear: It now codified the Daubert standard. The original text of North Carolina’s Rule 702 was largely identical to the original text of Federal Rule 702. Compare N.C.G.S. § 8B-1, Rule 702 (1983), with 28 U.S.C. app. Rule 702 (1976). But the judicial construction of North Carolina’s rule took a different path.

In the wake of the Daubert line of cases, this Court addressed whether North Carolina followed the Daubert approach. See *Howerton v. Arai Helmet, Ltd.*, 358 N.C. 440, 455, 597 S.E.2d 674, 684 (2004). In *Howerton*, we examined the development of Rule 702(a)4 in North Carolina law and concluded that “North Carolina is not, nor has it ever been, a Daubert jurisdiction.” *Id.* at 469, 597 S.E.2d at 693.

Our cases instead delineated “a three-step inquiry for evaluating the admissibility of expert testimony: (1) Is the expert’s proffered method of proof sufficiently reliable as an area for expert testimony? (2) Is the witness testifying at trial qualified as an expert in that area of testimony?

(3) Is the expert’s testimony relevant?” *Id.* at 458, 597 S.E.2d at 686 (citations omitted). 4 What had been North Carolina’s Rule 702 became Rule 702(a) in 1995, when the General Assembly added subsections 702(b) through (h). Act of June 20, 1995, ch. 309, sec. 1, 1995 N.C. Sess. Laws (1995 Reg. Sess.) 611, 611-13 (codified at N.C.G.S. § 8C-1, Rule 702 (2015)). -8- *STATE V. MCGRADY* Opinion of the Court Though this test “share[s] obvious similarities with the principles underlying Daubert, application of the North Carolina approach is decidedly less mechanistic and rigorous than the ‘exacting standards of reliability’ demanded by the federal approach.” *Id.* at 464, 597 S.E.2d at 690 (quoting *Weisgram*, 528 U.S. at 455).

This Court was concerned that the federal “gatekeeping” approach required judges to evaluate “the substantive merits of the scientific or technical theories undergirding an expert’s opinion.” *Id.* at 464, 597 S.E.2d at 690.

We found this gatekeeping role especially troubling when pretrial Daubert proceedings became “case-dispositive,” as parties could use them to exclude expert testimony necessary to prove an element of a claim and thereby “bootstrap motions for summary judgment that otherwise would not likely succeed.” *Id.* at 467, 597 S.E.2d at 691. North Carolina law, we concluded, favored liberal admission of expert witness testimony and left the role of determining its weight to the jury.

Id. at 468-69, 597 S.E.2d at 692-93. In 2011, the General Assembly added language to North Carolina's Rule 702(a) that was virtually identical to the 2000 amendment to the federal rule. Our rule now reads in relevant part: (a) If scientific, technical or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion, or otherwise, if all of the following apply: (1) The testimony is based upon sufficient facts or data. -9- STATE V. MCGRADY Opinion of the Court (2) The testimony is the product of reliable principles and methods.

(3) The witness has applied the principles and methods reliably to the facts of the case. Act of June 17, 2011, ch. 283, sec. 1.3, 2011 N.C. Sess. Laws (2011 Reg. Sess.) 1048, 1049 (codified at N.C.G.S. § 8C-1, Rule 702(a)) (new text in italics). When we interpret the North Carolina Rules of Evidence, as when we interpret other statutes, "[t]he cardinal principle... is to discern the intent of the legislature." State v. Jones, 359 N.C.

832, 835, 616 S.E.2d 496, 498 (2005). In determining this intent, "we presume that the legislature acted with full knowledge of prior and existing law and its construction by the courts." State ex rel. Cobey v. Simpson, 333 N.C. 81, 90, 423 S.E.2d 759, 763 (1992). And when the General Assembly adopts language or statutes from another jurisdiction, "constructions placed on such language or statutes are presumed to be adopted as well." Sheffield v. Consol.

Foods Corp., 302 N.C. 403, 427, 276 S.E.2d 422, 437 (1981). The commentary to the North Carolina Rules of Evidence supports this presumption in the specific context of the Rules: A substantial body of law construing [the Federal Rules of Evidence] exists and should be looked to by the courts for enlightenment and guidance in ascertaining the intent of the General Assembly in adopting these rules.

Uniformity of evidence rulings in the courts of this State and federal courts is one motivating factor in adopting these rules and -10- STATE V. MCGRADY Opinion of the Court should be a goal of our courts in construing those rules that are identical. N.C. R. Evid. 102 commentary.5 By adopting virtually the same language from the federal rule into the North Carolina rule, the General Assembly thus adopted the meaning of the federal rule as well.

In other words, North Carolina's Rule 702(a) now incorporates the standard from the Daubert line of cases. Whatever this Court's reservations about the Daubert standard were, see Howerton, 358 N.C. at 464-69, 597 S.E.2d at 690-93, the General Assembly has made it clear that North Carolina is now a Daubert state. This is not to say, however, that the 2011 amendment to Rule 702(a) abrogated all North Carolina precedents interpreting that rule.

Our previous cases are still good law if they do not conflict with the Daubert standard. Nor does this mean that the interpretation of Rule 702(a) is now a federal question. The proper interpretation

of Rule 702(a) remains an issue of state law, and any future judicial gloss by the federal courts on the meaning of Federal Rule 702 will not dictate the meaning of the North Carolina rule.

Federal case law that continues to refine the Daubert standard may, of course, be helpful. But unlike Daubert, Joiner, and Kumho—all of which were 5 While the commentaries printed with the Rules of Evidence do not have the force of law, we have repeatedly given them “substantial weight in our efforts to comprehend legislative intent.” *State v. Hosey*, 318 N.C.

330, 338 n.2, 348 S.E.2d 805, 810 n.2 (1986); accord *State v. Bogle*, 324 N.C. 190, 202-03 & 203 n.5, 376 S.E.2d 745, 752 & n.5 (1989); *State v. Chul Yun Kim*, 318 N.C. 614, 620 & n.3, 350 S.E.2d 347, 351 & n.3 (1986). -11- *STATE V. MCGRADY* Opinion of the Court decided before the General Assembly amended North Carolina’s rule in 2011—this case law could not have been incorporated into the amended state rule.

Here, both parties seem to agree that the 2011 amendment to North Carolina’s Rule 702(a) incorporated the standard announced in Daubert itself. Defendant, however, seems to overlook the fact that the 2000 amendment to the federal rule codified more than Daubert alone.

As explained above, the federal rule’s amended language codified not only Daubert, but also Joiner and Kumho. To determine the proper application of North Carolina’s Rule 702(a), then, we must look to the text of the rule, to all three of these United States Supreme Court cases, and also to our existing precedents, as long as those precedents do not conflict with the rule’s amended text or with Daubert, Joiner, or Kumho.

Rule 702(a) has three main parts, and expert testimony must satisfy each to be admissible.⁶ First, the area of proposed testimony must be based on “scientific, technical or other specialized knowledge” that “will assist the trier of fact to understand the evidence or to determine a fact in issue.” N.C. R. Evid. 702(a). This is the relevance inquiry discussed in both Daubert and Howerton.

See Daubert, 509 U.S. at 591; Howerton, 358 N.C. at 462, 597 S.E.2d at 688-89. As with any evidence, the testimony must meet the minimum standard for logical relevance that ⁶ For simplicity’s sake, we address these three parts in the order in which they appear in the rule. That is not to say, however, that a trial court must necessarily do the same. Cf. Howerton, 358 N.C. at 458-62, 597 S.E.2d at 686-89 (discussing reliability first, then qualifications, and then relevance). -12- *STATE V. MCGRADY* Opinion of the Court Rule 401 establishes.

See Howerton, 358 N.C. at 462, 597 S.E.2d at 688 (“[W]e defer to the traditional definition of relevancy set forth in the North Carolina Rules of Evidence....” (citing N.C.G.S. § 8C-1, Rule 401 (2003))). In other words, the testimony must “relate to [an] issue in the case.” Daubert, 509 U.S. at 591 (quoting 3 Jack B. Weinstein & Margaret A. Berger, *Weinstein’s Evidence* ¶ 702[02], at 702-18 (1988)).

But relevance means something more for expert testimony. In order to “assist the trier of fact,” N.C. R. Evid. 702(a), expert testimony must provide insight beyond the conclusions that jurors can readily draw from their ordinary experience. An area of inquiry need not be completely incomprehensible to lay jurors without expert assistance before expert testimony becomes admissible.

To be helpful, though, that testimony must do more than invite the jury to “substitut[e] [the expert’s] judgment of the meaning of the facts of the case” for its own. *Burrell v. Sparkkles Reconstr. Co.*, 189 N.C. App. 104, 114, 657 S.E.2d 712, 719, disc. rev. denied, 362 N.C. 469, 665 S.E.2d 738 (2008); accord N.C. R. Evid. 704 commentary (“These provisions [including Rule 702] afford ample assurance[s] against the admission of opinions which would merely tell the jury what result to reach....” (quoting Fed.

R. Evid. 704 advisory committee’s note)). Second, the witness must be “qualified as an expert by knowledge, skill, experience, training, or education.” N.C. R. Evid. 702(a). This portion of the rule focuses on the witness’s competence to testify as an expert in the field of his or her proposed testimony. Expertise can come from practical experience as much as from -13- *STATE V. MCGRADY* Opinion of the Court academic training.

Howerton, 358 N.C. at 462, 597 S.E.2d at 688. Whatever the source of the witness’s knowledge, the question remains the same: Does the witness have enough expertise to be in a better position than the trier of fact to have an opinion on the subject? *Id.* at 461, 597 S.E.2d at 688.

The rule does not mandate that the witness always have a particular degree or certification, or practice a particular profession. *Id.* at 461-62, 597 S.E.2d at 688. But this does not mean that the trial court cannot screen the evidence based on the expert’s qualifications. Cf. *Daubert*, 509 U.S. at 589.

In some cases, degrees or certifications may play a role in determining the witness’s qualifications, depending on the content of the witness’s testimony and the field of the witness’s purported expertise. As is true with respect to other aspects of Rule 702(a), the trial court has the discretion to determine whether the witness is sufficiently qualified to testify in that field.

Third, the testimony must meet the three-pronged reliability test that is new to the amended rule: “(1) The testimony [must be] based upon sufficient facts or data. (2) The testimony [must be] the product of reliable principles and methods.

(3) The witness [must have] applied the principles and methods reliably to the facts of the case.” N.C. R. Evid. 702(a)(1)-(3). These three prongs together constitute the reliability inquiry discussed in *Daubert*, *Joiner*, and *Kumho*.

The primary focus of the inquiry is on the reliability of the witness's principles and methodology, Joiner, 522 U.S. at 146, "not on the conclusions that they generate," Daubert, 509 U.S. at 595. However, "conclusions and methodology are not entirely distinct from one -14- STATE V. MCGRADY Opinion of the Court another," and when a trial court "conclude[s] that there is simply too great an analytical gap between the data and the opinion proffered," the court is not required "to admit opinion evidence that is connected to existing data only by the ipse dixit of the expert." Joiner, 522 U.S. at 146.

The precise nature of the reliability inquiry will vary from case to case depending on the nature of the proposed testimony. In each case, the trial court has discretion in determining how to address the three prongs of the reliability test. See Kumho, 526 U.S. at 152-53.

The trial court "must have the same kind of latitude in deciding how to test an expert's reliability... as it enjoys when it decides whether that expert's relevant testimony is reliable." Id. at 152. Many previous cases, both federal and state, articulate particular factors that may indicate whether or not expert testimony is reliable.

In its discretion, the trial court should use those factors that it believes will best help it determine whether the testimony is reliable in the three ways described in the text of Rule 702(a)(1) to (a)(3). In the context of scientific testimony, Daubert articulated five factors from a nonexhaustive list that can have a bearing on reliability: (1) "whether a theory or technique... can be (and has been) tested"; (2) "whether the theory or technique has been subjected to peer review and publication"; (3) the theory or technique's "known or potential rate of error"; (4) "the existence and maintenance of standards controlling the technique's operation"; and (5) whether the theory or technique has achieved "general acceptance" in its field.

Daubert, 509 U.S. at 593-94. When a trial court -15- STATE V. MCGRADY Opinion of the Court considers testimony based on "technical or other specialized knowledge," N.C. R. Evid. 702(a), it should likewise focus on the reliability of that testimony, Kumho, 526 U.S. at 147-49.

The trial court should consider the factors articulated in Daubert when "they are reasonable measures of the reliability of expert testimony." Id. at 152. Those factors are part of a "flexible" inquiry, Daubert, 509 U.S. at 594, so they do not form "a definitive checklist or test," id. at 593. And the trial court is free to consider other factors that may help assess reliability given "the nature of the issue, the expert's particular expertise, and the subject of his testimony." Kumho, 526 U.S. at 150.

The federal courts have articulated additional reliability factors that may be helpful in certain cases, including: (1) Whether experts are proposing to testify about matters growing naturally and directly out of research they have conducted independent of the litigation, or whether they have developed their opinions expressly for purposes of testifying.

(2) Whether the expert has unjustifiably extrapolated from an accepted premise to an unfounded conclusion. (3) Whether the expert has adequately accounted for obvious alternative explanations. (4) Whether the expert is being as careful as he would be in his regular professional work outside his paid litigation consulting. -16- STATE V. MCGRADY Opinion of the Court (5) Whether the field of expertise claimed by the expert is known to reach reliable results for the type of opinion the expert would give.

Fed. R. Evid. 702 advisory committee's note to 2000 amendment (citations and quotation marks omitted). In some cases, one or more of the factors that we listed in *Howerton* may be useful as well. See *Howerton*, 358 N.C. at 460, 597 S.E.2d at 687 (listing four factors: use of established techniques, expert's professional background in the field, use of visual aids to help the jury evaluate the expert's opinions, and independent research conducted by the expert).

Whatever the type of expert testimony, the trial court must assess the reliability of the testimony to ensure that it complies with the three-pronged test in Rule 702(a)(1) to (a)(3). The court has discretion to consider any of the particular factors articulated in previous cases, or other factors it may identify, that are reasonable measures of whether the expert's testimony is based on sufficient facts or data, whether the testimony is the product of reliable principles and methods, and whether the expert has reliably applied those principles and methods in that case.

See *Kumho*, 526 U.S. at 150-53. This three-step framework—namely, evaluating qualifications, relevance, and reliability—is not new to North Carolina law. We recognized the same steps in *Howerton*. See 358 N.C. at 458, 597 S.E.2d at 686.

The 2011 amendment to Rule 702(a) did not change the basic structure of the inquiry under that rule. But the amendment did change the level of rigor that our courts must use to scrutinize expert testimony before admitting it. Cf. *id.* at 464, 597 S.E.2d at 690 (noting that the then-existing North Carolina approach was “decidedly less... rigorous” than the *Daubert* approach).

A rule governing the admission of expert testimony necessarily strikes a balance between competing concerns since the testimony “can be both powerful and quite misleading” to a jury “because of the difficulty in evaluating it.” *Daubert*, 509 U.S. at 595 (quoting Jack B. Weinstein, Rule 702 of the Federal Rules of Evidence is Sound; It Should Not Be Amended, 138 F.R.D.

631, 632 (1991)). The interpretation we gave to Rule 702(a) in *Howerton* struck one such balance; the *Daubert* standard, now incorporated into North Carolina law, strikes another. Whether expert witness testimony is admissible under Rule 702(a) is a preliminary question that a trial judge decides pursuant to Rule 104(a). N.C.G.S. § 8C-1, Rule 104(a) (2015); *Howerton*, 358 N.C. at 458, 597 S.E.2d at 686; see also *Daubert*, 509 U.S. at 592 n.10.

In answering this preliminary question, the trial judge “is not bound by the rules of evidence except those with respect to privileges.” N.C. R. Evid. 104(a). To the extent that factual findings are necessary to answer this question, the trial judge acts as the trier of fact. N.C. R. Evid. 104(a) commentary.

The court must find these facts by the greater weight of the evidence. See *Daubert*, 509 U.S. at 592 n.10 (“These matters should be established by a preponderance of proof.” (citing *Bourjaily v. United States*, 483 U.S. 171, 175-76 (1987) (using the term “preponderance of the evidence” synonymously with “preponderance of proof”))); *Cincinnati Butchers Supply Co. v. Conoly*, 204 N.C.

677, -18- STATE V. MCGRADY Opinion of the Court 679, 169 S.E. 415, 416 (1933) (equating “preponderance of the evidence” with “greater weight of the evidence”). As with other findings of fact, these findings will be binding on appeal unless there is no evidence to support them. *State v. King*, 366 N.C. 68, 75, 733 S.E.2d 535, 540 (2012).

The trial court then concludes, based on these findings, whether the proffered expert testimony meets Rule 702(a)’s requirements of qualification, relevance, and reliability. This ruling “will not be reversed on appeal absent a showing of abuse of discretion.” *Howerton*, 358 N.C. at 458, 597 S.E.2d at 686. And “[a] trial court may be reversed for abuse of discretion only upon a showing that its ruling was manifestly unsupported by reason and could not have been the result of a reasoned decision.” *State v. Riddick*, 315 N.C.

749, 756, 340 S.E.2d 55, 59 (1986). The standard of review remains the same whether the trial court has admitted or excluded the testimony— even when the exclusion of expert testimony results in summary judgment and thereby becomes “outcome determinative.” *Joiner*, 522 U.S. at 142-43. Rule 702(a), as amended in 2011, does not mandate particular “procedural requirements for exercising the trial court’s gatekeeping function over expert testimony.” Fed.

R. Evid. 702 advisory committee’s note to 2000 amendment. The trial court has the discretion to determine “whether or when special briefing or other proceedings are needed to investigate reliability.” *Kumho*, 526 U.S. at 152. A trial court may elect to order submission of affidavits, hear voir dire testimony, or conduct an in limine hearing. See Fed. R. Evid.

702 advisory committee’s note to 2000 -19- STATE V. MCGRADY Opinion of the Court amendment. More complex or novel areas of expertise may require one or more of these procedures. See *Kumho*, 526 U.S. at 152. In simpler cases, however, the area of testimony may be sufficiently common or easily understood that the testimony’s foundation can be laid with a few questions in the presence of the jury.

See *id.* The court should use a procedure that, given the circumstances of the case, will “secure fairness in administration, elimination of unjustifiable expense and delay, and promotion of growth

and development of the law of evidence to the end that the truth may be ascertained and proceedings justly determined.” N.C.G.S. § 8C-1, Rule 102(a) (2015). III Using this analytical framework, we now address whether the trial court abused its discretion in excluding Mr. Cloutier’s proposed expert witness testimony under Rule 702(a).

Mr. Cloutier received a bachelor’s degree in criminal justice from North Carolina Wesleyan College and also graduated from the FBI National Academy in Quantico, Virginia. He worked as an officer of the Goldsboro Police Department for almost sixteen years, retiring as a captain. He then spent about eleven years at the North Carolina Justice Academy, working as an instructor and school director.

Mr. Cloutier developed and taught courses there in areas such as “subject control and arrest techniques” and the use of lethal and non-lethal force. After retiring from the -20- STATE V. MCGRADY Opinion of the Court Academy in 2001 and through the time of the trial in this case, he provided expert testimony about the use of force and crime scene investigation, and also trained civilians in martial arts and some of the “legal aspects of [the] use of force.” Mr. Cloutier intended to offer expert testimony on three principal topics: (1) that, based on the “pre-attack cues” and “use of force variables” present in the interaction between defendant and Mr. Shore, defendant’s use of force was a reasonable response to an imminent, deadly assault that defendant perceived; (2) that defendant’s actions and testimony are consistent with those of someone experiencing the sympathetic nervous system’s “fight or flight” response; and (3) that reaction times can explain why some of defendant’s defensive shots hit Mr. Shore in the back.

Defense counsel encouraged this Court at oral argument to focus on the reaction time testimony, conceding that the trial court was probably correct to exclude much of Mr. Cloutier’s other testimony either because it was unhelpful to the jury or because Mr. Cloutier was not qualified to give it.

We agree with this admission, but need not rely on it to conclude that the trial court acted within its discretion in -21- STATE V. MCGRADY Opinion of the Court excluding all of Mr. Cloutier’s expert testimony under Rule 702(a).⁷ We address each portion of Mr. Cloutier’s testimony in turn.⁸ First, the trial court did not abuse its discretion when it concluded that Mr. Cloutier’s testimony about “pre-attack cues” and “use of force variables” would not assist the jury.

In his expert report, Mr. Cloutier stated that pre-attack cues are actions “exhibited by an aggressor as a possible precursor to an actual attack.” According to the report, pre-attack cues include “actions consistent with an assault, actions consistent with retrieving a weapon, threats, display of a weapon, employment of a weapon, profanity and innumerable others.” Relatedly, Mr. Cloutier testified at voir dire that the phrase “use of force variables” refers to additional circumstances and events that influence a person’s decision about the type and degree of force necessary to repel a perceived threat.

Mr. Cloutier's expert report indicated that use of force variables include the age, gender, size, and number of individuals involved; the number and type of weapons present; and environmental factors. The trial court concluded that Mr. Cloutier's testimony about pre-attack cues and use of force variables would not assist the jury because these matters were within 7 In addition to the Rule 702(a) issue, the parties disagree on whether the trial court also properly excluded Mr. Cloutier's testimony under Rule 403, and whether defendant has properly preserved his objection to that ruling.

Because the testimony was properly excluded under Rule 702(a), however, the issues related to Rule 403 are moot. 8Because expert testimony is inadmissible if it fails to meet any part of the Rule 702(a) standard, we need not address the entire three-part test for each portion of Mr. Cloutier's testimony. -22- STATE V. MCGRADY Opinion of the Court the jurors' common knowledge.

This ruling was not an abuse of discretion. The factors that Mr. Cloutier cited and relied on to conclude that defendant reasonably responded to an imminent, deadly threat are the same kinds of things that lay jurors would be aware of, and would naturally consider, as they drew their own conclusions. Mr. Cloutier's own expert report stated that, even without formal training, individuals recognize and respond to these cues and variables when assessing a potential threat.

And if these cues and variables are logically relevant at all, they are relevant precisely because they are within the understanding of a layperson. Though defendant served in the military, he did not testify that he relied on any specialized training in threat assessment when he evaluated the threat that Mr. Shore posed to his life and the life of his son.

Nor was there any evidence that he relied on anything other than common experience and instinct when he did so. Jurors possess this experience and instinct as well, which is exactly why they are tasked with deciding whether a defendant has acted in self-defense.

In this instance, therefore, it was reasonable for the trial court to conclude that expert testimony would not assist the jury as required by Rule 702(a). Next, the trial court acted within its discretion in concluding that Mr. Cloutier was not qualified to offer expert testimony on the stress responses of the sympathetic nervous system. Mr. Cloutier's expert report stated that instinctive survival response to fear "can activate the body's sympathetic nervous system and create a condition commonly referred [to] as the 'fight or flight' response." Mr. Cloutier also indicated -23- STATE V. MCGRADY Opinion of the Court that defendant's perception of an impending attack would cause a surge of adrenalin in the body to "activate instinctive, powerful and uncontrollable survival responses as a means to prevent or minimize serious injury or death." This nervous system response, Mr. Cloutier maintained, causes "perceptual narrowing," which focuses a person's attention on the threat and leads to a loss of peripheral vision and other changes in visual perception.

According to Mr. Cloutier, the nervous system's response to a threat can also cause "fragmented memory," or an "inability to recall specific events" related to the threatening encounter. Defendant testified at trial that he did not remember the number of shots that he fired at Mr. Shore. He indicated that, during his encounter with Mr. Shore, all of his attention was focused on the threat.

Mr. Cloutier's testimony on stress responses was therefore intended to show that the state of defendant's memory and defendant's description of what he experienced were consistent with having perceived a threat to his life and the life of his son.

The trial court excluded this portion of Mr. Cloutier's testimony because it concluded that he was not "qualified to talk about how something affects the sympathetic nervous system." Mr. Cloutier testified at voir dire that he was not a medical doctor but that he had studied "the basics" of the brain in general psychology courses in college. He also testified that he had read articles and been trained by medical doctors on how adrenaline affects the body, had personally experienced -24- STATE V. MCGRADY Opinion of the Court perceptual narrowing, and had trained numerous police officers and civilians on how to deal with these stress responses.

Though Rule 702(a) does not create an across-the-board requirement for academic training or credentials, see Howerton, 358 N.C. at 462, 597 S.E.2d at 688, it was not an abuse of discretion in this instance to require a witness who intended to testify about the functions of an organ system to have some formal medical training.

As we have already said, expertise can come from practical experience. *Id.* But that does not mean that a trial court can never require an expert witness to have academic training. The propriety of imposing such a requirement in a given case is likely to be highly case specific. Whenever a trial court assesses an expert witness's qualifications under Rule 702(a), the court must look to see whether the witness's knowledge and experience are sufficient to qualify the witness in the particular field of expertise at issue.

Different fields require different "knowledge, skill, experience, training, or education." N.C. R. Evid. 702(a). For example, a witness with a Ph.D. in organic chemistry may be able to describe in detail how flour, eggs, and sugar react on a molecular level when heated to 350 degrees, but would likely be less qualified to testify about the proper way to bake a cake than a career baker with no formal education.

Mr. Cloutier, conversely, has strong practical experience in police training and tactics but not much medical expertise in human physiology. So while he may have been eminently qualified to testify about standard police practices regarding the -25- STATE V. MCGRADY Opinion of the Court use of force, he was far less qualified to testify about the sympathetic nervous system.

In this context, it was not "manifestly without reason" for the trial court to exclude Mr. Cloutier's testimony because he lacked medical or scientific training. Finally, the trial court did not abuse its

discretion when it concluded that Mr. Cloutier's testimony regarding reaction times was unreliable. Mr. Cloutier testified at voir dire that, because a person can turn his torso in less time than it takes to perceive a threat and fire a weapon, defendant could have perceived a threat from Mr. Shore while Mr. Shore was facing him but still end up shooting Mr. Shore in the back.

Mr. Cloutier's voir dire testimony included statistics on average reaction times as well as his opinion about how those statistics applied to this case. He testified specifically that an individual can turn his or her body 90 degrees in approximately 0.31 seconds, and can turn 180 degrees in approximately 0.676 seconds. He also testified that it takes a person approximately 0.2 seconds to perceive a threat and decide to shoot, and then another 0.365 to 0.677 seconds to begin firing, depending on whether the shooter's finger is already inside the trigger guard.

Another witness had previously indicated that it took defendant 1.82 seconds to fire all seven rounds at Mr. Shore. Mr. Cloutier stated that this testimony was consistent with the literature he had read, as well as with his own experiments. Given the total time that it would take an average person to perceive a threat, decide to shoot, begin shooting, and fire seven rounds, Mr. Cloutier concluded that "it's very possible and -26- STATE V. MCGRADY Opinion of the Court likely that during the course of firing...

Mr. Shore could have, in fact, turned 90 to 180 degrees, or, in fact, could have turned 360 degrees." Defendant offered this reaction time testimony to rebut any assumption in the jurors' minds that he could not have acted defensively if he shot Mr. Shore in the back. During voir dire, defense counsel elicited testimony from Mr. Cloutier relating to the reliability factors in amended Rule 702(a).

Mr. Cloutier testified that he interviewed defendant and other witnesses, reviewed interviews of defendant and Brandon and the case file and physical evidence collected by the Wilkes County Sheriff's Department, and visited the location where defendant shot Mr. Shore. This portion of his testimony appears to address the "sufficient facts or data" requirement in Rule 702(a)(1).

Mr. Cloutier also indicated that the average reaction time numbers he relied on to form his opinion came primarily from two studies: a 1972 Federal Aviation Administration study on the reaction times of aircraft pilots when avoiding midair collisions, and a university study focusing on how quickly college students could both shoot and turn their torsos. He stated that the results from these studies were consistent with testing that he worked on at the Justice Academy on the reaction times of police officers.

According to Mr. Cloutier, these studies were reliable and had been used extensively in his field over the previous fifteen years. All of this information deals with whether Mr. Cloutier's testimony before the jury would be "the product of reliable principles and methods" under Rule 702(a)(2). -27- STATE V. MCGRADY Opinion of the Court On cross-examination and during questioning by

the trial court, however, Mr. Cloutier provided testimony that undermined the reliability of his previous testimony about reaction times.

He testified that the manner and speed at which a victim can turn could be affected by previous injuries, clothing, and body position. He also admitted that his opinion could change if the shooter had a back injury, and he admitted to being aware that defendant had a back injury and a disability rating from the military. But he did not consider this or anything else about defendant's or Mr. Shore's medical history when he formed his opinions about their relative reaction times.

He indicated that he had not thought these factors relevant at the time because he believed that adrenalin would overcome any physical impairment. Yet when pressed further, he admitted that, though he believed that "adrenalin plays a factor," he was not certain how adrenalin would affect reaction times. Mr. Cloutier also admitted that he was unaware of the error rates in any of the studies that he cited.

The trial court concluded that Mr. Cloutier's proffered testimony about reaction times did not satisfy the reliability test in Rule 702(a)(1) to (a)(3). The trial court found that Mr. Cloutier had not provided the court with known or potential error rates for the studies on reaction times that he used.

The trial court also found that Mr. Cloutier acknowledged that variables could affect his opinions about the reaction times in this case, and that he knew that defendant suffered from a physical disability but did not consider this in reaching his conclusions.

For these reasons, -28- STATE V. MCGRADY Opinion of the Court the trial court concluded that Mr. Cloutier's reaction time testimony was based on speculation and was not reliable in this case. This decision was not an abuse of discretion, either.

The trial court properly focused on the three prongs of the reliability test in Rule 702(a)(1) to (a)(3), ruling on each one. And the specific factors that it chose to focus on in assessing the reliability of Mr. Cloutier's testimony were reasonable measures of reliability in this case. See *Kumho*, 526 U.S. at 152-53. Mr. Cloutier based his testimony about average reaction times on statistics from two studies, but he was not aware if those studies reported error rates in their findings and, if so, what those error rates were.

A trial judge could reasonably conclude that Mr. Cloutier's degree of unfamiliarity with these studies rendered his testimony about them, and the conclusions about this particular case that he drew from them, unreliable. And the court's finding about Mr. Cloutier's failure to consider defendant's back injury directly relates both to the sufficiency of the facts and data that Mr. Cloutier relied on and to whether he applied his own methodology reliably in this case.

It was not manifestly without reason for the trial court to be skeptical of Mr. Cloutier's opinion testimony when he had failed to consider any pertinent medical conditions that defendant or Mr. Shore had, despite being aware that at least one of them was partly disabled, and when Mr. Cloutier's own testimony established that a disability could affect reaction time.

In sum, our review of the record in this case demonstrates that the trial court properly fulfilled its gatekeeping role. Under the abuse of discretion standard, our -29- STATE V. MCGRADY Opinion of the Court role is not to surmise whether we would have disagreed with the trial court, see State v. Lasiter, 361 N.C. 299, 302, 643 S.E.2d 909, 911 (2007), but instead to decide whether the trial court's ruling was "so arbitrary that it could not have been the result of a reasoned decision," White v. White, 312 N.C.

770, 777, 324 S.E.2d 829, 833 (1985). Here, the trial court recognized the incorporation of the Daubert standard into amended Rule 702(a), carefully considered each aspect of the expert testimony that defendant wished to elicit from Mr. Cloutier, and permissibly exercised its discretion to conclude that Mr. Cloutier's proffered testimony should be excluded in its entirety.

The Court of Appeals likewise concluded that North Carolina is now a Daubert state, and found no error in the trial court's exclusion of Mr. Cloutier's testimony. We therefore affirm the decision of the Court of Appeals. AFFIRMED. -30-