

PRESENT: All the Justices

BRIAN KUANG-MING WELSH

v. Record No. 230800

COMMONWEALTH OF VIRGINIA

OPINION BY
JUSTICE WESLEY G. RUSSELL, JR.
MARCH 20, 2025

FROM THE COURT OF APPEALS OF VIRGINIA

Brian Kuang-Ming Welsh appeals a decision of the Court of Appeals affirming his convictions for two counts of first-degree murder and two counts of using a firearm in the commission of a felony. Welsh asserts that the Court of Appeals erred in concluding that the trial court’s refusal to permit testimony from his firearms expert was, at most, harmless error. For the reasons that follow, we conclude that the trial court erred in prohibiting the testimony of Welsh’s expert and that such error was not harmless. Accordingly, we reverse the judgment of the Court of Appeals.

I. BACKGROUND

In 2017 and 2018, Welsh was a drug addict. He regularly obtained drugs from Rishi Manwani (“Rishi”).

Welsh’s drug use was causing him financial problems. He had depleted a savings account that he shared with his wife and needed his mother to pay off a \$20,000 loan for him. Welsh was distraught and did not know how to break the bad financial news to his wife.

To make matters worse, Welsh was terminated by his employer, Lending Tree, on January 23, 2018, for “attendance [issues], falling asleep at his desk, being unprofessional, behavior [issues,] and [having] knives at his desk.” Cheri Hostetler, the human resources professional who fired Welsh, reported that Welsh was beside himself when she fired him. Hostetler told Welsh that she was “worried about [him,]” and Welsh responded that “[she]

should be worried about [him].” Hostetler asked the police to do a welfare check on Welsh because she was concerned about his well-being. Later that day, Welsh called her back, thanked her for calling the police, and asked about scheduling an exit interview. Hostetler noted that Lending Tree issued a no trespass notice to Welsh, which was not standard procedure for a normal termination.

On the morning of January 29, 2018, Carlos Rodriguez met with Rishi at Rishi’s house to buy Adderall and marijuana. Rishi lived with his mother, Mala Manwani (“Mala”). Welsh was outside Rishi’s house in his car when Rodriguez arrived. Rodriguez asked Rishi who was in the car, and Rishi responded that it was his “dumb-ass friend.” Rishi talked condescendingly towards Welsh once Welsh joined them in the basement. Soon thereafter, the trio left for Bank of America so that Rodriguez could withdraw money to pay Rishi for drugs. Rishi and Welsh rode in Welsh’s car, and Rodriguez drove separately. After the bank opened at 10 a.m., Rodriguez obtained money and paid Rishi \$200. Before leaving, Rodriguez asked Rishi if he wanted to get together later that week, but Rishi said not to contact him because he would be visiting his father in the hospital.

At 10:17 a.m., Welsh’s phone connected to a cell phone tower within range of Rishi’s home. At 10:23 a.m., Rishi received a text message on his burner phone but never read it. At 10:31 a.m., Mala, who was working from home, last interacted with her email inbox. At 10:38 a.m., somebody pressed the number “2” on Rishi’s burner phone. At 10:39 a.m., Welsh’s phone was moving and connected to a tower five miles north of Rishi’s home. At 10:57 a.m., Welsh called his mother-in-law and told her that he was coming to her house to pick up his kids. He called his mother a minute later and told her the same thing. His phone connected to a cell phone tower near his home during both of these calls. At 11:10 a.m., Welsh spoke to a recruiter from

an IT company for 20 minutes. The recruiter testified that Welsh seemed normal during the call, that it went well, and that he sought to move forward with Welsh as an applicant. Welsh spoke to the recruiter while in his mother-in-law's driveway. After the call, he went inside his mother-in-law's house and hugged her. His mother-in-law testified that he seemed normal and that she did not smell gunpowder or see any blood on him.

At 12:40 p.m., Welsh texted his brother, Michael, and asked Michael to call when he could. At 12:43 p.m., Welsh spoke to his mother on the phone again, and this time connected to a cell tower near his home. At 12:49 p.m., he texted Rishi, saying “[h]ey, call me when you can if you aren't in the hospital. A recruiting company called Kforce called me this morning with a job offer in D.C. but they seem to have a bunch of data center openings that you'd be a good fit for.” Welsh never tried contacting Rishi again. Michael responded to Welsh at 1:23 p.m., saying that he could not call him until after he got off of work and asking him “what[was] up?” Welsh texted him back at 1:28 p.m. and told him to “[j]ust call me after work.” Michael called Welsh around 5:30 p.m. During that call, Welsh asked Michael to pick up a handgun from him, claiming that his wife wanted it out of the house. That evening, Welsh gave Michael the handgun, a Browning Buck Mark .22 pistol, in a gun safe along with Gemtech ammunition and an empty magazine.

On January 30, 2018, Welsh drove to the house of his friend, Caitlin McCarthy (“Caitlin”). He asked Caitlin, who was also a friend of Rishi's, if she had heard from Rishi. Welsh indicated that he was concerned about Rishi because he had not heard from him since the day before and both of Rishi's phones were off. Welsh said that Rishi normally got back to him within an hour or two. Caitlin also had noticed that Rishi's phones were off when she tried to call him but did not think much of it at the time. Caitlin testified that Welsh seemed panicked

and anxious during their talk. Welsh then asked if Caitlin knew of anybody that may have wanted to hurt Rishi, explaining that he believed Rishi owed somebody over a thousand dollars.

Mala's coworkers became concerned about her when she did not come into work on Tuesday, January 30. None of them had heard from her since Monday morning. When Mala did not show up on Wednesday, January 31, they called the police to conduct a welfare check. Thereafter, the police discovered that Mala and Rishi were dead. Mala had suffered four gunshot wounds to the back of the head. Rishi had suffered seven gunshot wounds to the head and one to the leg. The police determined that they likely had been dead for between 48 and 72 hours. Rishi's body was significantly more decomposed than Mala's, which the medical examiner determined "[was] due to the presence of drugs in [Rishi's] system." Gemtech cartridge casings were found near the bodies.

The police never found Rishi's burner phone. However, Rishi's wallet was found on top of his body with no money in it. The DNA of Rishi and one other person was found on the wallet—Rodriguez, Welsh, and Mala were all eliminated as contributors. The Commonwealth's DNA analyst uploaded the genetic profile into a database and found five potential matches, four of which he eliminated and one of which he could not eliminate. However, the police determined that this person did not commit the murders.

The police also found a fingerprint of Daniel Suh, one of Rishi's buyers who frequented Rishi's house, on the backdoor leading into the basement where Rishi lived, but they also determined that he did not commit the murders. The police did not find any other fingerprints that did not belong to either Mala or Rishi.

Finally, Rishi had a dog, a white pit bull, that was unleashed in the house when the police arrived. The police did not discover any dog feces or urine in the house, and the dog had food in its bowl.

Caitlin texted Welsh on February 1, 2018, after hearing about Rishi's murder. She told him that she should have listened to him and that he was right to be concerned about Rishi's safety. The two spoke the following day and tried to determine who would want to hurt Rishi. Welsh deleted his messages and communications with Caitlin from around this time period. Caitlin was not surprised about that because Welsh's wife, Amy, did not approve of their relationship. Caitlin reached out to and talked to the police shortly after she spoke with Welsh. During her discussion with the police, Caitlin gave them Welsh's contact information.

The police interviewed Welsh numerous times over the following weeks. Welsh voluntarily provided his fingerprints, DNA, and the contents of his phone. Welsh told the police about his financial troubles and how he drained \$10,000 from his retirement account to buy drugs from Rishi without telling his wife. He also claimed to have loaned Rishi \$600 the day before Rishi was killed. Welsh stated that Rishi had about \$3,000 in cash in his wallet when they left the bank on January 29.

Welsh denied killing Rishi and Mala, explaining that he promptly left Rishi's house after returning from the bank because Rishi planned to go visit his father in the hospital. Welsh hypothesized that Rishi's death was linked to him needing money and offered several leads on who may have wanted to hurt Rishi. Welsh also admitted to owning several guns but did not mention the Buck Mark pistol.

After a few interviews, the police executed a search warrant at Welsh's home and found numerous guns, .22 caliber Gemtech ammunition, and various gun parts. Shortly after this

search, Welsh asked Michael to return the Buck Mark pistol so that he could give it to their father, who was the registered owner. Welsh explained that he wanted all of the family's weapons to be returned to their registered owners. Michael acknowledged that Welsh had given him guns before because Amy wanted them out of the house. Michael returned the Buck Mark to Welsh. Welsh later gave his mother the Buck Mark pistol and reclaimed a gun his father had that was registered to Welsh.

Welsh was arrested and questioned on March 20, 2018. Welsh denied that the Buck Mark pistol belonged to him, but eventually stated that it was his father's gun. The police searched Welsh's parents' house and recovered the Buck Mark pistol. The police also recovered other guns, Gemtech ammunition, gun parts, and gun barrels compatible with the Buck Mark.

Three months after his arrest, Welsh told his father on a recorded call from jail to “[g]et rid of the soda can.” His father replied, “[y]eah, I did. I threw it out. I took it apart and threw it out.” Other evidence established that Welsh's family stored ammunition and gun barrels in “ammo cans.” The Commonwealth argues that, by inference, a reasonable factfinder could conclude that Welsh's reference to throwing away a soda can was coded language for disposing of an ammunition can that concealed the gun barrel used in the murders.

One of the central aspects of the Commonwealth's case against Welsh was the testimony of Cara McCarthy, “the Department of Forensic Science firearms examiner[.]” At a pretrial hearing, the Commonwealth described McCarthy as “definitely the Commonwealth's most significant witness[.]” The Commonwealth reiterated the significance of McCarthy's testimony to its case, stating that “one of the most important witnesses in this case is Cara McCarthy.”

Based on her forensic examination, McCarthy concluded that Welsh's Buck Mark .22 pistol “matched” the cartridge casings found in the Manwani residence, but that the barrel

attached to the gun at the time it was seized did not match the bullets found in the residence. She posited that the barrel may have been switched out because the screws on the barrel appeared damaged.

Before trial, Welsh moved to preclude McCarthy from testifying, alleging that the scientific foundation underlying her opinion was unsound. McCarthy testified pre-trial that she was a member of the Firearm and Toolmark Examiner's Association (AFTE). She stated that in order to determine whether a firearm "matches" a cartridge case, firearm testing must reveal that the firearm left unique markings on that cartridge case. She testified that multiple studies had found that even consecutively manufactured firearms leave unique and identifiable marks on cartridge cases when the gun is fired. Welsh claimed otherwise. He asked McCarthy about the President's Council of Advisors of Science and Technology (PCAST) report claiming that there had been only one valid study testing the scientific basis of the practice. McCarthy testified that that report failed to recognize other valid studies that had been done and that PCAST's criteria for what constituted a "valid" study were unduly strict. She also claimed that various organizations and agencies had discredited the report due to statistical errors and failing to recognize other valid studies. She contended that the report was not relied upon in her industry.

McCarthy conceded that her "analysis is subjective in nature" and that "this is due to the evaluation of those individual characteristics," i.e., the unique characteristics of the firearm that imprint on the cartridge case, "and the significance of those individual characteristics." She explained that there is no set scientific standard to determine whether a firearm "matches" a cartridge case. She stated that examiners use the standard set forth by the AFTE, which "allows opinions of common origin to be made when the unique surface contours of toolmarks are in sufficient agreement." She testified that under the AFTE's standard, two samples are in

“sufficient agreement” when there is “significant duplication of toolmark[s] evidenced by correspondence of patterns, a combination of patterns, because the quality and quantity of the likelihood that another tool created the markings is very remote.”

The trial court determined that the Commonwealth had demonstrated that McCarthy’s opinions were sufficiently reliable to be considered by the jury and overruled Welsh’s motion to prohibit McCarthy from testifying.

The Commonwealth called McCarthy to testify at trial. She testified that she evaluated the Browning Buck Mark .22 pistol and the cartridge cases found at the Manwani’s for class characteristics and individual characteristics. She explained that class characteristics “are features that are determined prior to manufacture by the manufacturer. Class characteristics can include caliber, the number of lands and grooves, the width of the lands and grooves. Lands and grooves make up the rifling of the barrel, rifling to impart a spin on the projectile for stability and accuracy, the location of the extractor and the ejector in the firearm, among other general characteristics.” She contrasted class characteristics with individual characteristics, which “are random microscopic imperfections that are created during the manufacturing process. They’re not intended to be there by the manufacturer. And these are what we use to make opinions of identification if a bullet or a cartridge case was fired from a particular firearm.”

McCarthy then stated her opinion that Welsh’s Buck Mark pistol matched the cartridge cases found at the Manwani’s. She stated that her opinion is “not 100-percent absolute certainty” because she “[has] not examined every single firearm in the world.” However, she followed that qualification by saying that her opinion was given to “a practical certainty or very high level of certainty.” McCarthy then claimed that the bullets that killed Rishi and Mala were fired from a different barrel than the one then attached to the Buck Mark, pointing to the damaged screws on

the barrel of the firearm and the mismatch of the individual characteristics she found when comparing the bullets to the barrel.

Under cross-examination, McCarthy stated that firearm and toolmark identification has no established error rate. McCarthy conceded that “[t]he final analysis and conclusion is subjective in nature. It’s based on [her] training and experience, but it is founded on scientific principles.” She testified that she may find “sufficient agreement” between a firearm and a cartridge case when their patterns “exceed[] any agreement or even the best agreement that would be exhibited between two firing pin impressions that I know came from two different firearms, but it also has to be consistent in the quality and quantity of the agreement that I would expect to see between two firing pin impressions that I know came from the same firearm.”

Welsh then pressed McCarthy to explain how she factors subclass characteristics into her analysis. Subclass characteristics, she stated, are essentially miniscule defects that arise via random imperfections on the equipment used to manufacture the firearm. These imperfections would be present on all firearms created by that piece of manufacturing equipment until it is altered by the manufacturer, or the equipment gets worn down.

McCarthy acknowledged that she did not examine the equipment used to manufacture Welsh’s Buck Mark or study its manufacturing process before rendering her opinions. McCarthy conceded that she could not “make an opinion of identification on subclass characteristics,” but also stated that examiners like her are trained to recognize subclass characteristics and that “[t]here was no indication during [her] examination that the tool marks that [were] within the firing pin impression on those cartridge cases were subclass characteristics.” She maintained that trained examiners like herself can distinguish between consecutively manufactured firearms. She noted that consecutively manufactured firearms may not have consecutively manufactured

firing pins, and so the mark left by a firing pin may not share a subclass characteristic with a consecutively manufactured firearm.

McCarthy acknowledged that a gun's barrel may be removed to clean the firearm, and that she could not tell whether the screws on the barrel in this case were original, how many times they were removed, or when they were taken out.

Welsh sought to cross-examine McCarthy using the PCAST report he referenced pre-trial, but the trial court denied its introduction on hearsay grounds. The trial court permitted Welsh to make a proffer by questioning McCarthy outside of the presence of the jury. During that proffer, McCarthy contended that people in her profession did not rely on the report and that it had been rejected by numerous organizations and agencies, such as the International Association for Identification, FBI, ATF, Organization of Scientific Area Committees, and more. Welsh also sought to cross-examine McCarthy using a report from the National Academy of Sciences (NAS), but that too was excluded on hearsay grounds because McCarthy testified that it was not relied upon by those in her field.

In his case, Welsh introduced testimony from Rishi's friend Tim Barbrow, who stated that Rishi's pill source may have been "drying up." He stated that the new pills Rishi was selling were extremely expensive and that he was put off by the new price tag.

Welsh then questioned another one of Rishi's friends, Adam Masters. Masters stated that in the week or two leading up to Rishi's murder, Masters noticed that Rishi sustained scrapes and bruises to his face. Masters confronted Rishi about his injuries, and Rishi claimed that he tripped on the stairs. Masters was skeptical of Rishi's explanation because Rishi had numerous marks on his face. Masters did acknowledge that it was possible Rishi could have sustained his injuries

by tripping on the stairs, but Masters also testified that Rishi “was seeming a little more nervous about things, like someone may have done something to him.”

Welsh also elicited testimony from Heather Norman, who claimed to see Rishi’s pit bull outside with somebody on the morning of January 30, 2018, a day after the Commonwealth claimed that the Manwanis were murdered. Norman testified that the person accompanying the dog had a “broad type of silhouette” and was approximately six feet tall, much taller than Welsh. On cross-examination, Norman could not remember exactly which day she saw the pit bull. She testified that when she saw the murders on the news towards the end of February, she called the sheriff’s office to report that she saw the dog outside on January 30. She testified that she drove that route on a regular basis and that she drove it on January 29 through January 31.

Detective Bruns, who searched Welsh’s car, testified that he did not find any guns, gunshot residue, blood, or anything else incriminating during his search. He also noted that the car did not appear to have been detailed recently, although it was “relatively clean.”

Welsh then sought to introduce the expert testimony of William Tobin to counter McCarthy’s testimony that the cartridge cases found at the Manwani’s “matched” Welsh’s Buck Mark pistol. The Commonwealth objected, arguing that Welsh attempted to call Tobin “merely to undermine the credibility of” McCarthy. Welsh disagreed and explained that Tobin would be introduced as an expert in forensic metallurgy and material science, and that he was qualified to address toolmark and firearm identification.

Welsh then provided a proffer of Tobin’s credentials and his expected testimony, including the following:

- Tobin worked for the FBI for 27 years during which time he conducted toolmark analysis and oversaw other firearm and toolmark examiners;

- He had conducted extensive research on the forensic application of metallurgy, including bullet and lead analysis, and has “studied toolmark and firearm and science principles that are relied upon in the area to support the practice and methodology [McCarthy] used to identify” the Buck Mark pistol;
- He has published works related to the field of forensic metallurgy;
- He oversaw a firearm manufacturing plant for years;
- He would testify that he reviewed McCarthy’s worksheets, case file, and her testimony, and would opine on McCarthy’s “methods, protocols, and procedures”;
- He would explain that McCarthy’s assertion that “[m]anufacturing does not have an impact on the ability to identify” a firearm “match” is incorrect;
- He would testify that an examiner cannot find a “match” without identifying the firearm’s subclass characteristics, which can only be identified by investigating the process through which the firearm was manufactured;
- He would expound on why consecutively manufactured firearms do not leave unique markers such that an examiner can differentiate between them;
- He would describe why “metallurgy and material science [are] controlling factor[s] in the production of firearms” and talk about tribology, which McCarthy acknowledged is a factor in the manufacturing of firearms;
- He would discuss the pertinent literature and its implications for the field of firearm and toolmark identification;
- He would address McCarthy’s assertion that the field of firearm and toolmark analysis does not have an error rate; and
- He would illustrate the flaws in McCarthy’s methodology and her determination that the cartridge cases found at the Manwani’s “match” the Buck Mark pistol.

Welsh then stated that Tobin’s knowledge would help the jury understand the evidence, his testimony was based on empirical data and studies, and he would not opine on the credibility of McCarthy. The trial court responded that, based on Welsh’s proffer, Tobin would

impermissibly express an opinion on McCarthy's credibility. The court expounded, stating that Welsh "said [Tobin] reviewed [McCarthy's] case file and [was] going to comment on her work." After a lengthy back and forth, the trial court stated that Welsh's proffer did not satisfy Rule 2:702 for two reasons: (1) Tobin's testimony would constitute an opinion on the credibility of another witness, and (2) it would "attack the underlying science" of McCarthy's opinion, "which the [c]ourt ha[d] already ruled on pretrial."

Welsh asked to put Tobin on the stand outside of the presence of the jury to preserve the record, but the trial court refused. Although Welsh claimed that Tobin's testimony was too technical and detailed for him to submit a proffer without Tobin taking the stand, the trial court disagreed.

In its closing argument to the jury, the Commonwealth emphasized McCarthy's testimony. It told the jury, "you heard [McCarthy] testify pretty extensively and for a decent amount of time about her analyses, the multiple analyses that she conducted on the shell casings found at the scene of the murder, on the shell casings from the firing of that weapon back at the lab, on the bullets found at the scene, on the lead fragments found at the scene, on the bullets pulled from the bodies of Rishi and Mala Manwani and the bullets test fired back at the lab." The Commonwealth reminded the jury that McCarthy concluded that Welsh's Buck Mark pistol fired the casings found at the Manwani's residence.

The Commonwealth also focused on McCarthy's methodology, stating that "you heard her testify about how she conducts her examinations, how she compares those shell casings, how she utilizes the comparison microscope, what her training is. You saw her and you heard her explanation of what a cartridge is and how a cartridge works and what centerfire is and what rimfire is." The Commonwealth continued, "[y]ou saw her manipulating the firearm, explaining

to you how she clears it, how she makes sure it's in operating condition before she tests it, how it's safe to test, how extensive her examinations are, and her comparisons are before she makes an identification." The Commonwealth stated that McCarthy could have concluded that her tests were inconclusive or not a "match," and attempted to bolster her credibility by noting how she concluded that the barrel on the Buck Mark was not the one that expelled the cartridge casings found at the Manwani residence.

Welsh's closing argument also noted how important McCarthy's testimony was, going so far as saying the Commonwealth's case was "built on" her testimony. Welsh criticized McCarthy's conclusions by emphasizing that she did not examine any consecutively manufactured firearms. Additionally, Welsh argued that McCarthy worked backwards from her conclusion that the Buck Mark expelled the cartridge casings to hypothesize that the barrel was switched, flipping the scientific process on its head.

During its rebuttal argument, the Commonwealth again highlighted McCarthy's work and its importance to the case. The Commonwealth criticized Welsh's cross-examination-based criticisms of McCarthy's methodology and conclusions as nothing more than a "red herring."

After days of deliberation, the jury found Welsh guilty of two counts of first-degree murder and two counts of using a firearm in the commission of a felony. The jury sentenced Welsh to two life sentences plus an additional six years in prison.

Welsh sought review in the Court of Appeals, arguing, in pertinent part, that the trial court improperly excluded Tobin's testimony under Rule 2:702 and that, at a minimum, Tobin should have been allowed to testify outside of the presence of the jury in order to create a record for appeal. In a published opinion, a panel of the Court of Appeals, ruling on what it characterized as the best and narrowest grounds, assumed without deciding that the trial court

erred by excluding Tobin’s testimony, found any such error to be harmless, and affirmed the trial court’s judgment. *See Welsh v. Commonwealth*, 78 Va. App. 287 (2023).

Welsh now appeals.

II. ANALYSIS

Welsh asserts that the Court of Appeals erred by not reaching the merits of his Rule 2:702 argument and by finding any potential error to be harmless. We agree with Welsh.¹

A. Tobin’s proffered testimony was admissible

“Generally, the admissibility of evidence is within the discretion of the trial court and we will not reject the decision of the trial court unless we find an abuse of discretion.” *Midkiff v. Commonwealth*, 280 Va. 216, 219 (2010). “In evaluating whether a trial court abused its discretion, we do not substitute our judgment for that of the trial court. Rather, we consider only whether the record fairly supports the trial court’s action.” *Carter v. Commonwealth*, 293 Va. 537, 543 (2017) (quotations and alterations omitted). One way in which a circuit court can abuse its discretion is by applying erroneous legal standards. *Id.* at 543-44; *Lawrence v. Commonwealth*, 279 Va. 490, 496 (2010). “A lower court’s interpretation of the Rules of this

¹ Welsh also argues that the trial court should have permitted him to provide a more detailed proffer by having Tobin testify outside the presence of the jury. “[W]hen testimony is rejected before it is delivered, an appellate court has no basis for adjudication unless the record reflects a proper proffer.” *Wyche v. Commonwealth*, 218 Va. 839, 842 (1978) (quoting *Whittaker v. Commonwealth*, 217 Va. 966, 968-69 (1997)). Although a party may provide such a proffer “by avowal of counsel, . . . the better practice is to permit the witness to answer the question in the absence of the jury.” *Id.* We are cognizant of the fact that “[t]he conduct of the trial is committed to the discretion of the trial court[.]” *Watkins v. Commonwealth*, 229 Va. 469, 484 (1985), but also note that a circuit court’s quest for efficiency may not subordinate a party’s right to a fair trial. *See Peterson v. Castano*, 260 Va. 299, 303-304 (2000). Because we find that the proffer in this case is sufficient to allow us to reach the other issues raised by Welsh, we do not address Welsh’s argument that the trial court erred in refusing to allow him to make his proffer by having Tobin testify outside of the presence of the jury. *See Commonwealth v. Swann*, 290 Va. 194, 196 (2015) (recognizing that we strive to “decide cases on the best and narrowest grounds available”) (internal quotation marks and citations omitted).

Court, like its interpretation of a statute, presents a question of law that we review de novo.” *Findlay v. Commonwealth*, 287 Va. 111, 114 (2014) (quoting *LaCava v. Commonwealth*, 283 Va. 465, 469-70 (2012)).

Rule 2:702(b) states that

[e]xpert testimony may include opinions of the witness established with a reasonable degree of probability, or it may address empirical data from which such probability may be established in the mind of the finder of fact. Testimony that is speculative, or which opines on the credibility of another witness, is not admissible.

At issue in this case is whether an expert “opines on the credibility of another witness” when that expert criticizes the methodology utilized by, and hence, the conclusions drawn by, another expert.

In the broadest sense of the word “credibility,” any testimony that might cause a factfinder to disbelieve another witness could be labeled an attack on the credibility of that other witness. If the testimony of Witness A that the light was red causes the factfinder to disbelieve Witness B’s testimony that the light was green, it can be said that Witness A’s testimony undermined Witness B’s credibility. Neither Rule 2:702 nor any of our prior cases addressing limitations on a witness commenting on the credibility of another witness have embraced such a broad definition of “credibility.”²

² Rule 2:102 of the Virginia Rules of Evidence provides that the “Rules state the law of evidence in Virginia[,]” were “adopted to implement established principles under the common law and not to change any established case law rendered prior to the adoption of the Rules[,]” and that our prior decisions “whether decided before or after the effective date of the Rules of Evidence, may be argued to the courts and considered in interpreting and applying the Rules of Evidence.” *See also* Kent Sinclair, *The Law of Evidence in Virginia* § 1-2(a) (8th ed. 2024); *Campos v. Commonwealth*, 67 Va. App. 690, 706-07 (2017). Accordingly, we rely on our prior decisions delineating the limitations on a witness commenting on the credibility of another witness in determining the meaning and scope of Rule 2:702.

As we have noted previously regarding a question to a medical expert,

[i]t is well settled in this Commonwealth that the credibility of witnesses and the weight to be given to their testimony are questions exclusively for the jury. The settled law of this Commonwealth simply does not permit a defendant to ask a witness to opine whether another witness is ‘capable of lying.’ The finder of fact, in this instance the jury, must determine the witness’ veracity.

James v. Commonwealth, 254 Va. 95, 98 (1997) (citations omitted). *See also Pritchett v. Commonwealth*, 263 Va. 182, 187 (2002) (“An expert witness may not express an opinion as to the veracity of a witness because such testimony improperly invades the province of the jury to determine the reliability of a witness.”). In effect, Rule 2:702’s prohibition is on an *ad hominem* attack. Outside of the circumstances outlined in Rule 2:608,³ a witness, expert or otherwise, may not opine on the truthfulness of another witness’ testimony by reference to the personal characteristics of the witness. Nothing in our prior cases or in Rule 2:702(b) prohibits an expert from testifying to facts, conflicting opinions, criticisms of methodology, or other non-character-based circumstances that might cause a factfinder to disbelieve another witness. *See Fitzgerald v. Commonwealth*, 223 Va. 615, 629-30 (1982) (recognizing a distinction between an expert impermissibly opining on the veracity of a witness directly and providing testimony not directed to the personal characteristics of the witness that could cause a factfinder to disbelieve that witness).

When the witnesses involved are both experts, such a reading of the cases and of Rule 2:702 allows for the proverbial “battle of the experts” with the factfinder ultimately responsible for determining which of the conflicting expert opinions to believe. *See, e.g., Grattan v.*

³ Not relevant here, Rule 2:608 provides the limited circumstances in which a witness may “attack[]” the credibility of another witness by reference to that witness’ reputation for truthfulness.

Commonwealth, 278 Va. 602, 617-18 (2009); *Riner v. Commonwealth*, 268 Va. 296, 329-30 (2004); and *Mercer v. Commonwealth*, 259 Va. 235, 242 (2000).

Given that the proffer of Tobin’s testimony demonstrated that he sought to criticize McCarthy’s methodology and not to attack her personal veracity, our opinion in *Grattan* is particularly instructive. *Grattan* represented the classic “battle of the experts” with each expert “criticiz[ing] evaluation methods [used by] the other.” 278 Va. at 617. The fact that each expert criticized the other’s methodology for the purpose of causing the factfinder to disbelieve that expert’s opinion did not run afoul of the rule prohibiting an expert from opining on the credibility of another witness or otherwise render the opinions inadmissible. *See* Kent Sinclair, *The Law of Evidence in Virginia* § 13-16 (8th ed. 2024) (“A challenge to an expert’s methods and determinations, even when made by other experts, does not render inadmissible expert opinion based upon those methods”) (citations and footnotes omitted). Rather, the warring opinions created a question of fact to be resolved by the factfinder. *Grattan*, 278 Va. at 617-18; Sinclair, *supra*, at § 13-16 (“Disagreement among expert witnesses does not nullify the probative value of their testimony. It is for the jury to determine what weight to accord the testimony of each expert.”) (citations and footnotes omitted). As a result, the trial court erred in concluding that Tobin’s proffered testimony was prohibited by Rule 2:702.⁴

⁴ The well-established principle that conflicting expert opinions raise a question of fact for the trier of fact demonstrates the error in the trial court’s alternative ground, that Tobin’s testimony represented an attack on the science underlying McCarthy’s opinion about “which the [c]ourt ha[d] already ruled on pretrial.” In its role as evidentiary gatekeeper, the trial court permissibly determined pretrial that there was a sufficient scientific basis for McCarthy’s opinions to allow the jury to consider them. A pretrial finding that a proffered expert opinion is not “junk science” and may be considered by the jury does not turn that opinion into holy writ, immune from criticism by other experts. In refusing to allow the jury to even consider the conflicting opinions of a qualified expert in the relevant field, the trial court impermissibly invaded the province of the factfinder. As the aforementioned Professor Sinclair observed regarding another case, “by rejecting parts of the evidence from the [defense] expert which

Accordingly, the trial court erred by ruling that Tobin was precluded from criticizing McCarthy's methodology and conclusions. Having determined that the trial court's decision to prohibit Welsh from calling his firearms expert was error, we turn to the conclusion of the Court of Appeals that any such error was harmless.

B. Harmless Error

Once a Virginia appellate court determines that a trial court has erred, it is statutorily required to consider whether the error merits reversal of the trial court's judgment, i.e., whether the error was harmless. In pertinent part, Code § 8.01-678 provides that “[w]hen it plainly appears from the record and the evidence given at the trial that the parties have had a fair trial on the merits and substantial justice has been reached, no judgment shall be arrested or reversed . . . [f]or any . . . defect, imperfection, or omission in the record, or for any error committed on the trial.” Thus, we consistently have held that “Code § 8.01-678 makes ‘harmless-error review required in *all* cases.’” *Commonwealth v. Swann*, 290 Va. 194, 200 (2015) (quoting *Ferguson v. Commonwealth*, 240 Va. ix, ix (1990)).

This statutory command is no mere technicality, but rather, represents “a *limitation on the powers of this [C]ourt* to reverse the judgment of the trial court—a limitation which we must consider on every application for an appeal and on the hearing of every case submitted to our judgment.” *Commonwealth v. White*, 293 Va. 411, 419-420 (2017) (quoting *Walker v. Commonwealth*, 144 Va. 648, 652 (1926)). Accordingly, it is not enough for an appellant to demonstrate that a trial court erred; to be entitled to relief, he must demonstrate that the error was significant enough to merit reversal.

conflicted with evidence of the [Commonwealth's] expert[], the trial court violated the principle that prohibits the judge in a jury trial from assessing the weight and credibility of the evidence.” *Sinclair, supra*, at § 13-16.

1. The harmless error standard

When a Virginia appellate court conducts harmless error review, the standard it applies depends on the type of error being reviewed. If the error involves a constitutional issue, “the harmless-error standard . . . ask[s] ‘whether there is a reasonable possibility that the evidence complained of might have contributed to the conviction[.]’” *Id.* at 420-21 (quoting *Chapman v. California*, 386 U.S. 18, 23 (1967)). Stated differently, to find a constitutional error harmless, an appellate court must conclude, beyond a reasonable doubt, that absent the error the outcome would have been the same. *Id.* at 420-21.

When, as in this case, the trial court’s error is not of a constitutional dimension, the standard is different. An appellate court can conclude that a non-constitutional error is harmless “if it can conclude that the error did not influence the jury or had but slight effect.” *Commonwealth v. Kilpatrick*, 301 Va. 214, 216 (2022) (internal quotation marks and alterations omitted). “To reach this conclusion, the evidence of guilt must be so overwhelming that it renders the error insignificant by comparison such that the error could not have affected the” outcome. *Id.* at 217 (citing *Haas v. Commonwealth*, 299 Va. 465, 467 (2021)). In a criminal case, “that outcome is conviction.” *Kotteakos v. United States*, 328 U.S. 750, 764 (1946).

Although both harmless error standards are well-known and the above-cited cases are familiar to both the bench and bar, application of the standards to individual cases often proves difficult. This is so for many reasons. First, it is important to recognize that we refer to the harmless error “standards,” not the harmless error “rules.” *See, e.g., Kilpatrick*, 301 Va. at 217; *Haas v. Commonwealth*, 299 Va. 465, 467 (2021); *White*, 293 Va. at 420-22; and *Swann*, 290 Va. at 200-01. As the Court of Appeals previously has recognized, “legal standards are not amenable to the creation of hard and fast rules.” *Saal v. Commonwealth*, 72 Va. App. 413, 425

n.6 (2020) (internal alterations omitted) (quoting *Wynnycky v. Kozel*, 71 Va. App. 177, 200 (2019)). Standards involve consideration of subjective criteria about which reasonable minds can, and do, differ. Rules favor objective criteria that allow for a more straightforward application. One academic commentator has noted that “[t]he paradigmatic ‘rule’ falls toward the high end of the specificity spectrum; it ascribes definitive consequences to the satisfaction of precise and determinate criteria[,]” while “[t]he paradigmatic ‘standard,’ by contrast, leaves many application-related details unresolved.” Michael Coenen, *Rules Against Rulification*, 124 Yale L.J. 644, 652 (2014) (footnotes omitted); see also Antonin Scalia, *The Rule of Law as a Law of Rules*, 56 U. Chi. L. Rev. 1175 (1989). Accordingly, it is difficult if not impossible to detail a list of objective criteria to guide harmless error review in all cases. See *Shinseki v. Sanders*, 556 U.S. 396, 407 (2009) (warning against courts “determining whether an error is harmless through the use of mandatory presumptions and rigid rules rather than case-specific application of judgment, based upon examination of the record”) (citing *Kotteakos*, 328 U.S. at 760).

Furthermore, harmless error review does not follow the normal appellate sequence of a trial court making a decision that is then reviewed by an appellate court. By definition, there is no trial court ruling on harmless error to be reviewed; rather, questions regarding harmless error are to be answered by an appellate court in the first instance, meaning that there is no decision of the factfinder to which an appellate court can defer.

As a result, harmless error review effectively requires an appellate court to do what it normally does not do—engage in “fact” finding (and hypothetical “fact” finding, at that). This is so because harmless error review is not the traditional appellate question of whether the evidence, absent any error, was sufficient to support a conviction. *White*, 293 Va. at 422. It is

not even whether the jury reached the correct result. As the United States Supreme Court explained in *Kotteakos*, harmless error review after a jury trial does not turn on whether the defendant was “guilt[y] in fact[,]” but rather on whether he was “guilt[y] in law, established by the judgment of laymen. . . . [T]he question is, not were [the jurors] right in their judgment, regardless of the error or its effect upon the verdict. It is rather what effect the error had or reasonably may be taken to have had upon the jury’s decision.” 328 U.S. at 764. Finally, and critically, the question is not whether the members of the appellate court would have convicted absent the error, but rather, whether the jurors involved in the decision would have done so. *See id.* (“The crucial thing is the impact of the thing done wrong on the minds of other men, not on one’s own, in the total setting.”). Given that the appellate court does not know what motivated the actual jurors, the inquiry becomes hypothetical—what would the actual jurors, about whom we know little to nothing, have done in a hypothetical world where the error did not occur?

The lack of objective criteria to apply and the hypothetical nature of the “fact” finding required by harmless error review makes the task difficult and will lead to different judges reaching different conclusions in the same case. Such disparate results, however, simply demonstrate the legal maxim “that, for some decisions, conscientious jurists could reach different conclusions based on exactly the same facts—yet still remain entirely reasonable.” *Minh Duy Du v. Commonwealth*, 292 Va. 555, 564 (2016) (quoting *Thomas v. Commonwealth*, 62 Va. App. 104, 111 (2013)).⁵

For the reasons that follow, we conclude that it cannot be said with confidence “that the error did not influence the jury, or had but slight effect[.]” *Clay v. Commonwealth*, 262 Va. 253,

⁵ As a result, nothing we say should be taken as criticism of our dissenting colleagues or the Court of Appeals for concluding that the error here was harmless. The question is a close one and reasonable minds can and, in fact, have disagreed.

260 (2001) (quoting *Kotteakos*, 328 U.S. at 764). Because, at a minimum, we harbor a “grave doubt” that the trial court’s error did not affect the outcome, we cannot conclude that the error was harmless, and therefore, “the conviction cannot stand.” *Id.* (quoting *Kotteakos*, 328 U.S. at 765).

2. Application in this case

In applying this framework to the instant case, we begin by focusing on what the trial court’s error denied Welsh—an expert counterbalance to McCarthy’s testimony linking Welsh to the murder weapon. In a post-*CSI* world, it is not a stretch to believe that scientific evidence is given great weight by jurors. *Cf. United States v. Green*, 405 F. Supp. 2d 104, 117 (D. Mass. 2005) (recognizing as inherent in expert testimony the phenomenon that “a certain patina attaches to the testimony, running the risk that the jury, labeling it ‘scientific,’ will give it more credence than it deserves”). Logically, that risk is higher when, as here, the jury hears only from one expert and erroneously is denied the opportunity to hear a qualified competing expert’s equally scientific criticisms of the methodology underlying the opinions.

Here, there is no question that McCarthy was qualified to render her opinions and offer her conclusion that Welsh’s gun was the murder weapon to “a practical certainty[.]” Based on the proffer, it is equally clear that Tobin was qualified to call that conclusion and the methodology used to reach it into question. His nearly three decades of work for the FBI, his publications and research, and his other qualifications related to firearms and toolmark analysis should have allowed him to offer his critiques of McCarthy’s methodology, which necessarily called her ultimate conclusion into question. Given his qualifications, we simply cannot say that some reasonable jurors would not have found his methodological criticisms persuasive, and thus,

caused a discounting if not wholesale disregarding of McCarthy's opinions, including her conclusion that it was a "practical certainty" that Welsh's firearm was the murder weapon.⁶

Having concluded that there was a significant chance that Tobin's opinions might have influenced the jury to discount or discredit McCarthy's testimony,⁷ we must address how that would have affected the jury's ultimate conclusion. To do so, we first review the importance of McCarthy's testimony to the Commonwealth's case and then how it fit in with all of the other evidence.

There can be little question that McCarthy's testimony was central to the Commonwealth's case. With no witness to the killings and no video depicting them, the Commonwealth necessarily had to rely on circumstantial evidence and inference to tie Welsh to the murders. Perhaps the most critical piece of evidence giving rise to such an inference was

⁶ In support of its finding of harmless error, the Court of Appeals noted that McCarthy was subject to cross-examination and conceded that at least some of Tobin's proffered criticisms of her analysis had some merit. From this, the Court of Appeals concluded that having Tobin actually present the jury with his criticisms would not have provided significant additional benefit to Welsh. *See Welsh*, 78 Va. App. at 306. We disagree. Although cross-examination has been called the "greatest legal engine ever invented for the discovery of truth[.]" *California v. Green*, 399 U.S. 149, 158 (1970) (quoting 5 J. Wigmore, *Evidence* § 1367, p. 29 (3d ed. 1940)), it does not follow that cross-examination of an expert always is a sufficient substitute for the jury hearing a countervailing expert criticizing the methodology used by the first expert. As the United States Supreme Court recognized in its seminal case regarding the admission of expert testimony, "[v]igorous cross-examination, *presentation of contrary evidence*, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence." *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 596 (1993) (emphasis added). Thus, allowing Welsh one of the methods of attacking McCarthy's expert testimony, cross-examination, was not sufficient to overcome denying him another, presenting a countervailing expert, to which he was entitled.

⁷ This is not to say that the members of this Court, having heard Tobin's opinions, would have discounted or disregarded McCarthy's opinions and conclusions. However, as noted above, we are not charged with determining what the erroneously excluded testimony would have caused us to conclude. Instead, we must determine what effect it might have had on the jury in this case. *See Kotteakos*, 328 U.S. at 764.

McCarthy's opinion that, to "a practical certainty[.]" Welsh's gun was the murder weapon. Given the lack of a countervailing expert opinion, it provided the jury with a seemingly objective, largely unchallenged piece of evidence that tied Welsh personally to the killing as opposed to evidence that simply placed him in the area with an opportunity to have committed the killings.

The significance of McCarthy's testimony to the Commonwealth's case is underscored by the Commonwealth's statements and actions in the trial court regarding that testimony. After all, it was the Commonwealth that characterized McCarthy as "definitely the Commonwealth's most significant witness[.]" and reiterated that she was, at a minimum, "[o]ne of the most important witnesses in this case[.]" That significance was underscored by the Commonwealth's repeated references to McCarthy's testimony in its closing argument, which included multiple references to her effectively unchallenged methodology. The Commonwealth finished its closing argument by spending eight pages worth of transcript arguing the significance of McCarthy's analysis and findings to the jury, and then returned to McCarthy's testimony in its rebuttal argument. Specifically, regarding McCarthy, the Commonwealth argued that she

did an exceptional job in this case. She didn't go searching for evidence to frame him. She did every reasonable test, every necessary test, every appropriate test in order to make a determination as to which firearm fired the casings and the bullets. Attacking her, attacking her credibility, attacking her testimony, attacking her findings, attacking her conclusions is a red herring.

The Commonwealth treated McCarthy's testimony as central to its case, and its "red herring" argument would have been difficult if not impossible to make in the same manner if Tobin had been permitted to testify.

The conclusion that the trial court's error went to a central portion of the Commonwealth's case and undermined Welsh's ability to combat it does not inexorably lead to

the conclusion that the error was not harmless. Even a substantial trial court error in excluding evidence may be deemed harmless if the “evidence of guilt [is] so overwhelming that it renders the error insignificant by comparison such that the error could not have affected the” outcome. *Kilpatrick*, 301 Va. at 217; *see also Salahuddin v. Commonwealth*, 67 Va. App. 190, 212 (2017).

In its brief in this Court, the Commonwealth summarizes the other inculpatory evidence as being

Welsh’s acknowledged presence at Rishi’s home close in time to the Manwanis’ murders, his prevarications about when he left the Manwanis’ and what he did after leaving the Manwanis, his desperate need for cash, his possession of a Buck Mark firearm and then his subsequent shifting of its location throughout his family, his directive to his father to “get rid of the soda can” when his father apparently kept barrels in “ammo cans,” and his father’s assurance that he had already “taken it apart” and “threw it out,” there was overwhelming evidence that Welsh used a firearm to murder Rishi and his mother. Welsh’s inconsistent statements to police and attempts to downplay his relationships with Michael and Caitlin provide further evidence of his guilt.

Setting aside McCarthy’s opinions and any buttressing effect they may have had on the remaining evidence,⁸ the Commonwealth is correct that there is substantial evidence that Welsh is guilty of the crimes charged.

If the question before us was whether the other evidence, unaffected by McCarthy’s testimony, was sufficient to sustain Welsh’s convictions, the answer would be yes. But that is not the question before us. *White*, 293 Va. at 422. If the question before us was whether a majority, if not all, of the members of this Court would have concluded that Welsh was guilty of

⁸ The Commonwealth’s position that it was a reasonable inference that the soda can conversations were coded discussions about hiding the gun barrel is more credible if one accepts that the murder weapon belonged to the Welsh family and was passed around by its members.

the crimes charged absent the error, the answer very well may have been yes. But that is not the question before us. *Kotteakos*, 328 U.S. at 764.

The question before us is whether we have a “grave doubt” that absent the trial court’s error, the jury would have reached the same judgment of conviction. *Id.* at 765. Because a majority of this Court, considering the specific facts of this case, harbors such a “grave doubt,” we cannot conclude that the trial court’s error was harmless.

In reaching this result, we reiterate that, because we are applying a “standard” as opposed to a “rule,” our conclusion necessarily is tied to the specific facts of this case and, frustratingly, our analysis cannot be taken from this case and easily applied to others. *Shinseki*, 556 U.S. at 407 (recognizing that harmless error review requires “case-specific application of judgment”). Here, it is the combination of the significance of the trial court’s error when compared to the other evidence offered by the Commonwealth, the scientific nature of the disputed evidence, the centrality of McCarthy’s opinions to the Commonwealth’s case, Tobin’s qualifications and proffered testimony, the dispute in and about the pertinent literature, and the other evidence offered by Welsh, e.g., the evidence related to the dog at least suggesting another perpetrator, that leads us to conclude that the error here was not harmless.

III. CONCLUSION

For the foregoing reasons, we reverse the judgment of the Court of Appeals and remand the matter to the Court of Appeals with instructions to remand the matter to the trial court for further proceedings if the Commonwealth be so advised.

Reversed and remanded.

JUSTICE KELSEY, with whom JUSTICE McCULLOUGH and JUSTICE CHAFIN, join, concurring in part and dissenting in part.

I fully concur in the majority's analysis that the trial court erred in refusing to allow Tobin to testify. The proffered testimony violated neither Rule 2:702 nor our prior cases prohibiting a witness from commenting on the credibility of another witness. I disagree, however, with the majority's conclusion that, given all of the other evidence in the case, this error was anything other than harmless. For the reasons stated by the Court of Appeals in this case, I would conclude that the trial court's error was harmless. *See Kuang-Ming Welsh v. Commonwealth*, 78 Va. App. 287, 304-10 (2023).

Accordingly, I respectfully dissent from the majority's conclusion regarding harmless error.