STATE OF MINNESOTA

IN SUPREME COURT

A19-0240

Ramsey County — Thissen, J.

State of Minnesota,

Respondent,

vs.

Filed May 6, 2020
Office of Appellate Courts

Matthew Michael Garland,

Appellant.

Keith Ellison, Attorney General, Saint Paul, Minnesota; and

John J. Choi, Ramsey County Attorney, Thomas R. Ragatz, Assistant Ramsey County Attorney, Saint Paul, Minnesota, for respondent.

Cathryn Middlebrook, Chief Appellate Public Defender, Jennifer Workman Jesness, Assistant Public Defender, Saint Paul, Minnesota, for appellant.

S Y L L A B U S

1. Assuming without deciding that the district court erred by not holding a hearing on appellant's motion to exclude expert testimony regarding DNA evidence, any such error was harmless.

2. The district court did not abuse its discretion by admitting expert opinion testimony regarding the State's DNA evidence because the opinion was foundationally reliable and helpful to the trier of fact and the scientific technique used in the GlobalFiler test kit is not novel.

3. The district court did not abuse its discretion by concluding that the probative value of the DNA evidence outweighed the risk of unfair prejudice to appellant.

4. The prosecutor's unobjected-to conduct during the video replay that was requested by the deliberating jury and held in open court was not structural error and did not affect appellant's substantial rights.

5. The district court erred by adjudicating appellant guilty of both first-degree murder and second-degree murder.

Affirmed in part, reversed in part, and remanded.

O P I N I O N

THISSEN, Justice.

A jury found appellant Matthew Michael Garland guilty of first-degree murder and second-degree murder for the shooting death of Rondell Dunn and the district court adjudicated him guilty on both counts. Garland challenges both convictions. First, Garland argues that the district court erred by denying his request for an evidentiary hearing on the admissibility of the DNA evidence. Second, he argues that the district court abused its discretion by denying his pretrial motion to exclude the State's expert testimony regarding DNA evidence. He contends that the evidence should have been excluded because the expert's opinion lacked foundational reliability, was unhelpful to the trier of fact, and should

have been evaluated under the *Frye-Mack* standard because it involved a novel scientific technique. He also contends that the DNA evidence was inadmissible because it was more prejudicial than probative. Finally, Garland contends that the prosecutor's unobjected-to responses to three fact questions posed by the jury in open court with the judge and defense counsel present after the jury had begun deliberations constituted structural error.

We hold that any error the district court may have made by declining to hold an evidentiary hearing regarding the DNA evidence was harmless. We also hold that the district court did not abuse its discretion by denying Garland's motion to exclude the DNA evidence. We further hold that even if the prosecutor's conduct was plain error—an issue we do not reach—it is not reasonably likely that the jury would have reached a different result had the prosecutor not answered the three jury questions. Consequently, Garland was not prejudiced by the alleged prosecutorial misconduct. Finally, we hold that the district court erred by entering a formal adjudication on both first-degree murder and second-degree murder. We remand to the district court to correct that error. Accordingly, we affirm in part, reverse in part, and remand.

FACTS

Just after 2:00 p.m. on April 17, 2017, Rondell Dunn was shot at the corner of Saint Albans Street and Fuller Avenue in Saint Paul. A police investigation led to the arrest of Garland and his friend, S.L. Garland was charged with first-degree murder, first-degree murder committed for the benefit of a gang, second-degree murder, and second-degree murder committed for the benefit of a gang. S.L. was charged with aiding and abetting

second-degree murder. S.L. ultimately pled guilty to aiding an offender and testified against Garland.

After the district court conducted several pretrial hearings, Garland filed an additional pretrial motion to exclude DNA evidence and related expert testimony that the State sought to introduce against him. He also requested an omnibus hearing on the motion. In his motion, he argued that the expert opinion lacked foundational reliability under Minnesota Rule of Evidence 702, the DNA evidence was inadmissible under the *Frye-Mack* standard, and the evidence was more prejudicial than probative under Minnesota Rule of Evidence 403. The district court denied Garland's motion to exclude the evidence without holding an evidentiary hearing.

Garland petitioned for a writ of mandamus from the court of appeals. He argued that the district court erred by failing to hold an evidentiary hearing to determine whether the State's expert testimony met the requirements of Rule 702 and the *Frye-Mack* standard. He asked the court of appeals to direct the district court to hold an evidentiary hearing on the admissibility of the evidence and expert opinion testimony. The court of appeals denied Garland's petition and the case proceeded to trial.

At trial, the State established the following facts using witness testimony, crime scene surveillance videos, scientific test results, and other evidence. Just before 1:00 p.m. on the day of Dunn's murder, S.L. picked up Garland in S.L.'s girlfriend's car, a gold Saturn Vue. Garland was wearing a red Polo hat, a black True Religion shirt, black pants, and a black jacket. That was the same outfit Garland was seen wearing in a gas station surveillance video just one week before the murder.

S.L. and Garland drove toward S.L.'s house. As they were driving, they spotted Dunn. Garland told S.L. to park at a corner nearby. S.L. did so. Garland then told S.L. that he was going to "blow his ass down," which S.L. took to mean that Garland was going to shoot at Dunn. S.L. would not let him do it from the car, so Garland got out and walked down the street toward Dunn. He passed Dunn, turned around, and shot Dunn several times in the back.

After Garland left the car, S.L. immediately drove part of the way around the block and stopped by an alley. S.L. then saw Garland running through the alley and across a yard. He drove to the next street and picked up Garland in the middle of the block. Garland told S.L. that he had shot Dunn. Garland still had his gun, but said that it was empty. He was no longer wearing his red Polo hat. A different eyewitness confirmed parts of S.L.'s testimony about these events.

S.L. and Garland sped away from the scene of the shooting but got stuck at a stoplight. S.L. attempted to get around several cars, hitting one in the process. S.L. drove away from the scene of that accident and dropped Garland off at another person's house before picking his girlfriend up from work.

The woman whose car S.L. hit called 911 to report that she was the victim of a hit-and-run accident at a stoplight. The license plate number she provided to police was connected to a gold Saturn Vue that matched the car that surveillance cameras had recorded driving near the scene of the shooting. Officers determined that the car belonged to S.L.'s girlfriend and that S.L. had previously been seen driving the car. Police arrested S.L. and searched the Saturn Vue incident to that arrest. Garland's black jacket, which he was wearing

in the gas station surveillance video and on the crime scene surveillance video, was found in the car. And Garland's fingerprints were found on the exterior of the car window.

Garland disputed his involvement in the murder, stating that he had been in Chicago on April 17, 2017. But cell-site location information placed his cell phone in Minneapolis and Saint Paul on April 16 and 17. And messages from his Facebook account showed that he was making plans to meet a woman in Saint Paul on the afternoon of April 17.

The State also presented DNA evidence linking Garland to the shooting. At the scene of the shooting, police recovered a red hat with a Polo design on it that looked virtually identical to the one that Garland had been wearing in the gas station surveillance videos. Police sent the hat to the Bureau of Criminal Apprehension (BCA) for DNA testing. A BCA forensic scientist used a GlobalFiler test kit to analyze two DNA samples taken from the hat. Based on her analysis, the scientist opined that a swabbing sample taken from the hat, Item 1-1, contained a mixture of DNA from four or more individuals. She also concluded that a cutting sample taken from the hat, Item 1-2, contained a mixture of DNA from four or more individuals.

The BCA scientist then determined whether Garland could be excluded from the sample by comparing markers in his DNA to markers in the samples. She concluded that Garland could not be excluded from either sample. She could not—and did not—state whether Garland's DNA was part of either sample. Finally, she calculated what percentage of the population could be excluded as contributors to each sample. She concluded that, based on the DNA markers present, 92 percent of the general population could be excluded from Item 1-1 and 16.7 percent of the general population could be excluded from Item 1-2.

After the case was submitted and the jury began deliberations, the jury asked to review two video exhibits. The jury viewed the videos in open court in the presence of the judge, the prosecutor, the defense attorney, and Garland. The videos were played from the prosecutor's laptop and were projected onto the courtroom wall. During the viewing, the prosecutor responded to three questions about the videos from the jury. First, the jurors asked to stop one of the videos at a particular point and "get the time frame . . . [t]he time stamp." The prosecutor responded that the time was "14:18:26." Second, as the video was stopped at the same point, a juror asked, "This is Central, right?" and the prosecutor responded, "Yeah." And third, when viewing the second video, a juror asked, "What is the time stamp on that?" to which the prosecutor responded, "14:12." Following the second question, the district court reminded the jury that the prosecutor "can't answer questions." Defense counsel did not object to any of the prosecutor's statements.

The jury found Garland guilty of first-degree murder and second-degree murder and not guilty of the gang-related charges. Garland received a sentence of life without the possibility of release.

ANALYSIS

On appeal, Garland makes four principal arguments. First, he argues that the district court erred by not holding an evidentiary hearing to assess the admissibility of the State's expert opinion regarding the DNA evidence. Second, he contends that the district court abused its discretion by denying his motion to exclude the State's expert opinion under Minnesota Rule of Evidence 702. Specifically, he argues that the State's expert opinion involved a novel scientific theory and therefore needed to satisfy the *Frye-Mack* standard.

He also argues that the opinion lacked foundational reliability and was unhelpful to the jury. Third, he contends that the State's expert opinion was more prejudicial than probative under Minnesota Rule of Evidence 403. Finally, he argues that the prosecutor's exchange with the jury during the video viewing was reversible error.

I.

Garland sought to prevent the State from introducing expert testimony related to the DNA testing of the red Polo cap found at the crime scene. In support of his written motion to exclude the State's expert opinion, Garland submitted substantial evidence in the form of an expert report, affidavit, and the complete transcript of a prior evidentiary hearing on a DNA challenge involving the same experts. Garland demanded a hearing under Minn. R. Crim. P. 11.02, along with a request that the district court receive evidence under Minn. R. Crim. P. 11.03(a), to assess the admissibility of the State's expert opinion regarding DNA evidence. *See* Minn. R. Crim. P. 8.03. After reviewing Garland's written submissions, but without granting oral argument or holding an evidentiary hearing, the district court denied the motion to exclude the expert opinion.

On appeal, Garland argues that the district court committed reversible error by denying his motion without providing an opportunity for oral argument or holding an evidentiary hearing to receive testimony from the expert witnesses. Because the alleged errors were harmless, we need not decide whether the district court was required to grant

oral argument on the motion or hold an evidentiary hearing to receive testimony from the expert witnesses.[1]

We have previously held that the erroneous failure to hold a hearing on the admissibility of the State's evidence is subject to a harmless-error analysis. *State v. Roman Nose*, 649 N.W.2d 815, 823 (Minn. 2002) (applying a harmless-error analysis to a claim that the district court improperly denied the defendant a *Frye-Mack* hearing and therefore admitted the DNA evidence in error); *State v. Burns*, 394 N.W.2d 495, 497 (Minn. 1986) ("[T]he lack of an admissibility hearing where one would normally be held does not automatically entitle a defendant to relief."); *Coralin v. State*, 377 N.W.2d 14, 19–20 (Minn. 1985) (applying a harmless-error analysis to the district court's erroneous failure to hold a midtrial hearing on the admissibility of a pretrial photo lineup).

Even if we assume without deciding that the district should have held a hearing, the improper admission of DNA evidence is harmless if it "did not have a significant impact on the verdict." *State v. Nielsen*, 467 N.W.2d 615, 619 (Minn. 1991); *see also State v. Valtierra*, 718 N.W.2d 425, 435 (Minn. 2006) (explaining that an evidentiary error is harmless unless it "substantially influences" the jury's decision) (citation omitted) (internal

[1] The Minnesota Rules of Criminal Procedure generally do not provide clear guidance to courts or lawyers on what type of hearing a district court must hold under Rule 11.02 and when a district court should hold an evidentiary hearing as allowed under Rule 11.03. To ensure clarity for courts and practitioners, we refer to the Supreme Court Advisory Committee on the Rules of Criminal Procedure the task of studying and making recommendations to this court clarifying (1) the circumstances under which an opportunity to orally argue omnibus motions is required and (2) when a district court should allow witnesses to testify subject to cross-examination in connection with such motions.

quotations marks omitted). For the reasons that follow, we conclude that the admission of the State's expert opinion testimony did not have a significant impact on the verdict.

Although DNA evidence may be strong and persuasive to a jury, *see State v. Schneider*, 597 N.W.2d 889, 896 (Minn. 1999) (Anderson, J., concurring specially), other substantial and compelling evidence of Garland's guilt exists here. Garland's friend, S.L., testified that Garland admitted to shooting Dunn. S.L.'s testimony is corroborated by other evidence, including eyewitnesses and video surveillance. Garland's primary defense was that before the incident he boarded a bus from St. Paul to Chicago and was in Chicago at the time of the shooting. But there was no sign of Garland on the relevant bus station surveillance footage. Moreover, a phone that the State linked to Garland pinged cell phone towers in Minneapolis in the days immediately preceding and following the murder. Garland's Facebook messages also placed him in the area at the time of the shooting. And the State did not rely heavily on the DNA evidence. The prosecutor's closing argument took more than 30 pages of trial transcript, but the DNA evidence was mentioned on only four of those pages. On those four occasions, the prosecutor simply reiterated that Garland could not be excluded from the DNA sample found on the hat. *Cf. Roman Nose*, 649 N.W.2d at 823 (stating that we "simply [could not] say the jury's verdict was surely unattributable to the admission of [the] DNA evidence . . . given the importance that was placed on the evidence").[2]

[2] We further observe that the parties submitted extensive evidence for the district court to consider when determining admissibility, including detailed memoranda, expert reports, and transcripts of prior expert trial testimony by the two experts involved in this case. Moreover, the district court did not limit the parties' written submissions regarding

Based on the above considerations, we hold that the failure to hold a hearing on Garland's motion to exclude the State's expert testimony regarding the DNA evidence was harmless.

II.

Minnesota Rule of Evidence 702 governs the admissibility of expert testimony. It states:

> 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. The opinion must have foundational reliability. In addition, if the opinion or evidence involves novel scientific theory, the proponent must establish that the underlying scientific evidence is generally accepted in the relevant scientific community.

"Under this rule, expert testimony is admissible if: (1) the witness is qualified as an expert; (2) the expert's opinion has foundational reliability; (3) the expert testimony is helpful to the jury; and (4) if the testimony involves a novel scientific theory, it [satisfies] the *Frye-Mack*

Garland's motion to exclude. Consequently, Garland's complaint that at a hearing he would have introduced even more scientific studies and called on Dr. Nora Rudin to testify in more detail about the opinions included in her report falls flat. Garland has failed to specify how information that he would have elicited or presented at a pretrial evidentiary hearing meaningfully differs—aside from volume—from what he had already submitted to the district court. *See State v. Ortlepp*, 363 N.W.2d 39, 44-45 (Minn. 1985) (holding that the failure to hold a hearing was harmless in part because defendant did not demonstrate that the hearing would have benefitted him).

Garland also argues that an evidentiary hearing would have allowed cross-examination of the state's experts on "the GlobalFiler's lack of accreditation" and "the BCA employees' contamination of one of the samples" from the red hat. But as we discuss later in this opinion, the GlobalFiler was validated in accordance with accepted protocols and the claim that one of the samples was contaminated is based on a fundamental misunderstanding of the record.

standard." *State v. Obeta*, 796 N.W.2d 282, 289 (Minn. 2011). Garland argues that the State failed to show that prongs two, three, and four are satisfied.

"We review evidentiary rulings of the district court, including the admission of expert testimony, for abuse of discretion." *State v. Anderson*, 789 N.W.2d 227, 234–35 (Minn. 2010). "A district court abuses its discretion when its decision is based on an erroneous view of the law or is against logic and the facts in the record." *State v. Guzman*, 892 N.W.2d 801, 810 (Minn. 2017).

A.

We first consider Garland's challenge to foundational reliability. When determining whether an opinion is foundationally reliable under Rule 702, "the district court must analyze the proffered testimony in light of the purpose for which it is being offered . . . [and] consider the underlying reliability, consistency, and accuracy of the subject about which the expert is testifying." *Doe v. Archdiocese of St. Paul*, 817 N.W.2d 150, 167–68 (Minn. 2012). Foundational reliability goes "beyond a mere helpfulness standard." *Id.* at 167. Instead, it "is a concept that looks to the theories and methodologies used by an expert." *Kedrowski v. Lycoming Engines*, 933 N.W.2d 45, 56 (Minn. 2019). We have recognized that " 'DNA test results are only as reliable and accurate as the testing procedures used by the particular laboratory.' " *State v. Traylor*, 656 N.W.2d 885, 893 (Minn. 2003) (quoting *State v. Schwartz*, 447 N.W.2d 422, 426 (Minn. 1989)).

The district court must also determine whether the expert reliably applied the underlying theories and methodologies in the particular case. *See Doe*, 817 N.W.2d at 168–69. When we assess the "foundational reliability of a laboratory's DNA testing

methodology[,] . . . [we] look[] at 'whether the laboratory conducting the tests in the individual case complied with appropriate standards and controls.' " *Traylor*, 656 N.W.2d at 893–94 (quoting *Roman Nose*, 649 N.W.2d at 819).

Garland argues that the State's expert opinion lacked foundational reliability because the mixtures in Items 1-1 and 1-2 were too complex for reliable interpretation. He asserts that the State failed to show both that the BCA's testing methods are generally reliable and that its application of those methods in this case rendered reliable results.

1.

Garland's primary challenge to the underlying reliability is that the BCA's testing and reporting procedures are insufficient for analyzing complex mixtures. The State offered the DNA testimony to show that Garland could not be excluded as a contributor to the samples taken from the hat found at the crime scene and that a percentage of the general population could be excluded. The district court found that the expert testimony would focus on those conclusions and any challenges brought by the defense. Accordingly, the district court assessed whether the BCA's procedures for DNA testing and analysis could reliably, consistently, and accurately show whether Garland could be excluded as a contributor to the hat samples and what percentage of the general population could be excluded. *See Doe*, 817 N.W.2d at 168.

The BCA used the GlobalFiler testing kit as part of its DNA analysis. The BCA began using GlobalFiler on January 1, 2017, in accordance with Federal Bureau of Investigation (FBI) requirements that all facilities participating in the National DNA Index

System use kits that target 20 core DNA markers. The BCA's previous testing kit, Identifiler, targeted only 13 DNA markers. GlobalFiler meets the FBI requirement.

The GlobalFiler kit uses the PCR-STR method to amplify—that is, replicate—fragments of DNA.[3] Once those fragments have been replicated, a BCA analyst compares the DNA markers in fragments of an unknown DNA sample—for example, a sample collected at a crime scene—with the DNA markers in fragments of a sample from a known individual. The analyst will determine whether all DNA markers present in the known sample are also present at the same locations in the unknown sample. If they are, that known individual cannot be excluded as a possible contributor to the unknown sample.

If the analyst determines that the known individual cannot be excluded, the analyst will use some of the DNA markers to calculate the "combined probability of exclusion" (CPE). The CPE expresses the proportion of the general population that can be excluded from the unknown sample. This number can be expressed as a decimal or a fraction. The CPE does not allow an analyst to affirmatively determine whether a person's DNA is

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[3] We have explained:

> Polymerase Chain Reaction (PCR) is a method for replicating, also known as amplifying a portion of an individual's DNA. It essentially copies DNA, thus increasing the amount available to be tested. This method does not replicate the entire DNA strand. Instead, it generates millions of copies of a particular portion of DNA by repeatedly replicating a small, defined portion of the strand . . . .
>
> Recently, PCR testing began to examine a portion of human DNA known as short tandem repeats, or STRs[,]. . . in which a DNA sequence is repeated along the strand.

Traylor, 656 N.W.2d at 888–89.

included in an unknown sample, only whether a person cannot be excluded as a contributor to the sample.

Garland raised three primary objections to the BCA's procedures. Each objection was based on and supported by Dr. Nora Rudin's expert report, which Garland submitted to the district court. Dr. Rudin reached her conclusions by reviewing documentation from the BCA, including DNA reports, bench notes, logs, and raw electronic data, as well as BCA protocols and validation studies. Dr. Rudin did not perform independent testing of the DNA samples from the hat.

Dr. Rudin first opined that the BCA's analytical threshold is too high. The analytical threshold is the level above which DNA markers in a sample can be distinguished from other "noise" produced by the testing kit and equipment performing the analysis. According to Dr. Rudin's review, the BCA opted to use an analytical threshold that was too high.

Dr. Rudin's second objection concerned another BCA threshold—the stochastic threshold. The stochastic threshold is the level above which both DNA markers at a given location in a sample would be expected to be detected. This threshold is established using the previously determined analytical threshold. Dr. Rudin stated that the stochastic threshold was improperly determined and therefore was incorrect.

According to Dr. Rudin, when stochastic and analytical thresholds are incorrect, the testing kit may fail to detect DNA markers. And because mixtures contain DNA from multiple contributors, there is an increased risk that some markers will go undetected. When that happens, the analyst may overestimate the number of people who can be excluded from

an unknown sample. In other words, the resulting statistic may make it seem more likely that the defendant is a contributor to the sample.

Finally, Dr. Rudin stated that CPE calculations are not valid for analyzing samples containing DNA mixtures. She opined that no "scientific validation exists, either in the literature or from the BCA laboratory, to support the use of such statistics." She further opined that the more commonly used statistical calculation is the combined probability of inclusion (CPI). CPI is the inverse of CPE—it expresses what proportion of the population is included in a sample. She also stated that the CPI statistic is better expressed as a fraction, not a decimal.

The State presented evidence to refute each of the defense expert's arguments. Most important was an affidavit from Dr. Marlijn Hoogendoorn, Technical Leader for the biology section of the BCA. Dr. Hoogendoorn explained how the BCA determined its analytical and stochastic thresholds.

Dr. Hoogendoorn identified substantial support for the BCA's decision to use its chosen analytical threshold. She attested that a similar analytical threshold is commonly used in forensic science for the type of equipment the BCA uses to run the GlobalFiler test kit and that previous testing kits run on the same equipment were validated for the chosen analytical threshold. She therefore concluded that the BCA's analytical threshold is "determined more by the instrumentation than by the specific amplification kit chemistry."

Dr. Hoogendoorn's affidavit also refuted Dr. Rudin's conclusion that the stochastic threshold was improperly determined. She stated that the stochastic threshold was, in fact, determined using the appropriate analytical threshold, not a "different analytical threshold."

And in response to Dr. Rudin's objection to CPE, Dr. Hoogendoorn stated that CPE has long been accepted by the forensic community as a valid method for calculating the probability of exclusion from a DNA mixture. Other evidence before the district court supported Dr. Hoogendoorn's opinion, including a peer-reviewed scientific article regarding best practices for using CPE when evaluating DNA mixtures.

Finally, the State presented evidence demonstrating the reliability and accuracy of the BCA's internal validation of GlobalFiler. Validation is the testing needed to verify that the BCA's equipment and techniques are working properly. We have held that " 'the admissibility of specific test results in a particular case hinges on the laboratory's compliance with appropriate standards and controls.' " *Traylor*, 656 N.W.2d at 896 (quoting *Schwartz*, 447 N.W.2d at 428). When determining the appropriate standards and controls, "we look to [those] that are currently accepted by the scientific community." *Id.* Dr. Hoogendoorn attested that the BCA's validation of GlobalFiler included all studies required by the FBI Quality Assurance Standards and followed the guidelines of the Scientific Working Group of DNA Analysis Methods (SWGDAM), a group that advises the FBI and the forensic community regarding best practices in forensic science. The evidence before the district court showed that FBI and SWGDAM guidelines are accepted by the scientific community as measures of quality control in forensic testing.

The district court reviewed all of the evidence before it and found that the State met its burden of showing that the BCA's theories and methodologies were foundationally reliable. It concluded that disagreements between the two experts should be heard by the jury, as is often appropriate when qualified experts arrive at differing conclusions. We hold

that the district court did not abuse its discretion by finding that the State presented sufficient evidence to show that the BCA's approach to testing complex mixtures is reliable, consistent, and accurate.

2.

Garland also contends that the BCA's procedures did not produce reliable results in this case. In her expert report, Dr. Rudin asserted that Item 1-1 should not have been analyzed by the BCA. She stated that, because the BCA's analytical threshold was too high, the number of possible contributors to the sample was underreported. Dr. Rudin opined that, had the BCA used an appropriate analytical threshold, it would have concluded that Item 1-1 contained five or more contributors and therefore should not have been analyzed. According to the BCA's protocols, no sample that contains a mixture of five or more contributors should be analyzed.

This argument hinges on Dr. Rudin's conclusion that the BCA's analytical threshold was too high. But we have already concluded that the district court did not abuse its discretion by finding that the BCA's practices and procedures—including its analytical threshold—are reliable and accurate. We therefore also conclude that the district court acted within its discretion when it found that the BCA's procedures complied with appropriate standards and controls. *See Traylor*, 656 N.W.2d at 896.

Dr. Rudin also opined that Item 1-2 had virtually no statistical value. Only 16.7 percent of the population could be excluded as contributors to the sample. She stated that this statistic meant that "effectively anyone could be a contributor to this profile" and that therefore the statistic was "essentially meaningless . . . for determining who might be a

contributor." Nonetheless, Dr. Rudin agreed that the BCA's mathematical calculation was accurate. Her objection to the analysis of Item 1-2 related more to the weight of the evidence, rather than its admissibility. The appropriate weight to give evidence is a determination properly left to the trier of fact. *State v. Harris*, 895 N.W.2d 592, 600 (Minn. 2017). We therefore hold that the district court did not abuse its discretion by finding that the BCA's procedures produced reliable results with regard to Item 1-2.

Garland raises one final challenge to the reliability of Item 1-1. He asserts that the BCA analyst "discovered that two BCA employees' DNA were identified" in the sample, rendering the results unreliable. This argument relies on a misunderstanding of the record. The record reflects that two BCA employees could not be excluded as contributors to Item 1-1. This determination does not mean that the DNA of the two employees was found in or contaminated the DNA samples from the hat. As previously stated, analysts cannot determine whether an individual contributed DNA to a profile. They can determine only whether an individual can be excluded as a contributor. In other words, those employees were part of the 8 percent of the population that could not be excluded from the DNA sample. And the BCA verified that the two employees had not been involved in the handling or testing of Item 1-1. Garland's contamination argument therefore fails.

Based on the evidence before the district court, we hold that it did not abuse its discretion by finding that the State's expert opinion was foundationally reliable.

B.

Garland next challenges the helpfulness of the State's expert opinion under Minnesota Rule of Evidence 702. "Expert testimony is not helpful if the expert opinion is within the

knowledge and experience of a lay jury and the testimony of the expert will not add precision or depth to the jury's ability to reach conclusions." *Obeta*, 796 N.W.2d at 289 (citations omitted) (internal quotation marks omitted). In other words, if the jury can reach an informed conclusion just as easily as the expert, the expert's testimony is not helpful to the jury. *See State v. Saldana*, 324 N.W.2d 227, 229 (Minn. 1982).

Garland argues that the State's expert opinion was based on unreliable evidence and therefore could not add precision or depth to the jury's decision. We have already held that the district court did not abuse its discretion by finding that the BCA's procedures were reliable, consistent, and accurate, both generally and in this case. A helpfulness argument that focuses on a lack of reliability therefore must fail.

Under our standard, the State's expert testimony was helpful to the jury. An understanding of complex DNA analysis is not within the knowledge and expertise of a lay jury. A forensic scientist's opinion therefore helps a jury interpret DNA evidence and enables the jury to reach more precise conclusions regarding the weight of that evidence. We conclude that the district court did not abuse its discretion by finding that the expert testimony about the DNA evidence would be helpful to the jury.

C.

Finally, we address Garland's contention that the district court was required to assess the State's expert opinion under the *Frye-Mack* standard. He contends that such analysis was necessary because the GlobalFiler kit is a "brand new method of analyzing DNA evidence" and "utilizes a method of DNA analysis not used in any of the BCA's previous testing methods."

The *Frye-Mack* standard, which was incorporated into Rule 702 in 2006, "governs the admissibility of expert testimony that involves a novel scientific theory," *Doe*, 817 N.W.2d at 156 (citations omitted) (internal quotation marks omitted), or "emerging scientific techniques," *State v. Jobe*, 486 N.W.2d 407, 419 (Minn. 1992). Before engaging in the *Frye-Mack* analysis, a district court must first determine whether the proffered evidence involves a novel scientific theory or technique. *See State v. Harvey*, 932 N.W.2d 792, 806 (Minn. 2019). If the court finds that the evidence involves a novel technique, it must then determine whether the underlying science is generally accepted within the relevant scientific community and whether the particular scientific evidence in the case is shown to have foundational reliability. *Doe*, 817 N.W.2d at 165 (citing *Goeb v. Tharaldson*, 615 N.W.2d 800, 814 (Minn. 2000)). However, if the court determines that the evidence does not involve a novel technique, the court "need not consider whether [the evidence] has been generally accepted by the scientific community" and should instead focus on the second prong of the *Frye-Mack* standard. *See Harvey*, 932 N.W.2d at 806.

Garland argues that because we have not approved the use of the GlobalFiler testing kit, the district court was required to conduct a *Frye-Mack* analysis. *See Roman Nose*, 649 N.W.2d at 822 (stating that when "novel scientific evidence is offered that has not been reviewed by this court, the district court must determine whether the method of producing the scientific evidence is generally accepted in the relevant scientific community"). But we have clarified that "scientific evidence is [not] novel simply because Minnesota appellate courts have not yet analyzed a particular form of scientific evidence under the requirements

of Rule 702." *Harvey*, 932 N.W.2d at 807. Instead, whether a scientific technique is novel is determined based on whether the technique is new. *Id.*

In *Harvey*, we concluded that cell-site location information (CSLI) technology was not novel. *Id.* at 808. In reaching that conclusion, we considered evidence that the federal government had been using CSLI technology for more than 15 years; the FBI used the technology in its investigations; the FBI has presented CSLI evidence in over 1,000 trials; and Minnesota courts had been admitting CSLI evidence for more than 10 years. *Id.* Those same considerations inform our analysis here.

The district court found that the GlobalFiler kit does not involve novel scientific theories or techniques. GlobalFiler uses the same type of analysis—PCR-STR—used by earlier kits. We approved of PCR-STR analysis 17 years ago. *See Traylor*, 656 N.W.2d at 893 (holding that PCR-STR testing is "generally accepted in the relevant scientific community"). And the BCA has been using the PCR-STR technique since that time. Moreover, Minnesota courts have been admitting evidence obtained through PCR-STR testing for almost two decades. *See id.* at 900. Because the PCR-STR technique has been in longstanding use in Minnesota, it is not novel. *See Harvey*, 932 N.W.2d at 808. The district court therefore need only have focused on whether the evidence had foundational reliability.

The foundational reliability analysis under Rule 702 is "nearly identical to the analysis done under the second prong of the *Frye-Mack* test." *Doe*, 817 N.W.2d at 168. Therefore, as long as the district court considers the relevant foundational reliability factors, "it makes little difference whether the district court called the analysis a '*Frye-Mack*' analysis or a 'Rule 702' analysis." *Id.* We have already concluded that the district court did

not abuse its discretion by finding that the State's expert opinion was foundationally reliable under Rule 702. We have also held that any error in failing to hold a hearing on foundational reliability was harmless. The district court therefore did not err by not analyzing the DNA evidence under the *Frye-Mack* standard.

III.

We next turn to Garland's challenge under Minnesota Rule of Evidence 403. That rule states:

> Although relevant, evidence may be excluded if its probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury, or by considerations of undue delay, waste of time, or needless presentation of cumulative evidence.

Again, we "afford the district court broad discretion when ruling on evidentiary matters, and we will not reverse the district court absent an abuse of that discretion." *Doe 136 v. Liebsch*, 872 N.W.2d 875, 879 (Minn. 2015).

> "[T]he term 'prejudice' in Rule 403 'does not mean the damage to the opponent's case that results from the legitimate probative force of the evidence; rather, it refers to the unfair advantage that results from the capacity of the evidence to persuade [the jury] by illegitimate means.' " *State v. Mosley*, 853 N.W.2d 789, 797 (Minn. 2014) (quoting *State v. Cermak*, 365 N.W.2d 243, 247 n.2 (Minn. 1985)). And we have affirmed a district court's decision to exclude evidence where the evidence was "speculative and confusing," *see State v. Henderson*, 620 N.W.2d 688, 699 (Minn. 2001), or "not supported by an offer of proof," *see State v. Wilson*, 900 N.W.2d 373, 386 (Minn. 2017).

Here, the DNA evidence is probative because it connects Garland to the scene of the crime. And we have already held that the evidence is helpful to the jury. Accordingly, the question we must address is whether the DNA evidence is prejudicial to Garland.

Garland argues that the BCA's unreliable testing and analysis was misleading and that it produced misleading results. But we have already affirmed the district court's conclusion that the BCA's statistical and analytical methods are reliable and produced reliable results in this case. We therefore cannot conclude that the DNA evidence is misleading on that basis.

The DNA evidence was not confusing or distorted. The BCA analyst simply determined the probability that Garland could be excluded as a contributor to Items 1-1 and 1-2. And the defense expert agreed that the BCA's math was correct. Finally, as stated previously, the BCA analyst's method of reporting the probability—as a CPE—is used and approved of by forensic scientists across the United States. The State's DNA evidence was not confusing simply because the defense expert would have preferred that the probability be reported as a CPI in the form of a fraction.

Neither was the State's evidence speculative. As discussed above, the BCA analyst reached her conclusions using methods that have been approved by the FBI and other advisory organizations in the forensic scientific community, as well as by this court.

Finally, the defense had the opportunity to cross-examine the State's expert and present its own expert at trial. Garland therefore had ample opportunity to point out the weaknesses in the State's evidence and convince the jury to give it less weight.

Accordingly, we conclude that the district court did not abuse its discretion by admitting the DNA evidence because its probative value outweighed any prejudice to Garland.

IV.

Garland next argues that, by answering questions from the jury, "the prosecutor improperly intruded upon the jury's independent fact-finding mission and participated in their deliberations." The prosecutor answered two questions from the jury regarding time stamps at particular parts of the surveillance videos. She also answered a question about the name of a street on the video.

Garland contends that the prosecutor's conduct was structural error requiring automatic reversal. *See State v. Kuhlmann*, 806 N.W.2d 844, 851 (Minn. 2011) (stating that structural errors require automatic reversal of a conviction). "Structural errors are defects in the constitution of the trial mechanism, which defy analysis by harmless-error standards." *Id.* (citing *Arizona v. Fulminante*, 499 U.S. 279, 309 (1991)) (internal quotation marks omitted). When a structural error occurs, "[t]he entire conduct of the trial from beginning to end is obviously affected." *Fulminante*, 499 U.S. at 309–10.

Only certain types of errors are structural errors. *See, e.g.*, *Sullivan v. Louisiana*, 508 U.S. 275, 281–82 (1993) (constitutionally deficient reasonable-doubt jury instruction); *Fulminante*, 499 U.S. at 309 (noting cases holding that total deprivation of the right to counsel at trial and non-impartial judges as structural errors); *McKaskle v. Wiggins*, 465 U.S. 168, 177–78 n.8 (1984) (denial of the right to self-representation at trial); *State v. Dorsey*, 701 N.W.2d 238, 252–53 (Minn. 2005) (presence of a biased judge as fact finder); *State v. Reiners*, 664 N.W.2d 826, 835 (Minn. 2003) (erroneous denial of a defendant's peremptory challenge); *State v. Logan*, 535 N.W.2d 320, 324–25 (Minn. 1995) (prejudice resulting from failure to dismiss a potential juror for cause). Here, the prosecutor's conduct

does not rise to the level of structural error.[4] Garland argues that this case is similar to three cases in which we held that improper interactions with the jury necessitated automatic reversal of a conviction. *See Brown v. State*, 682 N.W.2d 162 (Minn. 2004); *State v. Costello*, 646 N.W.2d 204 (Minn. 2002); *State v. Mims*, 235 N.W.2d 381 (Minn. 1975). We disagree. The concerns that drove our decisions in those cases do not apply here.

In *Mims* and *Brown*, the district court judges entered the jury room during deliberations and communicated with the juries. In both cases, at least some of the communication happened in the absence of counsel. *Brown*, 682 N.W.2d at 164–65; *Mims*, 235 N.W.2d 383–84. On appeal, we were primarily concerned with the judge's outsized power to influence the jury. We stated that " '[i]n view of the judge's dominant role during earlier stages of the trial, an uninvited entrance into the sanctity of the jury room for any purpose offends the integrity of the proceedings and risks influencing the jury's decisional process in some degree, however difficult to define or impossible to measure.' " *Brown*, 682 N.W.2d at 167 (quoting *Mims*, 235 N.W.2d at 388).

Moreover, the judges in those cases did not simply provide factual answers to straightforward juror questions. Instead, in both *Brown* and *Mims*, the judges inquired of each jury how quickly it would reach a decision. *Brown*, 682 N.W.2d at 165; *Mims*, 235 N.W.2d at 383–84. We stated that such questioning ran the unacceptable risk of intruding

[4] We remind judges and attorneys that attorneys have only two opportunities to speak directly to the jury: during opening and closing arguments. Attorneys should not attempt—nor should judges allow them—to speak to the jury at any other time before, during, or after trial.

upon the jury's independent fact-finding role and pressuring the jury to shorten its deliberations. *Brown*, 682 N.W.2d at 167–68; *Mims*, 235 N.W.2d at 387–88.

Finally, in each case the judge communicated with the jury in the absence of the defendant and defense counsel. We concluded that the judges' actions violated the defendants' right to be present at all stages of the proceedings. *Brown*, 682 N.W.2d at 166; *Mims*, 235 N.W.2d at 388.

The exchange between the jury and the prosecutor in this case raises none of these same concerns. The prosecutor does not possess the same influence over the courtroom and the jury as a judge. The prosecutor provided factually accurate answers to basic questions; she did not exert pressure on the jury to reach a decision. And the exchange occurred in open court, on the record, and in the presence of the defendant and his attorney.

Neither is this case analogous to *Costello*, in which the district court judge permitted the jury to question witnesses during trial. 646 N.W.2d at 205–07. On appeal, we said that when jurors are permitted to question witnesses, they are encouraged to form hypotheses and opinions prior to the submission of the case, which risks jurors drawing conclusions about the case before the court has instructed the jury on the law. *Id.* at 210–11. We also expressed concern that questions from the jury alter the burden of proof and production and relieve the State of its burden to prove all elements of a crime. Such a change risks undermining the balance of our adversarial system. *Id.* at 211–12.

The issues raised in *Costello* are not present here. The jury's questions were not posed to witnesses. The inquiries from the jury here came after the case had been submitted. And the answers only provided the jury with information that had already been

presented at trial; the exchange between the prosecutor and the jury did not affect the burden of proof or encourage the jury to form premature opinions about the case.

We conclude that the prosecutor's responses to three straightforward fact questions from the jury do not constitute structural error. Accordingly, Garland's claim is subject to plain-error review because he failed to contemporaneously object to the prosecutor's conduct. *See State v. Ramey*, 721 N.W.2d 294, 299 (Minn. 2006) (holding "that appellate courts should use the plain error doctrine when examining unobjected-to prosecutorial misconduct"). "[B]efore an appellate court reviews an unobjected-to error, there must be (1) error; (2) that is plain; and (3) the error must affect substantial rights. If these three prongs are met, the appellate court then assesses whether it should address the error to ensure fairness and the integrity of the judicial proceedings." *State v. Griller*, 583 N.W.2d 736, 740 (Minn. 1998) (footnote omitted).

When the unobjected-to error involves prosecutorial misconduct, the State bears the burden of showing that the error did not affect the defendant's substantial rights—that is, that it did not prejudice the defendant. *See Ramey*, 721 N.W.2d at 300. An error "is prejudicial if there is a reasonable likelihood that the absence of the misconduct in question would have had a significant effect on the verdict of the jury." *State v. MacLennan*, 702 N.W.2d 219, 236 (Minn. 2005) (citation omitted) (internal quotation marks omitted).

We need not reach the question of whether the prosecutor committed an error that is plain. Instead, we turn to the question of whether the State carried its burden of showing that the prosecutor's answers to the jury's questions affected Garland's substantial rights. *See State v. Goelz*, 743 N.W.2d 249, 258 (Minn. 2007) (stating that if we conclude that a

claimed error did not affect a defendant's substantial rights, "we need not consider the other factors").

The prosecutor answered only three questions from the jury. Each brief answer provided information that the jury could have readily obtained by moving closer to the computer screen. Garland was present during the exchange. And, as we set forth in our discussion of whether the district court erred by declining to hold a hearing on Garland's motion to exclude, the totality of the evidence against Garland in this case was compelling.

Considering all of the evidence, the State established that it is not reasonably likely that the jury would have reached a different result had the prosecutor not answered the three jury questions. Accordingly, the prosecutor's answers did not affect Garland's substantial rights. The plain error test is therefore not satisfied.

V.

The jury found Garland guilty of both first-degree murder and second-degree murder for killing Dunn. The district court adjudicated Garland guilty on both counts but imposed only one sentence. "Upon prosecution for a crime, the actor may be convicted of either the crime charged or an included offense, but not both." Minn. Stat. § 609.04, subd. 1 (2018). When a defendant is found guilty of a charged offense and a lesser-included offense, the district court should "adjudicate formally and impose sentence on one count only." *Petersen v. State*, 937 N.W.2d 136, 140 (Minn. 2019) (citation omitted) (internal quotation marks omitted). Because second-degree murder is a lesser-included offense of first-degree murder, the district court erred by entering a formal adjudication on both

counts in its sentencing order. *Id*. Therefore, we remand to the district court to correct the error.

CONCLUSION

For the foregoing reasons, we affirm in part and reverse in part the decision of the district court.

Affirmed in part, reversed in part, and remanded.