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STATE OF CONNECTICUT *v.* BRETT B.*
(AC 41288)

DiPentima, C. J., and Prescott and Harper, Js.

Syllabus

Convicted of the crimes of murder and violation of a standing criminal protective order in connection with the deaths of his mother, B, and two individuals, R and J, who lived with her, the defendant appealed. The defendant and B had had an altercation while he was living in her home, which resulted in the issuance of a protective order that prohibited him from contacting her or going to her residence. After the defendant moved out of the home, R and J moved into the home. The police found the bodies of B, R and J in the home, where they had repeatedly been struck in the head. DNA was found on a checkbook, a plastic bag and a cell phone charger that were recovered from the home. C, a forensic expert for the state, testified that the defendant was a partial match as to the DNA on the checkbook, and a possible contributor to the DNA on the bag and cell phone charger. V, another forensic expert for the state, testified that a bloodstain that was found on a tissue that was recovered from the home appeared to have been caused by a finger, rather than by blood spatter from R's wounds. L, another forensic expert for the state, testified that bloody foot impressions from the crime scene were consistent in size and shape with the known foot impressions of the defendant, and that both impressions exhibited a swiping motion in the big toe area. On appeal, the defendant claimed, inter alia, that he was denied his right to a fair trial as a result of certain prosecutorial improprieties during closing argument and the admission of V's testimony. *Held:*

1. The defendant could not prevail on his claim that the prosecutor misstated or exaggerated the significance of certain DNA evidence and implied to the jury that he had knowledge outside the record with respect to the bloody foot impressions:
 - a. The prosecutor did not make any improper statements or mislead the jury about the DNA evidence from the bag, checkbook and cell phone charger: the prosecutor's statements were made while he set forth his theory of the case, it would have been clear to the jury that if evidence tended to demonstrate that the defendant was a possible contributor to a DNA profile, it was being asked by the state to draw every reasonable inference to conclude that it was the defendant's DNA that was found on those items, and the jury was able to evaluate the prosecutor's arguments in light of C's testimony and the statistical evidence she presented; moreover, the prosecutor properly asked the jury to infer from the totality of the evidence that in those instances in which there were multiple possibilities as to the source of the DNA, the defendant was the far more likely contributor, and the defendant had ample opportunity to object to and correct any misstatement by the prosecutor but did not do so, which suggested that he did not believe that the prosecutor's remarks warranted such intervention.
 - b. The prosecutor did not imply to the jury that he had knowledge outside the record with respect to the significance of the toe swipe evidence, as his argument was confined to the evidence, the defendant never objected to L's testimony about the swipe marks, the prosecutor's mention of a fact that was in evidence could not have been improper, and the prosecutor never indicated that the swipe mark had significance beyond the fact that it was a trait shared by the defendant and the person who left the bloody foot impressions.
2. The trial court did not abuse its discretion when it admitted V's testimony about the bloodstain on the tissue or when it denied the defendant's motion to strike that testimony and ruled that the jury was capable of determining the cause of the bloodstain on the basis of its knowledge and experience:
 - a. The defendant could not prevail on his claim that the trial court committed plain error when it permitted V to give expert testimony regarding bloodstain pattern analysis when she had not previously been

disclosed or qualified as an expert in bloodstain patterns or blood spatter analysis: defense counsel essentially acquiesced to the admission of V's opinion testimony by failing to seasonably object to V's qualifications to give an opinion about the mechanism by which the blood was transferred to the tissue or to whether her opinion was based on scientific methods, and by failing to ask for a continuance or an opportunity to voir dire her outside the presence of the jury, and it was not until the defendant moved to strike her testimony that he objected to it, which was limited to a claim of unfair surprise and that the testimony fell outside the standard recognized for scientific evidence; accordingly, the defendant failed to demonstrate that by allowing V to express an opinion as to the cause of a bloodstain, the court committed the type of obvious and readily discernible error that would warrant application of the plain error doctrine.

b. The defendant's claim that the trial court improperly denied his motion to strike V's testimony about how the blood was transferred to the tissue was unavailing; although the court refused to grant the defendant's motion to strike, the court nevertheless effectively granted the relief he sought by indicating to the jurors that they could decide for themselves on the basis of their own observations whether they agreed with what the court referred to as V's subjective opinion about how the bloodstain got on the tissue, and, thus, the court, through its comments, stripped from V's testimony any patina of expert gloss regarding her opinion, the defendant never objected to the court's statement that the jury could use its own powers of observation to determine whether the blood was a result of blood spatter or someone having touched the tissue with a bloody finger, which suggested that the defendant was satisfied with the court's resolution of the matter, and the defendant did not ask the court to conduct a hearing as to whether V's observations were properly viewed as scientific evidence.

c. The defendant could not prevail on his claim that the trial court improperly admitted V's opinion testimony regarding the cause of the bloodstain, which was based on his assertion that her opinion had not been disclosed previously and, therefore, that it unfairly ambushed the defense; the defendant never asked for a continuance to attempt to remedy the alleged unfair surprise, there was no testimony that V's opinion involved scientific techniques or obscure scientific theories that would have alerted the court that a hearing pursuant to *State v. Porter* (241 Conn. 57) was necessary, which the defendant never requested, the defendant did not cite a single case in which expert testimony was struck or precluded on the ground that the opinion offered had not been previously disclosed in a report, and the rule that the defendant proposed, which would preclude a forensic expert from giving opinion testimony unless it previously had been disclosed, was too rigid and would hamstring the discretion of the trial court, which has far less draconian remedies available to it.

Argued September 18—officially released December 11, 2018

Procedural History

Substitute information charging the defendant with three counts of the crime of murder and with one count of the crime of violating a standing criminal protective order, brought to the Superior Court in the judicial district of Hartford and tried to the jury before *Kwak, J.*; thereafter, the court denied the defendant's motion to strike certain testimony; verdict and judgment of guilty, from which the defendant appealed. *Affirmed.*

Lisa J. Steele, assigned counsel, for the appellant (defendant).

Matthew A. Weiner, assistant state's attorney, with whom, on the brief, were *Gail P. Hardy*, state's attorney, and *David L. Zagaja*, senior assistant state's attorney, for the appellee (state).

PRESCOTT, J. The defendant, Brett B., appeals from the judgment of conviction, rendered after a jury trial, of three counts of murder in violation of General Statutes § 53a-54a (a) and one count of violating a standing criminal protective order in violation of General Statutes § 53a-223a (a). The defendant claims on appeal that (1) he was denied his right to a fair trial because the prosecutor committed improprieties during closing argument by (a) misrepresenting to the jury that certain DNA found at the crime scene belonged to the defendant despite testimony from the state's DNA expert that the defendant was only a possible contributor, and (b) misleading the jury regarding foot impression evidence; and (2) the trial court abused its discretion by admitting into evidence previously undisclosed opinion testimony from the state's forensic expert that a bloodstain found on a tissue at the crime scene appeared to be caused by a finger rather than by blood spatter, which, if credited, tended to implicate the defendant as the perpetrator. We reject the defendant's claims and, accordingly, affirm the judgment of conviction.

The jury reasonably could have found the following facts. In the late 2000s, the defendant lived with his father, A, in a single-family raised ranch home in East Hartford (East Hartford home). The defendant grew up in the East Hartford home and had lived there intermittently during his adulthood. The main floor of the East Hartford home had two bedrooms connected by a short hallway leading to the kitchen and living room, with a bathroom located off that hallway near the two bedrooms. A third bedroom was located in the home's finished basement.

In 2009, the defendant's mother, B, moved into the East Hartford home. B, who was divorced from A, had lived for the preceding four years with the defendant's sister, C, in Manchester.¹ Although A and B were civil to each other, B primarily kept to the main level of the home while A stayed in the finished basement. While the defendant was living at the East Hartford house, he occupied one of the two main floor bedrooms.

On March 26, 2010, the defendant and B had an altercation that resulted in the defendant's arrest and an eventual conviction of a misdemeanor. The defendant moved out of the East Hartford home and into his sister's house in Manchester. On May 10, 2010, the court issued a protective order prohibiting the defendant from assaulting, threatening or harassing B. The protective order was modified on June 23, 2010, to a full no contact protective order, which prohibited the defendant from contacting B in any manner or going to her residence. At the defendant's sentencing, the court again modified the no contact order to a standing criminal protective order. See General Statutes § 53a-40e. The defendant

was unhappy with the situation involving his mother and had remarked to a cousin on one occasion that B “needed to be dead.”

During the summer of 2010, A’s health deteriorated. He died on September 15, 2010, leaving B as the sole occupant of the East Hartford home. The defendant indicated to several people that he blamed B for A’s death and was furious with her. Despite the criminal protective order in place, B remained concerned about her safety and believed that her life was in danger.

Approximately one month following A’s death, B invited Michael Ramsey and Pamela Johns to move into the basement bedroom of the East Hartford home. The defendant was angry that B had allowed Ramsey and Johns to move into the house, referring to them as “homeless people.” Despite the protective order, neighbors spotted the defendant near the East Hartford home. On one occasion, a neighbor observed the defendant get out of the passenger side of a white Nissan Altima, hide behind a line of bushes, and watch the house. On another occasion, a different neighbor saw someone fitting the defendant’s description driving a white Nissan Altima, and then watched him get out of the car and enter a wooded area behind the East Hartford home. B knew that the defendant was watching the house, telling a friend on November 22, 2010, that she was “worried of the fact that [the defendant] was roaming around the house” The friend told B to call the police.

A short time later, sometime between November 23, 2010, and the early morning hours of Thanksgiving Day, November 25, 2010, B, Johns, and Ramsey were brutally murdered in the East Hartford home, each having been struck repeatedly in the head with an object like a Sheetrock hammer.² The bodies were discovered on Thanksgiving Day by police officers who had been conducting a wellness check on B at the request of a niece living out of state. The bodies were all located near one another, with B’s and Ramsey’s bodies found in the main floor bathroom, and Johns’ body found just outside that bathroom in the hallway. There were no signs of forced entry. The front door of the home was locked, but a rear sliding glass door was not. Both women were found wearing jewelry. B’s bedroom and the basement bedroom where Ramsey and Johns were staying had been ransacked, although a purse containing \$1350 in cash was found hidden under B’s bedroom desk. The bedroom that the defendant formerly had occupied was not disturbed.

A neighbor and former friend of A’s noticed the police presence on Thanksgiving and contacted the defendant by phone to inform him that something was happening at the East Hartford home. The defendant responded to the neighbor that “maybe they’re all poisoned in there, maybe they’re all dead,” and, “maybe they’re

going to come and blame me for this.”

Investigators processed the bloody crime scene over the course of seven days. Among the items that were collected and sent to the state forensic laboratory for processing were a plastic bag found behind a bookcase in the defendant’s former bedroom, a checkbook and a cell phone charger found on B’s bed, and a tissue found in the doorway of the defendant’s former bedroom near a piece of skull from one of the victims. The side of the tissue that was facing out into the hallway had blood on it. It was later determined that the blood and skull fragment belonged to Ramsey, but another portion of the tissue contained dried mucous or saliva connected to the defendant through DNA. Bloody foot impressions that were made by socked feet were discovered in the kitchen and photographed for further analysis.

Because of the domestic complaints by B against the defendant and C, they were identified immediately by the police as possible suspects. The day the bodies were found, the police executed a warrant to search the defendant’s person. The defendant had visible marks on his body, including what appeared to be scratches and an injured toe. During the course of the investigation, the police also obtained and executed a search warrant for a white Nissan Altima that was registered to C’s daughter, who lived with C and the defendant. The warrant was executed on January 6, 2011, at the East Hartford home. When police informed C, who had driven the vehicle to the East Hartford home that day, that they were seizing the vehicle pursuant to a warrant, C asked if she could remove some items from the trunk of the car. Specifically, she sought to retain possession of two cell phones and chargers that she indicated to police belonged to Johns and Ramsey. She was not allowed to remove the items, and was questioned by the police as to where she had obtained those phones. C indicated that she had found them that same day in the basement bedroom, but, when pressed, claimed she could not remember where in the room she found them. The phones never yielded any useful information to the investigation.

During the pendency of the criminal investigation into the murders, the defendant became incarcerated on an unrelated drug charge. While in prison, he had a conversation in the prison’s dayroom with another inmate, William McCauley. McCauley told the defendant that he was serving a sentence for vehicular manslaughter, after which the defendant asked McCauley if he had killed a close friend. McCauley indicated that he had killed his best friend and that he still had dreams about the incident. The defendant responded that he had “similar dreams” and that, although he was in prison on a drug charge, the authorities were “trying to get him for a triple homicide around Thanksgiving

time.” McCauley’s cellmate, Rocco Strazza, who was also in the dayroom at the time the defendant spoke with McCauley, claimed that he overheard the defendant say that he was “the one who did the triple homicide.”

The defendant eventually was charged with three counts of murder and with one count of violating a standing criminal protective order. The defendant’s first trial ended in a mistrial. He was tried a second time, and the jury in the second trial returned a guilty verdict on all charges. The court, *Kwak, J.*, sentenced the defendant to a total effective term of 180 years of incarceration, with a mandatory minimum sentence of seventy-five years of incarceration. This appeal followed. Additional facts will be set forth as necessary.

I

The defendant first claims that, during closing and rebuttal arguments, the prosecutor improperly mischaracterized or overstated portions of the forensic evidence and that those improprieties deprived the defendant of his right to a fair trial. More particularly, the defendant claims that the prosecutor misstated or exaggerated the significance of (1) certain DNA evidence collected from items at the crime scene and (2) bloody foot impressions found in the kitchen. Because we do not agree that any of the challenged remarks were improper, we reject the defendant’s claim.

We begin by noting that the defendant concedes that he did not object at trial to any of the remarks he now challenges on appeal. As our Supreme Court has explained, however, this is not fatal to a prosecutorial impropriety claim. See *State v. Stevenson*, 269 Conn. 563, 572–73, 849 A.2d 626 (2004). “This does not mean, however, that the absence of an objection at trial does not play a significant role in the determination of whether the challenged statements were, in fact, improper. . . . To the contrary, we continue to adhere to the well established maxim that defense counsel’s failure to object to the prosecutor’s argument when it was made suggests that defense counsel did not believe that it was [improper] in light of the record of the case at the time.” (Internal quotation marks omitted.) *State v. Maner*, 147 Conn. App. 761, 782, 83 A.3d 1182, cert. denied, 311 Conn. 935, 88 A.3d 550 (2014). This is particularly true if, as in the present case, a defendant claims prosecutorial impropriety stemming from a prosecutor’s discussion of DNA evidence. Such discussions require precise and nuanced distinctions in nomenclature that easily may be misconveyed or misunderstood, especially in light of the zealous advocacy that is part and parcel of a closing argument. If a prosecutor’s arguments do not portray accurately the DNA evidence as it was presented to the jury or stray too far from reasonable inferences that may be drawn from such evidence, a contemporaneous objection by defense counsel

would permit any misstatements, whether inadvertent or intentional, to be remedied immediately.

“The standard we apply to claims of prosecutorial impropriety is well established. In analyzing claims of prosecutorial impropriety, we engage in a two step analytical process. . . . The two steps are separate and distinct. . . . We first examine whether prosecutorial impropriety occurred. . . . Second, if an impropriety exists, we then examine whether it deprived the defendant of his due process right to a fair trial. . . . In other words, an impropriety is an impropriety, regardless of its ultimate effect on the fairness of the trial. Whether that impropriety was harmful and thus caused or contributed to a due process violation involves a separate and distinct inquiry. . . . [If] a defendant raises on appeal a claim that improper remarks by the prosecutor deprived the defendant of his constitutional right to a fair trial, the burden is on the defendant to show . . . that the remarks were improper” (Internal quotation marks omitted.) *State v. Grant*, 154 Conn. App. 293, 319, 112 A.3d 175 (2014), cert. denied, 315 Conn. 928, 109 A.3d 923 (2015). The defendant also has the burden to show “that, considered in light of the whole trial, the improprieties were so egregious that they amounted to a denial of due process.” *State v. Payne*, 303 Conn. 538, 563, 34 A.3d 370 (2012).³

Certainly, “prosecutorial [impropriety] of a constitutional magnitude can occur in the course of closing arguments. . . . When making closing arguments to the jury, [however, counsel] must be allowed a generous latitude in argument, as the limits of legitimate argument and fair comment cannot be determined precisely by rule and line, and something must be allowed for the zeal of counsel in the heat of argument. . . . Thus, as the state’s advocate, a prosecutor may argue the state’s case forcefully, [provided the argument is] fair and based upon the facts in evidence *and the reasonable inferences to be drawn therefrom*. . . .

“While the privilege of counsel in addressing the jury should not be too closely narrowed or unduly hampered, it must never be used as a license to state, or to comment upon, or to suggest an inference from, facts not in evidence, or to present matters which the jury ha[s] no right to consider.” (Emphasis added; internal quotation marks omitted.) *State v. Ciullo*, 314 Conn. 28, 37–38, 100 A.3d 779 (2014). “A prosecutor may invite the jury to draw reasonable inferences from the evidence; however, he or she may not invite sheer speculation unconnected to evidence. . . . Moreover, when a prosecutor suggests a fact not in evidence, there is a risk that the jury may conclude that he or she has independent knowledge of facts that could not be presented to the jury.” (Citations omitted.) *State v. Singh*, 259 Conn. 693, 718, 793 A.2d 226 (2002). Because “[t]he prosecutor’s office carries a special prestige in the eyes

of the jury . . . [i]t is obligatory for prosecutors to find careful ways of inviting jurors to consider drawing argued inferences and conclusions and yet to avoid giving the impression that they are conveying their personal views to the jurors.” (Citations omitted; internal quotation marks omitted.) *Id.*, 722. With these principles in mind, we turn to whether the prosecutor’s challenged remarks in the present case were improper.

A

The defendant first contends that the prosecutor mischaracterized the DNA evidence by arguing to the jury that the defendant’s DNA was found on several pieces of evidence, which, according to the defendant, did not accurately reflect the testimony of the state’s own expert. The defendant’s claim focuses on what he characterizes as misstatements about DNA collected from three pieces of evidence: the checkbook found on B’s bed, the phone charger located nearby, and the handles of the bloodstained plastic bag found stuffed behind a bookcase in the defendant’s former bedroom. The defendant argues that, with respect to those items, the state’s expert testified that the defendant only was a possible contributor, and that other male relatives who shared the same Y chromosome, a group that included the defendant’s father, A, could have accounted for those results. The defendant notes that the misstatement was particularly significant in this case because both the defendant and A had lived in the East Hartford house and, thus, could have deposited DNA prior to the murders, and there was no evidence presented at trial establishing when the DNA at issue had been deposited or how long it could have been present on the items.

The state responds that the prosecutor’s challenged remarks were supported by the testimony of its expert and that it was not unreasonable or improper for the prosecutor to urge the jury to infer, in light of the evidence as a whole, that it was the defendant’s DNA that was found rather than the DNA of his father, who had died two months prior to the murders. On the basis of our review of the entirety of the closing arguments, we conclude that the prosecutor’s remarks were not improper.⁴

The following additional facts are relevant to this claim. Cheryl Carreiro, a DNA analyst from the state forensic laboratory, testified for the state regarding the results of DNA analysis that she performed on biological samples collected at the crime scene or later obtained from items collected at the crime scene. She prepared a number of reports that were admitted through her as full exhibits. During direct examination, she indicated that she had compared DNA profiles derived from the crime scene biological samples with DNA profiles derived from known samples obtained from the three victims and the defendant. She also provided statistical

data regarding possible contributors to the various DNA profiles she developed from those samples.

Carreiro performed two types of DNA tests on samples collected in this case: an “Identifiler” test, which looks at both male and female DNA, and a “Yfiler” or Y-STR DNA test that only looks for male DNA and, thus, can be useful in analyzing mixed biological samples that contain large amounts of female DNA masking trace amounts of male DNA. See *State v. Phillips*, 160 Conn. App. 358, 125 A.3d 280, cert. denied, 320 Conn. 903, 127 A.3d 186 (2015). Relevant to the defendant’s claim on appeal, Carreiro provided testimony about the DNA profiles developed from the biological samples taken from the checkbook, the phone charger, and the plastic bag handles.

With respect to the checkbook, Carreiro indicated that biological samples were taken from the checkbook’s exterior and interior cover, the top check, and the edges of the checks. When asked to describe the results of DNA testing of those samples, Carreiro first indicated that both the Identifiler and Yfiler results demonstrated that the biological samples taken from the checkbook resulted in a “mixed sample.”⁵ With respect to the three victims, only B was found to be a contributor to the Identifiler profile. Johns and Ramsey were eliminated as contributors. Carreiro testified that the defendant could not be eliminated as a contributor to the Identifiler profile. She explained that “the expected frequency of individuals who cannot be eliminated as a contributor . . . is approximately one in 10,000 in the African-American population, approximately one in 880 in the Caucasian population, and approximately one in 3400 in the Hispanic population.” Carreiro described the Yfiler results as “inconclusive as to whether [the defendant] could be a contributor to the Yfiler DNA profile.”

The prosecutor then asked Carreiro the following follow-up question without any objection from defense counsel: “On the Identifiler, however, in comparison to the known sample of [the defendant], on the swabbing of the checkbook . . . is it fair to say that you identified a partial profile consistent with that of him?” Carreiro responded: “Yes. He cannot be eliminated as a contributor, and that is a partial match.” Turning to the result of the DNA analysis of biological samples taken from the cell phone charger, Carreiro testified that this also resulted in a “mixed sample.” The Identifiler profile yielded inconclusive results as to whether the defendant could be a contributor. With respect to the Yfiler results, Carreiro indicated that “[the defendant] or another member of the same paternal lineage cannot be eliminated as a contributor,” and “[t]he expected frequency of individuals who cannot be eliminated as a contributor to the Yfiler . . . is approximately one in forty-three in the African-American population, approximately one

in eighteen in the Caucasian population, and approximately one in thirty-six in the Hispanic population.” When asked in a follow-up question whether she had “developed a partial DNA profile consistent with that of [the defendant] on the Y profiler,” Carreiro answered: “The Yfiler was—was a partial result, and it was, cannot be eliminated.”

Multiple biological samples were taken from the white plastic bag. One sample was taken from visible reddish brown stains on the bag that were identified as human blood. Additional samples were taken from the interior and exterior handles of the plastic bag. Regarding the samples taken from the handles, Carreiro testified that this was a “mixed sample.” Ramsey and B were both included as contributors to the Identifiler profile, and Johns could not be eliminated as a contributor. According to Carreiro, the defendant also is “included as a contributor” to the Identifiler profile, and “[the defendant] or another member of the same paternal lineage is included as a contributor to the Yfiler DNA profile.” The expected frequency of individuals who could be a contributor to both the Identifiler and Yfiler profiles is “approximately one in seven million in the African-American population, approximately one in 880,000 in the Caucasian population, and approximately one in 4.2 million in the Hispanic population.”

The prosecutor asked Carreiro about a summary table she had included in her report regarding the swabbing of the bag’s interior and exterior handle. In particular, he inquired whether she had identified “the full profile of three individuals and the partial profile of [Johns].” Carreiro responded: “Yes. The . . . first inclusion is [Ramsey], the second is [B]. The third cannot be eliminated, [Johns], and the fourth [the defendant].” On cross-examination, defense counsel elicited testimony from Carreiro that the defendant’s father, A, was “another member of the same paternal lineage” and would have the same Y-STR profile as the defendant.

During closing argument, the prosecutor set forth the state’s theory of the case and, in that context, made the following statements regarding the DNA evidence, including statements challenged by the defendant, which are emphasized: “Answer the \$20,000 question then. How does [the defendant’s] DNA end up on items in the house when he hasn’t been there in about six months? We know the answer. This is the tissue as it was found in the doorway of his bedroom next to what appeared to be a piece of a skull. The tissue was recovered and photographed by the state forensics lab. You see a large amount of blood in this picture, and you see at the other end of the tissue what was described as a yellowish mucous-like item consistent with mucous, tested positive for the presence of amylase. In place and in time, the defendant is connected to one of the victims. And not one of the victims innocently with

touch DNA, with bloodshed. The blood on that tissue is that of [Ramsey]. The remnants of blood on his nose, DNA's back to [the defendant].

“[The defendant], I would claim, ladies and gentlemen, who is covered in blood, and he blew his nose. And look at the back of that tissue. The back of the tissue is actually more evidence of blood, consistent with transfer or smearing. In a vacuum, as the lab people will say, when you get that material and put it in a test tube and get someone's DNA, they can't look at the DNA and date it. They can't look at the DNA and say, I can tell you when it was deposited on an item such as the Kleenex. But what you ladies and gentlemen know from the evidence is, the defendant blew his nose, and his bloody face and/or hands had blood [on] them, which passed over to that Kleenex. There's no way around it. And you know what? That's the first of the items.

“This is a picture of [B]'s room and [B]'s bed. You'll notice on the bed is a cell phone with a charger attached to it, a checkbook with checks inside it, and another set of checks next to it, seized. But let's not go to the lab yet, ladies and gentlemen. Let's look at what you see here because you know why, that's important. And if we're all on board that the attack happened at night, is [B] sleeping with her checks and her checkbook and her phone not plugged in, yet plugged into the phone itself, the charger, and what appears to be a tin of Altoids that [a detective] described? No. Those items were deposited and thrown and put on the bed close in time to when the attack happened. That's what's important to understand. This is where you use your common sense.

“And let's go to the results of the analysis conducted on those items. *[The defendant], in a partial DNA profile, is found on the wall end portion of the charger of that phone.* And on the checkbook, [the forensic examiner] examined the checkbook. And from swabbing the blue section of the checkbook and top of the checks and the edges, she came up with—you have the reports—*[B] obviously was on this checkbook. But who else was on this checkbook? In a partial profile, [the defendant].*

“Let's get to time and place, ladies and gentlemen. *The defendant, who hasn't been in the house since at least June, 2010, though he claims back to March, 2010, this check is dated November 15, 2010, and there are no additional written checks from the checks in here. The register itself starts recording back in August 11th. This, ladies and gentlemen, dates the DNA.*

“And the bag, again, from the starting point that [the defendant] is not in that house, a bag stuffed behind a bookcase in his room. You'll remember that the doorway is over here. It made entire sense when [the detec-

tive] said she can't imagine, based on her training and experience, that blood on that bag came from cast-off or spatter from the attack that happened in the hallway. Hey, and let's face it, we saw the photos. There was blood everywhere. So, literally, you saw it proof positive the blood flew everywhere, but what the blood didn't do is, it didn't take corners.

"And there virtually was no way that the blood found on that bag, which was [B]'s blood, came as cast-off or spatter. It was deposited there by someone who was bloody. And you know who that bloody person was? [The defendant]. *Ladies and gentlemen, we have the trifecta in that bag. You saw the picture from the lab. You've seen what looked like kitchen bags, if they come either folded in a box or rolled up in a roll. This bag appeared to have been opened at one time. Is it part of the cleanup process, ladies and gentlemen? But the swabbing at the top of the bag has DNA profiles of all four people involved: the three victims and [the defendant].*

"Now, [the defendant] arguably never had contact with [Johns] or [Ramsey]. They moved in somewhere in October, and he hadn't been in the house for about six or seven months by then. Or was he? There's no way around it, ladies and gentlemen. In time and in place, the DNA results tell you a story.

"I touched already on the bag. The bag speaks to evidence of someone making some attempt at cleaning up. Look at the entire scene. Look at what was presented to you from the scene. We have a virtual blood-bath in the hallway and the bathroom where the three victims were found.

"Questions were asked of detectives, and, I think, of some of the forensic analysts at the lab as to the likelihood that the attacker would be covered with blood. Yes. Yes. And the simple answer to that is, look at the exterior of the house. There's not a lot of blood outside. There were one or two drops. One right outside the slider and then one on the stairs.

"It answers a question. The attacker stayed in that house, changed clothes, bagged up bloody items, cleaned himself before he exited because if we're to assume that a bloodied attacker left through one of those doors without doing any of that, then you would've had a blood trail, and you don't." (Emphasis added.)

The prosecutor also briefly revisited the DNA evidence in his rebuttal argument, stating: "For you, as you assess this evidence, it makes it easier for you because not one of these items of evidence stands alone. Collectively, they paint a picture as to who the killer is. *And again, the entirety of the checkbook, which spans from August to November, the defendant isn't, shouldn't, and per his own words, wasn't in that house.*

And the most compelling piece of evidence is that bag. That bag, which has the DNA of every individual involved in this crime, the three victims and the defendant.” (Emphasis added.)

The defendant argues that the emphasized portions of the prosecutor’s arguments sought to mislead the jury by asserting facts not in evidence, which is improper. *State v. Singh*, supra, 259 Conn. 718. With respect to the checkbook, the defendant claims that the prosecutor’s statement that his DNA was found “[i]n a partial profile” was misleading because, to the extent that the statement referred to the Yfiler profile, the defendant’s DNA could not be distinguished from A, who was living at the East Hartford home until mid-September, 2010, after the checkbook began to be used in August, 2010. The defendant argues that the prosecutor also misstated the DNA results with respect to the cell charger by indicating that the defendant’s DNA was found “in a partial DNA profile.” The defendant asserts that this was incorrect because Carreiro had testified that the Identifiler profile was inconclusive as to the defendant and that the Yfiler had indicated only that the defendant or a member of the same parental lineage could not be eliminated as a contributor. Finally, with respect to the bag handles, the defendant notes that Carreiro testified that “[the defendant] or another member of the same paternal lineage is included as a contributor” to the Yfiler profile, whereas the prosecutor stated in closing argument and rebuttal that the mix sample obtained from the bag included DNA from the defendant.

“We long have held that a prosecutor may not comment on evidence that is not a part of the record and may not comment unfairly on the evidence in the record.” *State v. Fauci*, 282 Conn. 23, 49, 917 A.2d 978 (2007). “It is not, however, improper for the prosecutor to comment upon the evidence presented at trial *and to argue the inferences that the jurors might draw therefrom . . .*” (Emphasis added; internal quotation marks omitted.) *State v. Gibson*, 302 Conn. 653, 660, 31 A.3d 346 (2011). We previously have held that, if the evidence presented at trial is that the defendant is included as a contributor to a DNA profile, then it is not necessarily improper for a prosecutor to argue to a jury during closing argument that the DNA found was the defendant’s as long as that is a reasonable inference to be drawn in light of the evidence as a whole. See *State v. Jones*, 115 Conn. App. 581, 597–600, 974 A.2d 72, cert. denied, 293 Conn. 916, 979 A.2d 492 (2009). We see no reason why this same principle would not also apply to instances in which the defendant could not be eliminated as a contributor. See *State v. Small*, 180 Conn. App. 674, 687–88, 687 n.3, 184 A.3d 816 (finding claim unpreserved but observing in dicta that it was not improper for prosecutor to invite jury to draw inference that defendant’s DNA was on mop handle in

light of expert testimony that he could not be eliminated as contributor), cert. denied, 328 Conn. 938, 184 A.3d 268 (2018). In either instance, the defense was not precluded from arguing that the inconclusive nature of the DNA evidence left reasonable doubt about the defendant's guilt on the basis of the statistical probabilities presented.

Here, the prosecutor's statements regarding the DNA evidence were made in the context of his setting forth the state's theory of the case, and much of the prosecutor's closing argument focused on the evidence other than DNA that tended to support the theory that the defendant had committed the murders. It would have been clear to the jury that if evidence tended to demonstrate that the defendant was a possible contributor to a DNA profile, the state was asking the jury to draw every reasonable inference to conclude that it was, in fact, the defendant's DNA that was found, and not that of another possible contributor. The jury had heard Carreiro's testimony and was able to evaluate the state's closing arguments in light of its own understanding of that testimony, which also included statistical evidence about the likelihood that the defendant's DNA was the source of the profiles developed from the crime scene evidence. The defendant's argument with respect to the checkbook, which focuses on the Yfiler profile, also misses the mark because it ignores the fact that Carreiro testified that the defendant could not be eliminated as a contributor and, thus, "was a partial match," with respect to the Identifiler profile. Further, although it may be accurate with respect to the charger and bag to note that the Yfiler results indicated that both the defendant and A were possibly contributors to the DNA found on those items, the prosecutor properly asked the jury not to look at the results of each item individually, but to view all the evidence presented collectively in order to "paint a picture as to who the killer is." In other words, the prosecutor was asking the jury to infer from the totality of the evidence presented, including all the nonscientific evidence, that in those instances in which there were multiple possibilities as to the source of the DNA, the defendant was the far more likely contributor.

It was not necessary for the jury to have found that the state had proven beyond a reasonable doubt that the DNA in question belonged to the defendant in order properly to use that evidence, in conjunction with other evidence, to assess whether the state had met its burden of proving beyond a reasonable doubt that it was the defendant who had committed the murders. Although the state has the burden to prove beyond a reasonable doubt all elements necessary for the commission of a crime, including identity, subordinate facts, such as whose DNA was present on a particular item of evidence, may be established by inference or circumstantial proof and need not be established beyond a

reasonable doubt. See *State v. McDonough*, 205 Conn. 352, 355, 533 A.2d 857 (1987) (“[if] a group of facts are relied upon for proof of an element of the crime it is their cumulative impact that is to be weighed in deciding whether the standard of proof beyond a reasonable doubt has been met and each individual fact need not be proved in accordance with that standard”), cert. denied, 485 U.S. 906, 108 S. Ct. 1079, 99 L. Ed. 2d 238 (1988).

The prosecutor never stated that the defendant’s DNA was found on any item from which he had been eliminated as a possible contributor to the DNA profile, which would have been improper. To the extent that the prosecutor may have used imprecise language or terminology, the defendant had ample opportunity to object and to correct any perceived misstatement but elected not to do so, suggesting that he did not believe at the time that the remarks warranted such intervention. When considered within the context of the state’s entire argument and allowing some leeway for zealous advocacy, as we must, we cannot conclude that the prosecutor made any statements that reasonably can be viewed as improper under the circumstances or that the jury likely was misled by the prosecutor’s arguments.⁶

B

We next turn to the defendant’s contention that the prosecutor engaged in prosecutorial impropriety by misleading the jury about the significance of bloody foot impressions found at the crime scene. We are not persuaded that the prosecutor’s remarks were improper.

The following additional facts are relevant to our consideration of this aspect of the defendant’s prosecutorial impropriety claim. At trial, the state called as a witness Lisa Ragaza, a state forensic science examiner specializing in the analysis of imprints. She testified about comparisons that she made between the foot impressions found in the kitchen at the crime scene and known foot impressions the East Hartford Police Department later obtained from the defendant. She testified that the impressions from the crime scene were consistent in size and shape with the known foot impressions of the defendant. She also testified that both the crime scene impression and the known impression of the defendant exhibited a common characteristic, a “swiping motion” in the big toe area of the impression. The defendant did not object to this testimony.⁷

As to her final conclusions, Ragaza testified as follows on direct examination by the prosecutor:

“Q. Now, Ms. Ragaza, you’re not here, or, tell me, yes or no, are you capable of saying the known impressions that were submitted by the East Hartford Police Department—so I’ll hold up a transparency. The known

impressions by the East Hartford Police Department, the person who made those actually made what was submitted from the crime scene.

“A. No, I cannot.

“Q. And why not?

“A. There’s no individual characteristics present in the imprints from the crime scene that would allow me to make an identification or an individualization as to who made those imprints.

“Q. Okay. However, based on your examination, you are of the conclusion that they are consistent in size and shape?

“A. Uh, yes.

“Q. Let me ask you. I want to ask you to—in reviewing all of the prints from the crime scene with these photographs that look to be coming off of linoleum, for lack of a better word, did you see both left foot and right foot impressions?

“A. Yes.

“Q. And of the right foot impressions, did all of them that show a portion of the toes appear to have that swiping motion from the big toe noticed?

“A. Yes, I did notice that.

“Q. And of all the—the left foot impressions from the crime scene, were there a number of those observed by you?

“A. Uh, yes. There was more than just that one.

“Q. And of those, did you observe any swiping characteristics or what you observed on the big toe of left foot impressions?

“A. No, I did not see that.

“Q. And of the known prints that were submitted by the East Hartford police, did you observe the swiping motion of the big toe consistently in the right foot impressions?

“A. Uh, yes. It was consistent.

“Q. And did you observe any of that swiping characteristic in any of the left foot impressions submitted by the East Hartford Police Department?

“A. I don’t believe so.”

Again, no objections were made by the defendant to Ragaza’s testimony.

As part of cross-examination, defense counsel sought to clarify that Ragaza could not tell the jury about any “individualizing identifying factors” Ragaza responded: “Right. There’s nothing individualizing.” Defense counsel inquired further: “So, it would be fair to say that the sock prints, the impressions that you

looked at and in some ways using a—an unsocked or just barefoot impression, they could've been made by anyone who has a similarly sized foot?" Ragaza responded: "Yes. That's correct."

During closing argument, the prosecutor argued as follows with respect to the bloody foot impressions: "And there are footprints in the kitchen, socked footprints. Further evidence that someone is removing clothing, changing clothing, packaging up bloody clothing before his exit. We know where the person exited. We know the route they took in exiting. . . .

"The footprints, ladies and gentlemen. They simply do it. They're in blood. They speak to the here and now as it relates to the attack. You saw the photographs. You saw the transparent overlays. You make a decision.

"[Ragaza] from the lab testified. She indicated that footprint analysis is not individualizing, it's not exacting. She could not say the test prints were made by the defendant. She could not say from looking at his footprints that he made the prints at the crime scene, but what she could say is they were consistent in size and shape. And then you, for your own analysis, had an opportunity to compare those. They are, remarkably, incredibly, the same prints. These are enormous feet. They're size thirteen prints.

"The person at the crime scene continually made a swipe with his right big toe, and [the defendant] makes that same swipe with his right big toe. All of the left prints at the crime scene in that kitchen didn't have such a swipe, and none of the left prints that [the defendant] provided in December had a swipe. You ultimately decide if those are his prints in socks. Again, what killer removes his socks if he's not cleaning himself up? Or removes his shoes?" (Emphasis added.)

The defendant takes exception to the emphasized portion of the prosecutor's argument. The defendant acknowledges that it was proper for the jury to be asked to decide from its common knowledge the significance of the fact that the defendant shared the same size footprint as whoever left the bloody foot impressions at the crime scene. He nevertheless maintains that because the jury was never provided information about "the swipe mark's frequency," presumably meaning the frequency of its occurrence in the general population, the significance of the swipe mark fell beyond the jury's common knowledge. According to the defendant, "[t]he prosecutor's claim that the mark was significant implied that the state had knowledge beyond that in the record."

The prosecutor, however, clearly confined his argument to the evidence as it was presented. The defendant never objected to Ragaza's testimony describing the swipe marks she observed on the footprint evidence. Merely mentioning a fact that is in evidence cannot, by itself, be an impropriety. *State v. O'Brien-Veader*, 318

Conn. 514, 547, 122 A.3d 555 (2015) (“[i]t is not improper for the prosecutor to comment upon the evidence presented at trial and to argue the inferences that the jurors might draw therefrom” [internal quotation marks omitted]). The state never indicated that the swipe mark had any particular significance beyond the fact that, like foot size and shape, it was a trait shared by the defendant and the person who left the impressions at the crime scene. As the state indicated in its appellate brief, “the prosecutor expressly recognized the limits of Ragaza’s analysis as well as the jury’s role as ultimate decision maker.” The defendant has failed to convince us that the jury reasonably would have construed the state’s argument as implying that it had knowledge outside the record with respect to the significance of the toe swipe evidence. Nothing in the prosecutor’s argument regarding the foot impression evidence was improper.

In sum, because we conclude that none of the challenged statements of the prosecutor were improper, we reject the defendant’s prosecutorial impropriety claim.

II

The defendant next claims that the court abused its discretion by allowing one of the state’s forensic experts, Anita Vailonis, to provide previously undisclosed opinion testimony and by denying the defendant’s subsequent motion to strike that testimony. Specifically, the defendant challenges the admissibility of Vailonis’ testimony that the bloodstain found on the tissue collected at the crime scene appeared to have been caused by a finger, presumably that of the killer, rather than by blood spatter from wounds received by Ramsey during the murder. The defendant’s theory regarding the tissue was that it was discarded in the East Hartford home during the time he lived there and, by happenstance, was on the floor near his former bedroom at the time of the murders. The defendant argues that the state elicited this “surprise” testimony to bolster its own theory that the tissue was not present at the East Hartford home from an earlier, unknown time, but was deposited at the time of the incident by the killer, who, given the brutality of the killings, likely would have been covered in the victims’ blood. Because the defendant’s DNA was found on the used portion of the tissue, this tended to support an inference that he was the killer.

The defendant does not dispute that it was his DNA extracted from the portion of the tissue where the mucous with the presence of amylase was detected. Likewise, it is not disputed by the parties that Ramsey was the source of the blood found on the tissue. Carreiro testified that the testing of the bloodstained portion of the tissue demonstrated that it was a “mixed sample,” with Ramsey “included as a contributor” but the other victims and the defendant eliminated as con-

tributors. Carreiro indicated that the expected frequency of individuals who could have contributed to the DNA profile was “less than one in seven billion in the African-American, Caucasian and Hispanic populations.” As to touch DNA obtained from the portion of the tissue identified as containing saliva or nasal secretions, Carreiro explained: “The Identifiler results are consistent with [the defendant] being the source of the Identifiler DNA profile The expected frequency of individuals who could be the source of the Identifiler DNA profile . . . is less than one in seven billion in the African-American, Caucasian, and Hispanic populations.” The three victims were eliminated as possible sources of the touch DNA.

On appeal, the defendant makes three arguments in support of his evidentiary claim. First, the defendant contends that Vailonis gave expert bloodstain pattern analysis testimony without ever properly having been disclosed or qualified as an expert in bloodstain patterns or blood spatter analysis. Second, the defendant takes issue with the trial court’s rationale for denying his motion to strike Vailonis’ testimony, namely, its conclusion that the jury was capable of determining the cause of the bloodstain on the basis of its own knowledge and experience. Third, the defendant maintains that Vailonis’ opinion regarding the cause of the bloodstain ambushed the defense because it was not disclosed prior to trial either in response to the defendant’s request for disclosure, in Vailonis’ forensic report, or as part of her testimony at the defendant’s first trial.⁸

The state responds that we should reject the defendant’s claim because Connecticut law does not require pretrial disclosure of every aspect of an expert’s testimony, the defendant opened the door to the challenged testimony on cross-examination, and whether the stain looked like it was made by a finger was a matter the jury could decide without expert testimony. For the reasons that follow, we are unconvinced that the court abused its discretion in admitting Vailonis’ testimony or in denying the defendant’s motion to strike, and, thus, we reject the defendant’s claim.

The following additional facts and procedural history are relevant to our discussion of this claim. On April 9, 2015, the defendant filed a request for disclosure, seeking, inter alia, “any reports or statements of experts made in connection with the offense charged, including results of . . . scientific tests, experiments or comparisons, which are material to the preparation of the defense or are intended for use by the prosecuting authority as evidence in chief at the trial.” The state produced all relevant forensic reports. One report described the bloodstain observed on the tissue found at the crime scene, but did not opine on the mechanism by which the blood was transferred onto the tissue.

As part of her direct testimony, Vailonis explained that she was a forensic science examiner at the state forensic laboratory and discussed her educational background and experience. Her duties at the laboratory included examining evidence for the presence of blood or other body fluids and preparing samples for DNA analysis. She received a number of items collected from the crime scene in the present case and prepared several reports setting forth her observations, findings, and analysis. Those reports were admitted as full exhibits.

One item Vailonis was questioned about during her direct testimony was the tissue found near the door of the defendant's former bedroom. Vailonis testified that she observed reddish brown stains on one area of the tissue that she later determined was consistent with human blood, and another area she described as having a "crusty texture" that tested positive for amylase, a substance present in saliva and nasal secretions. She photographed the tissue and took samples of both areas and sent them for DNA testing. Photographs of the two significant areas of the tissue were marked as state's exhibits 179 and 180 and were admitted into evidence. The photographs were displayed on a projector for the jury, and Vailonis used a laser pointer to indicate to the jury the bloodstained area and the "crusty" area containing the amylase.

On cross-examination, the defense pursued a line of questioning intended to establish that Vailonis could not determine precisely how old the tissue was or how long any substance had been present on the tissue. She agreed that she could not provide that information. Vailonis also agreed with defense counsel that she had no way of knowing whether the presence of the amylase was the result of someone blowing his or her nose or spitting into the tissue.⁹

On redirect examination, the prosecutor sought to counter defense counsel's suggestion that the defendant could have used the tissue when he lived at the East Hartford home and that Ramsey's blood was transferred to the tissue through spatter caused by the violent assault on Ramsey. The following colloquy occurred:

"Q. Ms. Vailonis, [defense counsel] asked you whether or not you—you were able to agree with the possibility that the tissue appeared to have been someone blowing their nose based on the crusty material you observed in there?

"A. Yes.

"Q. Did you observe other areas of blood on that tissue?

"A. Yes.

"Q. And in looking at the areas of—of blood on that tissue, do you have any opinion based on your training and experience as to how or what it appears? What

mechanism took place in depositing it on that area?

“A. Yes.

“Q. In observing state’s exhibit 179, what did that stain appear to look like to you? (state’s exhibit [number] 179 projected on the screen)

“A. That stain appears to be some sort of fingerprint to me, bloodied hand with bloody fingers holding a tissue with—on one side and then the amylase-positive area of the tissue on the other side. So, a bloody fingerprint impression-type of stain opposite the amylase-positive area.

“Q. Are you, based on your training and experience, familiar with drops or—or the—the evidence of drops or dripping stains being observed on fabrics?

“A. Yes. I’ve taken courses and I—I am proficiency tested in blood spatter analysis.

“Q. Showing you state’s exhibit 180. Do these stains that are exhibited on this vantage point of the tissue seem to be consistent with drops or drips? (state’s exhibit [number] 180 projected on the screen)

“A. They do not.

“Q. And do you have an opinion based on your training as to what they are consistent of? What caused them?

“A. They appear to me to be some sort of transfer from one surface to another onto that paper product.”

At no point during the prosecutor’s redirect examination of Vailonis did defense counsel raise any objection. He did not object to the scope of Vailonis’ testimony, her qualifications to provide an opinion as to the mechanism by which the blood was transferred to the tissue, or to the form of any of the prosecutor’s questions.

On recross-examination, defense counsel challenged Vailonis regarding the opinion that she expressed during redirect examination:

“Q. Ms. Vailonis, with regard to that particular analysis, have you prepared a report with regard to that testimony?

“A. I have not.

“Q. Have you been asked to prepare a report in any way with regard to what we just saw and your opinion about it being a thumbprint?

“A. I have not, nor did I say thumbprint, but a finger type-print.

“Q. And did you—was that information provided in any kind of—or included in any kind [of] report that was provided by your laboratory?

“A. No.

“Q. And with regard to your opinion about that, what degree of scientific certainty and reliability do you have in making that opinion?

“A. There—there is my knowledge, and my experience, and my training that I rely on. I have had—I’m pushing thirty years of forensic experience, and I’ve examined very, very many items of evidence that are bloody. And that is what it appears to me to look like.

“Q. Have you been ever asked to express an opinion on that particular item of evidence before today?

“A. No.

“Q. And with regard to that, what standards did you use in reaching your opinion.

“A. My—

“Q. —besides your training and experience. What scientific standards did you use in reaching that opinion?

“A. I don’t believe there are any scientific standards by which I compare a stain to. I’m not quite sure what you’re asking.

“Q. Well, when you give an opinion about something, there has to be some kind of—and you claim to be a scientist and have this experience and education and training, there has to be a standard by which you have made your opinion that that’s a fingerprint, or thumbprint, or something. I’m just wondering what is it exactly? What standards did you use in reaching that opinion?

“A. My experience and training.”

At this point in the proceedings, defense counsel asked the court to strike Vailonis’ testimony regarding the cause of the bloodstain on the tissue, claiming that such testimony fell “outside the standards here as we recognize them for scientific testimony.” The prosecutor responded that a proper foundation for the testimony had been laid, “and it is follow-up based on [defense] counsel’s willingness to ask her a question about how other items got on that—could’ve been deposited on that item of evidence.” The following colloquy ensued:

“[Defense Counsel]: And I, also, Your Honor, would say that because there’s never been a report provided to the defense with regard to its—it’s basically ambush to the defense that I can’t then present a witness to be able to counter this opinion that’s being offered for the first time and has never been offered in a report.

“[The Prosecutor]: Your Honor, I don’t believe there’s a basis for it. It’s follow-up. There was—neither was there a report existing indicating that she was of the opinion that someone blew their nose in this tissue. But that was elicited by [defense] counsel.

“The Court: Was that in the report?

“[The Prosecutor]: No.

“The Court: Okay. Anything else, [defense counsel]?

“[Defense Counsel]: I don’t think we’re talking about the idea of it being someone blowing their nose in it, Your Honor. We’re talking about this, fingerprints, or—or thumbprint, whatever it is, and I didn’t inquire about that, Your Honor.

“The Court: Well, you did—well, you didn’t object when he was questioning [Vailonis] regarding the tissue in the follow-up.

“[Defense Counsel]: I had no idea where he was going, Your Honor.

“The Court: Well, he was—it was brought up on your cross-examination, correct, the tissue?

“[Defense Counsel]: Right. Exactly, brought up on his direct, Your Honor.

“The Court: Well, I thought you brought that up on cross-examination. Yeah, you discussed it, so.

“[Defense Counsel]: Oh, it was discussed, Your Honor, yes.

“The Court: Yeah. All right. Well, she did say it’s not a scientific method, and this is purely based on her experience of thirty years or so of forensic analysis. So, I’m going to deny your motion to preclude her testimony. Certainly, the jury can decide themselves, based on the exhibits, whether or not it appears to be what it is, and that’s just purely her subjective opinion. All right. Anything else?

“[The Prosecutor]: No, Your Honor.”

The following standard of review and other legal principles govern our consideration of the defendant’s evidentiary claim. “[T]he trial court has broad discretion in ruling on the admissibility . . . of evidence The trial court’s ruling on evidentiary matters will be overturned only upon a showing of a clear abuse of the court’s discretion. . . . We will make every reasonable presumption in favor of upholding the trial court’s ruling . . . and . . . upset it [only] for a manifest abuse of discretion.” (Internal quotation marks omitted.) *State v. Thompson*, 305 Conn. 412, 434, 45 A.3d 605 (2012), cert. denied, 568 U.S. 1146, 133 S. Ct. 988, 184 L. Ed. 2d 767 (2013).

Our deferential standard generally applicable to review of evidentiary rulings applies equally to rulings on the admissibility of expert testimony. “[U]nless [the court’s wide] discretion has been abused or the ruling involves a clear misconception of the law, the trial court’s decision will not be disturbed. . . . In determining whether there has been an abuse of discre-

tion, the ultimate issue is whether the court could reasonably conclude as it did.” (Internal quotation marks omitted.) *State v. Guilbert*, 306 Conn. 218, 229–30, 49 A.3d 705 (2012).

“Expert testimony should be admitted when: (1) the witness has a special skill or knowledge directly applicable to a matter in issue, (2) that skill or knowledge is not common to the average person, and (3) the testimony would be helpful to the court or jury in considering the issues. . . . In other words, [i]n order to render an expert opinion the witness must be qualified to do so and there must be a factual basis for the opinion. . . .

“It is well settled that [t]he true test of the admissibility of [expert] testimony is not whether the subject matter is common or uncommon, or whether many persons or few have some knowledge of the matter; but it is whether the witnesses offered as experts have any peculiar knowledge or experience, not common to the world, which renders their opinions founded on such knowledge or experience any aid to the court or the jury in determining the questions at issue. . . . Implicit in this standard is the requirement . . . that the expert’s knowledge or experience . . . be directly applicable to the matter specifically in issue. . . .

“Beyond these general requirements regarding the admissibility of expert testimony, [t]here is a further hurdle to the admissibility of expert testimony when that testimony is based on . . . scientific [evidence]. In those situations, the scientific evidence that forms the basis for the expert’s opinion must undergo a validity assessment to ensure reliability. . . . In [*State v. Porter*, 241 Conn. 57, 68, 698 A.2d 739 (1997), cert. denied, 523 U.S. 1058, 118 S. Ct. 1384, 140 L. Ed. 2d 645 (1998)], [our Supreme Court] followed . . . *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 113 S. Ct. 2786, 125 L. Ed. 2d 469 (1993), and held that scientific evidence should be subjected to a flexible test, with differing factors that are applied on a case-by-case basis, to determine the reliability of the scientific evidence. . . . Following [*Porter*], scientific evidence, and expert testimony based thereon, usually is to be evaluated under a threshold admissibility standard [relating to] the reliability of the methodology underlying the evidence.” (Citations omitted; internal quotation marks omitted.) *State v. Guilbert*, *supra*, 306 Conn. 230–31.

With these principles in mind, we turn to the arguments raised by the defendant in support of his evidentiary claim.

A

The defendant first argues that the court improperly permitted Vailonis to give expert bloodstain pattern analysis testimony without her having been disclosed or qualified as an expert in bloodstain patterns or blood

spatter analysis. The defendant concedes that defense counsel did not raise this particular objection before the trial court, arguing that counsel was “surprised by her testimony” The defendant nevertheless contends that “[i]t was plain error to permit a witness to give expert opinion testimony in a separate area without formally qualifying her as an expert witness in that area.” The state argues that we should decline to review this unpreserved aspect of the defendant’s claim. The state further argues that the defendant cannot succeed under the plain error doctrine; see Practice Book § 60-5; because there was no clear and obvious error here, and he has failed adequately to brief his entitlement to such extraordinary relief. We agree with the state on both grounds.

“[I]n order to preserve an evidentiary ruling for review, trial counsel must object properly. . . . In objecting to evidence, counsel must properly articulate the basis of the objection so as to apprise the trial court of the precise nature of the objection and its real purpose, in order to form an adequate basis for a reviewable ruling. . . . *Once counsel states the authority and ground of [the] objection, any appeal will be limited to the ground asserted.* . . . [T]hese requirements are not simply formalities. [A] party cannot present a case to the trial court on one theory and then seek appellate relief on a different one For this court to . . . consider [a] claim on the basis of a specific legal ground not raised during trial would amount to trial by ambush, unfair both to the [court] and to the opposing party. . . . Thus, because the essence of preservation is fair notice to the trial court, the determination of whether a claim has been properly preserved will depend on a careful review of the record to ascertain whether the claim on appeal was articulated below with sufficient clarity to place the trial court on reasonable notice of that very same claim.” (Citations omitted; emphasis in original; internal quotation marks omitted.) *State v. Miranda*, 327 Conn. 451, 464–65, 174 A.3d 770 (2018).

Even if a claim is unpreserved, however, an appellate court “may in the interests of justice notice plain error not brought to the attention of the trial court. . . .” Practice Book § 60-5. Application of the plain error doctrine is nevertheless “reserved for truly extraordinary situations [in which] the existence of the error is so obvious that it affects the fairness and integrity of and public confidence in the judicial proceedings.” (Internal quotation marks omitted.) *State v. Myers*, 290 Conn. 278, 287–88, 963 A.2d 11 (2009). “[Thus, a] defendant cannot prevail under [the plain error doctrine] . . . unless he demonstrates that the claimed error is both so clear and so harmful that a failure to reverse the judgment would result in manifest injustice.” (Internal quotation marks omitted.) *State v. Fagan*, 280 Conn. 69, 87, 905 A.2d 1101 (2006), cert. denied, 549 U.S. 1269,

127 S. Ct. 1491, 167 L. Ed. 2d 236 (2007).

During the state's redirect examination of Vailonis and prior to her giving her opinion about the origin of the bloodstain on the tissue, she testified that her background and experience included having been "proficiency tested in blood spatter analysis." She then gave her opinion that the bloodstain on the tissue appeared to have been made by "some sort of fingerprint" rather than from blood that was cast onto the tissue as a drop or drip. She clarified on cross-examination that she was not saying the stain was a thumbprint or fingerprint, but "a finger-type print," i.e., the stain was made by a finger. At no point during this testimony did the defendant raise *any* objection to the testimony, nor did he ask for a continuance or for an opportunity to voir dire Vailonis outside the presence of the jury. By failing to make a seasonable objection to Vailonis' qualifications to give an opinion about the mechanism by which the blood was transferred to the tissue or to whether her opinion was based on scientific methods that should be subject to a validity assessment in accordance with *Porter*, defense counsel essentially acquiesced to the admission of this opinion testimony. The defendant allowed the testimony to come in unchallenged and failed to alert the court to any potential error until much later in the examination of this witness.

This inaction was compounded by defense counsel's subsequent recross-examination of Vailonis. Counsel asked Vailonis whether her opinion about the cause of the bloodstain was in any report she had filed. She indicated that it was not. That line of questioning may have implicated the credibility of and possibly the weight that should be afforded to Vailonis' opinion, but did not go to its admissibility. In addition, Vailonis indicated in response to questions on recross-examination that her opinion was made on the basis of her specialized knowledge and experience in observing bloodstains, not on any particular scientific method. That testimony seems to undermine any assertion that the court should have recognized sua sponte the need for a *Porter* hearing. See *State v. Guilbert*, supra, 306 Conn. 230–31 (additional hurdle of *Porter* hearing needed only if innovative scientific methodology underlies opinion testimony); *State v. Vumback*, 68 Conn. App. 313, 329–31, 791 A.2d 569 (2002) (if witness does not apply scientific instrument or test to evidence, *Porter* not applicable), aff'd, 263 Conn. 215, 819 A.2d 250 (2003).

It was not until the defendant, in hindsight, moved to strike the testimony that he elected to raise any objection to Vailonis' testimony, and even then that objection was limited to a claim of unfair surprise and that the testimony fell outside the standard recognized for scientific evidence. The defendant was silent as to whether Vailonis properly had been disclosed or was

sufficiently qualified as an expert in the field of blood spatter analysis. The defendant never articulated to the trial court the argument he now raises on appeal, and, accordingly, we decline to review it as unpreserved.

We further decline to order a new trial on the basis of plain error. Although the defendant contends that the state had an obligation to “formally” qualify Vailonis as an expert in blood spatter analysis, she testified without objection that she had both training and expertise in this area. The defendant has failed to demonstrate that by allowing Vailonis to express an opinion as to the cause of a bloodstain, the court committed the type of obvious and readily discernible error that would warrant application of the plain error doctrine.

We also agree with the state that the defendant’s briefing of plain error borders on inadequate. The defendant cites § 7-1 of the Connecticut Code of Evidence in support of his claim,¹⁰ but provides no analysis of that code section or its applicability to the circumstances here. The defendant also cites without analysis this court’s discussion of impermissible lay opinions in *State v. Holley*, 160 Conn. App. 578, 620–22, 127 A.3d 221 (2015). Our decision in *Holley*, however, was reversed by our Supreme Court after the filing of the defendant’s brief and, thus, is of limited precedential value. See *State v. Holley*, 327 Conn. 576, 175 A.3d 514 (2018). We simply are unpersuaded that the defendant’s unpreserved evidentiary claim rises to the level of an “extraordinary [situation in which] the existence of the error is so obvious that it affects the fairness and integrity of and public confidence in the judicial proceedings.” (Internal quotation marks omitted.) *State v. Myers*, supra, 290 Conn. 287–88.

B

The defendant next argues that the trial court improperly denied his oral motion to strike Vailonis’ testimony on the basis of its erroneous conclusion that the jury was capable of determining the cause of the bloodstain from its own knowledge and experience. We are not persuaded that the court abused its discretion in declining to strike the testimony.

A careful review of the record leads us to conclude that although the trial court refused to grant the defendant’s motion to strike Vailonis’ testimony, the court nevertheless effectively granted the relief he sought by indicating to the jurors that they could decide for themselves on the basis of their own observations whether they agreed with what the court referred to as Vailonis’ subjective opinion about how the bloodstain got on the tissue. Stated another way, the court through its comments stripped from Vailonis’ testimony any patina of expert gloss regarding her opinion about the mechanism by which the blood was transferred to the tissue.

The defendant, in raising the motion to strike, claimed that Vailonis' testimony fell "outside the standards . . . for scientific testimony." Thus, the defendant was concerned that if Vailonis' testimony was allowed to stand, it would do so with an impermissible patina of expert opinion and, thus, might unfairly carry with it a far greater weight than that to which it was entitled. The trial court's statement in denying the motion to strike essentially transformed Vailonis' opinion from expert testimony to merely a lay opinion that was based on her observations, which the jury was instructed to evaluate for itself on the basis of its own observation of the evidence.

The defendant never objected to the court's statement to the jury that, in essence, the jury could use its own powers of observation to determine whether the blood on the tissue was a result of blood spatter or someone touching the tissue with a bloody finger. The fact that the defendant raised no further objection to the court's ruling or asked to be heard further on the topic suggests that the defendant was satisfied with the court's resolution of the matter.

Finally, at no time during the colloquy on the defendant's oral motion to strike did the defendant expressly ask the court to conduct a *Porter* hearing at which a record could have been made as to whether Vailonis' observations regarding the bloodstain were properly viewed as scientific evidence, what standards, if any, were applicable to determinations involving the causality of bloodstains, and whether those standards were followed here. We need not decide those issues here because they were not expressly raised by the defendant before the trial court.

C

Finally, the defendant argues that the court improperly admitted Vailonis' opinion regarding the cause of the bloodstain because that opinion had not been disclosed previously and, therefore, unfairly ambushed the defense. The defendant maintains that he was not provided with a report or any other notice indicating that Vailonis had formed an opinion as to how the bloodstain on the tissue was formed. As a result, the defendant claims, he had no opportunity to research Vailonis' credentials, to consult with his own experts, or to research "whether her admittedly subjective opinion could have been affected by knowing the prosecution theory of the case and that the first trial ended in a mistrial."¹¹ We are unpersuaded for a number of reasons.

First, and perhaps most importantly, although the defendant claims that he was ambushed by Vailonis' testimony, he never asked for a continuance in order to attempt to remedy the alleged unfair surprise. See *State v. White*, 139 Conn. App. 430, 441, 55 A.3d 818 (2012) (defendant required to utilize available court

procedures to protect rights, including requests for continuance), cert. denied, 307 Conn. 953, 58 A.3d 975 (2013). Such a request would have allowed the court to weigh the possibility of granting the defendant additional time to assess whether it would be necessary to consult his own expert or to conduct additional research. The defendant suggests that the court likely would have been unwilling to grant a continuance at this stage of the proceedings. By failing to inquire, however, the defendant deprived the court of the opportunity to assess the situation and to exercise its discretion. See *State v. Hoskie*, 74 Conn. App. 663, 673–74, 813 A.2d 136 (declining to speculate how trial court would have responded to timely request for continuance), cert. denied, 263 Conn. 904, 819 A.2d 837 (2003); see also *State v. Cooke*, 134 Conn. App. 573, 578–79, 39 A.3d 1178 (noting trial court’s broad discretion to remedy discovery issues and that rectification of prejudice by granting continuance preferred to suppressing otherwise admissible evidence, “‘a severe sanction which should not be invoked lightly’”), cert. denied, 305 Conn. 903, 43 A.3d 662 (2012).

Second, the defendant contends that prior disclosure would have allowed the trial court to exercise its gatekeeping function “to preclude the use of testimony based on obscure scientific theories . . . that [have] the potential to mislead lay jurors awed by an aura of mystic infallibility surrounding scientific techniques, experts and the fancy devices employed.” (Internal quotation marks omitted.) *State v. Griffin*, 273 Conn. 266, 281, 869 A.2d 640 (2005). Vailonis indicated in her testimony, however, that her opinion that the bloodstain on the tissue appeared to be made by a finger rather than from blood spatter was observational in nature. No testimony was ever elicited that her opinion involved scientific techniques or obscure scientific theories that would have alerted the court that a *Porter* hearing was necessary. Moreover, the defendant never requested a hearing.

Third, the defendant has not cited to a single case in which a court has stricken or precluded expert testimony on the ground that the opinion offered had not been previously disclosed in a report. In fact, as the defendant recognizes, our Supreme Court has upheld the admission of expert testimony given at trial despite there having been no prior disclosure in a report. See *State v. Genotti*, 220 Conn. 796, 808–809, 601 A.2d 1013 (1992).

Finally, the defendant urges us to hold that a forensic expert cannot give any opinion testimony unless there was “prior disclosure of the expert’s intention to so testify, and prior disclosure of the expert’s opinion and basis for it.” Such a rule, if adopted, would be far too rigid in its application and would unnecessarily hamstring the discretion of the trial court, which, as we

have already indicated, has far less draconian remedies available to it if the court determines that the defendant has been unfairly surprised, such as granting a continuance or allowing the defendant to conduct further voir dire outside the presence of the jury.

In sum, we are not persuaded that the court abused its considerable discretion by denying the defendant's unseasonable motion to strike Vailonis' opinion testimony.

The judgment is affirmed.

In this opinion the other judges concurred.

* In accordance with our policy of protecting the privacy interests of the victims of family violence, we decline to use the defendant's full name or to identify the victim or others through whom the victim's identity may be ascertained. See General Statutes § 54-86e.

¹ B moved out of C's home after she and C had an argument that resulted in the police being called. B suffered from dementia that complicated her relationship with her children.

² Although the murder weapon never was recovered, a state medical examiner testified at trial that the injuries to the victims were created by an object with both a round, blunt side and a hatchet-type side, such as found on a Sheetrock hammer.

³ In his brief, the defendant seems to attempt to shift the burden to the state to demonstrate that any established impropriety was harmless beyond a reasonable doubt. Because the defendant's claim, however, implicates only his general due process right to a fair trial and not an alleged deprivation of a "specifically enumerated constitutional right, such as the fifth amendment right to remain silent or the sixth amendment right to confront one's accusers"; *State v. Payne*, supra, 303 Conn. 563; the burden of demonstrating harm from any claimed impropriety remains with the defendant. See id., 562–63 (clarifying applicable standard of review).

⁴ As part of this claim, the defendant quotes from statements made by the prosecutor to the court outside the presence of the jury while arguing against the defendant's motion for a judgment of acquittal. The defendant has not challenged the court's ruling on the motion for a judgment of acquittal on appeal. Further, because those remarks were not made during closing arguments, they fall outside the scope of the defendant's prosecutorial impropriety claim.

⁵ As used in this context, a mixed sample refers to a biological sample that contains DNA from multiple contributors.

⁶ The defendant also suggests that the prosecutor employed "the prosecutor's fallacy" during his closing argument. There is no merit to this argument.

"A prosecutor employs the prosecutor's fallacy by equating random match probability with source probability in relation to DNA evidence. Random match probability and source probability are distinguishable. The prosecutor's fallacy is the assumption that the random match probability is the same as the probability that the defendant was not the source of the DNA sample. . . . Random match probability is the probability a member of the general population would share the same DNA with the defendant. . . . Source probability is the probability that someone other than the defendant is the source of the DNA found at the crime scene." (Internal quotation marks omitted.) *State v. Small*, supra, 180 Conn. App. 685.

The prosecutor in this case never mentioned the probability statistics testified to by Carreiro, did not equate random match probability with source probability, and never expressed that there was a certain percentage probability that the defendant was guilty on the basis of the DNA evidence. We agree with the state that no part of the prosecutor's closing argument implicates the prosecutor's fallacy.

⁷ For example, the defendant never raised any objection that the testimony regarding the "swiping motion" was speculative or that such a characteristic lacked evidentiary significance and, therefore, should not have been admitted. Once admitted, for the reasons we discuss, the prosecutor was free to refer to any evidence in his closing argument as long as he did not invite the jury to draw unreasonable inferences from that evidence. See *State v. Elmer G.*, 176 Conn. App. 343, 382, 170 A.3d 749, cert. granted on other grounds, 327 Conn. 971, 173 A.3d 952 (2017).

⁸ The defendant also invites us to exercise our supervisory authority over the administration of justice to adopt a rule that would require all forensic experts to document and disclose their conclusions and the basis for them before being permitted to testify regarding the same. We decline that invitation. Exercise of our inherent supervisory authority “is an extraordinary remedy to be invoked only when circumstances are such that the issue at hand, while not rising to the level of a constitutional violation, is nonetheless of utmost seriousness, not only for the integrity of a particular trial but also for the perceived fairness of the judicial system as a whole.” (Emphasis omitted; internal quotation marks omitted.) *State v. Lockhart*, 298 Conn. 537, 576, 4 A.3d 1176 (2010). The rule proposed by the defendant would unnecessarily burden the wide discretion we have afforded to trial courts to determine on a case-by-case basis the admissibility of expert testimony. Further, safeguards already exist to prevent unfair surprise, such as the granting of a continuance to the opposing party if warranted.

⁹ The following is the relevant portion of the colloquy between Vailonis and defense counsel during cross-examination about the tissue:

“Q. You made three different pieces out of what was the wad of tissue?”

“A. Yes.

“Q. Okay. Was it one of them that had a blood-like substance on it?”

“A. Yes.

“Q. Okay. And then the other two were the one—pieces that it appeared that there was something on it, but it was—did not appear to be blood?”

“A. I tested that area for the presence of amylase, the enzyme that is used in our saliva secretions to digest carbohydrates. So, the—that was the two pieces I sent.

“Q. Okay. Fair to say with regard to that particular item, that tissue, you can’t determine how old that tissue is?”

“A. No, I cannot.

“Q. Or how long a substance has been on that tissue?”

“A. I—no.

“Q. All right. Even—even the blood-like substance, you wouldn’t know?”

“A. No.

“Q. Just based on your training and experience can you look at a—blood-like stain and make a determination that, well, that one appears to be older, this one appears to be newer?”

“A. Well, in grand terms, yes. If something is very, very old, I can tell a very, very old stain from a newer stain, but it would have to be years or decades later.

“Q. And a lot of that would be based on the fact that the item itself happens to be old?”

“A. And the bloodstain kind of fades out.

“Q. Okay. But with regard to [the tissue], you can’t make a determination like that?”

“A. Correct.

“Q. And with regard to this—the amylase, that comes from—this could be something as if someone had blown their nose in a Kleenex?”

“A. Correct.

“Q. Or had spit something into Kleenex?”

“A. Yes.

“Q. Right. The amylase would be present in both of those particular scenarios?”

“A. Yes.

“Q. Okay. And fair to say you don’t know how it got there?”

“A. I do not.”

¹⁰ Section 7-1 of the Connecticut Code of Evidence provides: “If a witness is not testifying as an expert, the witness may not testify in the form of an opinion, unless the opinion is rationally based on the perception of the witness and is helpful to a clear understanding of the testimony of the witness or the determination of a fact in issue.”

¹¹ The defendant also makes a number of arguments suggesting that he had no opportunity to discover whether Vailonis followed proper methodology or what that methodology required. Vailonis testified, however, that she had not engaged in any scientific method in reaching her conclusion that the blood on the tissue appeared to have been transferred by a finger and not by blood spatter. Instead, she relied only on her training and experience observing bloody objects. There is nothing in the record to suggest that she employed any scientific methodology and, as indicated previously, the defendant could have asked questions relative to her qualifications, but chose not to do so, nor did he ask for a continuance to do further research.

