196P21 DISTRICT TWENTY-NINE B

SUPREME COURT OF NORTH CAROLINA

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STATE OF NORTH CAROLINA	)	
	)	From Henderson County
v.	)	16-CRS-862-64
	)	COA20-273
SHERRY LEE LANCE	)	

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PETITION FOR DISCRETIONARY REVIEW

PURSUANT TO N.C.G.S. § 7A-31

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TO THE HONORABLE SUPREME COURT OF NORTH CAROLINA:

SHERRY LEE LANCE, by and through counsel, respectfully petitions this Honorable Court, pursuant to N.C.G.S. §§ 7A-31(c)(1), (c)(2), and (c)(3) to certify for discretionary review the 1 June 2021 decision of the North Carolina Court of Appeals in *State v. Lance*, 2021-NCCOA-236 (Appendix).

This case presents a question of first impression—both in North Carolina and it appears nationwide—as to whether the common law of arson applies and second-degree arson is committed when the sole inhabitants of a burned dwelling are the co-conspirators who allegedly planned the burning for insurance proceeds and neither was endangered by the fire?

North Carolina defines the crime of arson at common law. For hundreds of years the common law has held that one cannot commit arson against one's own dwelling. Hence, common law arson requires that the burned dwelling must be the inhabited dwelling of "another." Case law from this Court demonstrates that, for purposes of common law arson, "another" should not be defined to include a co-conspirator who was allegedly involved in the planning of the burning, which was committed to obtain insurance proceeds, and who was never endangered by the fire set against her own dwelling.

In this case, to the contrary of deeply-rooted common law principles, the North Carolina Court of Appeals erroneously held otherwise. Moreover, the Court of Appeals' decision unconstitutionally places a burden of proof by requiring defendants to show another person's safety was not endangered by the burning.

Lastly, the charged conduct in this case—burning one's own dwelling for insurance proceeds—does not fall within the intended scope of common law arson, but rather is proscribed by a different statute: N.C.G.S. § 14-65. By shoe-horning the facts of this case into a conviction for second-degree arson, the Court of Appeals failed "to maintain a clear distinction between this ancient crime and burning for a fraudulent purpose as defined by G.S. § 14-65." *State v. White*, 288 N.C. 44, 51, 215 S.E.2d 557, 561 (1975).

Though this case presents a novel question based on unique facts, its resolution flows from the logical application of legal principles centuries old. This Court should allow review to correct and clarify that common-law arson neither applies nor is violated when the sole inhabitants of a burned dwelling are the alleged co-conspirators who planned the burning for insurance proceeds and there is no evidence either were present or endangered when the fire occurred.

Additionally, this case presents the need for this Court to reaffirm the principles asserted in *State v. McGrady*, 368 N.C. 880, 787 S.E.2d 1 (2016) and, in turn, North Carolina's jurisprudential commitment to the reliability and integrity of scientific evidence in our courtrooms. In the case at bar, the trial court failed to conduct a proper Rule 702 analysis that facilitated the prejudicial admission of expert testimony based on a method that has been repudiated by courts and experts alike as scientifically unreliable, namely the method of negative corpus.

Technically speaking, negative corpus refers to a "process of determining the ignition source for a fire, by eliminating all ignition sources found, known, or believed to have been present in the area of origin, and then claiming such methodology is proof of an ignition source for which there is no supporting evidence of its existence." National Fire Protection Association (NFPA) 921, ¶ 19.6.5 (2014 ed.) Simply put, negative corpus is a method of purportedly

determining the cause of a fire based on the inability to eliminate that cause independent of the evidence—or lack thereof—to support it.

In this case, the expert's testimony indicated that he employed the negative corpus method, despite his protestations to the contrary. When asked for his opinion as to the cause of the fire, the expert testified that he excluded all potential ignition sources that could have caused the fire, "with the exception of an incendiary causation." (T p 206) The expert's testimony that he employed the scientific method did not make it scientifically so. Because this erroneous testimony went to the core of the State's case, the Court of Appeals erroneously concluded there was no error. This Court should grant review to correct this error, re-assert a trial court's gatekeeping obligations under Rule 702, and reaffirm North Carolina's commitment in *McGrady* to the scientific integrity of expert and forensic evidence in criminal cases.

The foregoing subject matters of this case are of significant public interest and involve legal principles of major significance to North Carolina jurisprudence. *See* N.C.G.S. §§ 7A-31(c)(1) and (c)(2). Moreover, the Court of Appeals' decision conflicts with the precedent of this Honorable Court. *See* N.C.G.S. § 7A-31(c)(3). For these reasons and those that follow, this Court should grant this Petition and certify review.

FACTUAL HISTORY

Ronald Lance owned and rented a single-story house on Baldwin Circle in Fletcher, North Carolina to Sherry Lance (no relation to Ronald) and her mother, Jonnie Turner. On 7 September 2016, the house burned down. (T pp 103, 105-07, 178) Ms. Lance and her mother had lived at the house for a couple of years by the time it burned. (T p 104) The fire resulted in a total loss. (T p 107)

The day following the fire, Fletcher Police Detective Sergeant Ronald Diaz, Fletcher Fire Chief Greg Garland, Fire Marshall Joe Swain, and SBI Agent Matt Davis went to the property. (T pp 229, 255) Diaz was not a trained or certified arson investigator. Agent Davis brought along a canine trained to identify accelerants or incendiaries. (T pp 255-56) The canine did not alert to any accelerants or incendiaries. (T p 256)

Diaz found the number of personal belongings in the dwelling surprisingly low. He contacted the National Insurance Crime Bureau to see if Ms. Lance had a renter's insurance policy for her personal property. (T pp 229-30) Diaz learned that Ms. Lance obtained a renter's insurance policy in May 2016. (T p 230)

On 15 September 2016, more than a week after the fire, Casey Silvers, a fire investigator hired by State Farm Insurance Company to determine the origin and cause of the fire, went to the property to investigate. (T pp 176, 208)

Mary Ann Myer, a claims adjustor for State Farm's special investigations unit, was there most of the day with Silvers. (T p 294)

Casey Silvers' Testimony (Voir Dire)

In this case, the State tendered Silvers as an expert in fire origin and cause. During voir dire, Silvers testified about his methods of analysis and the conclusions he reached in this case. Silvers testified all "competent ignition source[s]" were "systematically excluded based on scientific data that prevented them from being the specific cause of this fire." (T p 142) However, Silvers testified, he "could not exclude an incendiary causation" and he believed "an ignitable liquid was used." (T p 142) In his report, Silvers' conclusion likewise stated: "All known potential ignition sources within the area of fire origin were eliminated, with the exception of an incendiary causation." (R p 37)

Silvers testified that he did "not have physical evidence of an ignitable liquid," but he did "have physical evidence to say there was something else present other than what was observed to bring the ignition temperatures, other materials that were there, to a point where they would self-sustain combustion." (T p 143) However, Silvers acknowledged he had no idea what that "something else" would be. (T p 143)

While he did not "classify this fire as an incendiary fire," Silvers was unable to disprove that hypothesis by application of the scientific method. (T

pp 143-44) Silvers insisted he had "other evidence that is consistent with incendiary. And while I lack the physical evidence of the ignitable liquid, there are other things that are consistent with an incendiary fire that I can't exclude it." (T pp 144-45) Silvers denied classifying the fire as incendiary under NFPA 921, but said "this is a hypothesis that I considered and that I cannot exclude." (T p 145)

Casey Silvers' Testimony (before the jury)

To determine the origin and cause of a fire, Silvers used what he characterized as a "scientific method." (T p 185) "You want to first develop the need for the investigation or the research," Silvers testified. (T p 185) Next, you "gather the data," "analyze that data," and "come up with hypotheses as to what potentially caused the fire, where it started." (T pp 185-86) Then you seek to disprove the hypotheses, Silvers explained, so as to either exclude or confirm a reason the fire occurred and where it occurred. (T p 186)

Fire patterns, witness statements and information about the contents of the home, electrical activity, fire dynamics, physical evidence collected at the scene, and fire department reports are all factors considered in determining the origin and cause of the fire. (T pp 186-87)

In this case, Silvers went in a clockwise direction around the house and identified smoke and burn patterns, including heavier burn patterns around the kitchen window. (T p 190) The fire patterns were lower down towards the

kitchen, which Silvers believed was indicative of the room where the fire originated. (T pp 190-91) Looking at the different patterns on the kitchen walls and the kitchen's metal and wood surfaces, Silvers testified he determined the fire originated in the kitchen. (T p 192)

To ascertain the location where the fire started, Silvers looked for patterns in the floor. (T p 192) Patterns on the floor and the bottom of the kitchen cabinetry were "indicative of some type of accelerant that was put there to burn underneath the cabinetry." (T p 193)

When asked whether he found any evidence of accelerants, Silvers testified he found what looked like rags, but they tested negative for ignitable liquids. (T p 195) In Silvers' opinion, the fire originated in the kitchen between the rear door and the range. (T p 197)

As for causation, Silvers testified the fire could not have come from an electrical wiring or failure. (T pp 197-98, 201) Nor did the fire patterns indicate the fire originated under the floor. (T p 198) Electrical branch circuits and discarded smoking materials were also determined not to be competent ignition sources. (T p 200) There was no evidence of unintended cooking or issues with the range, nor was there any evidence of weather causing the fire. (T pp 201-03)

Silvers acknowledged there were many components inside the home "to sustain combustion to burn," but it was his understanding based on

information from State Farm that nothing was present in what he considered the area of origin. (T p 203) Evidence of low burn fire patterns underneath the cabinets indicated, in Silvers' opinion, materials were placed on the floor to start a fire at a low level. (T p 204) Though the rags sent for testing to a lab came back negative, that did not mean, in Silvers' opinion, that an ignitable liquid was never present. (T p 204)

Silvers testified that he eliminated all known potential ignition sources at the home, but was unable to rule out an incendiary cause. (T pp 206-07) In Silvers' words, he "proposed a hypothesis that this was an intentionally set fire" and he attempted to disprove that hypothesis with alternative explanations from his investigation. (T p 206)

Based on the "science and the data" at the scene, Silvers was unable to devise an alternative explanation, and thus could not "exclude an incendiary causation." (T p 206)

On cross, Silvers acknowledged the negative lab result for ignitable liquids and conceded he had no physical evidence of a specific ignitable liquid. (T p 214) Silvers, however, claimed the fire patterns at the scene were "consistent with" an ignitable liquid. (T pp 214-15) Based on the information he obtained, "inductive and deductive reasoning," and his training and experience, Silvers asserted he was not able to scientifically exclude the hypothesis of incendiary causation. (T pp 214-15)

Approximately nine days after the fire, Mary Ann Myer met with Ms. Lance and took her recorded statement. (T p 283) Myer asked Ms. Lance about her personal background, her finances, whether she had ever had renter's insurance before, and whether she had any other fires. (T pp 285-87)

Myer testified that Ms. Lance told her she was renting a house on 7 September 2016 and, without giving any specifics, Myer testified Ms. Lance told her about the fire that occurred on that date. (T p 286) Ms. Lance told Myer that her mother was living there and that a man named Troy Williams moved out a couple of days before the fire. (T p 286)

Myer asked Ms. Lance about her insurance coverage, whether the house had any break-ins, how long Ms. Lance had lived at the house, whether there were any electrical problems and to describe them, and whether her landlord knew about any such electrical issues. (T pp 289-290) Myer testified that Ms. Lance said she told her landlord about electrical problems, that the landlord would not fix them, and that she thinks the fire was electrical. (T p 290)

Ms. Lance also described the layout of the house and drew a diagram of the kitchen. (T p 290) Myer asked Ms. Lance about the day of the fire, where she was, and what she did. (T p 291) Ms. Lance told Myer she had gone "dumpster diving" with her mother on the day of the fire, but never mentioned going to any storage center. (T pp 291-92)

In addition to the information Ms. Lance provided during the interview, Ms. Lance also submitted a written inventory of items she claimed were lost in the fire. (R p 77-81; T p 283) State Farm denied Ms. Lance claim because of her failure to comply with State Farm's investigation, and was unable to make a finding of fraud. (T pp 297-98)

On 3 November 2016, Detective Sergeant Diaz learned of a storage unit Ms. Lance's mother, Jonnie Turner, rented at Fletcher Storage Center on 6 September 2016, the day before the fire. (R p 85; T p 231) Diaz obtained a search warrant for the unit and found a large number of personal belongings and household items, as well as personal, financial, and legal documents. (T pp 233-250) In the storage unit, Diaz found items that Ms. Lance included in the loss inventory form submitted to State Farm. (T p 252) A couple of months later, Ms. Lance was indicted for second-degree arson, conspiracy with her mother to commit second-degree arson, and insurance fraud. (R pp 8-10)

PROCEDURAL HISTORY

Ms. Lance was indicted by a Henderson County Grand Jury on 3 January 2017 for second-degree arson, conspiracy to commit second-degree arson, and insurance fraud. (R pp 8-10) The case was tried during the 5 November 2019 Criminal Session of Henderson County Superior Court before the Honorable Athena Fox Brooks. The jury convicted Ms. Lance of all charges. (R pp 104-06;

T p 381) Ms. Lance appealed and presented multiple issues to the Court of Appeals.

First, Ms. Lance argued that all three of her convictions—second-degree arson, conspiracy to commit second-degree arson, and insurance fraud—should be vacated because the State's evidence failed to prove the essential elements of common law arson as a dwelling solely inhabited by the two co-conspirators to burn the dwelling did not constitute the dwelling of "another," and all three convictions arose from and were tainted by this fact.

Second, Ms. Lance argued that she should be granted a new trial because the trial court violated impermissibly admitted unreliable expert testimony. Third, Ms. Lance argued her insurance fraud conviction should be vacated because the trial court plainly erred in its jury instructions by not specifying the particular false statement alleged in the indictment the jury must find to convict Ms. Lance of this offense. Lastly, Ms. Lance argued and the State conceded that the restitution order entered against her for forty thousand dollars must be vacated because it was not supported by sufficient evidence. The Court of Appeals rejected Ms. Lance's first three arguments, but vacated the restitution order and remanded that matter for further proceedings. *See State v. Lance*, 2021-NCCOA-236. On 7 June 2021, upon Ms. Lance's motion, this Court entered an order staying enforcement of the Court of Appeals' decision pending this Petition. *See* Docket Sheet, *State v. Lance*, 196P21.

REASONS TO GRANT DISCRETIONARY REVIEW

I. Common law arson is intended to protect the safety of another person, not property. Where, as here, the only inhabitants of a targeted dwelling are the co-conspirators who allegedly planned the burning of their own residence for insurance proceeds, and neither's safety was endangered thereby, common law arson is neither applicable nor violated.

A. North Carolina defines arson by common law. Under common law, one cannot commit arson against one's own dwelling because the purpose of common law arson is to protect another's safety, not property.

In North Carolina, the common law is deemed "to be in full force" unless it has been "abrogated, repealed, or become obsolete." N.C.G.S. § 4-1. With respect to the crime of arson, our state adheres to the common law definition of arson, which is the "the willful and malicious burning of the dwelling house of another person." *State v. Barnes*, 333 N.C. 666, 677, 430 S.E.2d 223, 229 (1993) (cleaned up).

By statute, North Carolina distinguishes first-degree arson from second-degree arson depending on whether the dwelling was occupied at the time of burning. N.C.G.S. § 14-58. "The elements of second-degree arson are: (1) the willful and malicious burning (2) of the dwelling (i.e., inhabited) house of another; (3) which is unoccupied at the time of the burning." *State v. Scott*, 150 N.C. App. 442, 453, 564 S.E.2d 285, 293 (2002), *appeal dismissed* and *disc. review denied*, 356 N.C. 443, 573 S.E.2d 508 (2002).

Common law arson is concerned with protecting the safety of other people, not property. *See State v. Jones*, 296 N.C. 75, 77, 248 S.E.2d 858, 860 (1978). ("The main purpose of common law arson is to protect against danger to those persons who might be in the dwelling house which is burned.") *See also State v. Long*, 243 N.C. 393, 396, 90 S.E.2d 739, 741 (1956) ("Arson, at common law, is an offense against the security of habitation, rather than the safety of the property.")

Thus, for centuries it has been recognized that at common law one could not be guilty of arson for burning one's own dwelling. *See Shepherd v. People*, 19 N.Y. 547 (1859) ("It has been strenuously argued that the offence of arson in the first degree cannot be committed if the dwelling-house belonged to, and was in the actual possession of, the offender: in other words, that one cannot be guilty of arson in burning his own house. This was undoubtedly the rule of the common law, for the ancient definition of the felony denominated arson was the malicious and voluntary burning of the house of another."); *State v. Sarvis*, 45 S.C. 668 (1896) (citations omitted) ("There can be no doubt that a person cannot be convicted, at common law, of the crime of arson in burning his own dwelling house. . .even when it is insured."); *Daniels v. Commonwealth*, 172 Va. 583, 588 (1939) (citations omitted) (Common law arson "is an offense against the security of the habitation and has reference to

possession rather than property. . .He who burns his own dwelling is not guilty of this particular offense.")

Indeed, the North Carolina Court of Appeals has previously recognized in a citation to 5 Am.Jur.2d, *Arson and Related Offenses* Sec. 26 (1962) that because a "*person cannot commit common law arson against own dwelling*, defendant who burns dwelling at person's request cannot be prosecuted for common law arson." *State v. Ward*, 93 N.C. App. 682, 687, 79 S.E.2d 251, 254 (1989), *disc. review denied*, 325 N.C. 276, 384 S.E.2d 528 (1989) (emphasis added).

B. Common law arson does not apply when a burned dwelling is solely inhabited by the co-conspirators who allegedly planned the burning for insurance proceeds and neither person's safety was endangered thereby.

Since common law arson does not apply to burnings of one's own dwelling, the element of arson requiring the dwelling to belong to another "meant that the dwelling house had to be in the possession of someone other than the incendiary." John Poulos, *The Metamorphosis of the Law of Arson*, 51 Mo. L. Rev. 295, 311 (1986). Thus, "of course, the burning of a dwelling house by the person in actual possession of the premises was not common law arson." *Id.* at 311-12.

This rule makes sense considering common law arson's "main purpose…is to protect against danger to those persons who might be in the

dwelling house which is burned." *Jones*, 296 N.C. at 77, 248 S.E.2d at 860. Indeed, in *Jones*, the defendant cited this purpose of arson and argued he could not be convicted of arson because the evidence showed he was an occupant of the burned apartment. *Id.* at 77, 248 S.E.2d at 859. This Court did not address the merits of defendant's argument and affirmed defendant's arson conviction because, in any event, there were several other occupied apartments in the building and "any person who sets fire to any part of the building" is guilty of arson, given arson's purpose "is to protect against danger to those persons who might be in the dwelling house which is burned." *Id.* at 77, 248 S.E.2d at 860.

This Court subsequently extended this rationale in *Jones* to arson cases where the burned dwelling belonged to joint occupants. *State v. Shaw*, 305 N.C. 327, 337, 289 S.E.2d 325, 331 (1982). *Shaw* held that "the common law arson requirement that the dwelling burned be that of 'another' is satisfied by a showing that some other person or persons, together with the defendant, were joint occupants of the same dwelling unit." 305 N.C. at 338, 289 S.E.2d at 331.

However, *Shaw* shows that the joint occupants intended to satisfy the "another" requirement of common law arson are not co-conspirators to the burning, but third parties who are unaware of and thus endangered by the fire. As this Court wrote in *Shaw*:

> The need for protection of Mr. Boswell, Glenda Shaw, and the three grandchildren was just as compelling, and perhaps more so, in this joint occupancy situation as it would have been had they been occupants of an adjoining apartment. The wisdom of applying that rationale to joint occupancy situations is highlighted by the facts of this case. At the time defendant is alleged to have set the fire and the entire rear of the house became engulfed in flames, it was occupied by Glenda Shaw and Boswell's three grandchildren. They were able to escape by running out the front door. Fortunately, police officer Mark Adams saw several females screaming and running towards him, called for help, and used his fire extinguisher in an attempt to extinguish the blaze until fire department personnel arrived.

Id. at 337–38, 289 S.E.2d at 331.

Thus, in the context of cases involving joint occupants of a single dwelling, common law arson is intended to protect co-habitants—like unwitting neighbors in separate apartments in *Jones*—from the dangers of a fire of which they had no advanced knowledge or planning. 305 N.C. at 337-38, 289 S.E.2d at 331.

Indeed, in *State v. Ward*, the Court of Appeals reversed a second-degree arson conviction because no one was endangered by the burning, asserting the defendant's common law arson conviction was "arguably precluded" by the fact that the only possible person who could have been endangered by the fire in this case provided "consent to, if not active participation in, a scheme with

defendant to burn the trailer…" 93 N.C. App. 682, 687, 79 S.E.2d 251, 254 (1989), *disc. review denied*, 325 N.C. 276, 384 S.E.2d 528 (1989)

In addition to not applying to cases where the only other occupant of a dwelling was a co-conspirator to the burning, common law arson is not the applicable offense in cases where the burning was committed for a fraudulent purpose, conduct proscribed by N.C.G.S. § 14-65. In *State v. White*, this Court explained that "[t]he gravamen of the offense of common law arson is the danger that results to persons who are or might be in the dwelling, whereas the main import of G.S. s 14-65 is protection of the property itself." 288 N.C. at 50, 215 S.E.2d at 561. Indeed, the offense of fraudulent burning "describes a mental state having to do with the desire for illegal pecuniary gain usually at the expense of the property's insurer." *Id.*

This Court emphasized in *White* the need "to maintain a clear distinction between this ancient crime and burning for a fraudulent purpose as defined by G.S. § 14-65." *Id.* at 51, 215 S.E.2d at 561.

C. The Court of Appeals erroneously affirmed Ms. Lance's convictions, resulting in an unprecedented expansion of common law arson to conduct proscribed by N.C.G.S. § 14-65 and creating law that unconstitutionally places a burden of proof on defendants.

In this case, the Court of Appeals erroneously affirmed Ms. Lance's convictions because the State's evidence failed to establish the burned dwelling was inhabited by "another," as required by common law and second-degree

arson, and Ms. Lance's conspiracy and insurance fraud charges were inextricably woven together with that offense.

Here, the dwelling house in question at the time of the alleged burning was not inhabited by the defendant and another innocent party, but soley by Ms. Lance and her alleged co-conspirator, her mother, Jonnie Turner. Since the only inhabitants were the alleged co-conspirators to commit the burning, the "main purpose" behind common law arson—"to protect against danger to those persons who might be in the dwelling house which is burned"—does not logically apply because neither co-conspirator would have been endangered by the hazards of a fire they allegedly planned together. *Shaw*, 305 N.C. at 337, 289 S.E.2d at 331. Indeed, they were dumpster-diving when the fire occurred.

The Court of Appeals, however, held that the "State's evidence established that Turner was a person living in that dwelling who could have been in the home at the time it was burned, and that is all that is required to satisfy [the "another"] element of the arson offenses in this case." *Lance*, 2021-NCCOA-236, § 25. In so holding, the Court of Appeals failed to recognize that the co-occupants or joint inhabitants this Court envisaged as needing protection under common law arson were those unaware of and endangered by the fire. *See Jones*, 296 N.C. at 77, 248 S.E.2d at 860 and *Shaw*, 305 N.C. at 337-38, 289 S.E.2d at 331.

Moreover, the Court of Appeals asserted:

> Knowledge of, or participation in, a plan to commit arson does not remove the danger that the other person could be injured or killed when the burning occurs. Indeed, in this case, there is no evidence that Turner knew when the fire would be set, how it would be set, where in the house it would be set, or how much of the house would be destroyed.

Lance, 2021-NCCOA-236, § 25

This reasoning unconstitutionally shifted the burden onto Ms. Lance (and future defendants) to establish no one else was endangered by the fire, and thus to disprove the essential element of common law arson that the burned dwelling was that of another. *See Mullaney v. Wilbur*, 421 U.S. 684 (1975) (State has burden of proving all elements of a crime and cannot shift this burden to defendants); *In re Winship*, 397 U.S. 358, 364 (1970) ("Due process commands that no man shall lose his liberty unless the Government has borne the burden of * * * convincing the factfinder of his guilt.") As a result, the Court of Appeals' opinion provides published authority effectively sanctioning a due process violation for future arson prosecutions. This should not and cannot be the case.

At bottom, the facts in this case may have fit the criteria for a prosecution under N.C.G.S. § 14-65, but they did not align with common law arson. Because Ms. Lance—on the facts of this case—could not have legally been convicted of second-degree arson, she also could not legally have been convicted of

conspiracy to commit second-degree arson. *See State v. Abernathy*, 295 N.C. 147, 164, 244 S.E.2d 373, 384 (1978) (defining conspiracy as "an agreement between two or more persons to do an unlawful act or to do a lawful act in an unlawful way or by unlawful means.") Put simply, because the facts here did not fit the elements of second-degree arson as a matter of law, those same facts also failed to support a conviction for conspiracy to commit second-degree arson since, by definition, there was no "unlawful act" that could be performed. *Id.* Lastly, because the insurance fraud charge is "rooted in" the charges of second-degree arson and conspiracy to commit second-degree arson, this Court should find the insurance fraud charge "must fall" with them. *See State v. Massey*, 76 N.C. App. 660, 662, 334 S.E.2d 71, 72 (1985).

This Court should grant review to not only "maintain a clear distinction between this ancient crime" of common law arson and other statutory offenses, *White*, 288 N.C. at 51, 215 S.E.2d at 561, but to also ensure the common law is adhered to in "full force" in our state's jurisprudence. *See* N.C.G.S. § 4-1.

II. North Carolina is a *Daubert* jurisdiction that imposes "exacting standards of reliability" for the admission of expert testimony. Trial courts serve as the gatekeepers of evidence entrusted with the obligation to ensure expert testimony satisfies these standards. Where, as here, a trial court's failure to conduct a proper Rule 702 analysis results in the admission of unreliable and scientifically repudiated evidence, prejudicial error occurs.

A. Methods of fire and arson analysis have come under scrutiny as scientifically unreliable.

For over a decade, experts have expressed concern about the methods underpinning fire origin and cause investigations. *See* Committee on Identifying the Needs of the Forensic Sciences Community, National Research Council, *Strengthening Forensic Science in the United States: A Path Forward* 173 (2009) ("Despite the paucity of research, some arson investigators continue to make determinations about whether or not a particular fire was set. . .Experiments should be designed to put arson investigations on a more solid scientific footing.")

In 2016, the President's Council of Advisors on Science and Technology issued a report that specified "arson science" as an area of forensic evidence with "issues related to [its] scientific validity" that "require[d] urgent attention." President's Council of Advisors on Science and Technology,

Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods 23 (2016).

One theory of forensic fire science in particular has come under repeated scrutiny and has been rejected by the standard-bearer organization for fire investigators: negative corpus.

The National Fire Protection Association (NFPA), which issues the NFPA 921 (*Guide for Fire and Explosion Investigations*), explained how the process of elimination can be properly used in fire investigations, but rejected the method of negative corpus:

> The process of elimination is an integral part of the scientific method. Alternative hypotheses should be considered and challenged against the facts. Elimination of a testable hypothesis by disproving the hypothesis with reliable evidence is a fundamental part of the scientific method. However, the process of elimination can be used inappropriately. The process of determining the ignition source for a fire, by eliminating all ignition sources found, known, or believed to have been present in the area of origin, and then claiming such methodology is proof of an ignition source for which there is no supporting evidence of its existence, is referred to by some investigators as negative corpus.
>
> Negative corpus has typically been used in classifying fires as incendiary. . .This process is not consistent with the scientific method, is inappropriate, and should not be used because it generates untestable hypotheses, and may result in incorrect determinations of the ignition source and first fuel ignited.

NFPA 921, ¶ 19.6.5 (2014 ed.)

The NFPA 921 has been broadly accepted "as the de facto standard of care in fire investigation in state and federal courts." Parisa Dehghani-Tafti et al., *Folklore and Forensics: The Challenges of Arson Investigation and Innocence Claims*, 119 W. Va. L. Rev. 549, 556 (Winter 2016). It has been described as "the 'gold standard' for fire investigations." *McCoy v. Whirlpool Corp.,* 214 F.R.D. 646, 653 (D. Kan. 2003).

The NFPA 921 rejects the theory of negative corpus for determining the cause of a fire. The process of eliminating hypotheses concerning the cause of a fire is an "integral part of the scientific method, and is conducted at nearly every fire scene." Dehghani-Tafti et al., *Folklore and Forensics: The Challenges of Arson Investigation and Innocence Claims*, 119 W. Va. L. Rev. at 570. (internal quotation and citation omitted). However, negative corpus erroneously takes the process of elimination one step too far by not only eliminating "other competing hypotheses, but also to prove a single remaining hypothesis in the absence of any evidence directly supporting the final conclusion." *Id.* at 570-71.

The Kansas Court of Appeals described negative corpus as "a methodology of elimination and not a method based on the scientific method. It produces a hypothesis that cannot be proved. There is no physical evidence

supporting its conclusion." *Robinson v. State*, 56 Kan. App.2d 211, 230, 428 P.3d 225, 237 (2018).

The 2011 edition of the NFPA 921 marked a paradigm shift with respect to the organization's position on the theory of negative corpus. The NFPA's Technical Committee for Fire Investigations recognized "the inherent conflict and irreconcilable differences between the Scientific Method and the [negative corpus methodology]. The result was a reversal of the committee's previous position with a direct and straightforward rejection and repudiation of the" negative corpus theory. Dennis W. Smith, International Symposium on Fire Investigation Science and Technology, *The Death of Negative Corpus* 605 (2012).[1] Fire experts have concluded negative corpus "could not be supported by Scientific Method," "is not reliable," and "cannot be relied upon to yield reliable expert opinion and thus fails the Daubert criteria for reliable expert opinion." *Id.* at 606.

Unsurprisingly, three states—Arizona, Nebraska, and Oklahoma—have acknowledged the unreliability of arson convictions based on theories violating NFPA 921 and have passed resolutions allowing post-conviction review of their cases. Valena E. Beety et. al, *Evidence on Fire*, 97 N.C. L. Rev. 483, 513-14 (March 2019).

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[1] Available at https://premierfireconsulting.com/images/pdf/The-Death-of-Negative-Corpus-v2-Unabridged.pdf

B. Trial courts must determine, as evidentiary gatekeepers, whether proffered expert testimony satisfies all three prongs of Rule 702(a), which impose "exacting standards of reliability."

In 2016, this Court declared the General Assembly's modification of Rule 702 made North Carolina "a *Daubert* state." *State v. McGrady*, 368 N.C. 880, 888, 787 S.E.2d 1, 8 (2016). Thus, North Carolina's Rule 702(a) not only "adopted the meaning of the federal rule," but incorporated "the standard from the *Daubert* line of cases." *Id.* As this Court asserted, the *Daubert* line of cases "established 'exacting standards of reliability' for the admission of expert testimony." *Id.* at 885, 787 S.E.2d at 6. This new standard changed "the level of rigor that our courts must use to scrutinize expert testimony before admitting it." *Id.* at 880, 787 S.E.2d at 10.

Under *Daubert* and thus in North Carolina, trial courts have a "special obligation" to "ensure that any and all scientific testimony ... is not only relevant, but reliable." *Kumho Tire Co. v. Carmichael,* 526 U.S. 137, 147 (1999), quoting *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 589 (1993). In cases where an expert's "testimony's factual basis, data, principles, methods, or their application are called sufficiently into question, the trial judge must determine whether the testimony has "a reliable basis in the knowledge and experience of the relevant discipline." *Id.* at 149 (cleaned up).

At its core, the purpose of *Daubert*'s gatekeeping requirement "is to make certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field." *Id.* at 152.

Trial courts have discretionary latitude to determine how to evaluate the reliability of expert testimony and whether it is, in fact, ultimately reliable. *McGrady*, 368 N.C. at 890, 787 S.E.2d at 9. However, as Justice Scalia noted in his concurrence in *Kumho Tire*, such discretion does not encompass discretion to "abandon" its gatekeeping function or "to perform the function inadequately." *Kumho Tire Co.*, 526 U.S. at 159 (Scalia, J., concurring).

To be admissible, trial courts must find that expert testimony satisfies each of Rule 702(a)'s three main parts: qualifications, relevance, and reliability. *McGrady*, 368 N.C. at 889-90, 787 S.E.2d at 8-9. Only the third prong of Rule 702(a)—reliability—is in question in this case.

Under Rule 702(a)(1)-(3), expert testimony must meet all of the following criteria to be admissible:

> (1) The testimony [must be] based upon sufficient facts or data. (2) The testimony [must be] the product of reliable principles and methods. (3) The witness [must have] applied the principles and methods reliably to the facts of the case."

Id. at 890, 787 S.E.2d at 9.

Consequently, "[t]he primary focus" of this inquiry "is on the reliability of the witness's principles and methodology" and "not on the conclusions that they generate." *Id.* (internal quotations and citations omitted). Thus, when the "analytical gap between the data and the opinion proffered" is too great, trial courts are "not required to admit opinion evidence that is connected to existing data only by the *ipse dixit* of the expert." *Id.* (internal quotation and citation omitted).

C. The trial court's failure to analyze the State's proffered expert testimony under Rule 702 resulted in the prejudicial admission of expert testimony premised on an unreliable method repudiated by fire experts: negative corpus.

In this case, the State tendered Silvers as an expert in fire origin and cause. During voir dire, Silvers testified about his methods of analysis and the conclusions he reached in this case.

Silvers testified all "competent ignition source[s]" were "systematically excluded based on scientific data that prevented them from being the specific cause of this fire." (T p 142) However, Silvers testified, he "could not exclude an incendiary causation" and he believed "an ignitable liquid was used." (T p 142) In his report, Silvers' conclusion likewise states: "All known potential ignition sources within the area of fire origin were eliminated, with the exception of an incendiary causation." (R p 37)

Silvers testified that he did "not have physical evidence of an ignitable liquid," but he did "have physical evidence to say there was something else present other than what was observed to bring the ignition temperatures, other materials that were there, to a point where they would self-sustain combustion." (T p 143) However, Silvers acknowledged he had no idea what that "something else" would be. (T p 143)

While he did not "classify this fire as an incendiary fire," Silvers was unable to disprove that hypothesis by application of the scientific method. (T pp 143-44) Silvers insisted he had "other evidence that is consistent with incendiary. And while I lack the physical evidence of the ignitable liquid, there are other things that are consistent with an incendiary fire that I can't exclude it." (T pp 144-45) Silvers denied classifying the fire as incendiary under NFPA 921, but said "this is a hypothesis that I considered and that I cannot exclude." (T p 145)

At the conclusion of voir dire, defense counsel argued Silvers' testimony should be excluded under Rule 702 and *Daubert* as unreliable. (T pp 149-54). The trial court ruled, however, that Silvers' testimony was admissible because (1) it satisfied Rule 702's "relevancy test" and (2) Silvers qualified as an expert. (T p 161)

Yet, with respect to 702(a)(1)-(3)'s reliability analysis, the trial court merely asserted "the Court would find that that testimony was based upon

data, evidence, observations, testing principles that the expert relied upon to determine that conclusion, not the least of which was his own investigation at the scene sifting through all the layers of the fire." (T p 162)

Despite purporting to apply the three-part reliability test, the trial court's ruling shows it only considered the first prong, but not the second or third. As Rule 702(a) itself makes plain: scientific expert testimony is only permitted "if all" prongs of 702(a)(1)-(3) are satisfied. N.C. R. Evid. 702(a)(1)-(3).

The trial court made *no findings* as to whether Silvers' testimony was "the product of reliable principles and methods" (702(a)(2)) or whether the witness reliably applied those principles and methods to the instant case (702(a)(3)). By not applying the complete test required to determine the reliability of expert testimony under Rule 702(a), the trial court failed to properly perform—and abdicated—its gatekeeping function, manifesting an abuse of discretion.

The Court of Appeals, however, concluded that the trial court did not abuse its discretion and properly considered the three reliability factors in Rule 702 because the trial court used the words "under the three prong reliability test" in its ruling. *Lance*, 2021-NCCOA-236, ¶ 25. But, as the context of the trial court's ruling from which these six words were plucked shows, the trial court *did not* consider the three prongs of Rule 702(a)'s reliability analysis.

In fact, the transcript shows the trial court's assertion "under the three prong reliability" only applied to the "first line under the conclusion as to all known potential ignition sources within the area of fire origin were eliminated." (T pp 161-62; R p 37) The trial court found that "that testimony was based upon data, evidence, observations, testing principles that the expert relied upon to determine that conclusion, not the least of which was his own investigation at the scene sifting through all the layers of the fire." (T p 162)

However, with respect to the second line of the second part of Silvers' conclusion, the trial court did not make any findings concerning reliability under Rule 702(a)(1-3). Instead, the trial court simply asserted: "As to the second, with the exception of an incendiary causation, that matter the Court will allow that conclusion, but will give a very specific limiting instruction that I will prepare as to that that is not to be relied upon, that that means a certain thing, that that is an exception." (T p 162)

Despite its express concerns about confusing the jury with respect to the fine distinction in the expert's testimony between determining the cause of the fire and not being able to exclude a cause of the fire, which the trial court understood were two different things, and despite its promise to give a "very specific limiting instruction" on the matter (T p 162), neither the pattern jury instruction the trial court gave prior to the expert's testimony, nor the pattern instruction it provided during the jury charge, addressed or clarified this issue.

(T pp 175, 371-72) As a result, the trial court erroneously admitted confusing expert testimony based on an unreliable principle and method (negative corpus) that was "connected to existing data only by the *ipse dixit* of the expert." *McGrady*, 360 N.C. at 890, 787 S.E.2d at 9.

The trial court's failure to conduct a proper analysis under Rule 702(a)(1)-(3) prejudiced Ms. Lance because it permitted Silvers to offer scientifically unreliable testimony that, paradoxically, gave the State's theory that Ms. Lance started the fire the ostensible appearance of scientific rigor.

Specifically, in response to the prosecutor's question about whether he formed "an opinion as to the cause of the fire," Silvers testified to the jury:

> So the conclusions that I came to were specifically that the potential ignition sources that I observed I was able to exclude with the exception of an incendiary causation. And what that means is that I proposed a hypothesis that this was an intentionally set fire, so I tried to disprove that hypothesis by coming up with alternate explanations as to why I was seeing what I was seeing. And based on the science and the data that I observed at the scene and during the course of my investigation, I was not able to alternately explain why those things were present and, therefore, I cannot exclude an incendiary causation.

(T p 206)

This is the type of erroneous reasoning that lies at the heart of negative corpus, and which has accordingly been rejected as scientifically unreliable:

using the process of elimination to support a theory of causation for which no evidence exists.

And because this was not a case of overwhelming evidence showing Ms. Lance was responsible for starting the fire, the trial court's erroneous admission of this testimony was prejudicial. All of the State's other evidence about Ms. Lance starting the fire was circumstantial and second-hand, and thus there is a reasonable possibility the jury would have reached a different verdict had the trial court conducted a proper Rule 702(a) analysis and excluded Silvers' testimony. *See* N.C.G.S. § 15A-1443(a).

The Court of Appeals' decision in this case is inconsistent with *McGrady.* This Court should allow Ms. Lance's petition and certify review to reaffirm the principles asserted in *McGrady*, to provide clarifying guidance to trial courts regarding their gatekeeping obligations under Rule 702, and to demonstrate North Carolina's jurisprudential commitment to the reliability and integrity of scientific evidence in our courtrooms.

ISSUES TO BE BRIEFED

I. Did the Court of Appeals err in expanding common law arson to include the planned burning of a dwelling solely inhabited by co-conspirators for an illegal purpose proscribed by a separate statutory offense?

II. Did the Court of Appeals err in affirming the admission of expert testimony that was based on a scientifically repudiated method and the trial court failed to assess the reliability of the expert's testimony based on that method?

CONCLUSION

For the foregoing reasons and authorities, Ms. Lance asks this Court to allow her Petition and certify this case for review.

Respectfully submitted, this the 6th day of July, 2021.

By Electronic Submission:
Warren D. Hynson
North Carolina State Bar Number 50791
HYNSON LAW, PLLC
7283 NC HWY 42 W
Suite 120, # 102
Raleigh, N.C. 27603
919.351.9691
warren@hynsonlaw.com

Attorney for Petitioner

CERTIFICATE OF FILING AND SERVICE

I hereby certify that the original of Defendant-Petitioner's Petition for Discretionary Review has been filed, pursuant to Rule 26 of the North Carolina Rules of Appellate Procedure, by electronic means with the Clerk of the Supreme Court of North Carolina.

I further certify that a copy of Defendant-Petitioner's Petition for Discretionary Review has been served on Thomas Felling, Assistant Attorney General, N.C. Department of Justice, by electronic means by emailing to tfelling@ncdoj.gov, which counsel is informed and believes is Mr. Felling's correct and current email address.

This the 6th day of July, 2021.

By Electronic Submission:
Warren D. Hynson
North Carolina Bar Number 50791

Attorney for Petitioner

196P21 DISTRICT TWENTY-NINE B

SUPREME COURT OF NORTH CAROLINA

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STATE OF NORTH CAROLINA	)	
	)	From Henderson County
v.	)	16-CRS-862-64
	)	COA20-273
SHERRY LEE LANCE	)	

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APPENDIX

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State v. Lance,
2021-NCCOA-236 (2021)

IN THE COURT OF APPEALS OF NORTH CAROLINA

2021-NCCOA-236

No. COA20-273

Filed 1 June 2021

Henderson County, Nos. 16 CRS 862–64

STATE OF NORTH CAROLINA

v.

SHERRY LEE LANCE

Appeal by defendant from judgment entered 7 November 2019 by Judge Athena Fox Brooks in Henderson County Superior Court. Heard in the Court of Appeals 9 March 2021.

Attorney General Joshua H. Stein, by Assistant Attorney General Thomas J. Felling, for the State.

Warren D. Hynson for defendant.

DIETZ, Judge.

¶ 1 Defendant Sherry Lee Lance appeals her convictions for second degree arson, conspiracy to commit second degree arson, and insurance fraud, all stemming from allegations that Lance conspired with her mother to burn down the home they shared and collect insurance proceeds.

¶ 2 Lance's central argument is that the State could not prove an essential element of the arson charges—that Lance burned the dwelling house of another—because the

only other inhabitant of the home was her mother, who allegedly conspired with her to burn the home.

¶ 3 As explained below, we reject this argument. The State's evidence showed that Lance's mother still lived in the home when the fire occurred, and there was no evidence that Lance's mother knew when or how the fire would be set. Thus, the State's evidence was sufficient to send the case to the jury.

¶ 4 Lance also argues that the trial court erred by admitting the testimony of the State's fire investigation expert and committed plain error in the jury instruction concerning insurance fraud. We likewise reject these arguments and hold that the trial court properly considered the appropriate reliability factors before admitting the expert testimony and did not commit plain error in its jury instructions.

¶ 5 Finally, Lance alleges—and the State concedes—that there was insufficient evidence to support the trial court's award of restitution. We vacate the restitution order and remand that matter for further proceedings.

Facts and Procedural History

¶ 6 In September 2016, a house in Fletcher was destroyed by a fire. At the time of the fire, Defendant Sherry Lance and her mother Jonnie Turner lived in the house. They had leased it from the owner for about two years.

¶ 7 After the fire, Fletcher Police Sergeant Ronald Diaz, the town fire chief, the fire marshal, and an SBI agent went to the property to investigate. The SBI agent

brought a canine trained to identify accelerants or incendiaries, but the canine did not alert to any.

¶ 8 There was a large hole in the kitchen floor area that the investigators believed was the origin point of the fire. Sergeant Diaz observed that there was an unusually low number of personal belongings in the home and "not what you would expect in a home that was just lost to a fire." Based on that observation, Sergeant Diaz contacted the National Insurance Crime Bureau to see if Lance had renter's insurance on her personal property in the home. Sergeant Diaz learned that Lance had obtained a renter's insurance policy in May 2016, about four months prior to the fire, and had filed a claim for items lost in the fire.

¶ 9 On 15 September 2016, Casey Silvers, a fire investigator hired by the insurance company to investigate the cause of the fire, went to the property to investigate along with a claims adjuster. The claims adjuster also met with Lance to take her recorded statement about the fire. In her recorded statement, Lance explained that she told the landlord about some electrical problems in the home but he would not fix them. Lance explained that she thought the fire was electrical. When asked where she was and what she did on the day of the fire, Lance stated that she had gone "dumpster diving" with her mother, taking their two dogs with them. Lance submitted a "loss inventory list" to the adjuster, listing the items of personal property that she claimed were lost in the fire.

¶ 10 Several months later, Sergeant Diaz discovered that Turner had rented a storage unit in Fletcher the day before the fire. After obtaining a search warrant, Sergeant Diaz searched the unit and found a large number of personal belongings and household items, as well as personal financial and legal documents belonging to Lance. Various items that Sergeant Diaz found in the storage unit matched items listed on the loss inventory form Lance submitted to her insurance company. Sergeant Diaz obtained video footage from the storage facility, which showed Lance and Turner accessing the storage unit the day before the fire, moving items into the unit, and later moving items out of the unit after the fire.

¶ 11 The State charged Lance with second degree arson, conspiracy to commit second degree arson, and insurance fraud. The case went to trial.

¶ 12 At trial, the homeowner, the insurance adjuster, and Sergeant Diaz testified to the events described above. Along with Sergeant Diaz's testimony, the State presented the video footage from the storage facility and photographs of the items found inside the storage unit.

¶ 13 The State also offered the testimony of Casey Silvers as an expert in the field of fire and arson investigation. Lance objected on the ground that Silvers's expert testimony was not reliable under Rule 702. Both parties conducted *voir dire* questioning of Silvers. The trial court then ruled that Silvers's testimony was admissible "under the three prong reliability test" of Rule 702 and that it would allow

Silvers to testify to his conclusion that the results of his investigation excluded possible causes of the fire "with the exception of an incendiary causation."

¶ 14 The State also presented evidence that Lance made incriminating statements to family members following the fire. Lance's stepdaughter testified that, in 2018, Lance made statements to her indicating that Lance was "in trouble for burning [her] house down." Lance's father testified that Lance came to live with him in 2017 and admitted that she set fire to her home in North Carolina, telling him that she set the fire to collect renter's insurance.

¶ 15 At the close of the evidence, Lance moved to dismiss the arson charges, arguing that the State failed to present sufficient evidence to show that the house was "the dwelling of another person" as required for arson because the only inhabitants of the house at the time of the fire were Lance and her alleged co-conspirator in the arson plan, and thus, "this is a case where there was no risk to anybody else." The trial court denied the motion.

¶ 16 On 7 November 2019, the jury convicted Lance of all three charges. The trial court consolidated the charges and sentenced Lance to a term of 10 to 21 months in prison. The court also ordered Lance to pay $40,000 in restitution to the homeowner. Lance appealed.

Analysis

I. Denial of motion to dismiss

¶ 17 Lance first argues that the trial court erred in denying her motion to dismiss the arson and conspiracy to commit arson charges because the State failed to present sufficient evidence that the house in question was inhabited by "another person," an essential element of those arson charges. Lance asserts that the only other inhabitant of the house, her mother Jonnie Turner, was her alleged co-conspirator in the arson plan. Thus, she argues, the house was not the dwelling of "another" because "neither co-conspirator would have been endangered by the hazards of a burning they allegedly planned together."

¶ 18 "This Court reviews the trial court's denial of a motion to dismiss *de novo*." *State v. Smith*, 186 N.C. App. 57, 62, 650 S.E.2d 29, 33 (2007). The trial court must deny a motion to dismiss if the State presented "substantial evidence" of each essential element of the offense charged. *State v. Fritsch*, 351 N.C. 373, 378, 526 S.E.2d 451, 455 (2000). "Substantial evidence is such relevant evidence as a reasonable mind might accept as adequate to support a conclusion." *State v. Smith*, 300 N.C. 71, 78–79, 265 S.E.2d 164, 169 (1980). "In making its determination, the trial court must consider all evidence admitted, whether competent or incompetent, in the light most favorable to the State, giving the State the benefit of every reasonable inference and resolving any contradictions in its favor." *State v. Rose*, 339

N.C. 172, 192, 451 S.E.2d 211, 223 (1994).

¶ 19 Arson "is the wilful and malicious burning of the dwelling house of another person." *State v. White*, 288 N.C. 44, 50, 215 S.E.2d 557, 561 (1975). The essential elements of second-degree arson are: "(1) the willful and malicious burning (2) of the dwelling (i.e., inhabited) house of another; (3) which is unoccupied at the time of the burning." *State v. Scott*, 150 N.C. App. 442, 453, 564 S.E.2d 285, 293 (2002). Our Supreme Court has held that the "arson requirement that the dwelling burned be that of 'another' is satisfied by a showing that some other person or persons, together with the defendant, were joint occupants of the same dwelling unit." *State v. Shaw*, 305 N.C. 327, 338, 289 S.E.2d 325, 331 (1982).

¶ 20 The central issue in this case is whether Lance's mother, Jonnie Turner, qualifies as "another" person under the elements described above. The parties acknowledge that our appellate courts have never directly addressed whether an alleged co-conspirator in a plan to commit arson can be considered another person for purposes of establishing the required elements of arson. We hold that under the facts of this case, there was sufficient evidence that the home was the dwelling of another.

¶ 21 First, the elements of this offense and our existing precedent do not provide any exception for co-conspirators, nor do they require that the other person living in the home be unaware or uninvolved in the plan to burn the home. For example, in *Shaw*, our Supreme Court held that the "requirement that the dwelling burned be

that of 'another' is satisfied by a showing that some other person or persons, together with the defendant, were joint occupants of the same dwelling unit" without offering any exceptions for categories of persons who would not qualify as "another." 305 N.C. at 338, 289 S.E.2d at 331. Similarly, in *State v. Eubanks*, this Court emphasized that a house "is the dwelling house 'of another' if someone other than the defendant lives there." 83 N.C. App. 338, 339, 349 S.E.2d 884, 885 (1986). Again, the holding required only that "someone other than the defendant lives there." *Id.*

¶ 22 To be sure, these earlier cases involved homes that the defendant occupied together with others who were not involved in the arson plan. *See Shaw*, 305 N.C. at 328–29, 289 S.E.2d at 326–27; *Eubanks*, 83 N.C. App. at 339–40, 349 S.E.2d at 885. But we find nothing in these holdings that *required* those third parties to be innocent or uninvolved in the arson. *Shaw*, 305 N.C. at 337, 289 S.E.2d at 331; *Eubanks*, 83 N.C. App. at 339, 349 S.E.2d at 885. To the contrary, in *Eubanks*, the defendant warned the other inhabitant of the home to get out, take his belongings, and find another place to live in advance of the fire. 83 N.C. App. at 339–40, 349 S.E.2d at 885. Nevertheless, this Court found sufficient evidence of the essential elements of arson. *Id.* As these prior cases establish, the critical inquiry in determining whether a house "is the dwelling house 'of another'" is simply whether "someone other than the defendant lives there." *Id.* at 339, 349 S.E.2d at 885.

¶ 23 Lance cites to this Court's opinion in *State v. Ward*, where we held that the

facts "precluded defendant's conviction of common law arson" based on facts showing the other inhabitant's "consent to, if not active participation in, a scheme with defendant to burn the [home]." 93 N.C. App. 682, 686, 379 S.E.2d 251, 254 (1989). But our reasoning in that case was that the other inhabitant, with knowledge of the arson plan, "had permanently abandoned the [home] at the time of the burning" and was "living elsewhere at the time of the burning." *Id.* We held that "[u]nder these particular facts, there was no danger to anyone who 'might' have been in the [home] at the time it burned" because no one other than the defendant was currently living there. *Id.* at 686, 379 S.E.2d at 253.

¶ 24 In this case, by contrast, Lance's mother lived in the home at the time it was burned. Thus, unlike *Ward*, in this case there was a risk that Turner could have been in the home at the time it was burned, even assuming Turner participated in the plan to set the fire.

¶ 25 Moreover, an exception to this arson requirement for people who are aware of, or participate in, the plan to burn the dwelling is not consistent with the general purpose of criminalizing arson. When examining the scope of a criminal law, we consider "the public policy of the State as declared in judicial opinions and legislative acts, the public interest, and the purpose." *State v. Wagoner*, 199 N.C. App. 321, 324, 683 S.E.2d 391, 395 (2009), *aff'd,* 364 N.C. 422, 700 S.E.2d 222 (2010). In explaining its holding in *Shaw*, the Supreme Court noted that "the main purpose of common law

arson is to protect against danger to those persons who might be in the dwelling house which is burned." 305 N.C. at 337, 289 S.E.2d at 331. In other words, the "gravamen of the offense of common law arson is the danger that results to persons who are or might be in the dwelling." *White*, 288 N.C. at 50, 215 S.E.2d at 561. Knowledge of, or participation in, a plan to commit arson does not remove the danger that the other person could be injured or killed when the burning occurs. Indeed, in this case, there is no evidence that Turner knew when the fire would be set, how it would be set, where in the house it would be set, or how much of the house would be destroyed. The evidence is solely that Turner assisted with other aspects of the conspiracy, such as leasing the storage unit the day before the fire and moving various items from the house into that unit. The State's evidence established that Turner was a person living in that dwelling who could have been in the home at the time it was burned, and that is all that is required to satisfy this element of the arson offenses in this case. Accordingly, we hold that the trial court did not err by denying Lance's motion to dismiss.

II. Admission of fire investigator's expert testimony

¶ 26 Lance next argues that the trial court erred in admitting Casey Silvers's expert testimony because the court failed to conduct a proper reliability analysis under Rule 702 of the Rules of Evidence and because Silvers's testimony was based on an unreliable method.

¶ 27 A trial court's ruling to admit expert testimony under Rule 702 "will not be reversed on appeal absent a showing of abuse of discretion." *State v. McGrady*, 368 N.C. 880, 893, 787 S.E.2d 1, 11 (2016). A trial court "may be reversed for abuse of discretion only upon a showing that its ruling was manifestly unsupported by reason and could not have been the result of a reasoned decision." *Id.* "Under the abuse of discretion standard, our role is not to surmise whether we would have disagreed with the trial court, but instead to decide whether the trial court's ruling was so arbitrary that it could not have been the result of a reasoned decision." *Id.* at 899, 787 S.E.2d at 15 (citation omitted).

¶ 28 Lance first asserts that the trial court "failed to conduct a proper analysis under Rule 702" because, despite "purporting to apply the three-part reliability test" in Rule 702, "the trial court's ruling shows that it only considered the first prong, but not the second or third." Thus, Lance argues, the trial court "failed to properly perform—and abdicated—its gatekeeping function, manifesting an abuse of discretion."

¶ 29 Under Rule 702, expert testimony must meet a three-pronged reliability test: (1) the testimony must be based upon sufficient facts or data; (2) the testimony must be the product of reliable principles and methods; and (3) the witness must have applied the principles and methods reliably to the facts of the case. N.C. R. Evid. 702(a)(1)–(3); *McGrady*, 368 N.C. at 890, 787 S.E.2d at 9. "The precise nature of the

reliability inquiry will vary from case to case depending on the nature of the proposed testimony. In each case, the trial court has discretion in determining how to address the three prongs of the reliability test." *McGrady*, 368 N.C. at 890, 787 S.E.2d at 9. "The trial court must have the same kind of latitude in deciding *how* to test an expert's reliability . . . as it enjoys when it decides *whether* that expert's relevant testimony is reliable." *Id.* "Whatever the type of expert testimony, the trial court must assess the reliability of the testimony to ensure that it complies with the three-pronged test in Rule 702(a)(1) to (a)(3)." *Id.* at 892, 787 S.E.2d at 10.

¶ 30 Here, the trial court heard extensive *voir dire* testimony from Silvers. Silvers testified that he works as a senior fire investigator with a fire investigation firm, where he conducts origin and cause investigations for fires, using the scientific method to determine causation. Silvers stated that he has education and training in the field for more than 15 years and that he has completed various courses in fire investigation, expert testimony, and evidence collection through the National Fire Academy. He attends yearly seminars and classes on investigations and is regularly tested on his knowledge. He testified that he is a certified fire investigator, teaches classes in arson detection, and has investigated over 800 fires. Silvers went on to describe his process of using the scientific method to investigate a fire by gathering data, analyzing the data, forming hypotheses on possible fire causes, attempting to disprove the hypotheses, and then attempting to confirm any remaining hypotheses.

He testified that this method is recommended by the National Fire Protection Association's guidelines.

¶ 31 During questioning from Lance, Silvers testified that he is familiar with the term "negative corpus," which is a method that uses the elimination of accidental causes to conclude that a fire was caused by human agency, and that the negative corpus approach is not consistent with the scientific method. But Silvers clarified that he did not conclude that the fire in this case had an incendiary or human cause, only that he could not rule out the hypothesis of an incendiary cause based on the information gathered in his investigation. Silvers explained that his observations of the fire patterns and other evidence from the fire were indicative of an incendiary fire, which is why he could not exclude that hypothesis. Silvers testified that, even with negative test results for ignitable liquids, an incendiary cause could not be ruled out because there are incendiary sources that would not give a positive result.

¶ 32 Following this testimony, the trial court ruled that, "under the three prong reliability test," it would allow Silvers to testify about his conclusion that he had excluded other causes of the fire "with the exception of an incendiary causation" and that "he can say he excluded other things." The court noted, "I want it very clear that he just basically couldn't exclude that by his scientific means, not that means that's what happened."

¶ 33 In light of the trial record, the trial court's stated reasoning, and the court's

express pronouncement that it considered the three reliability factors in Rule 702, we hold that the trial court's ruling was within the court's sound discretion. *McGrady*, 368 N.C. at 893, 787 S.E.2d at 11. Silvers's extensive *voir dire* testimony covered all three prongs of the Rule 702 reliability test, describing in detail the facts and data he collected in conducting his investigation, the principles and methods he applied in accordance with his training and the guidelines for his profession, and the way he applied those principles and methods to the facts of this case to reach his conclusion that he could not exclude an incendiary cause. *See* N.C. R. Evid. 702(a)(1)–(3); *McGrady*, 368 N.C. at 890, 787 S.E.2d at 9. The trial court was not required to make detailed findings addressing each prong of Rule 702. The court's statement that it considered the three-prong analysis is sufficient to show that the trial court understood the applicable standard and exercised its discretion in choosing to admit the testimony under that standard. *McGrady*, 368 N.C. at 890, 787 S.E.2d at 9; *State v. Gray*, 259 N.C. App. 351, 355, 815 S.E.2d 736, 739–40 (2018). Accordingly, we reject Lance's claim that the trial court failed to engage in the appropriate Rule 702 analysis.

¶ 34 Lance also contends that the expert testimony should have been excluded because Silvers used a method, known as the negative corpus approach, that is unscientific and *per se* unreliable. Lance points to portions of the National Fire Protection Association's guidelines cautioning that "determining the ignition source

for a fire, by eliminating all ignition sources found, known, or believed to have been present in the area of origin, and then claiming such methodology is proof of an ignition source for which there is no supporting evidence of its existence, is referred to by some investigators as *negative corpus*." NFPA 921, ¶ 19.6.5 (2014 ed.). The guidelines explain that the negative corpus process "is not consistent with the scientific method, is inappropriate, and should not be used." *Id.*

¶ 35 But Silvers testified that he understood the negative corpus approach and its flaws and that he did not rely on negative corpus in reaching his conclusion about the cause of the fire in this case. Silvers testified that he applied the scientific method and process of elimination to rule out various hypotheses on the cause of the fire, in accordance with his profession's guidelines.

¶ 36 Again, the trial court was within its sound discretion to conclude that this testimony was admissible under Rule 702. "Rule 702 does not mandate particular procedural requirements, and its gatekeeping obligation was not intended to serve as a replacement for the adversary system." *Gray*, 259 N.C. App. at 355, 815 S.E.2d at 739–40 (citation omitted). "Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof continue as the traditional and appropriate means of attacking shaky but admissible evidence." *Id.* at 355, 815 S.E.2d at 740. Here, there were appropriate means to challenge Silvers's testimony through contrary evidence and cross-examination—for example, by underscoring that

Silvers's analysis did not establish causation.

¶ 37 Finally, even assuming the admission of this expert testimony was error—and we are not persuaded that it was—the error was harmless. This court may not order a new trial based on an evidentiary error unless the error was prejudicial, meaning "there is a reasonable possibility that, had the error in question not been committed, a different result would have been reached at trial." *State v. Babich*, 252 N.C. App. 165, 172, 797 S.E.2d 359, 364 (2017). Here, the State's evidence showed that Lance purchased an insurance policy shortly before the fire, that there was an unusually low number of personal belongings in the home at the time of the fire, and that Lance had moved many of her personal belongings from the house into a storage unit the day before the fire. Lance also admitted to two family members that she set the fire. In light of this evidence, Lance failed to show a reasonable possibility that, had the expert testimony been excluded, the jury would have reached a different verdict. *Id.* Accordingly, we find no error in the trial court's admission of the challenged expert testimony.

III. Challenge to jury instructions on insurance fraud

¶ 38 Lance next contends that the trial court committed plain error in the jury instructions concerning insurance fraud. Lance argues that the court failed to specify the particular false statement or misrepresentation alleged in the indictment.

¶ 39 Lance concedes that she did not object to the instructions at trial and thus we

review this issue solely for plain error. "For error to constitute plain error, a defendant must demonstrate that a fundamental error occurred at trial." *State v. Lawrence*, 365 N.C. 506, 518, 723 S.E.2d 326, 334 (2012). "To show that an error was fundamental, a defendant must establish prejudice—that, after examination of the entire record, the error had a probable impact on the jury's finding that the defendant was guilty." *Id.* Plain error should be "applied cautiously and only in the exceptional case" where the error "seriously affect[s] the fairness, integrity or public reputation of judicial proceedings." *Id.*

¶ 40 A defendant "must be convicted, if convicted at all, of the particular offense charged in the bill of indictment." *State v. Locklear*, 259 N.C. App. 374, 380, 816 S.E.2d 197, 202 (2018). With respect to the insurance fraud claim, this principle means that the trial court should "instruct the jury on the misrepresentation as alleged in the indictment." *Id.* at 383, 816 S.E.2d at 204. But a "jury instruction that is not specific to the misrepresentation in the indictment is acceptable so long as the court finds no fatal variance between the indictment, the proof presented at trial, and the instructions to the jury." *Id.*

¶ 41 Here, there is no variance between the allegations in the indictment and the State's evidence at trial. The indictment alleged that Lance provided a false "written and oral statement" to her insurer in which she "claimed that her personal property was destroyed by an accidental fire." The jury instruction required the jury to

determine if Lance's statements about the insurance policy "contained false or misleading information concerning a fact or matter material to the claim," but it did not identify the particular statement alleged in the indictment.

¶ 42 The State's evidence showed that, following the fire, Lance met with an insurance adjuster to provide a recorded statement for her renter's insurance claim in which she told the adjuster she thought the fire was "electrical" and provided an inventory of personal property she claimed was destroyed in the fire. The State contended that these statements were false and that Lance set the fire.

¶ 43 The State did not present any evidence of other false statements Lance made to her insurer aside from those regarding the cause of the fire and the property that was destroyed. Lance asserts that there was evidence of "more than one statement by Ms. Lance the jury could interpret as false or misleading," but all of these statements concerned the alleged destruction of her property through a fire that Lance claims she did not cause. Viewed in context, these statements all fell within the scope of the specific misrepresentation alleged in the indictment that her property was destroyed by an accidental fire. Accordingly, we reject this argument and find no plain error in the trial court's instructions to the jury.

IV. Restitution award

¶ 44 Finally, Lance argues that the trial court erred in ordering her to pay $40,000 in restitution without a sufficient evidentiary basis of testimony or documentary

evidence to support the amount of restitution ordered. The State concedes error on this issue and we agree.

¶ 45 This Court reviews *de novo* the issue of whether a trial court's restitution order was supported by evidence at trial or sentencing. *State v. Hardy*, 242 N.C. App. 146, 159, 774 S.E.2d 410, 419 (2015). The amount of restitution set by the trial court must be supported by *evidence* at trial. *State v. Moore*, 365 N.C. 283, 285, 715 S.E.2d 847, 849 (2011). A "restitution worksheet, unsupported by testimony or documentation, is insufficient to support an order of restitution." *Id.* Likewise, an "unsworn statement of the prosecutor is insufficient to support the amount of restitution ordered." *State v. Shelton*, 167 N.C. App. 225, 233, 605 S.E.2d 228, 233 (2004).

¶ 46 Here, the State informed the trial court that the owner of the house did "not wish to be here for sentencing," but that the State requested $40,000 in restitution. The State presented the trial court with a restitution worksheet requesting that amount, which the trial court then ordered. The State did not present any testimony or documents to support the requested $40,000 amount except for the worksheet. *See Moore*, 365 N.C. at 285, 715 S.E.2d at 849. We agree with the parties that the restitution award is not supported by sufficient evidence and therefore vacate and remand that portion of Lance's sentence for further proceedings.

Conclusion

¶ 47 For the reasons discussed above, we find no error in the trial court's judgment,

but we vacate the trial court's award of restitution and remand for further proceedings on that issue.

NO ERROR IN PART; VACATED AND REMANDED IN PART.

Judges CARPENTER and WOOD concur.