96559-5

IN THE SUPREME COURT OF THE
STATE OF WASHINGTON

STATE OF WASHINGTON

Respondent,

v.

JEFFREY POOL

Petitioner.

ON APPEAL FROM THE SUPERIOR COURT OF THE
STATE OF WASHINGTON FOR SPOKANE COUNTY

The Honorable John O. Cooney, Judge

PETITION FOR REVIEW

JASON G. JOHNSON, WSB#46430
Attorney for Petitioner

Gravis Law, PLLC
16201 Indiana Ave.
Suite 2240
Spokane Valley, WA 99216 Phone: 509.380.9102
Fax: 866.419.9269
Email: jason@gravislaw.com

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Cases

Regulations and Rules

A. IDENTITY OF PETITIONER

Petitioner Jeffrey Pool asks this Court to review the decision of the Court of Appeals referred to in section B.

B. COURT OF APPEALS DECISION

Petitioner seeks review of the court of appeal decision in *State v. Pool* 35296-0-III, filed October 30, 2018, attached as an appendix to this petition.

C. ISSUES PRESENTED FOR REVIEW

1. Whether the court erred in ruling the defense was prohibited from bringing into evidence the nature of prior convictions of two suspects at the scene of the May 30, 2015 robbery?

2. Whether the court erred when it overruled defense objections regarding the State's mischaracterization of DNA evidence, including an erroneous coin flip analogy during closing arguments, constituting misconduct?

D. STATEMENT OF THE CASE

On May 30, 2015, Cheney Police were dispatched to a report of an armed robbery at the Dollar Tree, located in Cheney, Washington. R.P. 274-275. Two employees of Dollar Tree were working at the time of the incident: Store Manager, Tom Busby, and co-worker Mikaela Norrish. After closing, Mr. Busby heard a noise, opened the office door and encountered a masked robber with a weapon. After placing the money into a bag, the suspect led Mr. Busby and Ms. Norrish to the front of the store and had Mr. Busby unlock the door. The suspect then left. The suspect was believed to be a white male, about 5-7, 170 pounds, with possibly blond hair.

In addition to the Cheney Police Department, a K-9 Deputy along with officers from Eastern Washington University and Airway Heights responded to the incident. R.P. 292-293. The K-9 was a track dog that started at the front doors of the

Dollar Tree building and went north, but then lost the scent. R.P. at 293. Directly north of the Dollar Tree was a Napa Auto store. R.P. 292.

Two males were in the Napa parking lot. R.P. 372, 387-388. These two individuals were asked to move outside the cordon area. R.P. 385. Officers did not run the license or identification of either individual on the night of the robbery. R.P. 387. It was later discovered one of the individuals had a warrant. R.P. 387. The warrant was out of King County from a 1992 kidnapping and robbery case. R.P. 9.

The next day, a call came into the police department regarding a suspicious item on the side of the road. R.P. 277. The item turned out to be a black knit ski cap that had been cut. R.P. 277. The mask seemed to match the description of the mask used in the robbery. R.P. 278 The mask was sent to the lab with a request for DNA on June 3, 2015. R.P. 561. On this request, the two individuals who were in the Napa parking lot, Mr. Matthew Smith and Mr. Frank Wolf were listed in the "suspect" column of the request. R.P. 562.

In that request, the suspect robber is described to be 5-7 to 5-9, with blond hair. R.P. 562. Both individuals had prior convictions and one had two outstanding warrants out of King County. R.P. 563. At least one had a prior conviction for robbery and kidnapping. R.P. 564-565.

The testimony regarding the background of the two individuals was the subject of the State's motion in limine. R.P. 8-19. At that time, the trial court found that 404 and 609 do not apply, and that the line of questioning may be relevant to show how the investigation was conducted. R.P. 18. The only questions that could be asked is what law enforcement knew at that time. R.P. 18-19.

When Captain Beghtol submitted a request for DNA, he included information from Mr. Wolf and Mr. Smith regarding their criminal histories. R.P. 563. While

these individuals were listed in the suspect column, Captain Beghtol stated that they were merely subjects, not suspects. R.P. 563. As Defense started to inquire about specific references in the request form, which mentions the nature of the underlying charges, the State objected. R.P. 565. The court ruled that due to the prejudicial effect, the exact nature of the prior criminal charges could not be discussed. R.P. 567.

DNA was extracted from the knit cap and a profile was developed, containing a mixture of at least three individuals, with two major contributors. R.P. 663. However, the DNA sample was not eligible for upload into CODIS. R.P. 664. Even though Mr. Wolf's DNA was in CCODIS, a keyboard search of the profile was not conducted for Mr. Wolf or Mr. Smith. R.P. 673, 675. The DNA analyst requested a reference sample from the two suspects from the Police Department. 671-672. The Police Department did not provide the lab with any additional information regarding the two suspects. R.P. 573-574.

On Saturday, July 9, 2016, Cheney Police Department again responded to a robbery at the Dollar Tree. Affidavit of Facts at 4. Mr. Busby was again working. *Id.* At closing time Mr. Busby encountered a suspect wearing a motorcycle helmet behind the door of the bathroom. *Id.*

The suspect flex-cuffed Mr. Busby, but then removed the flex cuffs when a coworker made contact and mentioned there was still a customer at the front. *Id* at 5. Mr. Busby handled the customer and then locked the front door. *Id.* The suspect then took the money and ran out the front door. *Id.* The suspect was described as a male in his mid-20's, 5-10, 175 to 185 pounds, wearing a motorcycle helmet, visor, a grey EWU sweatshirt with white lettering, dark military style pants, security gun belt, black shoes, black gloves, carrying a red bag. R.P. 429-430. Mr. Blazenkovic, who was another store employee, told authorities that earlier that evening, he saw the

defendant, Mr. Pool, walking in the store with a black motorcycle helmet in hand. R.P. 299.

On Tuesday, Officers arrested Mr. Pool as he showed up for work at the Airway Heights Correctional Facility. R.P. 532. Following his arrest, officers executed a warrant for his house, car, and DNA. R.P. 533-554. When arrested, Mr. Pool was wearing dark blue uniform pants and black leather work boots. R.P. 454. During the search of the home, officers recovered a handgun, ammo magazines and ammo. R.P. 464. Additionally, officers recovered two motorcycle helmets, one with visor, one without. R.P. 466 - 467.

Mr. Pool's DNA was subsequently compared to the DNA profile taken from the ski hat with a finding that it is 140 times more likely that the observed DNA typing profile occurred as a result of a mixture of Jeffrey Pool and an unknown individual than having originated from two unrelated individuals. R.P. 667. A likelihood ratio is the ratio of two hypotheses weighted against each other. R.P. 679. Analysts use a scale that helps weigh the likelihood ration. R.P. 684. The lower the likelihood ratio, the less strength there is in the hypothesis. R.P. 684-685. Likelihood rations can go into the tens- of-thousands and millions. R.P. 683-684. During opening statements, the prosecutor conceded that the DNA is somewhat nebulous. R.P. 84. When asked if a likelihood ratio between 83 and 146 is referred to as a nebulous result, the DNA analyst answers in the affirmative, stating that it would fall on the weight chart between moderate and moderately strong, which is the second lowest level used by the state for statistical purposes. R.P. 685. During closing arguments, over Defense objections, the State used an analogy stating that if you flip a coin 140 times, 139, it's Mr. Pool in combination with another individual. R.P. 863.

The Jury convicted Mr. Pool on all charges. R.P. 906-907.

E. REASONS WHY REVIEW SHOULD BE ACCEPTED AND ARGUMENT

1. DIVISION THREE'S DECISION AFFIRMING THE COURT'S RULING TO PROHIBIT THE NATURE OF THE PRIOR CONVICTIONS FROM FRANK WOLF AND MATTHEW SMITH CONFLICT WITH MR. POOL'S CONSTITUTIONAL RIGHT TO PRESENT A COMPLETE DEFENSE.

The trial court erred when it ruled that the Defense would be prohibited from bringing into evidence the nature of the prior convictions of the two "suspects" from the May 30, 2015 scene would not be allowed into testimony.

Washington evidence rules state "all relevant evidence is admissible, except as limited by constitutional requirements or as otherwise provided by statutes, by these rules, or by other rules or regulations applicable in the court of this state." ER 402. "Relevant evidence" is "evidence having a tendency to make the existence of any fact consequential to the resolution of a lawsuit more or less probable than it would be without the evidence." ER 401. ER 404(b) states that "evidence of other crimes, wrongs, or acts is not admissible to prove the character of a person in order to show action in conformity therewith. It may, however, be admissible for other purposes, such as proof of motive, opportunity, intent, preparation, plan, knowledge, identity, or absence of mistake or accident."

The standard for relevance of other suspect evidence is whether there is evidence "tending to connect" someone other than the defendant with the crime. *State v. Downs*, 168 Wash. 664 at 667, 13 P.2d I (1932). The *Franklin* court reinforced this standard by stating "some combination of facts or circumstances must point to a nonspeculative link between the other suspect and the charged crime." *State v. Franklin*, 180 Wn.2d 371 at 381, 325 P.3d 159, (2014).

Franklin held that "the trial court's error in that case to exclude evidence showing that another person had both the motive and opportunity to commit the

crime directly affected Franklin's state and federal constitutional right to present witnesses on his own behalf." *Id* at 382,325 P.3d at 164. This "constitutional error is presumed to be prejudicial and the State bears the burden of proving that the error was harmless. A constitutional error is harmless if the appellate court is convinced beyond a reasonable doubt that any reasonable jury would have reached the same result in the absence of the error." *Id.* (referencing *State v. Watt*, 160 Wn.2d 626,635, 160 P.3d 640 (2007) (citing *State v. Guloy*, 104 Wn.2d 412,425, 705 P.2d 1182 (1985) (citing *State v. Stephens*, 93 Wn.2d 186, 190-91, 607 P.2d 304 (1980)))).

In *Donald*, the Court went on further to explain that "character evidence might be considered relevant on four theories:

1. As circumstantial evidence that a person acted on a particular occasion consistently with his character (propensity evidence)
2. To prove an essential element of a crime, claim, or defense
3. To show the effect that information about one person had on another person's state of mind
4. Other purposes, such as identity or lack of accident."

State v. Donald, 178 Wn.App. 250,255, 316 P.3d 1081, 1083 (Div. 1 2013). The Court affirmed "that prior bad acts are generally not considered proof of any person's likelihood to commit bad acts in the future and that such evidence should demonstrate something more than propensity." *Id.* at 260, 316 P.3d at 1086.

The Supreme Court weighed in on the issue when considering the balancing of this type of evidence. See *Holmes v. South Carolina*, U.S. 319 (2006). "Well-established rules of evidence permit trial judges to exclude evidence if its probative value is outweighed by certain other factors such as unfair prejudice, confusion of the issues, or potential to mislead the jury." .*Id.* at 320. However, "whether rooted directly in the Due Process Clause of the Fourteenth Amendment or in the Compulsory Process or Confrontation clauses of the Sixth Amendment, the

Constitution guarantees criminal defendants 'a meaningful opportunity to present a complete defense.' "*Id.* at 320, citing *Crane v. Kentucky*, 476 U.S. 683, at 690 (1986).

"The United States Constitution bars the trial court from considering the strength or weakness of the State's case in deciding whether to exclude defense-proffered other suspect evidence." *Franklin*, at 373,325 P.3d at 160. "Evaluating the strength of only one party's evidence, no logical conclusion can be reached regarding the strength of contrary evidence offered by the other side to rebut or cast doubt. *Holmes* at 320. "We have never adopted a per se rule against admitting circumstantial evidence of another person's motive, ability, or opportunity. Instead, our cases hold that if there is an adequate nexus between the alleged other suspect and the crime, such evidence should be admitted. *Franklin*, at 373,325 P.3d at 160.

In the present case, it is clear that the underlying convictions of the two individuals found at the scene are relevant. They just "happened" to be in the area, north of the Dollar Tree, in the vicinity of where a K-9 search was conducted. This is a non-speculative link. The crimes of kidnapping and robbery in relation to Matthew Smith specifically were excluded as evidence by the trial court. The court ruled under ER 403 that the information should be excluded due to undue prejudice to the State. The Court of Appeals affirmed the holding of the trial court stating that the trial court had not abused its discretion because they did not consider such evidence as holding any relevance.

However, the defense was attempting to introduce this evidence for a "different purpose." Captain Beghtol made issue that the two individuals were not "suspects," but merely "subjects." Yet in filling out the DNA request, Captain Beghtol expounded on the criminal history as a basis for comparing the DNA to the "subjects."

The strength or weakness of the state's case should not have been considered in the trial court's order. Because the court erred when denying the Defense opportunity to introduce evidence of the prior convictions of the suspects, even for other purposes, Mr. Pool was denied a right to present a fair and complete defense.

2. DIVISION THREE'S DECISION AFFIRIMING THE COURT'S RULING THAT THE STATE'S ERRONIOUS COIN FLIP ANALOGY DID NOT CONSTITUTE PROSECUTORIAL MISCONDUCT CONFLICTS WITH WELL ESTABLISHED CASE LAW REGARDING PROSECUTORIAL MISCONDUCT.

The trial court erred when it overruled Defense objections regarding the States mischaracterization of DNA evidence during closing arguments, including an admittedly erroneous coin flip analogy, which constituted Prosecutorial misconduct. "To show misconduct, the defendant must show that the prosecutor did not act in good faith and the prosecutor's conduct was both improper and prejudicial." *State v. Jones*, 163 Wn.App. 354,363 266 P.3d 886,891 (Div. 2 2011). "The burden rests on the defendant to show the prosecuting attorney's conduct was both improper and prejudicial. Once proved, prosecutorial misconduct is grounds for reversal where there is a substantial likelihood the improper conduct affected the jury." *State v. Fisher*, 165 Wn.2d 727,747,202 P.3d 937 (2009).

In order to prevail, the defense must establish "'that the prosecutor's conduct was both improper and prejudicial in the context of the entire record and the circumstances at trial.'" *State v. Thorgerson*, 172 Wn.2d 438,258 P.3d 43, (2011), citing *State v. Magers*, 164 Wash.2d 174, 191, 189 P.3d 126 (2008). The burden to establish prejudice requires the defendant to prove that "there is a substantial likelihood [that] the instances of misconduct affected the jury's verdict." *Thorgerson* at 442-443, 258 P.3d at 46. As a quasi-judicial officer representing the people of the State, a prosecutor has a duty to act impartially in the interest only of justice." *State v.*

Warren, 165 Wn.2d 17, 27, 195 P.3d 940 (2008).

The Court has held "it is error to submit evidence to the jury that has not been admitted at trial. The 'long-standing rule' is that 'consideration of any material by a jury not properly admitted as evidence vitiates a verdict when there is a reasonable ground to believe that the defendant may have been prejudiced.'" *In re Personal Restraint of Glasmann*, 175 Wn.2d 696,705,286 P.3d 673 (2012). citing *State v. Rinkes*, 70 Wn.2d 854,862,425 P.2d 658 (1967). The coin flip analogy was clearly improper in that it completely misstated a critical piece of evidence the prosecutor relied on in his closing argument.

The prejudice is also apparent because after hearing the State's characterization of the DNA evidence, it is not only foreseeable but likely that the jury relied heavily on this characterization of the evidence during deliberation on the case. The prosecutor failed to act in good faith in failing to exercise extreme caution when discussing a critical piece of evidence in the case.

3. THE PROSECUTOR'S MISCONDUCT REGARDING MISCHARACTERIZATION OF DNA EVIDENCE INVOLVES A SIGNIFICANT QUESTION OF LAW UNDER THE STATE AND FEDERAL CONSTITUTIONS.

Researchers have discussed the issue of the legal fallacy of misstating or misrepresenting the likelihood ration of DNA hypothesis. See, Jane Moira Taupin Introduction to Forensic DNA Evidence for Criminal Justice Professionals, 71-73 (CRC Press, 2014). " this logic problem can be avoided by using the LR strictly as quoted in the forensic report ... [it] should not be translated to the probability of the hypothesis itself." *Id.* at 73. By making probability statements, the statement becomes logically incorrect. See, I.W. Evett, Avoiding the Transposed Conditional, Science & Justice, Vol 35, Iss 2, April 1995, pp 127-131. The error in shifting the language is illustrated as follows:

"The probability that an animal has four legs if it is a cow is one

Does not mean the same thing as:

The probability that an animal is a cow if it has four legs is one" *Id.* at 129.

In the present case, the prosecutor clearly mischaracterized the DNA results of the defendant. The DNA analyst confirmed that a range of 83-146 LR was on the second to the bottom ladder of in the strength chart. The DNA analyst did not covert the Likelihood ration to a percentage. When the prosecutor used the analogy of the coin flip, he essentially introduced facts which were not in evidence. Whether this was intentional, or due to a misunderstanding of DNA evidence is not at issue. The effect of prejudice is great when the jury is presented with the idea that 139 out of 140 times is the defendant. The conduct of the State was improper and prejudicial and Mr. Pool's constitutional rights under both the state and federal Constitutions were violated.

F. CONCLUSION

For the reasons set forth above, this Court should accept review, RAP 13.4(b)(1),(2) and (3).

Dated this 29 day of November, 2018.

Respectfully submitted,

JASON JOHNSON, WSBA 46430
Attorney for Petitioner

Certificate of Service

I, Amanda Jenkins, declare under penalty of perjury under the laws of the state of Washington that the following is true and correct:

That on the 29th day of November, 2018, I caused a true and correct copy of the **Petition for Review** to be served on the party/parties designated below.

Spokane County Prosecutors Office 1115 W. Broadway Ave. Spokane, WA 99201	Via Eastern Washington Attorney Services
Supreme Court of Washington P.O. Box 40929 Olympia, WA 99504-0929	Via Web Portal for Supreme Courts
Jeffery Pool DOC 398715 Clallam Bay Corrections Center 1830 Eagle Crest Way Clallam Bay, WA 98326	Via Untied States Postal Service

Amanda Jenkins
Amanda Jenkins
Paralegal

APPENDIX 1

Renee S. Townsley
Clerk/Administrator

(509) 456-3082
TDD #1-800-833-6388

The Court of Appeals of the State of Washington Division III

500 N Cedar ST
Spokane, WA 99201-1905

Fax (509) 456-4288
http://www.courts.wa.gov/courts

October 30, 2018

Jason Johnson
Gravis Law
16201 E Indiana Ave Ste 2240
Spokane Valley, WA 99216
jason@gravislaw.com

E-mail
Brian Clayton O'Brien
Larry D. Steinmetz
Cnty Prosc Atty Ofc
1100 W Mallon Ave
Spokane, WA 99260-2043

CASE # 352960
State of Washington v. Jeffrey Joseph Pool
SPOKANE COUNTY SUPERIOR COURT No. 161027025

Counsel:

Enclosed please find a copy of the opinion filed by the Court today.

A party need not file a motion for reconsideration as a prerequisite to discretionary review by the Supreme Court. RAP 13.3(b); 13.4(a). If a motion for reconsideration is filed, it should state with particularity the points of law or fact which the moving party contends the court has overlooked or misapprehended, together with a brief argument on the points raised. RAP 12.4(c). Motions for reconsideration which merely reargue the case should not be filed.

Motions for reconsideration, if any, must be filed within twenty (20) days after the filing of the opinion. Please file the motion electronically through the court's e-filing portal or if in paper format, only the original need be filed. If no motion for reconsideration is filed, any petition for review to the Supreme Court must be filed in this court within thirty (30) days after the filing of this opinion (may be filed by electronic facsimile transmission). The motion for reconsideration and petition for review must be received (not mailed) on or before the dates they are due. RAP 18.5(c).

Sincerely,

Renee S Townsley

Renee S. Townsley
Clerk/Administrator

RST:sh
Enclosure
c: **E-mail** Honorable John Cooney
c: Jeffrey Joseph Pool
#398715
1830 Eagle Crest Way
Clallam Bay, WA 98326

FILED
OCTOBER 30, 2018
In the Office of the Clerk of Court
WA State Court of Appeals, Division III

IN THE COURT OF APPEALS OF THE STATE OF WASHINGTON
DIVISION THREE

STATE OF WASHINGTON, Respondent, v. JEFFREY JOSEPH POOL, Appellant.	)	No. 35296-0-III UNPUBLISHED OPINION

FEARING, J. — Jeffrey Pool challenges his convictions for robbery, assault and kidnapping on the grounds that the trial court excluded permissible evidence and the prosecution committed misconduct. We find no error and affirm.

FACTS

This appeal concerns the prosecution of Jeffrey Pool for armed robbery of Cheney's Dollar Tree Store on May 30, 2015, and July 9, 2016. Pool worked at the Cheney Dollar Tree Store during 2012. During 2015 and 2016, Jeffrey Pool worked as a correctional officer at the Airway Heights Correctional Center. Airway Heights lies thirteen miles north of Cheney. Three miles separated Jeffrey Pool's residence from the Dollar Tree.

On May 30, 2015, Assistant Manager Tom Busby worked the evening shift at the Dollar Tree in Cheney. At 9:00 p.m. after closing, Busby and Mikaela Norrish, another store employee, inventoried store cash registers in the back office when Busby heard a noise inside the store. Busby had assumed no customers remained in the Dollar Tree since he already searched the premises and locked the front doors. Busby opened the office door, and a masked male charged into the room brandishing a pistol.

The hooded male politely informed Tom Busby and Mikaela Norrish: "sorry I have to rob you." Report of Proceedings (RP) at 114. Busby believed the intruder legitimately felt remorse, although the robber threatened the employees with use of his pistol. According to Busby, the trespasser wore a knit cap, with its cap eyes slit, pulled over his face. The courteous menacing man wore a red and black Eastern Washington University sweatshirt, gloves, and black pants.

The veiled thief ordered Tom Busby and Mikaela Norrish to place their cell phones in a safe. The interloper pawed and removed all cash from the tills and the safe. He grabbed $2,500. The masked man then marched Busby and Norrish to the front of the store, locked the front door, and instructed his two captives to march toward the rear of the building while not looking backward.

During the night of May 30, 2015, Cheney Police Sergeant Chris English investigated the Dollar Tree Store robbery. Sergeant English saw and spoke with Matthew Smith and Frank Wolf in a Taco Bell parking lot near the Dollar Tree. Smith

and Wolf had parked a vehicle in front of a NAPA Auto Parts store, which lay inside an area cordoned off by law enforcement. Smith and Wolf provided English a written statement in English, which included personal contact information. The pair, according to English, appeared relaxed.

On the night of May 30, Cheney Police Officer Timothy Ewen directed a police dog to track a scent. The dog traced a smell from the Dollar Tree to the NAPA Auto Parts parking lot, where the scent ended. Nevertheless, Sergeant Chris English and Officer Ewen did not deem Matthew Smith and Frank Wolf as viable suspects because neither man wore clothing described by Mikaela Norrish or Tom Busby as being adorned by the robber. Smith stood taller than the man who robbed the Dollar Tree.

Matthew Smith had a warrant for his arrest because of a failure to pay restitution after a 1992 King County juvenile court conviction for kidnapping and robbery. The Cheney Police Department learned of the warrant days later. Frank Wolf carried a felony conviction while a juvenile, which conviction was at least twenty years old. No witness identified the nature of the juvenile conviction.

At some date after May 30, 2015, Cheney Police Detective Sergeant Justin Hobbs attempted to contact Frank Wolf and Matthew Smith, but to no avail. At Jeffrey Pool's trial, Detective Hobbs did not recall how many times he attempted to contact either Wolf or Smith. Hobbs prepared no report about his attempts to contact the two.

On May 31, 2015, the day after the first robbery, an anonymous individual

telephoned the Cheney Police Department to report a suspicious object along State Route 904. Sergeant Chris English and Officer Zebulon Campbell then located a black knit cap on the side of the highway. The cap, with eye holes cut, resembled a ski mask. Mikaela Norrish and Tom Busby identified the cap as the one worn by the Dollar Tree intruder.

We forward thirteen months. On July 9, 2016, at 8:30 p.m., Eric Blazekovic, a Cheney Dollar Tree assistant manager, noticed Jeffrey Pool inside the store. Blazekovic and Pool attended Cheney High School as teenagers and, in 2015, frequented the same gym. Pool wore a motorcycle helmet and dark blue or black clothing. Blazekovic, a motorcycle enthusiast, peered into the store parking lot to view Pool's motorcycle. Blazekovic saw no motorcycle in the lot.

On July 9, 2016, Tom Busby again worked the evening shift at the Dollar Tree Store. Before closing, Busby searched for trespassers on the premises. Busby attempted to enter the employee restroom only to discover someone had blocked the doorway from inside. Busby placed his foot against the door to prevent the prowler from exiting. Busby and the intruder scuffled until the intruder informed Busby he held a gun.

The restroom occupant exited the bathroom, displayed his gun, and searched Tom Busby for weapons. The assailant wore a motorcycle helmet, a gray Eastern Washington University sweatshirt, dark military pants, a police belt, black shoes, and black gloves. He toted a red bag with a black drawstring.

The assailant shoved his gun into the small of Tom Busby's back, restrained

Busby's hands with plastic handcuffs, and ushered him toward the store's selling floor. Busby and his captor encountered store employee Sarah Cousins. Cousins informed the intruder that customers remained inside the store, so the robber moved Busby and Cousins to a warehouse in the back of the store. The interloper cut the handcuff ties to free Busby so that Busby could escort the remaining customers from the store as the interloper held Cousins captive. Busby waited on the remaining customers.

After the departure of all customers, the robber ordered Tom Busby and Sarah Cousins to the store office, and he collected cash from the tills and the safe. The thief also placed Busby's and Cousins' phones inside the safe, directed the two to the bathroom, and then fled the Dollar Tree.

Tom Busby informed law enforcement that he believed the same individual robbed the store on both occasions. Busby estimated the robber to stand at 5'10."

On July 9, 2016, Jeffrey Pool rode on his motorcycle on the way to work the graveyard shift at Airway Heights Corrections Center. The prison did not permit its employees to store firearms inside the center. Pool asked coworker Dru Searls if he could store his firearm inside Searls' vehicle. Pool had never before requested this favor from Searls. Pool lamented to Searls that Pool must work overtime to gain sufficient cash to purchase a home.

On July 12, 2016, law enforcement arrested Jeffrey Pool at the Airway Heights Corrections Center. Police also executed a search warrant for Pool's clothing,

deoxyribonucleic acid (DNA), automobile, and residence. Law enforcement seized a box of .9-millimeter bullets from Pool's vehicle's center console. Officers took a black pair of pants and a black long sleeve shirt from the car's trunk. Law enforcement found a Smith & Wesson M&P pistol inside Pool's home. Police also discovered two motorcycle helmets and an Eastern Washington University sweatshirt at the residence.

PROCEDURE

The State of Washington charged Jeffrey Pool with two counts of first degree robbery, four counts of second degree assault, and four counts of kidnapping in the first degree.

Before trial, the State moved in limine to prevent mention of criminal convictions of Matthew Smith and Frank Wolf, the two individuals with whom law enforcement spoke outside the NAPA store adjacent to the Dollar Tree on May 30, 2015. In its written motion, the State sought:

> . . . To prohibit the defense from mentioning the convictions of the witnesses on the stand or any witnesses who were contacted by law enforcement but are not testifying.
>
> . . . .
>
> . . . To prohibit the defense introducing irrelevant evidence about non-testifying witnesses or evidence that they acted in conformity therewith [to] the May 2015 robbery.

Clerks Papers (CP) at 32-33 (boldface omitted). During oral argument on the motion in limine, the State conceded that Smith garnered criminal convictions at an earlier age. Nevertheless, the State highlighted the convictions as occurring twenty-four years earlier.

The State did not concede that Wolf held prior convictions, but an officer later testified at trial to Wolf having a felony conviction. Neither party has identified the specific crime committed by Wolf.

During its motion in limine argument, the State characterized the convictions of Matthew Smith and Frank Wolf as irrelevant and admissible only for impeachment purposes, under ER 609, if either testified. The State agreed that Jeffrey Pool could introduce evidence concerning the interaction between law enforcement and Smith and Wolf on May 30, 2015, and thereafter, but the State sought preclusion of evidence of the criminal histories. The State did not then distinguish between the fact of the convictions and the crimes of convictions.

In response to the State's motion in limine, Jeffrey Pool emphasized that a dog tracked a scent from the Dollar Tree to the NAPA parking lot, where the officers found Frank Wolf and Matthew Smith. Pool also contended that Smith and Wolf walked to Safeway on the night of the robbery and that law enforcement found the knit cap near the Safeway store. Pool claimed that each man's prior convictions were for burglary and kidnapping, and Pool emphasized that he faced the same charges. Pool's counsel remarked:

> It wasn't found out until a couple days later that these two individuals, by Captain Beghtol, that one in particular had a warrant, outstanding warrant, for this burglary and kidnapping charge, the same charges that Mr. Pool is being referred to.

RP at 13-14. Pool characterized the two men as suspects, not witnesses. Thus, Pool stated he did not seek to question about the crimes of conviction in order to impeach the two. Nevertheless, according to Pool, evidence concerning Wolf's and Smith's crimes held relevance to the lack of thoroughness of the police investigation of the Dollar Tree robbery.

At the conclusion of the pretrial hearing, the trial court granted in part and denied in part the State's motion in limine to preclude reference or testimony about Frank Wolf's and Matthew Smith's past. The trial court ruled that Jeffrey Pool could introduce testimony about the pair's past in order to attack the competency of the police investigation. Nevertheless, the defense could not argue that Smith and Wolf committed the Dollar Tree store robberies because they committed similar crimes in the past. The trial court later readdressed its ruling.

During trial, police witnesses testified regarding the depth of the law enforcement investigation into Matthew Smith's and Frank Wolf's possible participation in the May 2015 Dollar Tree store robbery. In response to the State's attorney's questioning, Cheney Police Captain Richard Beghtol declared:

> Q Okay. And did you fill out the paperwork for the lab?
> A I did.
> Q Okay. And so both of the two subjects had felony convictions from 20 or so years ago when they were teenagers?
> A Yes.
> Q Okay. And so at least one of them was in CODIS [Combined DNA Index System] from a conviction 24, 25 years ago?

A That's correct.
Q Okay. And he had a legal financial warrant out for him?
. . . .
A Yes.
Q Okay. Now, was that a warrant for a crime that was out for him?
A No.
Q Okay. What kind of warrant was out for Mr. Smith?
. . . .
A It was for failing to pay restitution from his conviction.
Q (By Mr. Treece) Okay. And how old was that warrant?
A It was issued in 1994.
Q Okay. So back in—in 2015, a 21-year-old-warrant?
A Yes.
Q Out of which county?
A Out of King County.
. . . .
Q Okay. So to be clear, did Mr. Smith have any warrants out for any type of active crimes?
A No. Not that I could find.
. . . .
Q And besides Mr. Smith's felonies that he committed when he was a juvenile, has he ever committed another crime nationwide?
A Not that I could find.
. . . .
And Mr. Wolf, the other individual, did he have any warrants out for his arrest?
A No, he didn't have any warrants.

RP at 517-20.

Defense counsel cross-examined Captain Beghtol regarding Matthew Smith's and Frank Wolf's felony convictions:

Q . . . Captain, again, those facts of the prior convictions and the fact of the one individual with two active felony warrants, was that information useful?
A Yes.

> Q Does an officer who encounters an individual and runs and finds out about a felony warrant, does he have the leeway to let that individual go?
>
> A No.

RP at 626.

During the cross-examination of Captain Richard Beghtol, the State grew concerned that defense counsel might soon ask Beghtol about the label of the crimes committed by Frank Wolf or Matthew Smith. The trial court questioned defense counsel concerning the questions he intended to ask. Defense counsel responded that he intended to ask Captain Beghtol to identify the nature of the convictions and the relevance of the particular crimes to the Cheney Police Department investigation. The State objected to any questioning as to the names of the convictions. The prosecution commented:

> But I think the entire reason he [defense counsel] wants to bring up the robbery and kidnapping is to malign the character of—of this person [Matthew Smith] with a—convictions that are 24 years old. There is no other purpose to that.
>
> . . . If Mr. Johnson [defense counsel] wants to ask the captain do you know that you were wrong about the nature of the warrants, that's a valid question and he can certainly ask that question. But in terms of getting to the underlying crime that—that—that what the warrants were for, that's absolutely improper and is absolutely prejudicial to the State.

RP at 564-65. The trial court responded to the State's objection to identifying the crimes of conviction, and the State's attorney thereafter commented:

> THE COURT: You [defense counsel] can ask him [Captain Richard Beghtol] first if you knew of any felony convictions and, secondly, whether those—the nature of those felony convictions caused him to do or not to do anything. If he says yes, then I think it's fair game that that's why he

> included it in here. But it can't be used to show they [Matthew Smith and Frank Wolf] acted in conformity with that.
>
> MR. TREECE [prosecuting attorney]: Correct, Your Honor. The prejudice to the State is going to be devastating. We have a saying that this is a robber kidnapper that those are the charges we have before the Court.

RP at 565.

One might wonder if, based on this ruling, the trial court allowed defense counsel to question Captain Richard Beghtol about the nature of the convictions if Beghtol testified to the relevancy of the nature to the police investigation, as long as counsel did not later argue that Matthew Smith or Frank Wolf acted in conformance with the nature of the convictions in robbing the Dollar Tree store. The trial court briefly recessed and clarified its ruling. The trial court ruled that the identification of the convictions possessed relevance because that identity could have influenced the investigation of the Cheney Police Department. Nevertheless, the court found the information about the kidnapping and robbery to be unduly prejudicial to the State because the jury would conclude that Matthew Smith and Frank Wolf acted in conformity to the convictions at the time of the Dollar Tree Store robberies. The trial court reasoned that Jeffrey Pool could effectively present his argument about the poor quality of investigation of the crimes by testimony of the earlier felony convictions without identifying the convictions. The trial court affirmed that defense counsel could question Captain Richard Beghtol about the existence of the decades old felonies, but ordered that no witness be questioned about the nature of the convictions.

The prosecution later questioned Cheney Police Officer Timothy Ewen:

> Q You saw the two individuals in the parking lot from a distance?
> A Correct
> Q Did they match the description of the alleged suspect at all?
> A No.
> Q Do you recall why?
> A I saw them. Me and Sergeant English, we talked together. They didn't match the description.

RP at 751-52. Ewen described Matthew Smith and Frank Wolf as being over six feet tall and not matching the description of the robber given by Tom Busby, a victim of the kidnappings.

During trial, Washington State Patrol DNA forensic scientists Anna Wilson and Alison Walker testified. According to the witnesses, the State Patrol Laboratory developed a profile from DNA removed from the knit cap law enforcement discovered on the side of the highway and from DNA extracted from Jeffrey Pool. Walker found Pool to be one of two significant contributors to the cap DNA, when she compared the DNA typing profile of Jeffrey Pool to the DNA mixture extracted from the cap.

Alison Walker testified to her calculation of a likelihood ratio of DNA from the cap DNA matching DNA from Jeffrey Pool. The likelihood ratio is the ratio of two hypotheses. In this instance, the first hypothesis represents the chance that Jeffrey Pool and an unknown individual significantly contributed to the DNA profile found on the knit cap. The second hypothesis represents the chance that two unknown individuals contributed to the DNA found on the cap. The likelihood ratio weights the two

hypotheses. Walker found the likelihood ratio of 140 times more likely that the DNA extracted from the knit cap comes from a mixture of Jeffrey Pool and an unknown than two unrelated individuals selected at random from the United States population.

During closing argument, the prosecution commented:

> And after a DNA sample is taken from Jeffrey Pool, that DNA sample goes to the lab. And when that DNA sample is run against the two major contributors on the mask, there's an interesting—there's an interesting result. It's 140 times more likely that the two major contributors on the mask are Jeffrey Pool and an unknown individual than not. So here's what that means.
>
> . . . .
>
> . . . So you have a coin with Jeffrey Pool's face and another face with just a question mark on it. And then on the other side you have two faces with question marks. The science tells us that if today you flip that coin 140 times, 139 times it's Jeffrey Pool and the unknown individual. 140 times more likely that it's Jeffrey Pool's.
>
> And as Mr. Johnson pointed out, and I was obviously wrong, I called those results in my opening nebulous. That is not at all what the expert testified to. She said no, no, no, no, that's actually moderately strong DNA evidence. Guess what. Go with the expert. That's the—that's the evidence that you have, right?
>
> But here's the great thing about the science of DNA. There's nobody in the world who disagrees with it. There's nobody in the world who has any alternative theory of DNA. There's no doubt that the DNA was found, right?
>
> So that means that tomorrow you take out that same coin and you flip it 140 times. 139 times it's still Jeffrey Pool.
>
> And the next day you take out that coin and you flip it 140 times and 139 times it's still Jeffrey Pool.

RP at 862-64. Defense counsel objected to the prosecution's use of the analogy of a coin flip. The trial court overruled the objection.

The jury convicted Jeffrey Pool of two counts of first degree robbery, four counts

of second degree assault, and four counts of kidnapping in the first degree.

LAW AND ANALYSIS

On appeal, Jeffrey Pool assigns error to the trial court's refusal to permit the jury to hear evidence of the nature of Frank Wolf's and Matthew Smith's convictions. We note that neither party presented evidence as to the nature of Frank Wolf's conviction or convictions, so we limit Pool's assignment of error to contending that the trial court should have allowed him to elicit, from law enforcement testimony, Smith's convictions being for kidnapping and robbery. Pool also assigns error to the trial court's refusal to preclude the prosecution from employing the coin flip analogy during closing. We address the assignments in such order.

Smith Robbery and Kidnapping Convictions

On appeal, Jeffrey Pool contends the trial court should have permitted the jury to hear the identity of Matthew Smith's crimes as being kidnapping and robbery because such evidence related to the Cheney Police Department's investigation of the Dollar Tree Store robberies. At the same time, in his opening brief, Pool presents argument that the nature of the crimes constituted permissible other suspect evidence and permissible character evidence under ER 404(b). Nevertheless, Pool does not expressly assign error to the trial court's failing to permit the evidence as other suspect evidence or character evidence.

Before addressing the merits of Jeffrey Pool's assignment of error, we review the State's contention that Jeffrey Pool may not forward this assignment on appeal. The State claims Pool, under RAP 2.5(a), waived his argument about the evidence bar because Pool never asked the trial court to be able to present testimony that labeled Matthew Smith's felonies. The State also contends that, to the extent Pool claims the identity of the crimes constituted allowable other suspect evidence or character evidence, Pool impermissibly changes his evidentiary theory of admissibility on appeal.

We disagree with the State's contention that Jeffrey Pool never sought to introduce evidence of the identity of Matthew Smith's convictions. During the pretrial argument against the State's motion in limine, Pool referenced the importance of the robbery and kidnapping convictions of Smith in light of charges that Pool faced. Later, during trial, when Pool's counsel neared questioning Captain Richard Beghtol about the earlier convictions, the State objected to questions about the nature of the convictions. Defense counsel told the trial court that he intended to ask Beghtol to identify the crimes. Defense counsel argued the relevance of the crimes' identities.

We agree with the State's argument that Jeffrey Pool never sought introduction at trial of the identity of the crimes as other suspect evidence. A party cannot change theories of admissibility on appeal. *State v. Mak*, 105 Wn.2d 692, 718-19, 718 P.2d 407 (1986). We are uncertain as to whether Pool forwards, on appeal, the nature of the crimes as other suspect evidence, but, if so, we decline to entertain such an argument.

Pool agrees he cannot change theories on appeal and does not argue any exception to the rule of waiver to allow a change in his argument on appeal.

On appeal, Jeffrey Pool may contend the trial court should have allowed testimony, under ER 404(b), naming the crimes of Matthew Smith as kidnapping and robbery. This evidentiary rule reads:

> Evidence of other crimes, wrongs, or acts is not admissible to prove the character of a person in order to show action in conformity therewith. It may, however, be admissible for other purposes, such as proof of motive, opportunity, intent, preparation, plan, knowledge, identity, or absence of mistake or accident.

ER 404(b). Nevertheless, Pool never forwarded this theory of admissibility before the trial court.

We still must decide whether the trial court should have allowed Jeffrey Pool to inquire from Captain Richard Beghtol or other Cheney Police Department officers as to the nature of Matthew Smith's convictions. The trial court considered this evidence relevant to the investigation of the Dollar Tree Store robberies. The trial court, however, excluded the evidence, under ER 403, because of the undue prejudice to the State. According to the trial court, Jeffrey Pool could impeach the integrity of the Cheney Police Department's investigation by introducing evidence that Matthew Smith was convicted of felonies without naming the felonies.

ER 403 declares:

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

We review a trial court's evaluation of relevance under ER 401 and its balancing of probative value against its prejudicial effect or potential to mislead under ER 403 for an abuse of discretion. *State v. Russell*, 125 Wn.2d 24, 78, 882 P.2d 747 (1994). We hold that the trial court did not abuse its discretion when barring the identification of Matthew Smith's crimes because we do not consider such evidence as holding any relevance.

Jeffrey Pool's criminal trial encompassed his guilt or innocence of robbing the Cheney Dollar Tree store and kidnapping its employees, not the thoroughness of the police investigation of the crimes. Generally, law enforcement's investigation lacks relevance to guilt or innocence of the accused. *State v. Edwards*, 131 Wn. App. 611, 128 P.3d 621 (2006); *State v. Johnson*, 61 Wn. App. 539, 811 P.2d 687 (1991); *State v. Aaron*, 57 Wn. App. 277, 787 P.2d 949 (1990). On appeal, Pool does not explain the relevance of the Cheney Police Department's investigation of the Dollar Tree Store crimes to his guilt or innocence of the crimes other than perhaps contending that the police should have questioned Matthew Smith further or extracted his DNA to compare his genetic code to the DNA located on the knit cap because Smith possibly committed the Cheney robberies. Nevertheless, Pool never suggested to the trial court that evidence

of Smith's juvenile crimes should be allowed as other suspect evidence. On appeal, he does not present any reason for us to allow him to raise this contention for the first time on appeal.

State Mischaracterization of DNA Evidence

Jeffrey Pool next assigns error to the prosecutor's inclusion, in summation, of an analogy to a coin toss in explaining the DNA's likelihood ratio of 140 to 1. The State's attorney compared the chance of Jeffrey Pool committing the Dollar Tree store crimes as flipping a coin one hundred and forty times. Pool's face on the coin would appear one hundred and thirty-nine times. On appeal, the State concedes error in the analogy. DNA analysis does not convert to a percentage. The State argues that the error did not constitute prosecutorial misconduct.

To establish that a prosecutor committed misconduct during closing argument, the accused must prove that the prosecutor's remarks were both improper and prejudicial in the context of the entire record and the circumstances at trial. *State v. Thorgerson*, 172 Wn.2d 438, 442, 258 P.3d 43 (2011). The prosecutor may not represent to the jury facts not admitted into evidence. *In re Personal Restraint of Glasman*, 175 Wn.2d 696, 705, 286 P.3d 673 (2012). Once proved, prosecutorial misconduct is grounds for reversal when there is a substantial likelihood the improper conduct affected the jury. *State v. Fisher*, 165 Wn.2d 727, 747, 202 P.3d 937 (2009).

The State contends that, despite scientific error, the prosecution did not utter any facts not in evidence. Instead, according to the State, the State's attorney misconstrued the facts. We do not know whether to characterize a faulty analogy as an error of facts or error of logic. But we need not render such an assessment, because Jeffrey Pool does not show a likelihood that the error impacted the jury verdict. Pool claims prejudice but does not explain how the prosecution's error caused prejudice. Strong evidence, including the DNA evidence, supported the guilty verdicts.

CONCLUSION

We affirm all of Jeffrey Pool's convictions.

A majority of the panel has determined this opinion will not be printed in the Washington Appellate Reports, but it will be filed for public record pursuant to RCW 2.06.040.

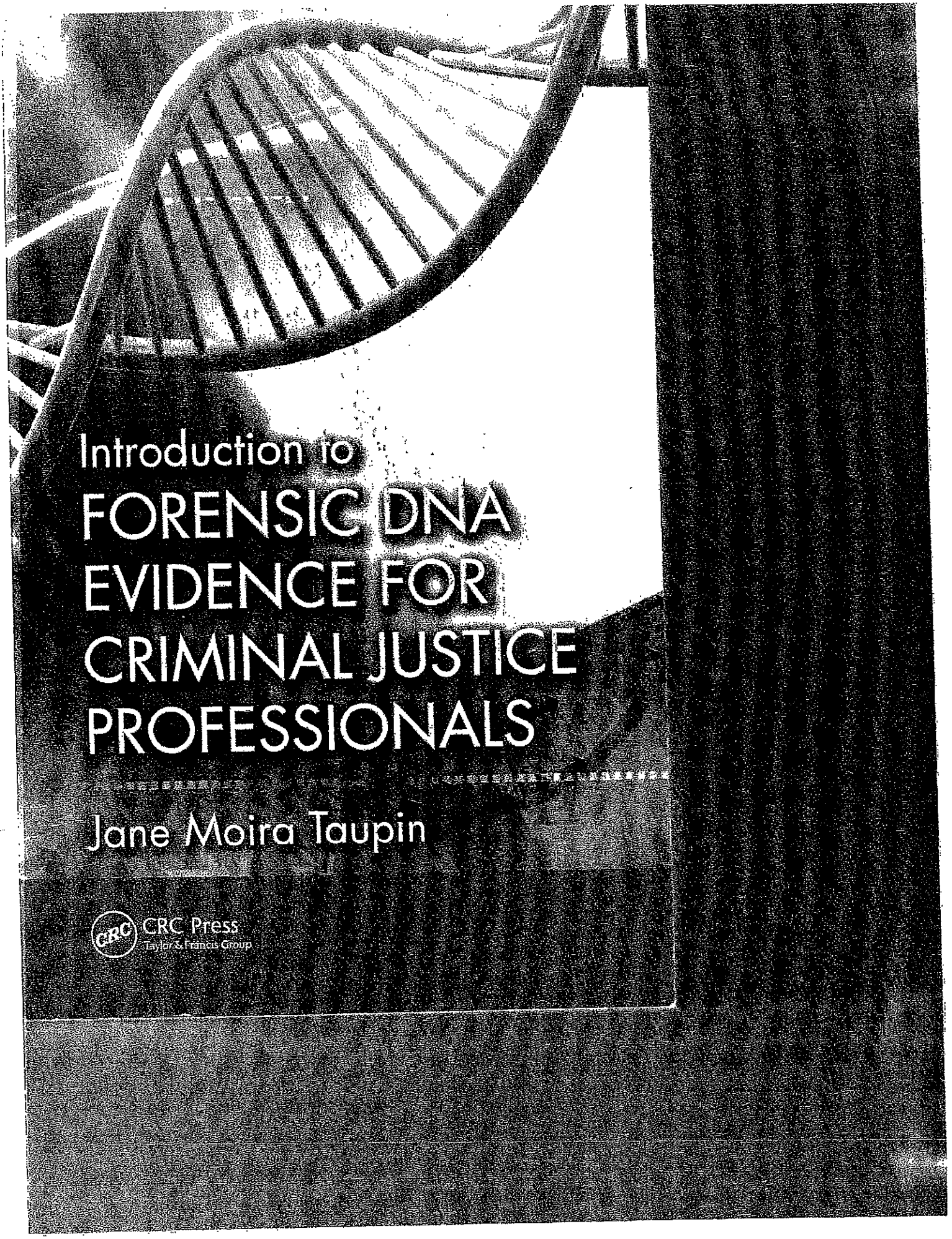
Fearing, J.

WE CONCUR:

Korsmo, J.

Pennell, A.C.J.

APPENDIX 2


Introduction to
FORENSIC DNA EVIDENCE FOR CRIMINAL JUSTICE PROFESSIONALS
Jane Moira Taupin
CRC Press
Taylor & Francis Group

> The Court of Criminal Appeal dismissed the appeal and special leave was granted to appeal to the High Court that then held that the appellant did not demonstrate that the probative value was outweighed by the danger of unfair prejudice.

It should be noted that mitochondrial DNA typing and Y-STR profiling use different techniques from autosomal STR DNA profiling, and the derivation of the statistical significance is different. The techniques are less discriminatory than autosomal STR DNA profiling due to the method of inheritance of haplotypes—either from the maternal line (mitochondrial) or from the paternal line (Y-STR). The considerations of haplotype frequencies and the way they are reported necessitate the "counting" approach (see Chapters 6 and 7). The strength of the evidence depends on the sizes of the databases.

The probability of exclusion, or random man not excluded (RMNE), or the complementary probability of inclusion entails a binary view of alleles, meaning that alleles are only present or absent. Furthermore, if they are present, they are observed. If alleles are found where there is a possibility of stochastic effects, laboratories may omit the inconvenient loci from their calculations (Gill et al., 2006). Such a calculation incorrectly implies that among the "random men" considered for comparison, only the same loci as those considered for the suspect in question would be used for inclusion or exclusion (see Chapter 5 for low level DNA techniques).

Two methods of statistical significance were presented in the OJ Simpson case in California (Weir, 1995). The prosecution wished to use the LR and the defense wanted to use the RMNE. The final result was that the court heard both methods and ruled that the LR method was preferable. Also see Chapter 1 for a discussion of this case.

Clayton and Buckleton (2005) summarized the advantages and disadvantages of each approach. Full discussions of the various methods of interpreting evidence can be found in comprehensive texts (Buckleton, 2005; Balding, 2005). According to the DNA Commission of the International Society of Forensic Genetics (Gill et al., 2006), the scientific community has a responsibility to support improvement of standards of scientific reasoning in the courtroom. This implies that concepts such as likelihood ratios, whether difficult to convey or not, are the methods of choice for the statistical evaluation of DNA profiles.

Computer software is available to forensic laboratories for calculating statistics such as likelihood ratios. Some laboratories may perform manual calculations to check their results, although the calculations may be very demanding. Each particular laboratory must have validated the population databases and genotype frequencies it uses in forensic calculations.

4.3.4 Rarity and rarity

It is important to note that statistical analyses can never lead to absolute conclusions. DNA evidence is essentially probabilistic as shown above and an expert witness should never denote an individual as the donor of a genetic material from which DNA was produced. There is a growing realization that all forensic science evidence is probabilistic and no current forensic technology supports the unique identification of an individual. Other forensic science disciplines follow binary match or no-match systems and this transparency deficit is being addressed (National Research Council, 2009; Fingerprint Inquiry, 2011).

Two authors (Saks and Koehler, 2005) described the genetics-based model of DNA profiling as highlighting the deficiencies in other forensic disciplines in which "untested assumptions and semi-informed guesswork are replaced by a sound scientific framework and justifiable protocols."

The statistics quoted in forensic reports for DNA profiles are often rarer than "1 in 1 trillion," a number that is greater than the population in the world (currently 6 billion). These statistics appear incredulous to many people and their method of derivation difficult to understand. It is hoped that this text explains that the statistics in most criminal cases are derived according to assumptions made both in the *comparison* of DNA profiles, and the *quality* of the profile itself (complete or partial/low level/mixture). It is also the probability of the DNA profile occurring in a particular population, not the probability of the case hypothesis (see Section 4.4 for legal fallacies).

An interesting example of how statistics can be readily misinterpreted is the famous (at least in statistical circles) "birthday problem." This particular problem has been used to illustrate misconceptions in DNA database matches (Weir, 2007; Kaye, 2009). Assume that equal numbers of people are born every day of the year. Then the random match probability for a particular birthday is 1/365. However, there is over a 50% probability that two people in a group of 23 or more share a birthday. How could this be? This is because there are 253 pairs of people in a group of 23 and the particular birthday is not specified. When translated to DNA issues, the birthday problem has to do with multiple occurrences of any profile, not one particular profile (Weir, 2007).

4.4 Legal fallacies

Using unfamiliar terminology plus difficulties in statistical interpretation may lead a legal professional to translate results to a wider perspective that may not be valid. Two well-known fallacies are common in the legal community and sometimes even in the news media. The *prosecutor's fallacy* is also called the "fallacy of the transposed conditional." This fallacy

to mistake the chance probability of the DNA match to the probability of innocence. For example, say there is a 1 in 100,000 chance probability of a match in a city of 1 million people. The prosecution fallacy is to say there is a probability of innocence of 1 in 100,000. The defense fallacy in this particular situation is to say the probability of guilt is 1 in 10.

Suppose a crime is committed in London (population about 7 million) and a crime scene profile has a likelihood ratio (LR) of 1 in 1 million. The prosecutor might say that the odds are a million to one in favor of the defendant being guilty. However, based on population size, about seven people in the city are expected to match the profile so it can be argued that the odds are actually 7 to 1 in favor of innocence. The defense fallacy unrealistically assumes that each of the 7 people has equal probability of guilt.

An often-quoted case from England (*R. v Deen*, 1994; Puch-Solis et al., 2012) illustrates the prosecutor's fallacy. *Deen* was an early DNA case in which the random match probability was quoted as 1 in 3 million.

Prosecutor: So the likelihood of this being any other man but Andrew Deen is 1 in 3 million?

Expert: In 3 million, yes.

Prosecutor: You are a scientist ... doing this research. At the end of this appeal a jury are going to be asked whether they are sure that it is Andrew Deen who committed this particular rape in relation to Miss W. On the figure which you have established according to your research, the possibility of it being anybody else being 1 in 3 million, what is your conclusion?

Expert: My conclusion is that the semen originated from Andrew Deen.

Prosecutor: Are you sure of that?

Expert: Yes.

The basic fallacy is contained in the first question when the attorney asks the probability of the accused being the source of the DNA profile; the attorney should have asked about the probability of the evidence. It is the jury's responsibility to decide whether factual propositions have been established by the evidence, not the expert.

Having been asked the wrong question, the expert in *Deen* confounded the fallacy, even to the extent of pronouncing himself "sure" that Deen was the source of the stain. In fact, a random match probability of 1 in 3 million implies that about 20 people in the UK would be expected to share the same profile.

The prosecution fallacy (transposing the conditional) may be described by two simple statements (Aitken et al., 2010):

1. If I am a monkey, I have two arms and legs.
2. If I have two arms and legs, I am a monkey.

This logic problem can be avoided by using the LR strictly as quoted in the forensic report. The probability of the evidence based on the hypothesis should not be translated to the probability of the hypothesis itself. It is also helpful to remember that DNA profiling evidence provides only the probability of a match of DNA profiles in the relevant population, not the probability that a particular person committed the crime. As will be repeated throughout this book, DNA is only one piece of evidence in a crime.

Limitations of the evidence must be described. The question of how the DNA was transferred is one for the jury to consider. The scientist's main role is to outline the various modes of transfer that exist and advise on the relative risks associated with the modes (Gill and Buckleton, 2010). The uncertainties about the mode of transfer increase with touch DNA evidence—evidence that cannot be associated with a particular body fluid (Buckleton, 2009).

4.5 *Understanding reports: Common phrases and their meanings*

Identifying the strengths and limitations of facts and opinions is a cornerstone of forensic science. Any forensic report or testimony should convey the limitations of all tests and all the evidence. All conclusions, assumptions made, and inferences should be enunciated and clearly explained. Differences or similarities between evidence and reference samples should be explained as actual differences or similarities inherent in the evidence or as consequences caused by imprecision of the test system—limitations. All alternative explanations (such as different hypotheses proposed) should also be conveyed in the report or testimony.

4.5.1 *Inclusion and exclusion*

Scientific statements should clearly support or refute a finding or state that the result is not possible due to the limitations of the hypotheses proposed. Case 2 from Western Australia (Merritt, 2010) shows how misconceptions may arise from the wording of forensic statements.

Case 2

Sixteen-year-old Patrick Waring was accused of rape, spent a year in detention, and was exonerated in 2007. The forensic report stated that the accused "could not be excluded" from the DNA profile taken from the victim's underwear.

APPENDIX 3

Avoiding the transposed conditional

IW EVETT

The Forensic Science Service, Priory House, Gooch St North, Birmingham, United Kingdom B5 6QQ

Science & Justice 1995; 35: 127–131
Received 8 June 1994; accepted 4 January 1995

This note is a discussion of the problem which the forensic scientist faces, particularly when at court, of avoiding making probability statements which are logically incorrect. The particular error under consideration is known as 'transposing the conditional'. The meaning of this phrase is first explained through a discussion of the concept of conditional probabilities and it is then illustrated by a series of examples. The final section touches on the philosophy of identification and on the need to maintain a sense of perspective.

Sachverständige müssen, vor allem vor Gericht, vermeiden Wahrscheinlichkeitsaussagen zu machen, die logisch nicht korrekt sind. Ursache für solche unlogischen Aussagen ist häufig das Verwechseln von abhängigen und unabhängigen Merkmalen bzw. Ereignissen. In dem Beitrag wird deshalb zunächst der Begriff der bedingten Wahrscheinlichkeit erklärt und an Beispielen verdeutlicht. Abschließend wird eine Art Identifizierungsphilosophie vorgestellt und auf die Notwendigkeit hingewiesen ein Gefühl dafür zu bekommen, die Dinge unter dem richtigen Blickwinkel zu betrachten.

Cette note est une discussion du problème rencontré par l'expert forensique, particulièrement au tribunal, pour éviter de faire état de probabilités qui sont logiquement incorrectes. L'erreur particulière discutée est connue comme la transposition du conditionnel. La signification de cette phrase est d'abord expliquée par une discussion du concept des probabilités conditionnelles puis est illustrée par une série d'exemples. La section finale aborde la philosophie de l'identification et le besoin de maintenir un sens de perspective.

En esta nota se discute el problema con que se encuentra el científico forense, especialmente cuando está ante un tribunal, de evitar pronunciarse en términos de probabilidad que lógicamente no son correctos. El error en consideración se conoce con el término de transponer el condicional. El significado de esta frase se explica a través de una discusión del concepto de probabilidad condicionada y se ilustra con una serie de ejemplos. La sección final trata de la filosofía de la identificación y de la necesidad de mantener el sentido de perspectiva.

Key Words: Statistics; Probability; Bayesian; Interpretation; Likelihood ratio.

Introduction

Recent articles [1, 2] have publicized a common error of inference in legal proceedings that has been called the 'prosecutor's fallacy'. The term was first used by Thompson and Schumann [3] but the error is well known to statisticians as something that can occur quite generally where probability statements are made, and it was given the name 'the fallacy of the transposed conditional' in the more general context by Diaconis and Freedman [4]. The error occurs in the following way.

A probability statement has little meaning unless it includes at least some indication of the information, knowledge and assumptions upon which it is based. In shorthand, a probability is often represented in the form $P(A \mid I)$ where A denotes the event or proposition which is uncertain and I denotes the information which has been taken into account. In this way the vertical line can be seen to be shorthand for the word 'given' or the phrase 'conditioned on'. Whereas some readers may consider it unnecessary to labour such basic issues, it is the author's experience that the education of the majority of scientists fails to achieve an appreciation of the nature of probability. The subject appears in general to be taught poorly, and the notion of conditional probability receives scant attention: when it is presented, it tends to be as a special kind of probability. The reality is that there is no such thing as an *unconditional* probability; it is meaningless to state a probability without an indication of the circumstances in which it is assessed. For brevity, when there is little scope for misunderstanding about the nature of the conditioning information it is frequent practice to abbreviate the symbols to $P(A)$: but the conditioning, although tacit, is still there.

For the interpretation of forensic transfer evidence there is considerable support for the Bayesian view which demonstrates that it is necessary to consider the probability of the evidence given whatever alternative propositions or hypotheses which are relevant to the deliberation of the court [5]. If there are two alternatives, then the ratio of the two probabilities—the likelihood ratio—provides the means for placing the scientific evidence in the context of the other evidence in the following way. The other evidence will have led to some state of belief in relation to the two alternatives (normally one defence and one prosecution) and it is useful to visualize these as odds—called the prior odds—in favour of the prosecution alternative. If the likelihood ratio has as its numerator the probability of the scientific evidence given the prosecution alternative and as its denominator the probability of the same evidence given the defence alternative, then the ratio provides a factor to multiply the prior odds. The new odds—the posterior odds—are now based on all of the evidence, including the scientific evidence.

Conventionally, however, it is still widespread practice to confine attention to the denominator of the likelihood ratio. In the simplest of cases, where the numerator can realistically be taken as one, this is not necessarily a bad way to proceed but it can become misleading when things become more complicated. To illustrate the problem of the transposed conditional, however, this paper is confined mainly to the simplest kind of transfer case, i.e., one in which the evidence consists solely of a body fluid stain left at the scene of a crime, which is found to match a sample taken from a suspect, who is of some hypothetical type X.

Let E be used to summarize the evidence that the body fluid stain found at the scene of the crime is type X. Let C denote the hypothesis that the suspect left the stain and let $\bar{C}$ denote the alternative hypothesis that some other unknown person from a specified population left the stain. If the case later comes to court, these can be seen to be respectively the prosecution and defence alternatives. Assume that the body fluid types are determined without error and also that data exist to estimate the proportion of people in that population who are type X. Following the conventional approach to the interpretation of such cases, a statement of the following form would typically be made:

The probability that the stain would be type X if it had come from some other person is 1 *in* 1000.

It is useful to write this symbolically:

$$P(E \mid \bar{C}) = 1/1000$$

Note that the shorthand here has itself been abbreviated; strictly speaking, the probability should be written in the form $P(E \mid \bar{C}, I)$ where I denotes all of the relevant information, in particular that which has led to the choice of database from which the frequency has been estimated. Note also that the word 'if' is being used to mean 'given that'. The error that is commonly made amounts to reversing the symbols around the vertical line as follows:

$$P(\bar{C} \mid E) = 1/1000$$

This is equivalent to saying:

The probability that the stain has come from some other person if it is type X is 1 *in* 1000

There may be unusual circumstances in which such an assertion is justified but the crucial point is that it does not follow from the first sentence. The rearrangement is clear in the algebra; the E and $\bar{C}$ terms have changed places around the vertical, or 'conditioning', line. This is what led to the expression 'transposing the conditional'.

The illogicality of the fallacy can be illustrated by means of trivial examples. For example:

The probability that an animal has four legs if it is a cow is one

does not mean the same thing as:

The probability that an animal is a cow if it has four legs is one.

Whereas it may be comparatively easy to spot correct and incorrect sentences when they are written out, it becomes more difficult with the spoken word and experience at court shows that questions from lawyers and judges are often wrongly framed. In that environment it can be difficult to decide whether or not a particular sentence is correctly framed.

Under the assumption that the body fluid type can be determined without error and given that the suspect is type X then it is certain that the crime stain would be found to be type X, if it came from him. Therefore, the probability of E given C is one, and if the evidence in the example were presented in the form of a likelihood ratio then the numerator would be one, the denominator 1/1000 and the ratio consequently 1000. Then the interpretation may be expressed as follows:

The evidence is 1000 *times more likely if the blood came from the suspect than if it came from someone else*

which may be incorrectly transposed as:

The blood is 1000 *times more likely to have come from the suspect than from someone else*

or:

The odds are 1000 *to* 1 *on that the blood came from the suspect.*

A statement of the odds in favour of a hypothesis can only validly be made if prior odds have been assigned. If the non-scientific evidence suggested prior odds of one then the posterior odds would indeed be 1000 to one on and the last sentence would be correct. However, the consideration of prior odds is rightly considered the function of the jury and, in general, the transposed form of the statement will be incorrect.

It follows that the Bayesian approach does not necessarily protect the scientist from the possibility of transposing the conditional. The difference is that the error will be made as an odds statement rather than as a probability statement.

Suggestions for avoiding the transposed conditional

Avoiding the problem in written reports is not difficult, provided that the writer has time to reflect, but avoiding the problem in court and in discussions with lawyers is much more difficult. It is the author's experience that questions from counsel are often framed as transposed conditionals. The following suggestions are offered as a guide.

It is inadvisable to speculate on the truth of a hypothesis without considering at least one other alternative hypothesis

This is a rather philosophical point which could, no doubt, be discussed at length but, as a general principle, the forensic scientist should be prepared to consider at least two explanations for any evidence that has been found.

Clearly state the alternative hypotheses that are being considered

This should be seen as an important element of report writing, recognizing that the alternatives to be addressed are provisional and might change with changing circumstances.

If a statement is to be made of probability or odds then it is good practice to use 'if' or 'given' explicitly to clarify the conditioning information

The examples following these suggestions illustrate this point.

Do not offer a probability for the truth of a hypothesis

Forensic scientists can state the probability of the *evidence* that has been found, given various hypotheses. To state the probability of a *hypothesis* given the evidence requires a prior probability or odds which may not be within the scientist's domain. The scientist is most likely to attract criticism when the hypothesis relates directly to the issue of whether or not the defendant can be connected with a particular feature of an incident. However, when the hypothesis does not directly relate to the involvement of the defendant it will be seen as permissible for the scientist to use his own experience to provide a prior probability. For example, if a scientist says 'In my opinion, this pattern of blood stains was probably

caused by the victim having been beaten about the head with a blunt instrument', he is taking into account not just the observations on the staining but also other factors such as experience and the circumstances surrounding the observations.

Examples

The following examples are not given in any particular order. Some are clearly correct, some are clearly wrong, but there are several which require careful reading before their validity can be determined. Note that words such as 'likelihood' and 'chance' tend to be used in court as synonyms for probability; this is unlikely to cause confusion, though statisticians make distinctions between the meanings of these words.

The probability of finding this blood type if the stain had come from someone other than Smith is 1 *in* 1000

This statement is correct. The event is 'finding this blood type' and the conditioning information is that it came from some other person. The condition is made clear by the use of 'if'.

The probability that someone other than Smith would have this blood type is 1 *in* 1000

This statement is also correct but it is not as clear as the first because the distinction between the event and the conditioning is not made explicit. If a lawyer at court inadvertently inverts it then it may be difficult to explain where he has gone wrong.

The probability that the blood came from someone other than Smith is 1 *in* 1000

This is clearly wrong. It is the most common form of the transposed conditional. It is the spoken equivalent of $P(\bar{C} \mid E) = 1/1000$; the probability of a hypothesis given the evidence rather than the other way around.

The evidence is 1000 *times more probable given the first alternative rather than the second*

It is good practice for the scientist first to explain the alternative hypotheses that have been considered and the framework of circumstances within which they have been addressed. If, in the context of the simple example, the first alternative is the prosecution alternative then this is a correct statement, in the form of a likelihood ratio.

The first alternative is 1000 *times more probable than the second*

This is an incorrectly transposed version of the previous example. It is a statement about the odds in favour of a hypothesis, rather than a likelihood ratio for the evidence.

The odds are 1000 *to* 1 *in favour of the first alternative*

This also is incorrect. It is similar to the previous example and also to the last example in the introduction.

There is only a 1000 *to* 1 *chance that Smith is not the donor of the bloodstain*

This is another version of the transposed conditional, again given in the form of odds: it is an odds statement about the truth of a hypothesis. As in several of these examples, the failure to state any of the conditioning information contributes to the confusion.

The chance of a man other than Smith leaving blood of this type is 1 *in* 1000

The problem with this sentence is that it can be read in two different ways:

The chance that a man other than Smith would leave blood of this type is 1 *in* 1000

or

The chance that a man other than Smith left blood of this type is 1 *in* 1000.

Readers may differ in their opinions as to which of these interpretations of the wording is more obvious. The first is an acceptable statement whereas the second embodies a transposed conditional.

It is very unlikely that the stain came from someone other than Smith

Although this is not quantitative, it implies a transposed conditional because, once again, it relates to the probability of a hypothesis given the evidence, rather than the other way around.

The evidence strongly supports the hypothesis that the stain came from Smith

The use of the word 'supports' in this context was proposed by an eminent statistician, H. Jeffreys [6], and this kind of formulation is, in the author's opinion, the best available. This is the method which is recommended to scientists within the Forensic Science Service. Although it successfully conveys the impression that the evidence favours one hypothesis over the other it is not a probability statement. The strength of the support is based on the likelihood ratio but the overall probability (or odds) in favour of the hypothesis depends also on the other evidence.

There is very strong evidence that the stain came from Smith

This may be a familiar style of presentation to forensic scientists but it is difficult to determine whether or not a transposed conditional is inferred. Problems may well arise at court because subtle wording changes by counsel could inadvertently change it into a clear transposed conditional. It would be preferable to specify clearly which alternatives have been considered and the extent to which the evidence supports one of them.

The chance of selecting a man other than Smith having the same blood type is 1 *in* 1000

The most natural way of reading this is as: 'If a man other than Smith is selected then the chance that he will have the same blood type is 1 in 1000'. Whereas this is correct, the sentence is not as clearly worded as it might be. It would be clearer if it were rearranged to include explicitly a conditioning word or phrase.

Keeping the problem in perspective

If avoidance of the transposed conditional were taken to extremes, things could become rather ludicrous. For example, if a scientist enters a room where the walls are smoke-blackened then it would be entirely natural for him to conclude that there had probably been a fire of some sort. If he were to say 'the evidence supports the hypothesis that there has been a fire' then non-scientists could be forgiven for regarding him as eccentric and/or pedantic. Unless the hypothesis relates directly to the ultimate issue of the defendant's involvement, courts will consider it acceptable, even desirable, for the expert to introduce a prior probability based on his experience and thus legitimately express an opinion about a hypothesis. But the expert should, at least, be aware of the logical steps he is following.

Furthermore, if the Bayesian view were taken to its logical conclusion then experts would never give an opinion of identification. It is not possible for a scientist, following the Bayesian paradigm, to say 'I am satisfied that this tool made this mark' unless he assumes a prior probability, quantifies the evidence and assumes a threshold posterior probability at which he becomes virtually certain about a hypothesis. In reality, of course, none of these three is done explicitly. Although the process of subjective identification is recognized by courts everywhere as an invaluable element of forensic science, it cannot be rationalized by the simple Bayesian view, though BW Robertson and GA Vignaux (personal communication) have demonstrated an indirect method which treats the expert's opinion itself as an item of evidence for the court to consider. In practice, the reconciliation is a matter of pragmatism and sound common sense.

References

1. Balding DJ and Donnelly P. How convincing is DNA evidence? Nature 1994; 368: 285–286.
2. Matthews R. Improving the odds on justice? New Scientist 1994; 16 April: 12–13.
3. Thompson W and Schumann E. Interpretation of statistical evidence in criminal trials: the prosecutor's fallacy and the defence attorney's fallacy. Law and Human Behaviour 1987; 11: 167.
4. Diaconis P and Freedman D. The persistence of cognitive illusions. The Behavioral and Brain Sciences 1981; 4: 333–334
5. Aitken CGG and Stoney D (eds). The use of statistics in forensic science. Chichester: Ellis Horwood, 1991.
6. Jeffreys H. Theory of Probability. Oxford: Oxford University Press, 1939.

GRAVIS LAW, PLLC

November 29, 2018 - 11:13 AM

Filing Petition for Review

Transmittal Information

Filed with Court:	Supreme Court
Appellate Court Case Number:	Case Initiation
Appellate Court Case Title:	State of Washington v. Jeffrey Joseph Pool (352960)

The following documents have been uploaded:

- PRV_Motion_20181129111131SC208358_3554.pdf
  This File Contains:
  Motion 1 - Waive Filing Fee
  The Original File Name was 18_11_29 Motion to Waive Filing Fees.pdf
- PRV_Petition_for_Review_Plus_20181129111131SC208358_7331.pdf
  This File Contains:
  Certificate of Service
  Petition for Review
  The Original File Name was 18_11_29 Petition for Review.pdf

A copy of the uploaded files will be sent to:

- bobrien@spokanecounty.org
- lsteinmetz@spokanecounty.org
- scpaappeals@spokanecounty.org

Comments:

Sender Name: Amanda Jenkins - Email: amanda@gravislaw.com
Filing on Behalf of: Jason Johnson - Email: jason@gravislaw.com (Alternate Email:)

Address:
16201 E. Indiana
Ste. 2240
Spokane Valley, WA, 99216
Phone: (509) 319-2672

Note: The Filing Id is 20181129111131SC208358