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IN THE  
APPELLATE COURT OF ILLINOIS  
FIRST JUDICIAL DISTRICT

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THE PEOPLE OF THE STATE OF ILLINOIS,	)	Appeal from the Circuit Court
	)	of Cook County.
Plaintiff-Appellee,	)	
	)	
v.	)	No. 11 CR 1487
	)	
RASHON PIKE,	)	
	)	The Honorable
Defendant-Appellant.	)	Joseph J. Kazmierski,
	)	Judge Presiding.

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JUSTICE PUCINSKI delivered the judgment of the court, with opinion.  
Justice Lavin concurred in the judgment and opinion.  
Justice Hyman dissented, with opinion.

**OPINION**

¶ 1 We hold that the admission of DNA expert testimony of a 50% probability of inclusion for a random person in the population as a possible contributor to a mixed DNA profile was error because it was irrelevant, as it did not tend to make the issue of defendant's identification more likely than not. However, the admission of this evidence was not plain error because the error was not serious and the evidence was not closely balanced because both victims identified defendant and, as such, defendant's forfeiture of both issues due to his failure to object is

effective. The jury in this case was not confused by this evidence, and we believe juries generally are capable of appropriately weighing properly presented DNA evidence.

¶ 2 We also hold in this case that there is no requirement that the court recite all counts against a defendant in admonishment of a waiver of the right to counsel pursuant to Illinois Supreme Court Rule 401(a) (Ill. S. Ct. R. 401(a) (eff. July 1, 1984)). Rather, Rule 401(a) requires admonishment of the "nature of the charge." There was no error in the court's second admonishment to defendant in this case where the court stated the nature of the charge and the possible maximum punishment but did not recite every count against defendant.

¶ 3 BACKGROUND

¶ 4 Defendant, Rashon Pike, was charged by indictment with twelve counts: (1) armed robbery with a firearm; (2) habitual criminal; (3) unlawful use or possession of a weapon by a felon; (4) another count for unlawful use or possession of a weapon by a felon; (5) possession/use of a firearm by a felon; (6) another count of possession/use of a firearm by a felon; (7) aggravated unlawful use of a weapon based on a prior conviction; (8) another count of aggravated unlawful use of a weapon based on a prior conviction; (9) another count of aggravated unlawful use of a weapon based on a prior conviction; (10) another count of aggravated unlawful use of a weapon based on a prior conviction; (11) attempted residential burglary; and (12) aggravated unlawful restraint.

¶ 5 Defendant was arraigned on February 10, 2011, at which time defendant was appointed a public defender.

¶ 6 On June 2, 2011, defendant asked to proceed *pro se*. The court admonished defendant of the charges pending against him and some of the elements of those crimes. After hearing this admonishment, defendant chose to be represented by counsel.

¶ 7 On September 12, 2011, defendant, who had written a letter to his counsel indicating he wished to represent himself, informed the court that he wanted to represent himself. The court admonished defendant as follows:

"You have the right to represent yourself. You also have the right to an attorney if you couldn't afford one, but I just want to tell you that you're facing the charges of armed robbery, armed habitual criminal, a number of unlawful use of a weapon by a felon charges, aggravated unlawful use of a weapon, attempt residential burglary and aggravated unlawful restraint. The armed robbery charge carries with it a term in the penitentiary – a possible term in the penitentiary anywhere from 6 years to 30 years. Getting a penitentiary sentence, you'd have to serve a period of two years – excuse me, three years mandatory supervised release, which is like parole, when you get out of the penitentiary.

The armed habitual criminal also is a Class X felony. The range of sentence on that charge goes from 6 to 30 years as well. That charge also carries with it an 85 percent sentence that you'd have to serve that as – if convicted of that charge."

¶ 8 The assistant State's Attorney interjected:

"[ASSISTANT STATE'S ATTORNEY]: Judge, I don't mean to interrupt, but the armed robbery is specifically charged as armed with a firearm, which it carries an enhancement of 15 years."

¶ 9 The court then further admonished defendant as follows:

"In addition to the term of sentences you can get an armed robbery, if the jury finds or the trier of facts [*sic*] finds that you were armed with a firearm, an additional 15 years has

to be added onto at that charge [*sic*], so you're looking at possibly 6 years up to 45 years as a sentence that could be imposed.

The aggravated – excuse me, the unlawful use of weapon by felon are Class 2 felonies. All the Class 2 felonies that you're charged with –

Is he Class X by background?

[ASSISTANT STATE'S ATTORNEY]: He is, Judge.

THE COURT: If you're convicted of those charges, the range of sentence on that charge goes from 6 years to 30 years also, with that same three years mandatory supervised release period.

The attempt residential burglary is a Class 2 felony, so that range of sentence applies on that charge as well.

The aggravated unlawful restraint, is that a Class 4?

[ASSISTANT STATE'S ATTORNEY]: Yes.

THE COURT: That's a Class 4 felony, so the range of sentence on that charge goes from –

[ASSISTANT STATE'S ATTORNEY]: Judge, I believe it's a [Class] 3. It's a 3.

THE COURT: Okay. The range of sentences on that charge goes from two years to five years, but because you have certain convictions in your background, that time can go all the way up to ten years as a maximum sentence on that sentence alone. Getting a penitentiary sentence there, that carries with it a one year mandatory supervised release period.

That's the range of sentences you could get on these charges if you're convicted on that.

Do you understand that?

DEFENDANT: Yes.

THE COURT: Do you understand the nature of the charge here, too, armed robbery. You took property from the person or presence of another while armed with a firearm. The other charges, they're possession of a firearm, when you had a prior conviction of a felony and also the attempt residential burglary that you made a substantial step to enter someone's dwelling place. That's the nature of the charge and all these counts of this particular charge that's facing you.

Do you understand that?

THE DEFENDANT: Yes.

THE COURT: Do you also understand that if you can't afford an attorney, I would appoint one to represent you. You have one right now. You also could have your attorney of your choice to represent you in open court.

Do you understand also that those options are open to you as well?

THE DEFENDANT: Yes.

THE COURT: Do you understand all these particular points that I talked to you about as far as representing yourself so far?

THE DEFENDANT: Yes.

THE COURT: You also understand that I'm not going to be your attorney in the case, so I can't help you try your case wherever it happens to be, and you'll be held to the same standard as you would as if you were an attorney in the case.

Do you understand that?

THE DEFENDANT: Yes.

THE COURT: Are you sure this is what you want to do?

THE DEFENDANT: Yes.

THE COURT: Okay. The public defender is given leave to withdraw."

¶ 10 But by December 5, 2011, defendant requested counsel and the court reappointed the public defender. Appointed counsel represented defendant on the following two court dates and filed a motion to quash arrest and suppress evidence, which the court denied at a hearing on January 19, 2012.

¶ 11 Also on January 19, 2012, the court ruled that the armed robbery with a firearm, attempted residential burglary, and aggravated unlawful restraint charges (counts I, XI and XII) needed to be severed from the other charges because the other charges required evidence of prior convictions at trial, which could potentially affect the jury's verdict on counts I, XI, and XII (armed robbery, attempted residential burglary, and aggravated unlawful restraint). The State elected to proceed to trial first on counts I, XI, and XII of the indictment (armed robbery, attempted residential burglary, and aggravated unlawful restraint), and the court set a date for trial.

¶ 12 On February 16, 2012, defendant again indicated he desired to represent himself. The following proceedings were on the record:

[ASSISTANT STATE'S ATTORNEY]: Judge, we had writ [defendant] in today and counsel and I [*sic*] in the hopes

[DEFENDANT]: Excuse me, Your Honor.

THE COURT: Hold on one second. This gentleman who is standing right next to you is your attorney. He is a very experienced attorney. So I would suggest that you talk to him first before you say anything to the court because anything you say is being taken

down by this lady, the court reporter, and this lady over here is the – who is the State's Attorney she may use it against you. She will. Okay. So talk to your attorney first.

[DEFENSE COUNSEL]: Judge, Mr. Pike has previously represented himself *pro se*. He indicates at this time that he sent a letter to me. I'm not yet in receipt of it. Although I have no reason to doubt him, and he is asking the court to consider allowing him to represent himself.

THE COURT: Okay. Is that correct, Mr. Pike?

[DEFENDANT]: Yes.

THE COURT: Mr. Pike, you want to represent yourself. That's fine. That's your prerogative.

[DEFENSE COUNSEL]: Resume representing himself.

THE COURT: Resume representing himself. Here is a couple of things [*sic*] about that. This is not a ping-pong game that goes back and forth where you get to decide today I want an attorney to represent me. Tomorrow I don't. Okay. It is going to be the last time you make that decision. All right. You need to decide if that is what you want to do.

Let me tell you a couple of things though. I am sure you have probably heard this before if you have represented yourself. I want you to understand that presenting a defense is not a simple matter of telling one's story but requires and adheres to various technical rules governing the conduct of a trial.

A lawyer, the one standing right next to you, has substantial experience and training in trial procedure and the prosecution will be represented by an experienced attorney. I told you at the onset [*sic*]. A person unfamiliar with legal procedures may allow the

prosecutor an advantage by failing to make objections to inadmissible evidence and may not make effective use of such rights as to voir dire of jurors which is during jury selection and may make tactical decision [*sic*] that produce unintended consequences.

If you proceed *pro se*, you will be not allowed to complain [*sic*] on appeal about the competency of this representation. The effectiveness of your defense may well be diminished by dual roles as an attorney and an accused. You will receive no special consideration from the court. You will receive no extra time for preparation or greater library time since you are in the penitentiary. The lawyer can render important assistance upon determining the existence of possible defenses to charges against you through consultation with the prosecutor regarding possible reduced charges or lesser penalties and in the event of a conviction by presenting to the court matters which might lead to a lesser sentence.

In the event the court accepts your decision to represent yourself, you will not be given an opportunity to change your mind during the trial. If the court in its discretion – in its discretion will not appoint stand by counsel. There will be no one to assist you at any stage of the trial.

Do you understand all of things [*sic*] I have just said to you?

[DEFENDANT]: Yes.

THE COURT: All right. Do you understand what the sentencing range is on that charge, sir?

[DEFENDANT]: No, I do not because of the simple fact that the firearms which was dismissed [*sic*] which made them eligible for the extended terms.



THE COURT: So you don't know what your sentence could be. Is that what you are trying to tell me?

[DEFENDANT]: Yes.

[ASSISTANT STATE'S ATTORNEY]: I would also indicated [sic] the firearm charges have not been dismissed. This is a 12 count indictment, judge, which covers everything from armed robbery, attempt residential burglary, agg[ravated] UUW, armed habitual criminal, aggravated unlawful restraint.

[DEFENDANT]: How is it an armed robbery –

THE COURT: Hold on. This is not a discussion between you and the State. This is a discussion between you and myself where I am going to be asking questions and you are going to be answering those questions.

[DEFENDANT]: Okay.

THE COURT: So, State, is it my understanding that the most serious offenses is [sic] a class X felony at this time.

[ASSISTANT STATE'S ATTORNEY]: It is a class X felony with the enhancement of 15 years for being armed with a firearm.

THE COURT: Okay. So a class X felony is punishable from 6 to 30 years in the Illinois Department of Correction[s]. 30 to 60 years extended term, a fine up to \$25,000 and three years mandatory supervised release which is commonly referred to as parole that you will serve at the end of any time in the penitentiary. And as the State has pointed out there is also a 15 year enhancement on this case. So that would be added on if the jury were to find that. And so you may also be subject to consecutive sentencing based on the

charges which I don't know what the facts of your case are. But if the State is seeking that and it is allowed by law you may be subject to that.

Do you understand that?

[DEFENDANT]: Yes.

THE COURT: All right. And do you understand that you have the right to counsel. And that if you are indigent to have counsel appointed to you by the court.

[DEFENDANT]: Yes.

THE COURT: All right. And understanding all of this, do you still wish to proceed without the benefit of counsel?

[DEFENDANT]: Yes.

THE COURT: All right. How old are you?

[DEFENDANT]: I am 26.

THE COURT: How far did you go in school?

[DEFENDANT]: I graduated high school.

THE COURT: What high school was that?

[DEFENDANT]: I got my GED in Centralia Correctional Center.

THE COURT: So you have a GED, not a high school diploma. You have no college classes?

[DEFENDANT]: No.

THE COURT: Do you have any legal training?

[DEFENDANT]: No.

THE COURT: All right. And you have other criminal background; is that correct?

[DEFENDANT]: Yes.

THE COURT: So you have been through the process before?

[DEFENDANT]: Yes.

THE COURT: And have you been representing yourself on any of those other prior occasions?

[DEFENDANT]: No.

THE COURT: You have been represented by an attorney before.

[DEFENDANT]: Yes.

THE COURT: All right. Well, sir, it does not seem to me that this would be the most prudent move on your part to be represented by yourself. It would seem to me that you would want to be represented by an attorney especially one with vast experience as the lawyer who is standing right next to you, but it's your decision. If you want to do that, it's up to you. But you are playing with fire, do you understand that?

[DEFENDANT]: Yes.

THE COURT: All right. Knowing everything that I have told you, do you understand I am not going to be appointing stand-by counsel. So it's not like you are going to have an attorney standing there to tell you what to ask and what to do during the course of this trial? Right?

[DEFENDANT]: So I am not going to be able to have stand by counsel to help me with the litigation of the legal [sic].

THE COURT: No. I started out that was one of my first points to tell you [sic]. That if you recall I told you at the very beginning that this is not simple matter [sic] of telling one's story. It requires adherence to various technical rules governing the conduct at trial.

And a lawyer has substantial experience and training in trial procedure and the attorney on the State's side will be an experienced lawyer. So if you are asking to have stand-by counsel to help you formulate questions and help with you [*sic*] with your theory of the case, you will not be allowed to have stand-by counsel.

[DEFENDANT]: Okay. I still wish to go *pro se*.

THE COURT: Okay. All right then. You will be going *pro se*. And it is set for a jury trial; is that correct?"

¶ 13 The trial court granted the assistant public defender leave to withdraw and asked the State to order the transcript of its admonishments to defendant about proceeding *pro se*. Defendant demanded trial and the court gave an interim status date for the State to retender discovery to defendant.

¶ 14 On February 23, 2012, the parties appeared before Judge Kazmierski. The court asked defendant whether he elected to proceed *pro se* on the last court date and defendant responded, "Right, sir." On the next court date, February 27, 2012, the trial date was postponed so the trial court could decide motions filed by defendant. The jury trial date was reset for April 9, 2012.

¶ 15 On April 9, 2012, the parties appeared and the court asked defendant, "You still want to do this by yourself?" Defendant replied, "Yes." The State nol-prossed count XII of the indictment (aggravated unlawful restraint) and proceeded on count I (armed robbery with a firearm) and count XI (attempted residential burglary). The State indicated that one witness had experienced a death in the family and jury selection was postponed until April 11, 2012.

¶ 16 Defendant then represented himself for the remainder of the proceedings, including throughout trial. The jury was selected on April 11, 2012, and trial began on April 12, 2012.

¶ 17 At trial, the victim, Willie Creator, testified. Willie testified that he was 54 years old and that he lived at Englewood and Stewart Avenues with his wife of eight years, Geraldine. On the evening of the alleged crimes, December 29, 2010, Willie picked up Geraldine after work, they bought a pizza and drove home together arriving at around 10:20 p.m. Geraldine got out of the car, passed through the front gate and entered their house while Willie parked the car. Geraldine turned off the house alarm by punching in the code. Geraldine closed the front door but left the keys in the lock and did not shut the inner door to the house. Willie took his bag and their dinner from the car and headed toward their house. As he did so, Willie saw three men on the opposite side of the street looking at him. They walked toward him. As Willie entered the gate, one of the men charged at Willie with a handgun. Willie identified this individual as defendant. According to Willie, defendant threatened him as the other two men came up behind Willie and pushed guns into his back. One held a shotgun while the other held a handgun. Defendant held a handgun and told Willie, "[G]et up the stairs or else I'll kill you." The other two men came inside the yard also and tried to push Willie up the front stairs with their weapons. Defendant said, "get up the stairs, n\*\*\*, or else I will kill you." Willie verbally and physically resisted and yelled loudly in an attempt to warn his wife and said to defendant, "[W]hy are you going to do this, please, you don't have to do this." Defendant walked up the front stairs of the house while the other two men stayed behind Willie. Willie saw defendant try to get inside the house with the door keys that Geraldine left in the lock of the door. Willie told the men that if they were going to kill him, they were going to have to kill him outside, and tried to back down the stairs. Eventually the two men gave up and ran west down Englewood Avenue. When defendant saw his accomplices running away, he ran down the stairs, grabbed the bag Willie was carrying, and also ran off westbound on Englewood Avenue.

¶ 18 Willie then got in his car and drove around the corner, where he found a police officer. Willie told the officer what happened and provided a description of the offenders and then returned home. Fifteen minutes later, officers came to his home with defendant in custody, whom Willie positively identified. Willie further testified that the street lights were on during the commission of the crime. Willie could not provide a description of the offenders' hairstyles because they wore hooded sweatshirts, referred to as "hoodies." Willie did not recall informing the police that the offenders' pants and shoes were black.

¶ 19 Geraldine, Willie's wife, also testified. Geraldine testified that when she and Willie arrived home on December 29, 2010, at about 10:30 or 10:35 p.m., the porch lights and interior lights were off. The Christmas tree lights were on and the church across the street had its exterior lights on. After Geraldine exited the car, she walked through the front gate and up the front exterior stairs, opened the outer glass storm door and the main wooden door, entered the house and turned off the alarm. She left the keys in the wooden door so that her husband could use the keys to lock the gate. Soon thereafter, Geraldine heard Willie screaming, so she ran to the front door where she saw two men with guns near her husband and a third man on the porch. Geraldine testified that the man on the porch was trying to open the wooden door using the keys she had left in the lock and that she could see him through the glass window in the wooden door. Geraldine identified this individual as defendant. Geraldine testified that the wooden door was closed but not locked, and that defendant was "working the key" but unable to get inside. Geraldine held the door shut because defendant was trying to push it open. As Geraldine looked out the window, she called 911. Geraldine estimated that defendant tried to open the door for 5 to 10 minutes before the other two men fled. Defendant then followed the two men, grabbing Willie's bag as he left. Willie's bag contained tools and coats they planned to donate for homeless

children. Geraldine then moved to the front window and did not see Willie or his car. Thinking Willie may have been abducted by the men, she called 911 again. Willie soon returned and, 20 minutes later, the police arrived with defendant. Geraldine identified defendant as the offender on the porch. Geraldine could "somewhat" see defendant's face during the incident and recalled defendant was wearing black pants and a black shirt that may or may not have been a hoodie.

¶ 20 Officer Lester Vaughn testified that on the night of the offense he was on patrol with two partners when they received a flash message of a robbery by three black males described as 5 feet 9 inches tall, 170 pounds, and 20 to 25 years old. Vaughn was driving past the 6300 block of Parnell Avenue, a block and a half from the scene, when he saw defendant running northbound on Parnell Avenue toward 63rd Street. Vaughn apprehended defendant and brought him to the scene of the victim's residence for identification. At the scene, Willie and Geraldine both identified defendant as the offender and defendant was placed under arrest at 10:53 p.m. Vaughn radioed for other officers who searched the area and took defendant to the 7th District police station. Vaughn testified that defendant was wearing a black hoodie, blue jeans, and brown boots. At the time of his arrest, defendant was not in possession of a gun or a bag.

¶ 21 Officer Raymond Urbanski was assigned to Unit 153, a city-wide mobile strike force on the date of the occurrence and participated in a systematic search of the area of the victims' home. Urbanski testified that at 11 p.m. he received a call from another officer indicating that weapons were found at 6303 S. Parnell Avenue. Urbanski went to that address and found a sawed-off shotgun and a semi-automatic handgun lying in the snow at the foundation of a house. Urbanski left the weapons for the evidence technicians to collect, who recovered them at 11:30 p.m.

¶ 22           Officer Brian Devan, an evidence technician, testified that he photographed and processed the scene at the victims' home and then responded to 6306 South Parnell Avenue, where he photographed and recovered two weapons from the front lawn at that address. One weapon was a shotgun and the other weapon was a semi-automatic handgun. Officer Devan took the weapons and ammunition recovered from inside the weapons to the police station and swabbed the serrated portions of the guns for possible DNA testing. Officer Devan inventoried all the items, and the swabs from the guns were sent to the Illinois State Police Crime Laboratory for analysis. Officer Devan testified that there was moisture and snow on the guns when he recovered them.

¶ 23           Cook County State's Attorney's Office Investigator Alfred Perez testified that he took a buccal swab from defendant on April 7, 2011. Investigator Perez described the procedure he used to obtain defendant's buccal swab and testified that he inventoried the swab after collecting it.

¶ 24           Forensic scientist Katrina Gomez testified that she is employed by the Illinois State Police Forensic Science Center in Chicago. Gomez was accepted as an expert in forensic biology and DNA analysis without objection. Gomez was assigned to analyze the evidence collected in this case. Gomez was trained in short tandem repeat (STR) polymerase chain reaction (PCR) DNA testing and testified that the swabs did not contain sufficient DNA to develop a profile. Gomez then spoke with forensic scientist Lisa Fallara about the possibility of performing Y-chromosome STR (Y-STR) analysis on the DNA extract from the gun swabs. Gomez then sealed the items and forwarded them to Fallara for Y-STR testing.

¶ 25           The swabs were then analyzed by a Illinois State Police forensic scientist Lisa Fallara, who was trained in Y-chromosome STR (Y-STR) analysis. Fallara was accepted as an expert in biology and DNA analysis without objection. Fallara testified that Y-STR testing is generally



accepted in the scientific community. Whereas traditional DNA testing looks at several areas of DNA along with several different chromosomes, Y-STR testing looks at several different locations only on the male Y chromosome; it is essentially male DNA testing. Fallara explained that Y chromosome DNA is passed down from the paternal line, so that a brother, father and father's father will all have the same Y-STR DNA profile. Fallara explained that Y-STR analysis is better suited for obtaining profiles from a limited amount of DNA. Fallara testified that Y-STR testing was required because there was a small amount of DNA on the sample from the gun and that it is probable that snow could remove DNA from a surface.

¶ 26 Fallara conducted Y-STR testing on defendant's buccal standard as well as the extracted DNA from the swabs from the 9-millimeter handgun. Fallara identified a low-level mixture of two Y-STR profiles on the DNA swabs from the 9-millimeter handgun at three locations, which was interpreted as a mixture of two males' DNA. Fallara was only able to do comparisons and statistics at one locus. When Fallara compared this profile with defendant's buccal swab DNA profile, she determined that defendant could not be excluded as a contributor. Fallara calculated a frequency estimating how rare the profile is in the general population, and testified that approximately 1 in 2 unrelated African-American males, 1 in 2 unrelated Caucasian males, and 1 in 2 unrelated Hispanic males cannot be excluded from having contributed to the mixture based on a 95% confidence limit for each population. Therefore, the profile was consistent with one in every two unrelated African-American, Caucasian, and Hispanic males. Defendant did not object to the admission of this evidence at trial and instead proceeded to cross-examine her.

¶ 27 On cross-examination by defendant, Fallara explained that defendant is included as a potential contributor to the mixture but that she could not identify defendant as the contributor. Fallara further explained her statistical calculation by stating, "I would say that every two

randomly selected people, one out of those two could not be excluded." Fallara explained that the profile database used for Y-STR statistical calculations is purely for statistical purposes, not identification purposes. Fallara further explained, "When I have a profile identified from an evidence stain, I make a comparison to any standards that are submitted in the case, and I will either include or exclude somebody from a profile, and I'm not 100 percent saying that they are the donor, I'm saying they are potential donor [*sic*]. In this case, I had a mixture, so that's why I had to use the words cannot be excluded because there was more than one DNA type, not just one DNA type that I compared." Defendant asked Fallara on cross-examination, "Okay so you also stated that I cannot be excluded, does that also go for I cannot technically be included either?" Fallara explained, "I would state that I could not exclude you from the mixture. You would be included as [a] potential contributor, but I could not identify you as the contributor."

¶ 28 The jury found defendant guilty of armed robbery with a firearm and attempted residential burglary. The court denied defendant's *pro se* posttrial motion for a new trial on August 6, 2012. The court sentenced defendant to 20 years for the armed robbery with a firearm conviction, with a 15-year enhancement for carrying a firearm, for a total of 35 years' imprisonment for that conviction, and 20 years for the attempted residential burglary conviction, upon finding the offense was subject to mandatory Class X sentencing based on defendant's criminal history. The sentences were imposed concurrently. The court then explained that defendant's sentences would be served at 50%. Defendant timely appealed.

¶ 29

## ANALYSIS

¶ 30

### I. DNA EVIDENCE

¶ 31

#### A. DNA IS COMPLICATED BUT JURIES GET IT

¶ 32 The major issue in this case is whether there was plain error in the admission of the DNA statistical probability expert testimony. Fallara testified that the method for calculating DNA probability statistics is generally accepted in the DNA scientific community. There was no objection at trial nor does defendant raise any *Frye* challenge (*Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923)) on appeal to the science or general acceptance or Fallara's method of identification and method of probability calculation in this case. Defendant's only plain error challenge to the probability calculation is relevance. Defendant argues that the trial court erred in admitting the DNA evidence because the "random match probability" of 50% rendered the evidence irrelevant and more prejudicial than probative. Defendant acknowledges that he made no objection at trial and did not raise this issue in a post-trial motion, thereby forfeiting it (*People v. Enoch*, 122 Ill. 2d 176 (1988)), but argues that the court's admission of the expert testimony constitutes plain error. The plain error doctrine allows for the review of a forfeited issue if error in fact occurred and: (1) the evidence was closely balanced; or (2) the error was so substantial that it deprived defendant of a fair trial. *People v. Herron*, 215 Ill. 2d 167, 178-79 (2005).

¶ 33 Testimony is admissible if it is relevant to an issue in dispute (*People v. Patterson*, 192 Ill. 2d 93, 114-15 (2000)). "Relevant evidence" is defined under our rules of evidence as "evidence having any tendency to make the existence of any fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence." Ill. R. Evid. 401 (eff. Jan. 1, 2011). See also *People v. Harvey*, 211 Ill. 2d 368, 392 (2004); *People v. Morgan*, 197 Ill. 2d 404, 455-56 (2001) (relevant evidence means any evidence that has a tendency to make the existence of a fact that is of consequence in the proceedings either more or less probable than it would be without the evidence). Probability is probability "tested in the light of logic, experience, and accepted assumption as to human behavior." *People*

*v. Patterson*, 192 Ill. 2d 93, 115 (2000). Generally, "all relevant evidence is admissible unless otherwise provided by law." *People v. Cruz*, 162 Ill. 2d 314, 348 (1994); *People v. Kirchner*, 194 Ill. 2d 502, 539 (2000).

¶ 34 "Relevance is a threshold requirement [for admissibility] that must be met by every item of evidence." *People v. Dabbs*, 239 Ill. 2d 277, 289 (2010). See also *Bangaly v. Baggiani*, 2014 IL App (1st) 123760, ¶ 155 (reciting that the first requirement even for expert testimony is that "the testimony must be relevant to a material fact in the case"). Identification evidence is, of course, relevant because "[t]he prosecution has the burden of proving beyond a reasonable doubt the identity of the person who committed the crime." *In re Keith C.*, 378 Ill. App. 3d 252, 257-58 (2007) (citing *People v. Slim*, 127 Ill. 2d 302, 306 (1989)). A court may, however, exclude evidence, even if it is relevant, if the prejudicial effect of the evidence substantially outweighs its probative value. *People v. Walker*, 211 Ill. 2d 317, 337 (2004).

¶ 35 1. DNA Basics: Types of Testing

¶ 36 In order to properly address this issue, it is necessary to provide a brief background and explanation of DNA terms and differing statistical probabilities in criminal cases. DNA, or deoxyribonucleic acid, is the fundamental building block for an individual's entire genetic makeup – our hereditary blueprint passed on to us by our parents. DNA is composed of the familiar double-helix strand of nucleotide base pairs which form the sugar-phosphate "double ladder" backbone of the DNA on a chromosome. Chromosomes are found in the nucleus of a cell. "Within the nucleus of each human cell are 23 pairs of chromosomes composed of deoxyribonucleic acid, or DNA, which contains the coded information that provides the genetic blueprint that determines the physical structure and characteristics for each individual." *People v. Rokita*, 316 Ill. App. 3d 292, 298 (2000). A variant of the DNA sequence at a given locus on a

chromosome is called an "allele." *In re Jessica M.*, 399 Ill. App. 3d 730, 743 (2010) (citing John M. Butler, *Forensic DNA Typing: Biology & Technology Behind STR Markers* 13-17 (2001)). Markers used for human identity testing are found in the DNA either between the genes or within genes and are not the portions that code for genetic variation but are still highly variable. See *id.* at 744 (citing National Research Council, *The Evaluation of Forensic DNA Evidence* 14 (1996)). "The location of 'markers' in these highly polymorphic or variable regions is called a 'locus' (plural 'loci')." *Id.* at 743 (citing John M. Butler, *Forensic DNA Typing: Biology & Technology Behind STR Markers* 13-17 (2001)). Humans have two alleles at each genetic locus, with one allele inherited from each parent. Alleles are represented by "peaks" that appear on an electropherogram, which is a genetic chart used in DNA testing. With the exception of identical twins, no two people have the same DNA. *Id.*

¶ 37 A good summary of the science of DNA can be found in *United States v. Yee*, 134 F.R.D. 161 (N.D. Ohio 1991):

"The human genome is composed of twenty-three pairs of chromosomes containing approximately six billion individual nucleotide bases comprising approximately three billion nucleotide base pairs. Each chromosome consists of two long chains of deoxyribonucleic acid (DNA) linked together by hydrogen bonding between complementary pairs of nucleotide bases. The overall physical structure of the DNA molecule, otherwise called a double helix formation, has been likened to a ladder the sides of which are twisted or coiled along its longitudinal axis.

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Most of the DNA belonging to a species is identical. In humans 99% of the genes are the same for all persons, thereby accounting for the abundant shared characteristics of

all human beings. Some DNA is, however, different from person to person, population to population, race to race. These differences, which account for our unique characteristics as individuals, as well as the differences between ethnic groups and races, are the result of the variation in the base sequences of the genes that encode for these individualizing characteristics." *Id.* at 169.<sup>1</sup>

¶ 38 In its earliest form, DNA forensic technology focused upon the parts of the DNA molecule where there is significant variation (polymorphism) of base pair patterns, called "Variable Numbers of Tandem Repeats" (VNTRs), but through the years, the technology now focuses on a class of polymorphisms in DNA called "Short Tandem Repeats" (STRs), which are even shorter in base pair length. These STRs are readily amplified by a process known as "polymerase chain reaction" (PCR) technology. *In re Jessica M.*, 399 Ill. App. 3d at 744. The number of repeats in STR markers can be highly variable among individuals, which makes them particularly desirable for forensic identification. *Id.* (citing John M. Butler, *Forensic DNA Typing: Biology & Technology Behind STR Markers* 53 (2001)). The number of repeats of a specific STR sequence present at a given locus, combined over a designated number of loci, creates a unique DNA "profile" of an individual. *Id.* (citing John M. Butler, *Forensic DNA Typing: Biology & Technology Behind STR Markers* 18 (2001)).

¶ 39 Y-STR testing examines the Y chromosome that is passed from father to son. *People v. Zapata*, 2014 IL App (2d) 120825, ¶ 11; *People v. Barker*, 403 Ill. App. 3d 515, 527-28 (2010) (citing and quoting Jules Epstein, "*Genetic Surveillance*"—*The Bogeyman Response to Familial*

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<sup>1</sup> *Yee* is a very early and fascinating DNA case in which the principal issues were whether the FBI's methodology for sampling DNA and generating statistical probabilities were sufficient to meet the standards for what was, at the time, a novel scientific theory or procedure. It includes a lengthy, detailed description of DNA, DNA sampling, DNA statistical gathering, *Frye* issues and more in readable terms.

*DNA Investigations*, 2009 U. Ill. J.L. Tech. & Pol'y 141, 148). Y-STRs are short repeats found solely in the male-specific Y chromosome that code for male sex determination, spermatogenesis, and other male-related functions. *Id.* at 527. The DNA segments that are the focus of Y-STR testing are inherited as a block through an individual's paternal lineage which is known as a "haplotype—"a set of closely linked genetic markers present on one chromosome which tend to be inherited together." " *Zapata*, 2014 IL App (2d) 120825, ¶ 15 (quoting *State v. Bander*, 208 P.3d 1242, 1246 (2009), quoting National Forensic Science Technology Center, *President's DNA Initiative: DNA Analyst Training Glossary*, <http://www.nfstc.org/pdi/glossary.htm#H> (last visited May 12, 2009)). " 'All men in the same paternal lineage have the same DNA profile at these markers on their Y chromosomes.' " *Id.* (quoting *Bander*, 208 P.3d at 1246).

¶ 40 For identification purposes, Y-STR testing is limited because "all individuals in a paternal line will have the same Y-STR DNA profile. [Citation.] A match between a suspect and evidence using the Y-STR procedure means only that the suspect *could have contributed* the DNA in the forensic stain, as could his brother, father, son, uncle, paternal cousin, or a distant cousin from his paternal lineage." (Emphasis added.) *People v. Stoecker*, 2014 IL 115756, ¶ 29 (citing John M. Butler, *Fundamentals of Forensic DNA Typing* 366 (2010)). But Y-STR DNA testing can conclusively *exclude* a suspect from the pool of possible suspects. See *Zapata*, 2014 IL App (2d) 120825, ¶ 15; *Barker*, 403 Ill. App. 3d at 527. Y-STR analysis is essentially the same as the PCR-STR regular DNA comparison and analysis, except that Y-STR analysis permits isolation of male DNA in a mixed source sample. See *Zapata*, 2014 IL App (2d) 120825, ¶ 15. It is well established that Y-STR testing is generally accepted. *Id.* at 5.

¶ 41

## 2. Steps in DNA Testing

¶ 42 "There are three general steps in DNA testing: (1) creating a DNA 'profile' of a sample; (2) determining whether the profiles of different samples 'match'; and (3) if the samples match, estimating the statistical probability of a random match." *People v. Dalcollo*, 282 Ill. App. 3d 944, 948 (1996).

¶ 43 If the first step, retrieving a DNA profile or partial profile in relation to the crime, is successful, then the second step is to compare that profile to the suspect's profile. The DNA expert analysis is biological and goes toward identification to determine if there is a "match," which is a laboratory determination that the suspect cannot be excluded as the source of genetic material found at the crime scene or on the victim. *In re Jessica M.*, 399 Ill. App. 3d 730, 744 (2010) (citing *People v. Watson*, 257 Ill. App. 3d 915, 930 (1994), *aff'd*, 214 Ill. 2d 271 (2005)).

¶ 44 When the DNA profile of a known individual (a victim or a suspect) matches the DNA profile from the crime scene evidence the individual is "included" as a potential source of that evidence. A DNA profile shown to occur rarely in the population (for example, 1 time in 5 million people) would more strongly suggest that the individual is the source of the biological evidence than would a more common DNA profile (for example, 1 time in 5,000 people). Inclusion does not necessarily mean that a suspect is guilty. When the DNA profile from an individual (a victim or a suspect) does not match the DNA profile generated from the crime scene evidence, the referenced individual is "excluded" as a donor of the evidence. Exclusion does not necessarily mean the suspect is innocent. *Id.*

¶ 45 The final step is to provide a statistical context for the match, *i.e.*, to calculate the probability of a random "match" using the population genetic statistics database. See *In re Jessica M.*, 399 Ill. App. 3d 730, 744 (2010). In 1993, the Federal Bureau of Investigations (FBI) completed an exhaustive worldwide population survey for its population database used in these



statistical calculations. *People v. Dalcollo*, 282 Ill. App. 3d 944, 960 (1996) (citing United States Department of Justice, Federal Bureau of Investigation, *I-A VNTR Population Data: A Worldwide Study* (1993)). The United States DNA Advisory Board<sup>2</sup> explains that "[w]hen a comparison of DNA profiles derived from evidence and reference samples fails to exclude an individual(s) as a contributor(s) of the evidence sample, statistical assessment and/or probabilistic reasoning are used to evaluate the significance of the association." DNA Advisory Board, *Statistical and Population Genetics Issues Affecting the Evaluation of the Frequency of Occurrence of DNA Profiles Calculated From Pertinent Population Database(s)*, 2 Forensic Sci. Comm. No. 3 (2000), <http://www.fbi.gov/about-us/lab/forensic-science-communications/fsc/july2000/index.htm/dnastat.htm> (DNA Advisory Board).<sup>3</sup>

¶ 46 3. DNA Statistics: Different Statistics for Different Uses

¶ 47 The use of population statistics databases evolved out of the necessity to estimate the random match probability of a possible source of a DNA profile occurring within the appropriate reference population. *In re Jessica M.*, 399 Ill. App. 3d at 745. The statistical probability of finding a DNA profile in the general population is a critical step in DNA analysis. *People v. Watson*, 2012 IL App (2d) 091328, ¶ 27 (citing *People v. Miller*, 173 Ill.2d 167, 185 (1996)). See also *Miller*, 173 Ill. 2d at 185 ("For a [DNA] match to be meaningful, a statistical analysis is required. The statistical analysis determines the frequency in which a match would occur in a database population."); Committee on DNA Technology in Forensic Science, *et al.*, DNA

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<sup>2</sup> The DNA Advisory Board (DAB) was a 13-member, congressionally mandated entity created and funded by the DNA Identification Act of 1994 (42 U.S.C. § 14132 (2012); Violent Crime Control and Law Enforcement Act of 1994, Pub. L. No. 103-322, 108 Stat. 1796 (1994)).

<sup>3</sup> The FBI's website states that the "*Forensic Science Communications* (FSC, ISSN 1528-8005) is a peer-reviewed forensic science journal published quarterly in January, April, July, and October by FBI Laboratory personnel. It is a means of communication between forensic scientists." The FBI Federal Bureau of Investigation, *About FSC*, <https://www.fbi.gov/about-us/lab/forensic-science-communications/aboutfsc.html>.

Technology in Forensic Science 74 (1992) ("To say that two patterns match, without providing any scientifically valid estimate (or, at least, an upper bound) of the frequency with which such matches might occur by chance, is meaningless.").

¶ 48 DNA probability calculations have long been generally accepted and admissible. *People v. Lipscomb*, 215 Ill. App. 3d 413 (1991). See also *People v. Dalcollo*, 282 Ill. App. 3d 944, 960 (1996) (holding that the FBI's calculation of statistical probabilities, as derived by the product rule, is generally accepted in the scientific community). Such DNA statistics are admissible as relevant to identification, and any challenge to their reliability usually goes only to the weight to be given to the evidence. *People v. Redman*, 135 Ill. App. 3d 534, 540 (1985). See also *Lipscomb*, 215 Ill. App. 3d at 436. A statistic is necessary to understand the significance of the inclusion as a potential contributor. As one court explained, "[w]ithout the probability assessment, the jury does not know what to make of the fact that the patterns match: the jury does not know whether the patterns are as common as pictures with two eyes, or as unique as the Mona Lisa." *Yee*, 134 F.R.D. at 181.

¶ 49 a. Single Source DNA Sample: Random Match Probability

¶ 50 Where there is one distinct single source of the suspect's DNA profile obtained in relation to the crime, typically the statistic that is calculated is the "random match probability," which is the statistical likelihood that a random person (unrelated to the defendant) would match the DNA profile. National Research Council, Committee on DNA Forensic Science, *The Evaluation of Forensic DNA Evidence* 127 (1996); John M. Butler, *Advanced Topics in Forensic DNA Typing: Interpretation* 314 (1st ed. 2014); *In re Jessica M.*, 399 Ill. App. 3d at 744 (citing *Watson*, 257 Ill. App. 3d at 918-19).

¶ 51 One of the leading experts in this field explains random match probability as follows:

"Random match probability is not the chance that someone else is guilty or that someone else left the biological material at the crime scene. Likewise it is not the chance of the defendant not being guilty or the chance that someone else in reality would have that same genotype. Rather *random match probability* is simply the estimated frequency at which a particular STR profile (given genetic inheritance models) would be expected to occur in a population as determined by allele frequencies from that population group. This RMP may also be thought of as the theoretical chance that if you sample one person at random from the population, they will have the particular DNA profile in question." (Emphasis in original.) John M. Butler, *Advanced Topics in DNA Typing: Interpretation* 293 (1st ed. 2014).

¶ 52 There is some confusion regarding the term "random match probability" and doubts regarding juries' understanding of the meaning of this probability calculation. As a reference manual from the Federal Judicial Center explains, "it has been suggested that jurors do not understand probabilities in general, and infinitesimal match probabilities will so bedazzle jurors that they will not appreciate the other evidence in the case or any innocent explanations for the match." Federal Judicial Center, *Reference Manual on Scientific Evidence*, 537-38 (2d ed. 2000). The reference manual goes on to elaborate:

"A more sophisticated variation on this theme is that the jury will misconstrue the random match probability—by thinking that it gives the probability that the match is random. \*\*\* The words are almost identical, but the probabilities can be quite different. The random match probability is the probability that (A) the requisite genotype is in the sample from the individual tested *if* (B) the individual tested has been selected at random. In contrast, the probably that the match is random is the probability that (B) the

individual tested has been selected at random *given that* (A) the individual has the requisite genotype." (Emphases in original.) *Id.* at 538.

¶ 53 To illustrate:

"To appreciate that the equation is fallacious, consider the probability that a lawyer picked at random from all lawyers in the United States is a federal judge. This 'random match probability' is practically zero. But the probability that a person randomly selected from the current federal judiciary is a lawyer is one. The 'random judge probability'  $P(\text{judge given lawyer})$  does not equal the transposed probability  $P(\text{lawyer given judge})$ ." (Emphasis in original.) *Id.* at 539.

¶ 54 b. Mixed Source DNA Samples: Probability of Inclusion/Exclusion

¶ 55 In cases of mixed DNA samples, the DNA Advisory Board<sup>4</sup> has endorsed two methods for calculating statistical ratios: (1) the combined probability of inclusion (or its reverse, the combined probability of exclusion) calculation; or (2) the likelihood ratio calculation. DNA Advisory Board, Statistical and Population Genetics Issues Affecting the Evaluation of the Frequency of Occurrence of DNA Profiles Calculated from Pertinent Population Database(s), 2 Forensic Sci. Comm. No. 3, ¶ 21 (2000) (DNA Advisory Board).

¶ 56 A "probability of inclusion" is the probability that an unrelated person randomly chosen from the population is included as a potential contributor of the mixed DNA profile. The probability of inclusion statistic provides an estimate of the portion of the population that has a genotype composed of at least one allele<sup>5</sup> observed in the mixed profile. John M. Butler,

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<sup>4</sup> The DNA Advisory Board (DAB) was a 13-member, congressionally mandated entity created and funded by the DNA Identification Act of 1994.

<sup>5</sup> Allele (Peak): One of two or more alternative forms of a gene, a peak appears on an electropherogram for each allele that is detected. That is, on each chart of the DNA strand the

Advanced Topics in Forensic DNA Typing: Interpretation 320 (1st ed. 2014). The "random man not excluded" approach uses the combined probability of inclusion where all possible genotypes are given equal weight. *Id.* A single "probability of inclusion" calculation "involves summing all of the observed alleles at a locus and then squaring this value to obtain the combination of all possible genotypes." *Id.* at 314.

¶ 57 c. Mixed Source DNA Sample: Likelihood Ratios

¶ 58 A likelihood ratio "compares an evidence match relative to coincidence. It is the statistic reflecting the relative probability of a particular finding under alternative theories about its origin." William C. Thompson, Laurence D. Mueller, & Dan E. Krane, *Forensic DNA Statistics: Still Controversial in Some Cases*, *The Champion* (Dec. 2012). Its calculation estimates how much more likely it is that the suspect is the source of the evidence than it is that the evidence originated from a randomly selected member of the population unrelated to the suspect. National Research Council, Committee on DNA Forensic Science, *supra* at 127-28. Under the likelihood ratio approach, "[t]wo competing hypotheses are set up: the hypothesis of the prosecution \*\*\*, which is that the defendant committed the crime, and the hypothesis of the defense \*\*\*, that some unknown individual committed the crime." John M. Butler, *Advanced Topics in Forensic DNA Typing: Interpretation*, 322 (1st ed. 2014). The likelihood ratio is then the probability of the evidence given the prosecution's hypothesis over the probability of the evidence given the defense's hypothesis. *Id.* That is, it is the ratio between the likelihood that a given profile came from a particular individual and the likelihood that it came from a random unrelated person. U.S. Department of Justice, *DNA for the Defense Bar* 17 (June 2012).

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alleles peak up, producing a chart that looks very much like the more familiar heart beat patterns on an EKG.

¶ 59 The imprecise use of the terms "random," "likely," and "probable" can add to confusion over what exactly has been compared, making it all the more important for experts and attorneys to choose their descriptive words carefully.

¶ 60 4. Prosecutor's Fallacy

¶ 61 A common mistake in attempting to understand the varying DNA statistical probability calculations is to conflate either a probability of inclusion/exclusion, or a random match probability, with the probability (or likelihood ratio) that a particular defendant is or is not the source of the DNA. This mistaken assumption is referred to as the "prosecutor's fallacy," which "is the assumption that the random match probability is the same as the probability that the defendant was not the source of the DNA sample." *McDaniel v. Brown*, 558 U.S. 120, 128 (2010) (quoting National Research Council, Committee on DNA Forensic Science, *The Evaluation of Forensic DNA Evidence* 133 (1996)). Alternatively, it is called the "fallacy of the transposed conditional." Brief of 20 Scholars of Forensic Evidence as *Amici Curiae* in Support of Respondent, *McDaniel v. Brown*, 558 U.S. 120 (2010). "In other words, if a juror is told the probability a member of the general population would share the same DNA is 1 in 10,000 (random match probability), and he takes that to mean there is only a 1 in 10,000 chance that someone other than the defendant is the source of the DNA found at the crime scene (source probability), then he has succumbed to the prosecutor's fallacy." *McDaniel*, 558 U.S. at 128. "This faulty reasoning may result in an erroneous statement that, based on a random match probability of 1 in 10,000, there is a 0.01% chance the defendant is innocent or a 99.99% chance the defendant is guilty." *Id.*<sup>6</sup> This is an important distinction to make, and yet it is a distinction

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<sup>6</sup> There is also a "defendant's fallacy," which is: "to assume that in a given population, anyone with the same profile as the evidence sample is as likely to have left the sample as is the suspect.

that has not been clearly explained in our jurisprudence in Illinois. This same error can occur with the use of the probability of inclusion or probability of exclusion, which can be confused with source probability.

¶ 62 The prosecutor's fallacy is "the incorrect belief that the chance of a rare event happening is the same as the chance that the defendant is innocent." Helen Joyce, *Beyond Reasonable Doubt*, +Plus Magazine (Aug.31, 2002) <https://plus.maths.org/content/beyond-reasonable-doubt>. "For instance, most United States senators are men, but very few men are senators. Consequently, there is a high probability that an individual who is a senator is a man, but the probability that an individual who is a man is a senator is practically zero." Federal Judicial Center, *supra* at 131 n.167. "The obvious but absolutely wrong thing to do is to say: 'The rarity of this profile is 1 in 2 million. So there's only a 1 in 2 million chance that it came from someone other than the suspect... We've got him!' " Philip Dawid & Rachel Thomas, *It's a match!*, +Plus Magazine (July 12, 2010), <https://plus.maths.org/content/os/issue55/features/dnacourt/index>. This is the prosecutor's fallacy – "misinterpreting the match probability (the probability that a random person's profile matches the crime sample) as the probability this particular person is innocent on the basis of the evidence." *Id.*

¶ 63 Compare the following variations on the same numbers. Assume that the correct statement is: The chance is 1 in 7000 that *some particular person* other than the suspect would leave a stain like the actual stain (random match probability). Now turn it around for the prosecutor's fallacy: The chance is 1 in 7000 that *someone, anyone*, other than the suspect left the stain. Then consider how often the same facts are carelessly paraphrased: The chance is 1 in 7000 for *someone other than the suspect* to produce the observed evidence.

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National Research Council, Committee on DNA Forensic Science, *supra* at 133. In this case we are presented only with an instance of the prosecutor's fallacy.

¶ 64 It is a fallacy because it falsely equates that the probability that the suspect might be the donor (source probability) can be computed from the DNA evidence alone, which implies illogically that other evidence in the case makes no difference at all. See Charles H. Brenner, Ph. D., *Forensic mathematics of DNA matching*, <http://dna-view.com/profile.htm>.

¶ 65 5. Is it the Mona Lisa?

¶ 66 Defendant confuses several different types of DNA statistics. First, defendant refers to the 50% figure in this case as a "random match probability," but the 50% figure is not a random match probability; it is the probability of inclusion. Here, there was no complete "match" made in this case between defendant's DNA and the DNA on the gun due to the fact that the DNA obtained from the gun yielded only a partial mixed Y-STR profile, indicating a mixed contribution from two males. Further, Fallara's statistical calculation was done for only the partial profile at one locus. The 50% figure in this case is not a computation of the probability that a person chosen at random from the population would "match" the DNA on the gun but, rather, represents the percentage of the population that could have contributed to the mixture in the partial profile found on the gun at that locus. Although the prosecutor did not elicit testimony of the term "probability of inclusion" specifically from the witness, Fallara clearly testified that the 50% figure represented the statistic that a person randomly chosen from the population "could not be excluded," or was included as a potential contributor to the mixed sample, calculated for a single locus, which is a probability of inclusion.

¶ 67 Defendant also commits the mistake of the prosecutor's fallacy, conflating the probability of inclusion with the wholly separate concept of source probability, *i.e.*, the probability that defendant specifically is the source of the DNA. Defendant argues that the probability of inclusion in this case was irrelevant because "[t]he *chances that Pike could not be excluded from*



*the profile* were exactly equal to the chance that any other man on the street at that time could not be excluded." (Emphasis added.) This is not the case; defendant was unequivocally *included* in the group of potential contributors to the profile. The 50% statistic refers solely to the odds that a random person *also* would be included as a potential contributor to the partial DNA profile found on the gun. This figure says nothing about the probability that defendant in particular would be the source of the DNA. This evidence means that a person chosen from the general population has a 50% chance of also matching the mixed partial DNA profile found on the gun. It does not mean, as defendant apparently misunderstands, that the likelihood of defendant's specific identification is 50%. The 50% figure does not represent, as defendant argues, *defendant's* "odds of inclusion." Fallara clearly testified that defendant was in fact included in the pool of potential contributors. There is no "coin flip"; defendant was already included.

¶ 68 Defendant also argues, "That [defendant] shares a genetic profile with the contributor, along with half of the population, does not in fact make *the likelihood that he handled the weapon* more likely – it makes the likelihood exactly the same as before." (Emphasis added.) This is also not true. An estimation of how much more likely it is that the suspect is the source of the evidence than that the evidence came from a random person would be a likelihood ratio calculation. See National Research Council, *supra* at 127-28 (NRC II). Indeed, such a statistic would have been relevant in this case. But a likelihood ratio is a different calculation that was not done by Fallara in this case. Defendant again confuses the calculation of *inclusion* probability with a calculation of *source* probability.

¶ 69 6. So What? Was it Relevant? How Close is Too Close?

¶ 70 Having clarified that the nature of the statistical figure in this case is a probability of inclusion (the probability that any person chosen at random in the population would also be

included as a contributor to the mixed DNA profile from the gun), and not any probability regarding the likelihood of defendant being the source of the DNA, we address whether the DNA expert testimony in this case was relevant.

¶ 71 The fact that defendant could not be excluded and was included as a potential contributor (the second step of DNA analysis in a criminal case) is indeed relevant. As the State argues, the fact that defendant was included as a potential contributor corroborates both of the victims' eyewitness identifications and tends to support the State's theory that defendant committed the crimes. For example, the United States District Court for the District of Columbia has explained that nonexclusion DNA evidence "remains probative, and helps to corroborate other evidence and support the Government's case as to the identity of the relevant perpetrators." *United States v. Morrow*, 374 F. Supp. 2d 51, 65 (D.D.C. 2005). See also *Redman*, 135 Ill. App. 3d at 540 (holding that generally such DNA statistics are admissible as relevant to identification, and any challenge to their reliability goes only to the weight to be given the evidence).

¶ 72 But the statistic in this case was that 50% of the population also is included as potential contributors. Defendant cites to and echoes the same argument found in *People v. Harbold*, 124 Ill. App. 3d 363 (1984), where the defendant similarly argued that a blood typing statistical probability calculation of 1 in 500 was plain error because it was irrelevant and prejudicial. *Id.* at 383. Back then, this court agreed and held the admission of this evidence was plain error because of the danger of the prosecutor's fallacy in misunderstanding the difference between random match probability and source probability and because the circumstantial evidence was factually close. See *id.*

¶ 73 Of course, we have come a long way since 1984 with the development of DNA identification evidence and in our understanding of statistical probabilities. Since the holding in

*Harbold*, courts in our State have recognized and repeatedly held that testimony regarding DNA statistical probabilities is generally accepted and admissible. *People v. Lipscomb*, 215 Ill. App. 3d 413, 432 (1991); *People v. Johnson*, 262 Ill. App. 3d 565, 569 (1994); *People v. Pope*, 284 Ill. App. 3d 695, 701-05 (1996); *People v. Dalcollo*, 282 Ill. App. 3d 944, 960 (1996); *People v. Miller*, 173 Ill. 2d 167, 185 (1996). Normally the probability of inclusion is admissible, even if that probability is rather high. See, e.g., *People v. Smith*, 2012 IL App (1st) 102354, ¶ 75 (holding that DNA expert testimony that the probability of inclusion for the partial profile on the gun was 1 out of 11 and so defendant could not be excluded from a group of 600 million people as possible contributors to the DNA mixture was properly admitted and the weight of this testimony was a matter for the jury to decide).

¶ 74 But there are no reported decisions in our State that have addressed the issue of relevance where the DNA inclusion probability statistic admitted at trial is only 50%. There are federal decisions that have addressed this issue under a similar relevancy definition, and the weight of this authority is that such evidence should be excluded. In *Morrow*, while the court found other DNA statistical evidence admissible, it reserved its final ruling regarding a nonexclusion match with a random match probability of only 1:2, specifically concerned about the "probative value." *Morrow*, 374 F. Supp. 2d at 66.

¶ 75 In *United States v. Graves*, 465 F. Supp. 2d 450 (E.D. Pa. 2006), the court held nonexclusion DNA matches with random match probabilities of 1:2900 and 1:3600 were admissible but held that a nonexclusion match with a random match probability of only 1:2 was inadmissible after concluding the probative value of admitting this evidence would be "substantially outweighed by the danger of unfair prejudice and confusion of the issues" because

"half of the relevant population cannot be excluded as a contributor to the DNA sample." *Id.* at 459.

¶ 76 7. Error But Not Plain Error

¶ 77 We hold that the admission of expert testimony of the 50% inclusion probability statistic in this case was error because the statistic was irrelevant. The probability of inclusion of 50% of the population as a potential contributor to the mixed DNA profile on the gun did not tend to make defendant's identification more or less probable, and so as a whole the DNA expert testimony in this case was irrelevant.

¶ 78 But while the admission of this evidence was error, it was not serious error. On this point, the fact that 50% of the population could have been potential contributors of the mixed DNA found on the gun weighs against defendant's argument for finding substantial prejudice. Here, we agree with the State's argument:

"Fallara's testimony about the nature of Y-STR analysis and the limited scope of her opinion was clearly expressed to the jury, who then properly was tasked with determining what, if any, weight to give to the Y-STR evidence in this case. On cross-examination by defendant, Fallara explicitly testified that defendant is included as a potential contributor to the mixture but that she could not identify defendant as the contributor."

¶ 79 B. CSI Effect: No Empirical Evidence That It Exists

¶ 80 We do not share the concerns of our colleague regarding the existence of a "CSI Effect"<sup>7</sup> and any confusion in weighing DNA evidence due to pop culture television shows or cases where wrongfully convicted individuals are exonerated by DNA evidence.

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<sup>7</sup> "CSI" is a reference to a popular fictional television show called *CSI: Crime Scene Investigation*.

¶ 81           Regarding the so-called "CSI Effect" that some commentators have postulated forensic crime television shows have on jurors. Initial concern about the existence of a CSI Effect arose only from media commentary and surveys of lawyers' opinions and speculation. This concern was mostly voiced as a fear that jurors will *acquit* defendants where there is an *absence* of forensic evidence because jurors allegedly expect such evidence in every case because of popular forensic crime shows.

¶ 82           A 2013 study by researchers at Walden University analyzed data from 60 jurors in a mid-Atlantic city who participated in malicious wounding cases. They concluded that their findings "provide[] some support for the notion that prosecutors, defense attorneys, and judges have legitimate concerns about the impact of juror decision-making as a result of the influence of watching television crime shows." 7 Corey Call, Amy K. Cook, John D. Reitzel, & Robyn D. McDougale, *Seeing Is Believing: The CSI Effect Among Jurors in Malicious Wounding Cases*, *Journal of Social, Behavioral, and Health Sciences*, Walden University 62 (2013). However, they also noted that "[i]t is possible that such shows have played a role in shaping the perceptions of individuals who regularly watch them, but there is a great deal of uncertainty about whether the effects of watching such shows have had a significant and patterned effect on juror-decision making." *Id.* And they concluded that "given the many influences that possibly confront jurors during trial such as perceived injustices, mistrust of police officers, concerns of legitimacy of the criminal justice system, and prior experiences with the system, we cannot isolate the true significance of the *CSI* effect in comparison to other jury influences." *Id.* at 63.

¶ 83           In other words, the popular notion that there is a "CSI Effect" as something that motivates jurors cannot be demonstrated by any current reliable empirical study. All we have are anecdotal stories and media hype.

¶ 84 Earlier empirical studies detailed below came to the same conclusion. There are many influences on juror behavior and no current reliable data on the effect of CSI-type shows on juror expectations for high value forensic evidence or what its lack does to juror decision making.

¶ 85 The argument that popular television shows may skew how jurors view evidence or the criminal justice system itself also is not new. A similar concern was raised in the late 1980s regarding the rising popularity of "real life" court shows such as "The People's Court," and their influence on jurors' expectations and views of actual trials. See Tom R. Tyler, *Viewing CSI and the Threshold of Guilt: Managing Truth and Justice in Reality and Fiction*, 115 Yale L.J. 1050, 1055 & n.16 (2006) (citing Wende Vyborney Dumble, *And Justice for All: The Messages Behind "Real" Courtroom Dramas*, in *Television Studies: Textual Analysis* 103, 112 (Gary Burns & Robert J. Thompson eds., 1989)). Yet, the juries' role in our justice system continued to function and there was no breakdown in the criminal justice system due to these television shows.

¶ 86 The citations provided by our colleague also do not support any broad general statement that pop culture or forensic crime television shows affect jurors' analysis of actual DNA evidence in courtrooms or have led to any belief that all DNA evidence is infallible. These law review articles do not cite to any actual studies or precedent in support of this broad general view and, indeed, either actually recognized that there is widespread dispute as to whether the so-called "CSI Effect" even exists or merely state the idea as a general assumption without any supporting facts. See Tamara F. Lawson, *Before the Verdict and Beyond the Verdict: The CSI Infection Within Modern Criminal Jury Trials*, 41 Loy. U. Chi. L.J. 119, 121 n.1 (2009) (recognizing in the very first footnote that "[s]cholars and practitioners disagree regarding the existence of the CSI Effect"); Jonathan J. Koehler, *Linguistic Confusion in Court: Evidence from the Forensic*

Sciences, 21 J.L. & Pol'y 515, 517 (2013) (generally stating that "confusion in the DNA and fingerprint areas has been documented and is relatively common" without providing any citation to such "documented" confusion).

¶ 87 In fact, the myth of the "CSI Effect" has been roundly debunked. The studies that have been done show that, in fact, there is no such effect. The National Institute of Justice's study found that "[a]lthough *CSI* viewers had higher expectations for scientific evidence than non-*CSI* viewers, these expectations had little, if any, bearing on the respondents' propensity to convict." Donald E. Shelton, *The "CSI Effect": Does It Really Exist?*, NIJ Journal No. 259 (2008). See also Kimberlianne Podlas, *"The CSI Effect": Exposing the Media Myth*, 16 Fordham Intell. Prop. Media & Ent. L.J. 429, 461 (2006) (suggesting that "frequent viewers of *CSI* are no more influenced by *CSI* factors than are non-frequent viewers."); The "CSI Effect" and Other Forensic Fictions, 27 Loy. L.A. Ent. L. Rev. 87 (2006-07) (concluding that "[c]ontrary to the hype, the empirical data does not support the existence of a *CSI* Effect"); *Investigating the "CSI Effect" Effect: Media and Litigation Crisis in Criminal Law*, 61 Stan. L. Rev. 1335, 1361 (2009) (study of linear regressions of acquittal rates before and after the airing of *CSI* found no statistically significant difference in the rate of acquittals and, thus, no *CSI* Effect). One study showed that, if anything, jurors who watch such shows are in fact more critical of the evidence and *less* likely to convict. See N.J. Schweitzer & Michael J. Saks, *The CSI Effect: Popular Fiction About Forensic Science Affects the Public's Expectations About Real Forensic Science*, 47 Jurimetrics J. 357 (2007).

¶ 88 Of course we acknowledge social cognitive theory that popular culture can influence jurors' views and behaviors (see Kimberlianne Podias, *Impact of Television on Cross-Examination and Juror "Truth"*, 14 Widener L. Rev. 479 (2009) (acknowledging that television's

legal narratives can cultivate assumptions and expectations about law)). But generally "[l]egal scholars have \*\*\* noted that even if media influences jurors, that by no means necessarily translates into changed verdicts." Simon A. Cole & Rachel Dioso-Villa, *Investigating the "CSI Effect" Effect: Media and Litigation Crisis in Criminal Law*, 61 *Stan. L. Rev.* 1335, 1341 (2009). The findings are that, "[a]lthough the reliability of investigative technologies such as fingerprints and DNA evidence is often overstated, for the most part the expectations of summoned jurors for scientific evidence in particular types of cases is reasonable and comports with the reality of investigation procedures." Donald E. Shelton, *et al.*, *A Study of Juror Expectations and Demands Concerning Scientific Evidence: Does the "CSI Effect" Exist?*, 9 *Vand. J. Ent. & Tech. L.* 331, 358 (2006).

¶ 89 Yet, despite the lack of empirical evidence of any "CSI Effect," the belief that shows like "CSI" change jury verdicts persists among some people. This fear may be what led the State in this case to present the irrelevant 50% inclusion probability DNA evidence.

¶ 90 Instead, what may be afoot is a broader "tech effect." See *id.* at 362 (survey of more than 1,000 people called for jury duty in Michigan state court found that there were significant expectations and demands for scientific evidence but little or no indication of a link between those preconceptions and watching particular television shows; suggesting that "increased expectations of and demands for scientific evidence is more likely the result of much broader cultural influences related to modern technological advances \*\*\* a 'tech effect' "). The backgrounds and experiences of jurors today are different than they were in previous generations. In 2000, Generation-Xers (Gen-X)<sup>8</sup> comprised approximately 40% of the people in jury pools. See Gregory J. Morse, *Techno-Jury: Techniques in Verbal and Visual Persuasion*, 54

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<sup>8</sup> Gen-X normally calculated as the generation born after the World War II baby boom; generally those born between 1964 and 1979.



N.Y.L. Sch. L. Rev. 241, 242 (2010) (commenting how "[t]he backgrounds and experiences of jurors today are different than they were in previous generations," specifically the "Gen-X" who "grew up on television and came of age in the era of personal computers").

¶ 91 There is some evidence that, despite the fact that jurors are not changing their verdicts in response to any "CSI Effect," some jurors who watch such shows are instead slightly more likely to expect to at least have such forensic evidence presented. See Donald E. Shelton *et al.*, A Study of Juror Expectations and Demands Concerning Scientific Evidence: Does the "CSI Effect" Exist?, 9 Vand. J. Ent. & Tech. L. 331, 349 (survey of more than 1,000 potential jurors in a Michigan state court finding that a relatively small proportion of respondents expected to see scientific evidence in situations where it is usually less relevant to the crime in question, notably, 12.2% expected DNA evidence in any theft case). But this cannot be said to cause prejudice to defendants in courtrooms, given the actual real advances in forensic science. See Simon A. Cole & Rachel Dioso-Villa, *Investigating the "CSI Effect" Effect: Media and Litigation Crisis in Criminal Law*, 61 Stan. L. Rev. 1335, 1347 (2009) ("Presumably, jurors' expectations should, appropriately, increase over time, in response to actual advances in forensic technology."); Donald E. Shelton, *et al.*, A Study of Juror Expectations and Demands Concerning Scientific Evidence: Does the "CSI Effect" Exist?, 9 Vand. J. Ent. & Tech. L. 331, 368 ("It is not only appropriate but constitutionally expected that those jurors and their verdicts will reflect the changes that have occurred in popular culture.").

¶ 92 There are myriad other pop culture influences as well, including the Internet and social media, which are part of jurors' lives. This fact does not *ipso facto* mean that jurors cannot then pay attention to and weigh the evidence in a given case, in a real courtroom, or that certain forensic scientific evidence poses a danger of prejudice. Pop culture influences are too numerous

to list. There will undoubtedly be untold further advances in science and forensic evidence, which will also then be commented upon and become a part of pop culture. But the answer is to then do just as was done with DNA evidence and any new science: subject the science to the rigors of *Frye*; adequately explain the evidence to juries; and, for the defense, conduct vigorous cross-examinations of expert testimony regarding such evidence. Also, both legal and public discussion of the use of forensic evidence in courtrooms can inform the public and jurors. See Richard Catalani, *A CSI Writer on the CSI Effect*, 115 Yale L.J. Pocket Part 76 (2006) ("[B]etter informed juries can't be a bad thing.").

¶ 93

### C. No Juror Confusion over DNA Statistics

¶ 94

As to juror confusion over DNA statistics, DNA evidence and the attendant statistical probability calculations have been part of our judicial system for quite some time now. Confusion regarding DNA evidence outweighing the probative value of the evidence is an old argument that was advanced at the beginning of the admission of DNA evidence in our courts when the science of DNA analysis was relatively new, but for more than 20 years, around the time of the second National Research Council Report, DNA evidence has been consistently held to be reliable and admissible. More than 20 years ago, this court recognized that "[a] jury is capable of properly weighing DNA evidence and is unlikely to be swayed or dazzled by statistical evidence, including probability estimates, to the point that it ignores evidence showing a tester failed to follow proper procedures in developing the evidence." *People v. Stremmel*, 258 Ill. App. 3d 93, 106 (1994) (adopting the holding in *United States v. Jakobetz*, 955 F.2d 786 (2d Cir. 1992)). This court held that "[t]he role of the court should focus on the admissibility of a particular type of scientific evidence and allow the jury to discharge its duties of weighing the

evidence, making credibility determinations, and ultimately deciding the facts." *Stremmel*, 258 Ill. App. 3d at 106.

¶ 95 The holding still holds true. There is no need to go back in time to resurrect an argument heard at the beginning of the admission of DNA evidence—that juries do not understand the evidence or are confused or are so mesmerized by the statistics that they cannot appropriately make determinations at criminal trials. There is also no need to overstate the role of DNA evidence, especially in a case such as this one, where the limited value of the evidence was clearly testified to by the expert.

¶ 96 Not all DNA evidence possesses an "aura of infallibility." Rather, the DNA evidence is qualified by the statistical probabilities in any given case. There are certain cases where the statistical probability DNA evidence is indeed overwhelming, as where the likelihood of a random match is extremely small. On the other hand, there are cases where it has exonerated wrongfully convicted individuals by showing that those individuals do not match and are actually excluded. And there are also other cases where the DNA evidence simply is inconclusive, as in this case.

¶ 97 While we agree with our colleague to the extent that, in certain cases, the DNA evidence certainly can be extremely persuasive to a jury, such as where the random match probability is incredibly small (for example, 1 in 10 billion), this is not true in the case before us, where the expert clearly testified to only a 50% probability of inclusion and also clearly testified that she could *not* identify defendant specifically.

¶ 98 There simply is no empirical data or evidence to support the view that pop culture references or television shows have so impacted jurors that they are unable to objectively

understand and weigh DNA evidence in criminal trials and that their verdicts are affected. We thus find such concern to be unfounded.

¶ 99 Arguing that certain forensic evidence, such as DNA evidence, is more prejudicial than probative and poses a danger of "wrongful conviction" based on completely unfounded—and disproven – assumptions that jurors believe all such evidence because of television shows or other pop culture influences (despite any explanation of the evidence by experts at trial) is patronizing and does not give the jury the credit it deserves. It is also a dangerous argument because it evinces a lack of trust in jurors and, by implication, our jury system. See Hon. Donald E. Shelton, *et al.*, A Study of Juror Expectations and Demands Concerning Scientific Evidence: Does the "CSI Effect" Exist?, 9 Vand. J. Ent. & Tech. L. 331, 368 ("The constitutional stature of juries in our system is based on the principle that individual judgments of guilt or innocence, like issues of other governmental representation, should be made by ordinary citizens.").

¶ 100 We do recognize that expert testimony on statistical probability explaining DNA evidence can be confusing in certain cases. We thus note that, while not necessary in terms of foundation, the State should elicit testimony on direct examination of its experts to explain the *type* of DNA identification statistic presented and its significance to prevent confusion by defendants. Also, appropriate instructions may assist in understanding the meaning of the different types of statistics and prevent confusion such as the prosecutor's fallacy. To combat the problem of the prosecutor's fallacy, the Committee on DNA Forensic Science of the National Research Council has suggested the following instruction to define the random match probability:

"In evaluating the expert testimony on the DNA evidence, you were presented with a number indicating the probability that another individual drawn at random from the

[specific] population would coincidentally have the same DNA profile as the [blood stain, semen stain, etc.]. That number, which assumes that no sample mishandling or laboratory error occurred, indicates how distinctive the DNA profile is. It does not by itself tell you the probability that the defendant is innocent." (Internal quotation marks omitted.) NRC II, *supra* at 213 n.93.

¶ 101 But in this case we find the expert's testimony was clear and there was no jury confusion. There is no indication in the record that the jury succumbed to the prosecutor's fallacy regarding the meaning of the statistic or that the jury was at all confused by her testimony.

¶ 102 We hold that the error in this case in admitting the 50% probability of inclusion statistic, though error, was not so serious as to constitute plain error, and thus defendant fails to satisfy the serious error prong to show plain error. The error was not of such magnitude as to deny defendant fair trial. In this case, Fallara clearly indicated that the 50% combined probability of inclusion referred to the percentage of the population that could have contributed to the mixed profile, clarified that defendant was included within this group, and also clearly testified that 50% of the population is also included in the group of potential contributors to the partial DNA profile off the gun. The expert in this case also clearly testified that she could *not* specifically identify defendant. This evidence was presented accurately and there could be no mistake that defendant in fact was only included as a potential contributor, along with 50% of the population, and in fact was *not* identified as "matching" the DNA.

¶ 103 We also hold that evidence of defendant's guilt was not so closely balanced, as there was eyewitness identification by both victims. A single witness's identification of the accused is sufficient to sustain a conviction if the witness viewed the accused under circumstances permitting a positive identification. *Slim*, 127 Ill. 2d at 306. The identification evidence was very

strong. Both of the victims positively identified defendant as the perpetrator. One of the same studies which debunked the "CSI Effect" found that in fact jurors were more likely to convict even without *any* scientific evidence when eyewitness testimony is presented. See *A Study of Juror Expectations and Demands Concerning Scientific Evidence: Does the "CSI Effect" Exist?*, 9 Vand. J. Ent. & Tech. L. 331, 354, 357 (2006). Defendant thus also fails to satisfy the first prong required to show plain error. See *Herron*, 215 Ill. 2d at 178-79. Because defendant failed to show either prong of plain error, defendant's forfeiture of this issue is effective.

¶ 104 We believe that jurors are capable of fairly evaluating all the evidence presented, including the irrelevant forensic evidence such as the 50% probability DNA evidence in this case, and thus we further hold that the admission of this evidence, though error, does not rise to the level of plain error. Our holding that the error was not plain error is a clear message reaffirming faith in our jury system.

¶ 105 We also believe juries are capable of understanding and appropriately weighing DNA evidence and are constitutionally entrusted to do so. Juries can separate fact from fiction.

¶ 106 II. Defendant Knowingly and Intelligently Waived His Right to Counsel

¶ 107 The other issue in this case is whether the trial court substantially complied with Illinois Supreme Court Rule 401(eff. July 1, 1984) before accepting defendant's waiver of his right to counsel. Defendant argues that the court did not substantially comply with Rule 401(a) in rendering its admonishment to defendant regarding his decision to elect to proceed *pro se* on February 16, 2012 because the court did not recite "all 12 pending charges and the sentencing ranges attached to those charges" in its admonishment on February 16, 2012. Defendant argues that any prior admonishment does not suffice because defendant had counsel in the interim. Defendant seeks to have his conviction reversed and his case remanded for a new trial. The State

argues that the court did substantially comply with its admonishment to defendant on February 16, 2012 regarding defendant's decision to proceed *pro se*.

¶ 108 Defendant acknowledges he failed to raise this alleged error in a posttrial motion, thereby forfeiting the issue (*People v. Enoch*, 122 Ill. 2d 176 (1988)), but argues that the court's admonishment in this case constitutes plain error. The plain error doctrine allows for the review of a forfeited issue if error in fact occurred and: (1) the evidence was closely balanced; or (2) the error was so substantial that it deprived defendant of a fair trial. *People v. Herron*, 215 Ill. 2d 167, 178-79 (2005).

¶ 109 The sixth amendment of the United States Constitution entitles a defendant to counsel. U.S. Const., amends. VI, XIV; see also *People v. Hughes*, 315 Ill. App. 3d 86 (2000). A defendant may waive this right and proceed without counsel only if he "voluntarily and intelligently elects to do so." *People v. Baker*, 92 Ill. 2d 85, 90 (1982); see also Ill. S. Ct. R. 401 (eff. July 1, 1984). Because the right to counsel is fundamental, we may review a failure to substantially comply with Rule 401(a) under the plain-error doctrine despite a defendant's failure to properly preserve such an error. *People v. Vazquez*, 2011 IL App (2d) 091155, ¶ 14 (citing *People v. Vernon*, 396 Ill. App. 3d 145, 150 (2009), and *People v. Stoops*, 313 Ill. App. 3d 269, 273 (2000)). Before addressing whether defendant's claim satisfies the plain error doctrine, defendant must first show that a clear or obvious error occurred. *People v. Hillier*, 237 Ill. 2d 539, 545 (2010). See also *People v. Piatkowski*, 225 Ill. 2d 551, 565 (2007) ("the first step is to determine whether error occurred").

¶ 110 Under Illinois Supreme Court Rule 401(a) (eff. July 1, 1984), the trial court shall not permit a waiver of counsel by a person accused of an offense punishable by imprisonment without first addressing defendant in open court and informing him of and determining that he

understands the following: (1) the nature of the charge; (2) the minimum and maximum sentence prescribed by law, including penalties the individual faces due to prior convictions; and (3) that he has the right to counsel and, if he is indigent, to have counsel appointed for him by the court.

¶ 111 Defendant argues only that the first and second required admonishments were not met, and does not argue that the court's recitation of the third required admonishment was deficient.

¶ 112 We note that strict compliance with Rule 401(a) is not necessary in every case. See *People v. Meeks*, 249 Ill. App. 3d 152 (1993). "Even where admonishments are prescribed, only substantial compliance—rather than strict compliance—is required." *People v. Reid*, 2014 IL App (3d) 130296, ¶ 12. Illinois has recognized two categories of substantial compliance with Rule 401. *People v. Koch*, 232 Ill. App. 3d 923, 926 (1992). Substantial compliance occurs when any failure to fully provide admonishments does not prejudice defendant because either: (1) the absence of a detail from the admonishments did not impede defendant from giving a knowing and intelligent waiver; or (2) defendant possessed a degree of knowledge or sophistication that excused the lack of admonition. *People v. LeFlore*, 2013 IL App (2d) 100659, ¶ 52; see also *People v. Coleman*, 129 Ill. 2d 321, 340 (1989); *People v. Ware*, 407 Ill. App. 3d 315, 348 (2011). When a defendant is admonished in substantial compliance with Rule 401(a), there is a valid waiver of counsel. *People v. Haynes*, 174 Ill. 2d 204, 236 (1996).

¶ 113 An otherwise inadequate admonition may be constitutionally sufficient, and therefore does not constitute error, if the absence of a detail did not impede the defendant from giving a knowing and intelligent waiver. *People v. Black*, 2011 IL App (5th) 080089, ¶ 20. The court may find substantial compliance with Rule 401(a) where the record indicates that the defendant knowingly, intelligently, and voluntarily waived his right to counsel, and the admonishments he received did not prejudice his rights. *People v. Haynes*, 174 Ill. 2d 204, 236 (1996); *People v.*



*Phillips*, 392 Ill. App. 3d 243, 262 (2009). As the court explained in *People v. LeFlore*, 2013 IL App (2d) 100659, "[t]he difference between 'strict compliance' and 'substantial compliance' has been described as 'essentially superficial.'" *Id.*, ¶ 52 (quoting *People v. Gilkey*, 263 Ill. App. 3d 706, 711 (1994)). What must be shown is that:

" 'any deficiency in the admonishments must not prejudice the defendant, either because he was already aware of the information that was omitted or because his degree of legal sophistication made it evident that he was aware of the information that compliance with the rule would have conveyed. In other words, \*\*\* the dispositive issue to be determined when deciding whether a waiver of counsel \*\*\* is valid is whether the waiver of counsel was knowingly, understandingly and effectively made, in light of the entire record.' [Citation.]" *Id.* (quoting *Gilkey*, 263 Ill. App. 3d at 711).

¶ 114 While a finding whether a defendant's waiver of counsel was knowing and voluntary is reviewed for an abuse of discretion (*People v. Baez*, 241 Ill. 2d 44, 116 (2011)), the legal issue of whether the court failed to substantially comply with Supreme Court Rule 401(a) admonishments is a question of law that we review *de novo*. *Black*, 2011 IL App (5th) 080089, ¶ 20.

¶ 115 Defendant argues that the court was required to state all the counts against him to satisfy the first required admonition of the nature of the charge, and that any prior admonishment of the counts against him cannot suffice to satisfy this requirement when defendant had counsel in the interim and then again requested to waive his right to counsel.

¶ 116 It is true that if a defendant receives a valid admonishment of waiver of the right to counsel but then requests and receives counsel and then later again indicates a desire to waive counsel, the defendant must be readmonished. "Under the continuing waiver rule, a valid waiver of counsel generally continues throughout later stages of the proceedings, including posttrial

stages. [Citation.] The continuing waiver rule, however, is subject to two exceptions: (1) the defendant later requests counsel or (2) other circumstances suggest that the waiver is limited to a particular stage of the proceedings. [Citation.]" (Internal quotation marks omitted.) *Ware*, 407 Ill. App. 3d at 342. The State argues that readmonishment was not necessary because defendant "did not request counsel for a distinct stage of proceedings," seemingly conflating the two exceptions into one, but these are distinct exceptions. The case before us presents the first exception to the continuing waiver rule, as defendant was initially admonished but later requested and received counsel and then, before trial, again wished to waive his right to counsel. The court is required to readmonish a defendant in substantial compliance with Supreme Court Rule 401(a) upon a second request to waive counsel. *People v. Cleveland*, 393 Ill. App. 3d 700, 702 (2009), *overruled in part on other grounds, People v. Jackson*, 2011 IL 110615. Thus, the court in this case was required to readmonish defendant on February 16, 2012, in substantial compliance with Supreme Court Rule 401(a).

¶ 117 But there is no requirement that the court specifically recite all the counts against a defendant in order to substantially comply with the first required admonishment of the nature of the charge. The first admonishment required under Rule 401(a) is only the "nature of the charge." Ill. S. Ct. R. 401(a)(1) (eff. July 1, 1984). The plain language of the rule does not require recitation of all pending counts. It has long been established that this rule requiring that defendant be advised of nature of charge against him and consequences thereof if found guilty does not require the trial court to state to defendant all facts which do or may constitute the offense. See *People v. Harden*, 78 Ill. App. 2d 431, 444 (1966) (interpreting the phrase "nature of the acts constituting the offense" under the previous Illinois Supreme Court Rule 26(3) (Ill. Rev. Stat. 1963)). In *People v. Phillips*, 392 Ill. App. 3d 243, 263 (2009), this court held a waiver

of counsel admonishment regarding the nature of the charges sufficient even where the trial court had previously incorrectly admonished the defendant that the charge was a Class 2 felony where "[t]he charges were fairly simple: [the defendant] was accused of hitting a deputy sheriff in the face. There was nothing particularly complicated or sophisticated about these charges." Similarly, in this case, the charges were fairly simple and defendant clearly was admonished and knew that the nature of the charges against him were for armed robbery with a firearm and attempted residential burglary.

¶ 118 Although defendant required readmonishment on February 16, 2012, to determine whether there was substantial compliance with Rule 401(a) we still look to the entire record. "[S]ubstantial compliance will be sufficient to effectuate a valid waiver if the record indicates that the waiver was made knowingly and voluntarily, and the admonishment the defendant received did not prejudice his rights." *People v. Haynes*, 174 Ill. 2d 204, 236 (1996) (citing *People v. Coleman*, 129 Ill. 2d 321, 333 (1989), and *People v. Johnson*, 119 Ill. 2d 119, 132 (1987)). Here, the court had previously admonished defendant extensively regarding the nature of the charges against him and again reiterated that the nature of the charges was armed robbery.

¶ 119 During the admonishment on February 16, 2012, defendant did not indicate that he did not understand the nature of the charges against him. Rather, defendant indicated he did not understand the extended term sentencing range for the armed robbery with a firearm charge when he believed all the charges involving a firearm were dismissed. But the court indicated that the armed robbery with a firearm charge, the most serious offense, was a Class X felony punishable from 6 to 30 years in the Illinois Department of Corrections and punishable by a 30 to 60-year extended term with a 15-year enhancement. The court then asked defendant if he

understood this, and defendant indicated he did. There was substantial compliance with the required admonishment of the nature of the charge pursuant to Rule 401(a)(1).

¶ 120 The State also argues that the prosecutor fully informed defendant of all the counts against him and thus they were spread of record, but defendant argues that this was insufficient and that the court itself must specifically admonish him of all the counts. Here, we find support in precedent for looking to the record to determine whether there was substantial compliance with Rule 401(a). In *People v. Toy*, 407 Ill. App. 3d 272, 283 (2011), this court held that the trial court substantially complied with Rule 401(a) governing defendant's waiver of counsel, where defendant received a listing of all charges and sentences for several pending cases, and later, he received specific information of the charges and penalties for the case, the court told defendant to read and review the documents and advised him to ask questions about anything he did not understand, and defendant acknowledged receiving these documents on the record. The record in this case indicates that defendant was aware of the all the counts against him.

¶ 121 We hold that admonishing a defendant of all the specific counts against him or her is not required under Supreme Court Rule 401(a)(1); all that is required in admonishment of the charge is that defendant be admonished of the "nature of the charge." Ill. S. Ct. R. 401(a)(1) (eff. July 1, 1984). Here, defendant was admonished of the nature of the charges against him.

¶ 122 Defendant also argues that the court failed to substantially comply with the second required admonishment under Rule 401(a) because it informed defendant of the sentencing range for the armed robbery charge only, and not for any of the lesser charges. A trial court's admonitions regarding the maximum sentence which could be imposed on defendant must be accurate before a court may accept waiver of counsel. *People v. Koch*, 232 Ill. App. 3d 923, 927 (1992). On the other hand, precedent consistently has held that no prejudice arises from the

failure to advise a defendant of the minimum sentence he might receive where the sentence he actually receives is below the maximum sentence of which he has been advised. *People v. Adams*, 255 Ill. App. 3d 95, 97 (1993) (citing *People v. Phillips*, 195 Ill. App. 3d 560, 562 (1990), and *People v. Johnson*, 119 Ill. 2d 119, 134 (1987)).

¶ 123 On this point we agree with the State that *Haynes* is dispositive. In *Haynes*, the Illinois Supreme Court held that the trial court's failure to inform a defendant of minimum and maximum sentences possible for the burglary charge did not invalidate the defendant's waiver of right to counsel, where the defendant was fully aware of range of sentences possible for most serious charge against him, first degree murder, including the possibility of the death sentence. *Haynes*, 174 Ill. 2d at 243. In this case, the court substantially complied with Rule 401(a) in its admonishment of the applicable minimum and maximum sentences. The court informed defendant that the most serious charge he faced was a Class X felony, which was punishable by 6 to 30 years' imprisonment or an extended term of 30 to 60 years. The court also informed defendant that a further 15-year enhancement could be added to any sentence, and that defendant could be subject to consecutive sentencing. Defendant then expressly stated that he understood the sentencing range.

¶ 124 Defendant attempts to distinguish *Haynes* because *Haynes* did not involve a second waiver after reappointment of counsel and argues that the only proposition in *Haynes* that is applicable to this case is that earlier admonishments are not always insufficient. But the rationale in *Haynes* regarding the specific point on admonishment of the applicable sentencing range is indeed applicable to this case, as the court here also correctly admonished defendant of the maximum range of his possible total sentence. We acknowledge that a proper readmonishment was necessary, but we hold that the court did in fact substantially comply with Rule 401(a) when,

after having had counsel reappointed, defendant again requested to waive counsel. We believe the holding in *Haynes* that the court's admonishment of the applicable sentencing range substantially complied with Rule 401(a) where the court advised the defendant of the maximum penalty governs, and we hold that the court's admonishment regarding the possible sentencing in this case similarly substantially complied with Rule 401(a). We further note that although the most serious punishment in *Haynes* was the death penalty, and that the defendant in *Haynes* had standby counsel, we find that the reasoning is equally applicable to this case.

¶ 125 Defendant cites to no authority finding a failure to satisfy Rule 401(a) because of a failure to recite the *minimum* sentence for lesser charges. Rather, a failure to comply with Rule 401(a) and resulting prejudice have been found where the court understates the *maximum* aggregate penalty. See, e.g., *People v. Bahrs*, 2013 IL App (4th) 110903, ¶ 50. Similar to *Haynes*, the court in this case clearly admonished defendant of the maximum range of sentences for the most serious charge, armed robbery, and so substantially complied with Rule 401(a).

¶ 126 Further, precedent is clear and well-established that no prejudice arises from any failure to advise a defendant who wishes to represent himself of the minimum sentence he might receive where sentence he actually received is below maximum sentence of which he has been advised. *People v. Adams*, 255 Ill. App. 3d 95, 97 (1993). Defendant in this case was sentenced to a term below the maximum sentence of which he was admonished. Thus, the trial court substantially complied with Rule 401(a), and defendant suffered no prejudice.

¶ 127 Even assuming for the sake of argument that the admonishment regarding the nature of the charge or the sentencing range was somehow insufficient, there is no evidence to suggest that defendant was prejudiced and would have acted any differently had the court strictly complied with Rule 401(a) on the date it granted defendant's request to proceed *pro se*. Defendant

indicated several times that he wanted to waive his right to counsel and proceed *pro se* and did so. See *People v. Ware*, 407 Ill. App. 3d 315, 348 (2011) (the trial court substantially complied with Rule 401(a) where there was "absolutely no indication in the record that, had defendant been fully admonished" in a later proceeding, he would have acted any differently because he had been admonished a number of times previously "and those admonitions did not change [his] decision to repeatedly reject his appointed counsel").

¶ 128 Here, however, we hold that the court did comply with Rule 401(a) and sufficiently admonished defendant of the nature of the charges against him and the applicable sentencing range, and thus we find no error. Therefore, we hold that defendant's argument is not subject to plain error review, as there was no error.

¶ 129 CONCLUSION

¶ 130 Defendant has not shown plain error in the trial court's admission of the expert testimony of the 50% probability of inclusion for the Y-STR DNA evidence and that defendant was included within this 50% of the population and could not be excluded.

¶ 131 Defendant also has not shown plain error in the court's admonishment regarding defendant's waiver of his right to counsel, as the court's admonishment here substantially complied with Supreme Court Rule 401(a) and the record shows defendant's waiver of his right to counsel was knowing and voluntary.

¶ 132 Affirmed.

¶ 133 JUSTICE HYMAN, dissenting.

¶ 134 I agree with my colleagues that the trial court erred in admitting the DNA evidence, as it did not even pass the most basic evidentiary test: relevance. But, I disagree with the majority's

conclusion that this error did not meet the plain error test because I believe the error was clear and obvious, and the evidence presented at trial was closely balanced.

¶ 135 To meet the plain error standard, a defendant has the burden to show that a "clear and obvious error" occurred, and either (1) the evidence is so closely balanced that the error alone threatens to sway the scales of justice against defendant, regardless of the seriousness of the error, or (2) the error is so egregious that it affects the trial's fairness and challenges the integrity of the judicial process, regardless of the closeness of the evidence. *People v. Thompson*, 238 Ill. 2d 598, 613 (2010). As to the first prong, the majority discounts the error by saying that it was not "serious," (*supra* ¶ 1) but under the closely balanced test, the error's seriousness does not matter. As to the second prong, I agree with the majority.

¶ 136 While there is unanimity among us that admission of the DNA evidence constituted error, the issue then turns to whether a clear and obvious error exists and the majority says no. The majority criticizes the oft-discussed "CSI effect," after the popular crime-scene investigative television series. The CSI shows and the occasional high-profile news report of a years' old conviction being reversed based on DNA evidence has an impact on the public's perception of DNA evidence. Generally, the public perceives the results of DNA evidence as conclusive when actually, the results only indicate that the defendant could not be eliminated as a suspect. The problem adversely affects both the defense and prosecution. The defense worries the jury will place too much emphasis on DNA, which can easily be misunderstood, manipulated, and misrepresented; the prosecution worries that without scientific evidence, the jury will be unwilling to convict. See Tamara F. Lawson, *Before the Verdict and Beyond the Verdict: The CSI Infection Within Modern Criminal Jury Trials*, 41 Loy. U. Chi. L.J. 119 (2009); Jonathan J. Koehler, *Linguistic Confusion in Court: Evidence from the Forensic Sciences*, 21 J.L. & Pol'y



515 (2013) (confusion in understanding DNA evidence has been documented and is relatively common).

¶ 137 Experts disagree on whether the "CSI Effect" exists. But even without the influence of popular culture, juries rely on DNA evidence because they are encouraged to do so. DNA evidence possesses an aura of infallibility and can potentially impress on the jury that the case against the defendant appears more compelling and more potent than other evidence and, therefore, the potential for a wrongful conviction increases. See Kimberly Cogdell Boies, *Misuse of DNA Evidence is Not Always a "Harmless Error": DNA Evidence, Prosecutorial Misconduct, and Wrongful Conviction*, 17 Tex. Wesleyan L. Rev. 403, 405 (2011) ("Given the widespread belief in the reliability of DNA evidence, prosecutors must be held to the highest standard, when DNA evidence is involved.").

¶ 138 The State certainly encouraged the jury to rely on the DNA evidence; the State used the DNA evidence again and again to bolster its case. Indeed, the State's case needed bolstering; otherwise, the evidence consists of Pike's mere presence in the vicinity of the Creator home and two guns found in the snow (neither of which were linked by any other evidence to Pike), along with an overly suggestive identification. Of the State's eight witnesses, three of them testified exclusively about the DNA evidence. During closing argument, the State referenced the DNA evidence no fewer than seven times. The importance of the DNA evidence to the State's case supports the conclusion that the error was obvious.

¶ 139 But we need not determine whether the scientific or forensic nature of the inadmissible evidence made it more or less likely that the jury would convict. The evidence was not even *relevant*, as the majority correctly points out. See Ill. R. Evid. 401 (relevant evidence has tendency to make fact more or less probable); R. 402 (eff. Jan. 1, 2011) (irrelevant evidence

inadmissible); *People v. Dabbs*, 239 Ill. 2d 277, 289 (2010) (relevance is "threshold requirement" that must be met by every piece of evidence). Regardless of whether the evidence was forensic or completely nontechnical, its inadmissibility is clear.

¶ 140 Next, we must determine whether the case is so closely balanced that the erroneous admission of the DNA evidence could have swayed the scales of justice against Pike. The majority concludes that the evidence was not closely balanced, finding the eyewitness testimony sufficient to support the conviction. But sufficiency is a "separate question" from whether the evidence is closely balanced. *People v. Piatowski*, 225 Ill. 2d 551, 566 (2007) (finding evidence closely balanced so as to meet plain error test, even though eyewitness testimony sufficient to convict). The fact that a reasonable juror could convict does not render the State's evidence stronger than it was; the evidence could be closely balanced while still being sufficient to find Pike guilty.

¶ 141 Without the DNA evidence, the State's case boils down to two points: Pike's proximity to the Creator house and the guns in the snow, and the Creators eyewitness identifications. Both the judicial and executive branches of Illinois have recognized the potential of eyewitness testimony to inculcate the wrong person. See George H. Ryan, Report of the Governor's Commission on Capital Punishment 127-28 (Apr. 15, 2002); *People v. Tisdell*, 338 Ill. App. 3d 465, 467-68 (2003). Courts throughout the country have reached similar conclusions. See *People v. Starks*, 2014 IL App (1st) 121169, ¶¶ 85-90 (Hyman, P.J., specially concurring, joined by Pucinski, J.) (listing other state and federal courts that have noted unreliability of eyewitness identifications). Our pattern jury instructions deal with this problem by instructing jurors to consider, among other things, "[t]he opportunity the witness had to view the offender at the time of the offense," "[t]he witness's degree of attention at the time of the offense," and "the witness's

earlier description of the offender." Illinois Pattern Jury Instructions, Criminal, No. 3.15 (approved Oct. 17, 2014).

¶ 142 The same considerations addressed by the instruction apply to Willie and Geraldine. Neither of them had ever met defendant. It was late on a December evening, their home's porch lights and interior lights were off, and any illumination came from Christmas lights inside their house and exterior lights from the church across the street. Willie saw the man he identified as defendant charging at him with a handgun just as two armed men came up behind him and pushed guns into Willie's back. And Geraldine "somewhat" viewed the intruder's face through a glass panel while she dialing 911 with one hand and holding the door closed with the other. Both Willie and Geraldine experienced a terrifying, stressful ordeal. Unsurprisingly, neither Willie nor Geraldine were able to provide police with a detailed description of the suspects, listing all three men as young, black, with average height and weight, wearing dark clothing. To say that defendant "fit the description" is to say nothing at all.

¶ 143 Further, Willie's and Geraldine's identifications of Pike—through no fault of their own—were even less reliable than the average eyewitness identification, as the police conducted a "showup" rather than a lineup. Our Illinois Supreme Court, and this court, have stated that this form of identification—where witnesses are presented with a suspect alone, rather than one suspect in a group of nonsuspects—may be unduly suggestive. *People v. Blumenshine*, 42 Ill. 2d 508, 512 (1969) (show-ups carry "a dangerous degree of improper suggestion"); *People v. Murdock*, 259 Ill. App. 3d 1014, 1021-22 (1994).

¶ 144 Pike's proximity to the guns, without the DNA evidence, had little probative value. While the jury could infer that these two guns were two of the guns used in the crime, and that defendant's presence near them meant that defendant possessed those guns, a reasonable juror

could equally infer (1) the guns were those used in the robbery, but defendant was only coincidentally near them when he was apprehended, or (2) defendant did indeed possess those guns and left them in the snow, but the guns could not be conclusively linked to the robbery at the Creator house, or (3) neither the defendant nor the guns had any connection to the robbery. The connection between the guns and the robbery was tenuous at best. Willie Creator testified that the perpetrators had two handguns and a shotgun, and later testified that he recognized both weapons presented at trial. But there was no evidence that the weapons found were distinctive in any way, nor did Willie describe the weapons used by size, color, or model that could help a jury conclude that the weapons found in the snow were indeed those used against Willie. It is completely understandable that Willie would have been unable to provide this information to police, given the fear he was under during the incident. But it underlines the weakness of the State's case that the connections among Pike, the guns, and the robbery needed to be supported by such paltry identification testimony.

¶ 145           The presence of two guns in the snow raises an additional question: three men were involved in the robbery, and each was armed. Willie and Geraldine testified that the other two perpetrators fled first while Pike struggled to open the front door. If Pike was responsible for ditching the two guns in the snow, when did he acquire one of the other perpetrator's guns in time to dispose of it, since the other perpetrators had already fled by the time Pike ran from the house? If the guns found in the snow were, in fact, those used in the robbery, it is more likely that they were both disposed of by the perpetrators who fled together—not by the individual at the front door, who, under the State's theory, was Pike.

¶ 146           Finally, Pike's proximity to the Creator house when he was apprehended does not much help the State's case. According to the police testimony, Pike was seen a block and a half away

from the Creator house when the police approached him. But police also testified that Pike was spotted running northbound on South Parnell Avenue—not running away from the Creator house, but *towards* the scene. If Pike was fleeing a failed robbery, he was doing a spectacularly bad job of it.

¶ 147           Given the weakness of the State's case, I would conclude that the evidence was closely balanced and find plain error. See *Piatkowski*, 225 Ill. 2d at 567-70 (finding plain error where only evidence against defendant was weak eyewitness identification). We cannot be certain that the DNA evidence swayed the scales of justice against Pike, but "[w]e deal with probabilities, not certainties; we deal with risks and threats to the defendant's rights. When there is error in a close case, we choose to err on the side of fairness, so as not to convict an innocent person." *People v. Herron*, 215 Ill. 2d 167, 193 (2005).

¶ 148           None of this is to say that we should not have faith in our jury system, or in jurors' abilities to sift through and properly weigh evidence (even complicated scientific evidence). But the premise of the plain error doctrine—indeed, all appellate review—relies on the notion that faith in jurors is not enough to ensure public confidence in the outcomes of criminal trials. The cherished constitutional principle of a just and fair trial depends on the judiciary for its vitality and strength. When an error is clear and obvious, and the evidence closely balanced, it is the courts that must act to protect the rights of defendants.

¶ 149           Accordingly, I would reverse Pike's convictions and remand the case for a new trial.