

**BEYOND THE KEN?
TESTING JURORS' UNDERSTANDING OF
EYEWITNESS RELIABILITY EVIDENCE**

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ABSTRACT: Over the past thirty years, researchers have made substantial strides in understanding the workings and limitations of human memory. However, the application of these scientific advances to eyewitness identifications in the criminal justice system, though increasing, has been limited. Trial judges in most jurisdictions exercise their discretionary powers to exclude expert testimony about the reliability of eyewitness identifications. The most common rationale for excluding eyewitness identification expert witnesses is that their findings are not "beyond the ken" of the average juror.

To empirically test this "beyond the ken" rationale, an independent survey of potential jurors in the District of Columbia was designed to investigate whether jurors understand, as a matter of common sense, what makes some eyewitness identifications more or less reliable than others. The survey results, presented in this article, demonstrate that jurors misunderstand how memory generally works and how particular factors, such as the effects of stress or the use of a weapon, affect the accuracy of eyewitness testimony. In light of these findings, judicial practices of excluding expert testimony on the reliability of eyewitness identifications should be reexamined. Wrongful convictions, of which eyewitness identification error is the leading cause, will inevitably continue to result unless jurors can be better educated about these scientific findings.

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Over 75,000 people a year become criminal defendants on the basis of eyewitness identifications.¹ Court officers, law enforcement, and jurors are repeatedly called upon to assess the accuracy of witnesses' claims that they remember having seen the accused committing a criminal offense or other significant details about a crime. Yet, without prior training in assessing eyewitness reliability—or, in the case of jurors, the chance to learn how to make this assessment in the courtroom—these key actors in the criminal justice system have only their common sense intuitions as guides when facing a host of difficult questions about witnesses' claims. These questions include the following: Is an eyewitness more reliable if the witness expresses absolute confidence in her identification in trial testimony? Do people remember faces better or worse when they are under stress? When do people's memories begin to fade? Does it matter if a witness is of a different race from the perpetrator? What is the significance of an eyewitness learning new information about the alleged culprit after the event? Is one kind of police identification procedure better than another?

In the late 1970s pioneering psychologists created a new field of social science research dedicated to the study of such questions about eyewitness reliability. They and their successors built upon and extended core research regarding memory and visual perception that dates from the foundation of psychology as a science in the early twentieth century. After thirty years of scientific investigation, the field has found empirical answers to the above questions and many others.

Such discoveries frequently are relevant to criminal trials, for example:

- Accuracy-Confidence Correlation: an eyewitness' stated confidence is not a good predictor of identification accuracy;
- Stress Effects: highly stressful situations may make an experience seem especially vivid, but such stressors can reduce the ability to recall details about a person's face;
- Time Estimates: eyewitnesses typically overestimate how long an event took to unfold;
- Cross-race Bias: eyewitnesses are more accurate at identifying members of their own race than members of other races;
- Postevent Information: eyewitness testimony about an event often reflects not only what a person actually saw, but also information learned later on that unconsciously becomes part of the memory;
- Presentation Format: witnesses are more likely to misidentify someone when they view all the suspects simultaneously in a group rather than one at a time, in sequence.²

1. Press Release, Nat'l Sci. Found., False Identification: New Research Seeks to Inoculate Eyewitnesses Against Errors (Jan. 3, 1997), available at <http://www.nsf.gov/pubs/stis1997/pr971/pr971.txt>.

2. Several excellent resources are available that introduce this research to nonexperts in more detail. See BRIAN L. CUTLER, EYEWITNESS TESTIMONY: CHALLENGING YOUR OPPONENT'S WITNESS (2002); BRIAN L. CUTLER & STEVEN D. PENROD, MISTAKEN IDENTIFICATION: THE EYEWITNESS, PSYCHOLOGY AND THE LAW (1995); ELIZABETH F. LOFTUS, EYEWITNESS TESTIMONY (1996). The American Psychology-Law Society has assembled a comprehensive research bibliography at <http://www.ap-ls.org/links/publishingEyewitness.html>.

Eyewitness reliability research uses methods accepted in all sciences. Researchers form hypotheses based on prevailing theories of human memory and cognition, and these hypotheses are tested—sometimes by archival studies (such as of police records) or surveys but mostly by controlled experiments. Data from the experiments are analyzed to see if the results could be explained by chance. Results are peer reviewed before publishing, and it often takes several confirmatory studies of the same hypothesis for a research result to become generally accepted in the scientific community.

For example, in 2004 researchers at Yale University School of Medicine published the results of an experiment on the effects of high and low levels of stress on eyewitness memory.³ The study tested the popular assumption that people are better at remembering events that are stressful and raise a physiological alarm response.⁴ The scientists hypothesized, based on anecdotal evidence from returning veterans, that this theory may not be true for high stress situations.⁵ Working with commanders in charge of armed forces prisoner-of-war training, researchers designed an experiment where over 500 healthy military personnel underwent low stress interrogation exercises (using verbal pressure over a forty-minute period) and high stress interrogation (including both verbal and physical confrontation over the same period). Twenty-four hours later, personnel from both groups were asked if their interrogators were present in a photo array of sixteen pictures presented simultaneously, a “live” lineup of fifteen people, or a sequence of sixteen photos shown one at time.⁶ If participants identified an individual as their interrogator, they were asked their level of confidence in that determination.⁷ The experimental results show that almost three-fourths of the high stress group and a fourth of the low-stress group could not identify their interrogators, that a sequential identification procedure produced the most accurate results, and that subjects’ stated confidence levels were not reliable indicators of accuracy. This large, realistic study has already spurred further reviews of the negative effects of stress on eyewitness reliability, a finding about which there appears to be general consensus emerging among experts.⁸

In fact, relative to other scientific research that enters courtrooms, the lack of controversy in the field of eyewitness identification is remarkable. A 2001 survey of established eyewitness researchers found near unanimity that the above-mentioned findings and many others were reliable and established in scientific literature.⁹ If eyewitness experts are thought of as researchers who offer fact-finders information that helps educate their thinking about the reliability of a

3. Charles A. Morgan, III et al., *Accuracy of Eyewitness Memory for Persons Encountered During Exposure to Highly Intense Stress*, 27 INT’L J.L. & PSYCHIATRY 265, 265–67 (2004).

4. *Id.* at 265.

5. *Id.*

6. *Id.* at 269–70.

7. *Id.*

8. See Kenneth A. Deffenbacher et al., *A Meta-Analytic Review of the Effects of High Stress on Eyewitness Memory*, 28 LAW & HUM. BEHAV. 687, 699 (2004).

9. Saul Kassin et al., *On the “General Acceptance” of Eyewitness Testimony Research: A New Survey of the Experts*, 56 AM. PSYCHOLOGIST 405, 413–14 (2001).

witness' testimony, experts may be analogized to other psychological and mental health experts whose testimony is routinely heard by jurors throughout the country. However, the level of consensus and the quantity of research in the eyewitness identification arena (well over 2,000 studies have been done)¹⁰ vastly exceeds the research conducted with respect to most other mental health evidence. If one analogizes further and tries to compare the empirical bases and expert consensus in eyewitness research with fields sometimes considered to be "junk science," like local narcotics trafficking pattern experts who are admitted in most courtrooms, the reliability of eyewitness experts is even more obvious.

Of course, there are limits to what eyewitness research can do. Typically, eyewitness experts are prepared to testify in court about the extent to which the research literature explains how a particular factor, considered alone or in combination with others, likely would affect the reliability of an identification.¹¹ For example, all other things being equal, a victim's identification of an assailant is likely to be less reliable when a weapon was used in the commission of the crime or when the victim views a simultaneous lineup (compared to a crime without a weapon or a sequential lineup showing suspects one-by-one). Experts do not comment on the reliability of a particular witness' memory.

In short, eyewitness reliability research today is an established body of knowledge. It uses well-accepted methodologies. It is part of the research agenda at major universities throughout the world. It is a subject of thousands of peer-reviewed publications. It has existed for decades. There is nearly unanimous consensus among researchers about the field's core findings, and the conclusions of eyewitness reliability research provide an empirical basis for deciding some of the most difficult and pressing questions in this nation's courts.

I. THE TIMELINESS OF RELIABILITY RESEARCH

Given the well-established status of eyewitness research, one would expect such findings to have made their way into courtrooms around the country. Without access to research findings, jurors, judges, and attorneys have only their common sense intuitions with which to gauge an eyewitness who pauses on the stand, points, and says "that's him." Because such in-court identifications are often the most emotionally moving evidence heard in criminal trials, common sense intuitions usually favor crediting the eyewitness' word. Yet, common sense is often wrong.¹²

10. CUTLER & PENROD, *supra* note 2, at 68.

11. *Id.* at 19.

12. The experience of Jennifer Thompson, a twenty-two-year-old college student who was raped in 1984 in her own home, provides one example. See Jennifer Thompson, Op-Ed., *I Was Certain, But I Was Wrong*, N.Y. TIMES, June 18, 2000, § 4, at 15. She spoke at length with her assailant. She took every opportunity to study his face as they moved by several locations in the house where lights were on. She studied the man's face, his hairline, his body. A few days after the attack she positively identified a suspect from a photo array. Investigators arrested the individual, and she again picked him out of a live lineup. At both identifications and at trial she stated with complete certainty that the suspect, named Ronald Cotton, was the man who raped her. She was wrong. Eleven years after being incarcerated, Ronald Cotton was exonerated by DNA evidence that also inculpated a man with similar

Prompted by DNA exonerations, in the last five years, executive and legislative branches at all levels of government have begun to reform eyewitness identification procedures used by law enforcement officials so as to minimize the risk of altering or biasing eyewitness' memories.

A major catalyst was a 1999 guide to eyewitness evidence published by the National Institute of Justice¹³ that was followed by a training manual in 2003.¹⁴ This guide, drafted by a multidisciplinary panel of eyewitness experts and law enforcement members, was given to every state and federal agency in the country. It presents best-practice recommendations for how to gather identification evidence (such as via a photo array, a lineup, or interviews) in a manner that is nearly as rigorous as rules governing the collection and handling of physical evidence.

Numerous police agencies have adopted new eyewitness procedures in Boston, Minneapolis, and other cities.¹⁵ In New Jersey and North Carolina, procedural reforms have been undertaken by the state-level executive branch. Illinois, Virginia, and thirteen other states have completed or pending legislative efforts to mandate state-level reform.¹⁶

The judicial system, too, has become somewhat more receptive to expert testimony and the use of social science in trials. The Federal Rules of Evidence (FRE) were adopted in 1975, immediately preceding the explosion of research on eyewitness reliability. They, and parallel state rules of evidence,¹⁷ directly address the admissibility of scientific research by qualified experts in three provisions. Most importantly, FRE 702 and similar rules provide that:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as

features named Bobby Poole. Poole pled guilty to the crime in 1995. Since that time, Jennifer Thompson has become an outspoken voice for scrutinizing eyewitness identifications with all possible care. Still, despite the evidence and her acceptance of the fact that he was not the one who raped her, Jennifer Thompson's false memories are so real that when she pauses and thinks of her attacker she says she still sees Ronald Cotton. *Frontline: What Jennifer Saw* (PBS television broadcast Feb. 25, 1997). (transcript available at <http://www.pbs.org/wgbh/pages/frontline/shows/dna/interviews/thompson.html>).

13. NATIONAL INSTITUTE OF JUSTICE, EYEWITNESS EVIDENCE: A GUIDE FOR LAW ENFORCEMENT (1999).

14. NATIONAL INSTITUTE OF JUSTICE, EYEWITNESS EVIDENCE: A TRAINER'S MANUAL FOR LAW ENFORCEMENT (2003).

15. Scott Ehlers, *Eyewitness Identification: State Law Reform*, THE CHAMPION, Apr. 2005, at 34.

16. The extent of reform being considered in these jurisdictions varies widely. Some follow recommendations from scientists laid out in the American Psychology-Law Society (APLS) recommendations (a division of the American Psychological Association), others use modifications of the APLS recommendations by legal organizations such as the American Bar Association or Department of Justice guidelines.

17. Today, all but two states have adopted rules of evidence identical or substantially similar to FRE 702. For a survey of state court rules of scientific admissibility through December 15, 1997, see Heather G. Hamilton, Note, *The Movement from Frye to Daubert: Where Do the States Stand?*, 38 JURIMETRICS J. 201, 210-13 (1998). Since Ms. Hamilton's note was published, Connecticut and Pennsylvania have adopted comparable language. See CONN. CODE EVID. § 7-2 and PA. R. EVID. 702. Only New York and Massachusetts have substantially different rules.

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an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.¹⁸

Other key rules include Rule 704 (allowing expert testimony even when it touches on an ultimate issue to be decided by the fact finder) and Rule 403 (allowing judges to reject any testimony when its probity is “substantially outweighed” by unfair prejudice or confusion of the issues).

More than mere codifications of existing practices and case law, FRE 702, 704, and 403 were liberalizing reforms intended to encourage the use of expert witnesses. As expected, overall use of expert witnesses has greatly increased under the rules.¹⁹ The Supreme Court’s 1995 *Daubert* ruling has opened the door even wider to expert testimony by letting judges apply evidentiary rules even when a field lacks general consensus among experts. Precisely how these rules of evidence have been applied to judicial decisions about eyewitness experts is further explained below. However, the broad trend to increase the use of scientific evidence in courts bears emphasis—such evidence is to be admitted if it is scientifically sound, helpful to laypersons, and not substantially outweighed by any prejudice or confusion.

Another legal trend supports admission of expert testimony regarding eyewitness identification. Over the last thirty years, under the due process clause and the Sixth Amendment, courts around the country have reaffirmed and strengthened the right of an accused to present a complete and zealous defense, including presentation of expert testimony. In *Chambers v. Mississippi*,²⁰ the Supreme Court held that a defendant’s right to offer witness testimony on his behalf is one of the most fundamental constitutional rights.²¹ Building upon this foundation, the Supreme Court, in cases like *Ake v. Oklahoma*²² and *Crane v.*

18. FED. R. EVID. 702. The Advisory Committee characterizes the ability to “assist the trier of fact” as a question whether the “untrained layman would be qualified to determine intelligently and to the best possible degree the particular issue” FED. R. EVID. 702 advisory committee’s note. Prior to amendment in 2000, the rule stated: “If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise.” FED. R. EVID. 702 (1999). The amendment was not intended to make any substantive change to the rule as interpreted by the federal courts. See FED. R. EVID. 702 advisory committee’s note.

19. See, e.g., FED. R. EVID. 702 advisory committee’s note on proposed revision stating: This revision is intended to limit the use, but increase the utility and reliability, of party-initiated opinion testimony bearing on scientific and technical issues. The use of such testimony has greatly increased since enactment of the Federal Rules of Evidence. This result was intended by the drafters of the rule, who were responding to concerns that the restraints previously imposed on expert testimony were artificial and an impediment to the illumination of technical issues in dispute.

Id. (citations omitted).

20. 410 U.S. 284 (1973).

21. *Id.* at 302.

22. 470 U.S. 68 (1985).

Kentucky,²³ has emphasized that the adversary system depends on defendants' ability to contest prosecution theories with expert testimony and to challenge the circumstances under which government evidence was gathered. *Ake* held that state funding of expert psychiatric testimony for defendants was constitutionally required whenever sanity is a significant factor at trial because lay jurors would run the risk of an inaccurate weighing of the facts without expert advice.²⁴ *Crane* held that where an inculpatory confession was nearly the only evidence against the defendant, testimony must be allowed regarding details of the physical and psychological environment present during a confession because these go to the reliability and credibility of the evidence.²⁵ Such cases on the right to present defense witnesses dovetail neatly with the recent *Apprendi v. New Jersey*²⁶ decision that emphasizes the unique role of jurors, rather than judges, as the ultimate fact finders. The overall message is that due process requires that jurors be allowed to consider and resolve contested factual matters, and—if those factual matters involve questions in which expert testimony can be helpful—to hear expert testimony when offered by an accused in a criminal trial.

The powerful stories of wrongful convictions based on flawed eyewitness evidence, the efforts of other government branches and other organizations to reform eyewitness procedures, and broader judicial trends to liberalize evidence rules all combine to make the introduction of eyewitness research into the courts especially timely. Indeed, because these trends all point in the same direction, toward introduction of eyewitness science into the courtroom, one would expect that an eyewitness expert "revolution" would have taken place over the past thirty years. Such an expectation, however, would be misguided.

II. JUDICIAL RESISTANCE TO RELIABILITY RESEARCH

All but a few courts have chosen to ignore clear evidence that denial of defense requests to present expert testimony about eyewitness reliability leads to wrongful convictions. A poignant example of this phenomenon is the Maryland case of Kirk Bloodsworth,²⁷ the namesake of a section of Congress's Innocence Protection Act that provides for postconviction DNA testing.²⁸ Mr. Bloodsworth was twice convicted of the murder and rape of a young girl, chiefly on the basis of one young eyewitness' composite sketch and two eyewitnesses' lineup and in-court identifications. At trial, counsel for Bloodsworth requested that jurors be allowed to hear the findings of an eyewitness expert. Defense counsel's motion

23. 476 U.S. 683 (1986).

24. *Ake*, 470 U.S. at 82.

25. *Crane*, 476 U.S. at 691.

26. 530 U.S. 466 (2000).

27. *Bloodsworth v. State*, 512 A.2d 1056 (Md. 1986).

28. Justice for All Act of 2004, 42 U.S.C. § 14136(e) (2004).

was denied by the trial court on grounds that an expert would not be helpful,²⁹ and Bloodsworth then spent nine years in prison before DNA evidence exonerated him.³⁰

Such resistance is all the more surprising because long before DNA exoneration could prove what is now known—that mistaken eyewitness identifications are the leading cause of wrongful convictions—courts recognized that eyewitness evidence is not as reliable as many jurors think it is. The Supreme Court, first in the 1927 case of *Sacco and Vanzetti*³¹ and again in the 1967 case of *United States v. Wade*,³² emphasized that eyewitness identification testimony can be deeply problematic if not carefully monitored.³³

Despite the judiciary's general awareness that eyewitness identifications are problematic, most courts are hostile to the introduction of eyewitness social science in criminal trials. Perhaps this has something to do with the judiciary's own limited understanding of the social science research. One of the largest studies to date on nonexperts' knowledge about eyewitness reliability has shown that individual judges' knowledge of the factors indicating reliable eyewitness claims is flawed.³⁴ In that survey more than two-thirds of respondent judges gave answers contrary to established research in three of the six questions asked about basic issues such as the link between eyewitness confidence and accuracy.³⁵ It may be the very familiarity of judges with a few of the problems with eyewitness testimony that leads many to wrongly assume they need not learn more and, more importantly, that jurors need not learn more either. Such assumptions result in courts around the country refusing to allow criminal defendants to provide jurors with information that could help place eyewitness testimony into a more informed context.

29. *Bloodsworth*, 512 A.2d at 1063:

I am concerned that the possibility of admitting the evidence would tend to confuse or mislead the jury.

This is not just a matter of usurping the province of the jury, although it is in my judgment most certainly that, it is also that such testimony is of little value in aiding the jury in this case. I'm not persuaded that the testimony will be helpful to the jury in understanding the evidence in this case.

30. Shockingly, the case affirming Mr. Bloodsworth's conviction remains controlling law on the admissibility of eyewitness expert testimony in Maryland and is an egregious example of the widespread judicial resistance to this particular sort of expert testimony. Further details about Mr. Bloodsworth's wrongful conviction may be found in TIM JUNKIN, *BLOODSWORTH: THE TRUE STORY OF THE FIRST DEATH ROW INMATE EXONERATED BY DNA* (2004).

31. *Sacco v. Massachusetts*, 275 U.S. 574 (1927).

32. 388 U.S. 218 (1967).

33. Justice Brennan, writing for the majority, quoted Justice Frankfurter:

The vagaries of eye-witness identification are well known: the annals of criminal law are rife with instances of mistaken identification. Mr. Justice Frankfurter once said: "What is the worth of identification testimony even when uncontradicted? The identification of strangers is proverbially untrustworthy. The hazards of such testimony are established by a formidable number of instances in the records of English and American trials.

Id. at 228 (citations omitted).

34. Richard A. Wise & Martin A. Safer, *A Survey of Judges' Knowledge and Beliefs About Eyewitness Testimony*, 40 CT. REV. 6 (2003).

35. *Id.* at 8.

A. Current Case Law

Appellate courts' reluctance to admit eyewitness research usually shows itself in the practice of routinely upholding lower court denials of defendants' motions to allow expert researchers to testify.³⁶ In reaching their decisions, appellate courts have used four main approaches.³⁷

1. Pure Discretion Regarding Experts

The majority rule in approximately twenty-eight state and federal appellate courts is one of pure deference: appellate courts simply say they will defer to trial courts' discretionary decisions.³⁸ The decisions of these majority rule courts offer no standing rules to lower courts as to what fact patterns require eyewitness experts to be admitted. A few such courts, without more, require trial judges to examine the unique facts of the case when eyewitness identifications are key to

36. Occasionally there are skirmishes to get jury instructions about factors relevant to eyewitness reliability; however, very few of these decisions have received appellate review. *But see* State v. Cromedy, 727 A.2d 457, 458–49 (N.J. 1999) (dealing with cross-racial identification jury instruction).

37. As of fall 2005, approximately ten appellate courts, in addition to the United States Supreme Court, had not given separate consideration to eyewitness identification experts and relied on rulings concerning expert witnesses more generally. There have been no rulings by the highest appellate courts in the following states: Hawaii; Michigan; Mississippi; New Hampshire; New Mexico; North Carolina (but one recent appellate case used a pure discretionary standard, State v. Cole, 556 S.E.2d 666, 670 (N.C. Ct. App. 2001)); Oklahoma (but eyewitness experts have been admitted by a lower appellate court, Bristol v. State, 764 P.2d 887, 890 (Okla. Crim. App. 1988)); Oregon (but admission appears to be discretionary, State v. Fox, 779 P.2d 197, 197–98 (Or. Ct. App. 1989)); Virginia (but appears to be admitted in narrow circumstances, Currie v. Commonwealth, 515 S.E.2d 335, 338–39 (Va. Ct. App. 1999)); Wisconsin (but appears not to be admitted except in narrow circumstances, State v. Sullivan, No. 02-2775-CR, 2003 WL 22091937, at *3 (Wis. Ct. App. Sept. 3, 2003).

38. As of fall 2005, approximately five federal circuits and twenty-three states and the District of Columbia held that the admissibility of eyewitness identification experts depends on the exercise of trial court discretion without giving any general rules as to what facts might constitute an abuse of discretion: United States v. Stokes, 388 F.3d 21 (1st Cir. 2004), *rev'd on other grounds*, 125 S. Ct. 1678 (2005); United States v. Welch, 368 F.3d 970 (7th Cir. 2004), *rev'd on other grounds*, 125 S. Ct. 1063 (2005); Hager v. United States, 856 A.2d 1143 1147–48 (D.C. 2004); United States v. Smith, 156 F.3d 1046, 1053 (10th Cir. 1998); United States v. Jackson, 50 F.3d 1335, 1340 (5th Cir. 1995); United States v. Rincon, 28 F.3d 921, 923 (9th Cir. 1994); Parker v. State, 968 S.W.2d 592, 596–97 (Ark. 1998) (further narrowing Utley v. State, 826 S.W.2d 268 (Ark. 1992)); Campbell v. People, 814 P.2d 1, 7 (Colo. 1991) (en banc); State v. McClendon, 730 A.2d 1107, 1114 (Conn. 1999); Garden v. State, 815 A.2d 327 (Del. 2003), *rev'd on other grounds*, Garden v. State, 844 A.2d 311 (Del. 2004); McMullen v. State, 714 So. 2d 368, 372 (Fla. 1998); Johnson v. State, 526 S.E.2d 549, 552–53 (Ga. 2000); State v. Alger, 764 P.2d 119, 127–28 (Idaho Ct. App. 1988) (distinguishing the only state supreme court ruling on the subject that occurred prior to a change in evidence rules, State v. Hoisington, 657 P.2d 17 (Idaho 1983)); People v. Enis, 743 N.E.2d 1 (Ill. 2000); State v. Schutz, 579 N.W.2d 317 (Iowa 1998); State v. Kelly, 752 A.2d 188, 191 (Me. 2000); Bloodsworth v. State, 512 A.2d 1056, 1064 (Md. 1986); Commonwealth v. Zimmerman, 804 N.E.2d 336, 340 (Mass. 2004); State v. Miles, 585 N.W.2d 368, 371 (Minn. 1998); State v. Long, 575 A.2d 435, 463 (N.J. 1990); People v. Lee, 750 N.E.2d 63, 65 (N.Y. 2001); State v. Fontaine, 382 N.W.2d 374, 377 (N.D. 1986); State v. Werner, 851 A.2d 1093, 1100 (R.I. 2004); State v. McCord, 505 N.W.2d 388, 391 (S.D. 1993); Weatherred v. State, 15 S.W.3d 540, 543 (Tex. Crim. App. 2000); State v. Percy, 595 A.2d 248, 252–53 (Vt. 1990); State v. Cheatam, 81 P.3d 830, 840 (Wash. 2003); State v. Taylor, 490 S.E.2d 748, 754 (W. Va. 1997); Engberg v. Meyer, 820 P.2d 70, 80 (Wy. 1991).

the case—a kind of minimal rule that discretion should be exercised on the facts, but one free of any guidance as to how facts should be weighed.³⁹ This “pure discretionary” standard is typically announced by appellate courts with little explanation and often seems to be hollow. For instance, some jurisdictions have said they apply a discretionary standard while at the same time categorically stating that juries do not need expert testimony.⁴⁰

With such deferential standards of review, trial court decisions in majority rule jurisdictions are *de facto* final. Review for “abuse of discretion” is vacuous. Since most cases coming up on appeal are denials of defense motions to admit experts, most appellate case law in these “purely discretionary” jurisdictions simply recite trial-level rationales about why experts are excluded and so appear to discourage the admission of eyewitness reliability experts. The appearance that this expert testimony is generally inadmissible is enhanced by the practical barriers to appellate review of any trial court decisions permitting expert testimony. Because the prosecution cannot appeal from an acquittal, cannot generally raise an interlocutory challenge, and has no reason to raise such claims in an appeal from a conviction, a trial judge searching through appellate decisions on the subject will likely look in vain for decisions affirming a decision to admit expert testimony. This is not because such rulings never occur, but because such decisions never get challenged on appeal and published.

Against this majority rule stand state and federal jurisdictions that have circumscribed trial court discretion somewhat or completely.

2. *Limited Discretion to Deny Experts*

Of the twenty-two jurisdictions opposing the pure discretion approach, about eleven purport to require the admission of eyewitness identification experts in limited circumstances, generally where an identification by a stranger is uncorroborated and occurs many weeks after the initial incident.⁴¹ Early rulings in Arizona, California, and the Third Circuit started this so-called “modern trend” toward requiring the admission of eyewitness experts when the entire case turns

39. *United States v. Smith*, 156 F.3d 1046, 1053 (10th Cir. 1998); *Campbell v. People*, 814 P.2d 1, 8–9 (Colo. 1991) (en banc); *Johnson v. State*, 526 S.E.2d 549, 552–53 (Ga. 2000); *State v. Cheatam*, 81 P.3d 830, 842 (Wash. 2003).

40. *See, e.g., McMullen v. State*, 714 So. 2d 368, 371–72 (Fla. 1998) (upholding an earlier decision by that court that espoused a discretionary approach while saying a jury is never in need of an eyewitness expert’s advice).

41. One federal circuit and ten states have articulated some kind of fixed rules regarding what factual circumstances require the admission of eyewitness experts: *United States v. Mathis*, 264 F.3d 321, 340 (3d Cir. 2001); *Skamarocius v. State*, 731 P.2d 63, 67 (Alaska Ct. App. 1987); *State v. McCutcheon*, 781 P.2d 31, 34 (Ariz. 1989) (narrowing *State v. Chapple*, 660 P.2d 1208 (Ariz. 1983)); *People v. Jones*, 70 P.3d 359, 374 (Cal. 2003) (following *People v. McDonald*, 690 P.2d 709 (Cal. 1984)); *Cook v. State*, 734 N.E.2d 563, 570 (Ind. 2000); *Commonwealth v. Christie*, 98 S.W.3d 485, 490 (Ky. 2002); *State v. DuBray*, 77 P.3d 247, 255 (Mont. 2003); *White v. State*, 926 P.2d 291, 293 (Nev. 1996); *State v. Buell*, 489 N.E.2d 795, 803 (Ohio 1986); *State v. Frazier*, 592 S.E.2d 621, 623 (S.C. 2004) (following *State v. Whaley*, 406 S.E.2d 369 (S.C. 1991)); *State v. Maestas*, 63 P.3d 621, 626 (Utah 2002).

upon eyewitness evidence.⁴² However, the “modern trend” has only been followed by a few of the more recent appellate decisions. In fact, Arizona retreated from its broad language in 1989,⁴³ and only one state supreme court followed suit in the 1990s.⁴⁴

3. *Limited Discretion to Admit Experts*

A third approach, also in opposition to the pure discretion trend, makes the exclusion of eyewitness experts a default rule except in special circumstances. Approximately six courts have precedent where the denial of experts is required except in circumstances similar to those where admission is required in other minority jurisdictions, such as no corroboration and a significant passage of time between sighting and identification.⁴⁵ On those unique facts, admission is discretionary.

4. *Prohibition On Experts*

The fourth approach is not to allow eyewitness experts to testify under any circumstance. Until the 1980s, few appellate jurisdictions had given separate attention to whether eyewitness experts could be admitted to testify and a flat prohibition on such testimony was the norm among trial courts. Prohibition of eyewitness expert testimony was largely abandoned in the 1990s when a wave of almost two dozen of the highest state and federal appellate courts adopted the above-mentioned “pure discretion” standard deferring to trial courts.⁴⁶ However, five high courts, including the Eleventh Circuit, still have a rule of total exclusion.⁴⁷

In sum, very few jurisdictions encourage lower courts to provide jurors with eyewitness identification research when sought by criminal defendants. At best, a few jurisdictions require the admissibility of this evidence when its relevance and importance is indisputable. Most jurisdictions do not do even this much; the “pure discretionary” standard used by many courts operates to discourage judges from admitting eyewitness expert testimony, while other courts flatly prohibit the

42. *State v. Chapple*, 660 P.2d 1208, 1223–24 (Ariz. 1983); *People v. McDonald*, 690 P.2d 709, 723 (Cal. 1984), *superseded by* 738 P.2d 764 (1987); *United States v. Downing*, 753 F.2d 1224, 1241 (3d Cir. 1985).

43. *State v. McCutcheon*, 781 P.2d 31, 34 (Ariz. 1989).

44. *White v. State*, 926 P.2d 291 (Nev. 1996).

45. Three federal circuits and three states have indicated that eyewitness experts should be excluded except in special circumstances: *United States v. Martin*, 391 F.3d 949, 954 (8th Cir. 2004) (following *United States v. Kime*, 99 F.3d 870 (8th Cir. 1996)); *United States v. Bellamy*, 26 Fed. Appx. 250, 259 (4th Cir. 2002) (following *United States v. Harris*, 995 F.2d 532 (6th Cir. 1993)); *United States v. Lumpkin*, 192 F.3d 280, 289 (2d Cir. 1999); *Ex parte Williams*, 594 So. 2d 1225, 1227 (Ala. 1992); *State v. Chapman*, 436 So. 2d 451, 453 (La. 1983); *State v. Whitmill*, 780 S.W.2d 45, 47 (Mo. 1989).

46. *See* cited cases, *supra* note 38.

47. *United States v. Smith*, 122 F.3d 1355, 1357–59 (11th Cir. 1997); *State v. Gaines*, 926 P.2d 641, 649 (Kan. 1996); *State v. George*, 645 N.W.2d 777, 790 (Neb. 2002); *Commonwealth v. Simmons*, 662 A.2d 621, 631 (Pa. 1995); *State v. Coley*, 32 S.W.3d 831, 833–34 (Tenn. 2000).

use of such testimony altogether.⁴⁸ Although the appellate case law has arguably moved in the direction of admissibility over the past thirty years, the movement has been slow and the current standards have the effect of keeping this critical information away from jurors.

B. Rationales for Current Case Law

Why have courts moved so grudgingly in the area of eyewitness experts when the general trend in nearly all other scientific areas has been toward greater admissibility—particularly when evidence is offered by an accused in his own defense? Typically, appellate opinions discussing the admissibility of eyewitness expert testimony provide two reasons: (1) the reliability of the identification is not deemed a critical issue because of corroborating evidence; and (2) the proffered testimony does not pertain to a subject that courts believe is “beyond the ken” of the average juror and therefore “helpful” to the trier of fact.⁴⁹ Often courts rely on both rationales in explaining why it was permissible to keep the jury from learning about the eyewitness identification research.

1. The Corroborating Evidence Rationale

The first of these rationales—that expert testimony about reliability factors is unnecessary because the particular eyewitness identification at issue was not critical to the outcome or was sufficiently corroborated—is a fallacious standard for trial or appellate courts.

A primary problem with this argument is that judicial reliance on corroborating evidence seems to rest on a false premise—namely, that, where other corroborating evidence of guilt exists, defense testimony attacking the reliability of a government eyewitness is of such little importance as to be “irrelevant.” If that were true, the proffered eyewitness testimony itself should have been excluded as irrelevant. This obviously never happens because eyewitness testimony is always important evidence.⁵⁰

The opportunity to defend oneself before a jury against criminal charges is a bedrock foundation of our adversarial system. A regime where a trial judge decides whether a defense response to prosecution evidence is “important” enough to allow jurors to hear it resembles the Confrontation Clause regime recently condemned by the Supreme Court in *Crawford v. Washington*.⁵¹ In *Crawford*, the question was whether the Sixth Amendment would permit judges to apportion confrontation rights by first deciding whether prosecution evidence

48. Discretionary standards do not inherently work this way. But the combination of two factors lead to this result: (1) lack of guidance about how to exercise discretion; and (2) no finding of abuse in cases excluding experts.

49. See, e.g., *People v. Lee*, 750 N.E.2d 63, 66–67 (N.Y. 2001).

50. See *Kyles v. Whitley*, 514 U.S. 419, 446 (1995) (noting the clear importance of eyewitness testimony even in cases where substantial amounts of other evidence exists: “[t]he effective impeachment of one eyewitness can call for a new trial even though the attack does not extend to others, as we have said before.”).

51. 541 U.S. 36 (2004).

was “reliable” enough to make confrontation unnecessary. In rejecting this form of analysis, the Court explained that “dispensing with confrontation because testimony is obviously reliable is akin to dispensing with jury trial because a defendant is obviously guilty. This is not what the Sixth Amendment prescribes.”⁵² Similar language could be used to describe a regime in which the judge, and not the defendant, decides whether prosecution evidence is sufficiently corroborated to render any defense through the presentation of expert testimony unnecessary. Even if there is an independent DNA match identifying the defendant, it simply is not the proper role of the trial judge to exclude proffered expert testimony on government eyewitnesses.

But even if our adversarial system allowed judges to take issues away from juries, looking to corroborating evidence to determine whether an eyewitness identification expert should be permitted is an unsound way to identify those cases where testimony could be significant. First, trial courts deciding admissibility questions in a pretrial posture are poorly situated to resolve questions about whether the “corroborating” evidence is so substantial as to effectively eliminate any potential importance of the expert’s proffered testimony to the fact finder. The danger is that prior to hearing all the evidence and without a complete understanding of the case, the trial judge will be swayed by the persuasive power of an eyewitness identification when she views the constellation of facts in a case. The result may be the creation of corroborating evidence out of nothing.⁵³

Second, particularly in a pretrial posture, it is difficult for a trial court to determine whether corroborating evidence arose independently of the eyewitness identification. In a criminal investigation, evidence emerges from a dynamic context in which each item is affected by the establishment of other evidence. Knowledge of one eyewitness’ identification can raise a second person’s confidence in their identification or lead police to use more suggestive interrogation tactics with other potential witnesses.⁵⁴

Reliance on corroborating evidence, thus, improperly prevents a defendant from responding to important government proof. Because any assessment of corroborating evidence must be made before all the evidence is in, trial courts may prohibit a defense response to prosecution evidence that jurors find to be critical.

52. *Id.* at 62.

53. In the case of exoneree Ronald Cotton, the government introduced a pair of black shoes and a flashlight found at his home into evidence at trial to corroborate Jennifer Thompson’s eyewitness identification and description of a man wearing black shoes and possessing a flashlight. Apart from that eyewitness identification, Ronald Cotton’s possession of such ordinary items would never have been deemed identification evidence.

54. Kirk Bloodsworth’s case exemplifies how the corroboration of several eyewitnesses that seemed to mutually reinforce each other, in retrospect, may not be trustworthy when the identifications were not truly independent of one another. The same flawed interrogation procedures, investigator bias (or fraud), or postevent information supplied to eyewitnesses may create a false appearance of independent corroboration.

Ending reliance on corroborating evidence will admittedly lead to the admission of expert testimony in many more cases. But this is a natural product of the adversarial system in which juries and not judges should resolve disputed questions about the reliability of a piece of government proof. Courts need not fear that such a regime would necessarily invalidate convictions in cases where judges erroneously exclude expert testimony. Harmless error review by appellate courts can effectively ensure that convictions will survive in those rare cases where any expert testimony would truly have been unimportant to the jury's verdict. This appears to be the intent of some trial and appellate courts when applying a corroboration rationale to exclude experts in cases where the evidence is in fact overwhelming; the courts are effectively saying that any exclusion of the expert testimony is harmless because there was so much independent evidence supporting the guilt of the defendant.

The harmless error rule has become well established through many years of application by appellate courts. Appellate courts applying a harmless error standard have a distinct advantage over trial courts in evaluating the significance of corroborating evidence because they have access to more complete information posttrial and because they have clear standards to guide their review. Harmless error standards, moreover, are strongly weighted to ensure that an error will not be deemed "harmless" unless the government can convince the court that the error could not have played any role in the verdict, thus reducing the likelihood that defense expert testimony will be excluded just because a judge, as opposed to a jury, has some intuition that the identification is correct.

Finally, the use of a harmless error standard has one other substantial benefit over a standard blankly excluding experts where there is thought to be corroborating evidence. Harmless error review begins with the determination that a ruling of the trial court, such as the improper exclusion of an expert response to eyewitness testimony, was in fact "error," and then proceeds to determine whether that error mattered in the context of a particular case. This form of analysis ensures that, in the next case, a trial court will permit the expert response because an appellate court has already held that the failure to allow the testimony was error, thus eliminating any sort of speculation about whether the expert testimony would have affected the verdict.

By contrast, where corroborating evidence is cited by appellate courts as the rationale for upholding the exclusion of an eyewitness expert without distinct error and harm analyses, trial courts receive the signal that it is up to them to assess how important the evidence is and whether it will matter to the jury when deciding whether to exclude expert testimony.⁵⁵

In sum, whether the evidence corroborating an eyewitness identification is strong or weak, rarely can a reasonable basis be found to disallow expert testimony about the reliability of that identification on grounds that it is merely "irrelevant" or "sufficiently corroborated."

55. *Manson v. Brathwaite*, 432 U.S. 98, 118 & n.* (1977) (Stevens, J., concurring) (warning against reliance on corroborating evidence when making decisions about the admissibility of identification testimony).

2. The “Beyond the Ken” Rationale

The second rationale proffered by courts in current case law—that eyewitness expert testimony is “not beyond the ken” of jurors—is slightly more defensible on its face because it at least applies the proper standard for the admissibility of a particular item of expert testimony. The “beyond the ken” rationale derives from the “helpfulness standard” of Rule 702. The rule requires that the expert testimony “will assist the trier of fact to understand the evidence.”⁵⁶ Even evidence that only marginally improves jurors’ ability to determine issues meets this standard. Because of their short opinions, it is not always clear whether courts that refer to the helpfulness standard mean to say that, given corroborating evidence in the case, experts would add nothing more to jurors’ ability to judge eyewitness reliability, or whether judges simply believe that jurors know the findings of eyewitness experts as a matter of common sense. In either case, courts say eyewitness research is “not beyond the ken” of jurors.

The problem with this analysis, however, is that (a) it is not apparent from their decisions that trial or appellate judges fully understand what the proffered eyewitness expert testimony would have been; and (b) appellate and trial judges speculate about what jurors understand about eyewitness expert testimony without any hard evidence.

There is considerable evidence that courts do not adequately understand the very expert research they deem to be of no assistance to jurors. Most court opinions, especially the majority following the “pure discretion” approach, contain no literature review and do not parse out which particular aspects of the proffered expert testimony they deem to be common knowledge. In these cases, one can only conclude judges are relying on their experience and intuitions, which, as Wise and Safer demonstrated, are wrong half the time.⁵⁷ For example, without any expert guidance as to what the research says, only 31% of surveyed judges believed a description of the “forgetting curve” to be true, a research finding that memory often deteriorates quickly shortly after an event, then forgetting becomes more gradual.⁵⁸ Nonetheless, expert testimony about the “forgetting curve” is typically excluded as common knowledge when proffered by defendants.⁵⁹ Of course, a few court opinions, particularly those following the modern trend limiting discretion to deny experts, do take care to address particular eyewitness research findings. However, even these cases rarely cite to research and end up with unscientific and contrary holdings, disagreeing, for example, on whether the lack of significant correlation between a witness’ confidence and their accuracy is commonly known.⁶⁰ Stress, too, and its

56. FED. R. EVID. 702.

57. Wise & Safer, *supra* note 34, at 8.

58. *Id.*

59. *See, e.g.*, Hager v. United States, 856 A.2d 1143, 1148–49 (D.C. 2004); Skamarocius v. State, 731 P.2d 63, 66 (Alaska Ct. App. 1987); Commonwealth v. Christie, 98 S.W.3d 485, 490 (Ky. 2002).

60. *Compare* Garden v. State, 815 A.2d 327 (Del. 2003) (*rev’d on other grounds*, Garden v. State, 844 A.2d 311 (Del. 2004)) (holding that expert testimony on the correlation of confidence and

debilitating effects on memory, is thought to be common sense to some of those few courts who have considered the matter counterintuitive to others.⁶¹ In short, while most appellate courts do not address specific eyewitness research findings and do not examine the research, those that do have generated conflicting precedent that gives trial courts no sure guidance in exercising their discretion.

Most importantly, courts also do not understand what jurors know about eyewitness reliability. Until now, no one has appropriately measured what jurors know about eyewitness reliability. Research into laypersons' knowledge of eyewitness reliability factors has been sparse. Eyewitness researchers, in the course of conducting more targeted experiments, have repeatedly found their subjects to be unaware of basic scientific findings of the field. There also have been some small, nonrandomized surveys about juror understanding of eyewitness reliability that indicated a general lack of knowledge.⁶² Based on these small surveys and their laboratory experience, scientists studying eyewitness reliability have come to believe that ordinary lay jurors know little about the subject as a matter of common sense.

These researchers' opinions are in sharp contrast to judicial opinions. For example, recent surveys have shown that mug-shot-induced bias—the fact that prior exposure to mugshots of a suspect increases the likelihood that a witness will later choose the suspect from a lineup—was thought to be a matter of common sense by only 13% of researchers compared with 74% of judges.⁶³ The rift between the courts' and researchers' beliefs about what jurors understand about eyewitness reliability has been unresolved because no one has performed a large, empirical study of jurors' knowledge. Thus, judicial rulings about what is “beyond the ken” of jurors are, at best, speculation based solely on judges' experience and intuition.⁶⁴

Neither judicial rationale for excluding eyewitness experts—that their testimony is unnecessary because of corroborating evidence or not helpful because it is not beyond the ken of jurors—holds up under examination. The first rationale is logically and legally flawed, and the second is mere speculation.

To better ground their assertions about what is “beyond the ken,” judges would have to understand both what eyewitness research says and whether

accuracy should be permitted to the same extent as other admissible topics such as cross-racial bias) and *Skamarocius*, 731 P.2d at 66 (finding that confidence is commonly, but mistakenly, thought to correlate with accuracy) and *United States v. Downing*, 753 F.2d 1224, 1230 n.6 (3d Cir. 1985) (noting that confidence-accuracy studies are often counterintuitive to jurors) with *United States v. Mathis*, 264 F.3d 321, 340 (3d Cir. 2001) (holding that the correlation between confidence and accuracy in identifications was not a proper subject for expert testimony).

61. *Compare* *Commonwealth v. Christie*, 98 S.W.3d 485, 490 (Ky. 2002) (finding stress to be among the narrow circumstances sufficient to support eyewitness expert admission) and *United States v. Mathis*, 264 F.3d 321, 340 (3d Cir. 2001) (finding stress is among the proper subjects for expert testimony) with *Green v. United States*, 718 A.2d 1042, 1053 (D.C. 1998) (upholding trial finding that effects of stress on eyewitnesses are not beyond the ken of jurors).

62. *See infra* note 69.

63. *Wise & Safer*, *supra* note 34, at 10.

64. At worst, such opinions are being disingenuous about other motives, such as keeping out evidence that almost always benefits defendants.

laypersons' common sense understanding of these issues parallels the research findings. If jurors can be shown to understand eyewitness research findings as a matter of common sense, then the judicial rationale for excluding experts as "unhelpful" is valid. But, if eyewitness research findings are not known to jurors, the only plausible rationale for excluding eyewitness experts is wrong and courts should reevaluate their positions on eyewitness expert admissibility.

III. EMPIRICAL FINDINGS

In the winter of 2004, lawyers from the Public Defender Service for the District of Columbia (PDS) began investigating whether jurors do understand as a matter of common sense what makes some eyewitness identifications more or less reliable than others.⁶⁵ Preliminary investigation showed that despite extensive academic research into the reliability of eyewitnesses, there was little direct research on the extent to which nonexperts' intuitions match experts' findings.⁶⁶ The surveys indicate that while many attorneys have sound common-sense opinions about factors like cross-racial identification, the effects of stress or violence, and the importance of unbiased lineup instructions, most lack an accurate understanding of eyewitness confidence or bias in simultaneous (versus sequential) lineups.⁶⁷ Surveys of judges (mentioned above) indicate they have correct intuitions at roughly the same rates as attorneys.⁶⁸ However, there have been only a handful of surveys about the knowledge of nonexperts outside the legal system, and most of these have been nonrandomized studies using undergraduate or law students.⁶⁹ These latter surveys have used a diagnostic test called the Knowledge of Eyewitness Behavior Questionnaire (KEBQ) that poses scenarios with multiple factors relevant to eyewitness identifications. As with the judicial and attorney surveys, a significant portion of students taking the KEBQ were found to have some awareness of factors, such as cross-racial identification, but grossly misunderstand others, like the fact that training does not improve a witness' accuracy.⁷⁰

65. This inquiry was an outgrowth of PDS's duty to give the best representation possible to indigent clients and was conducted in the context of several ongoing cases involving purported eyewitness identifications.

66. A few studies have assessed attorneys' understanding of eyewitness reliability variables. All of these studies, however, involve small samples and some date from the early 1980s. For an overview, see Jennifer Devenport et al., *Eyewitness Identification Evidence*, 3 PSYCHOL. PUB. POL'Y & L. 338 (1997).

67. *Id.* at 343.

68. *Compare* Wise & Safer, *supra* note 34, with CUTLER & PENROD, *supra* note 2, at 159–68.

69. Kenneth A. Deffenbacher & Elizabeth F. Loftus, *Do Jurors Share a Common Understanding Concerning Eyewitness Behavior?*, 6 LAW & HUM. BEHAV. 15 (1982); Kevin M. McConkey & Suzanne M. Roche, *Knowledge of Eyewitness Memory*, 24 AUSTL. PSYCHOL. 377 (1989); Elizabeth Noon & Clive R. Hollin, *Lay Knowledge of Eyewitness Behaviour: A British Survey*, 1 APPLIED COGNITIVE PSYCHOL. 143 (1987).

70. CUTLER & PENROD, *supra* note 2, at 101, 175 Table 11.1 (1995) (noting that even those factors most often recognized by test takers, like cross-racial bias, were missed by 25% or more of the participants).

There has been significantly more “indirect” research into the attitudes of nonexperts about eyewitness reliability, such as research that does not attempt to survey a population’s self-described understanding of reliability but instead relies upon smaller studies of how laypersons reason about eyewitness identification factors.⁷¹ For example, postdiction studies required respondents to read summaries of eyewitness identification experiments and then predict the rate of accurate identifications in the experiment. Similarly, judgment studies put nonexperts through mock trials and assessed jurors’ sensitivity to different aspects of the case through questionnaires and their final verdict. Considered together, the quantity of this “indirect” research into laypersons’ knowledge of eyewitness research findings suggests jurors’ common sense reasoning on these matters is often flawed. However, this kind of research lacks the persuasive value of direct surveys assessing the knowledge of the jury pool.⁷²

To describe the Washington, D.C. juror pool, PDS decided to conduct its own research on the issue.⁷³ PDS accordingly commissioned a Washington, D.C. polling firm to survey approximately 1,000 potential District of Columbia jurors. The survey results, discussed in detail below, demonstrate that judicial assertions about jurors’ ability to appraise eyewitness identifications are wrong. Jurors suffer from a basic misunderstanding of how memory generally works and do not understand how particular factors, such as the effects of stress or the use of a weapon, affect the accuracy of eyewitness testimony.

A. Mechanics of the PDS Survey

In the Fall of 2003 and early Winter of 2004, Peter D. Hart Research Associates, Inc. (Hart Research) worked together with attorneys at PDS and Dr. Elizabeth Loftus to prepare a survey that would discern what potential District of Columbia jurors understand about memory in general and the reliability of eyewitness identification evidence in particular. The questionnaire consisted of approximately twenty questions about whether jurors believe eyewitness testimony is generally reliable and also about the specific factors jurors believe would make an eyewitness identification more or less reliable.⁷⁴

71. *Id.* at 346–49.

72. Admittedly, surveys are subject to the critique that they cannot assess how jurors are actually able to apply their knowledge about eyewitness identifications in the courtroom—a question to which postdiction and judgment studies may be better suited.

73. The project was initiated by Edward J. Ungvasky, Public Defender Service for the District of Columbia (PDS) Special Counsel and a Vice Chair of the NACDL Forensic Evidence Committee, and PDS’s Special Litigation Division, a unit that works exclusively on systemic criminal justice issues such as forensic evidence challenges and issues surrounding the suppression of exculpatory evidence by prosecutors. The motivation behind this project was simple: If jurors understand as a matter of common sense what makes some eyewitness identifications more reliable than others, it would not make sense for PDS to continue to devote resources toward educating already-informed jurors on this topic. On the other hand, if jurors actually have an incomplete understanding of the factors that affect eyewitness reliability, it would remain imperative to continue to seek to provide jurors with the tools necessary to ensure that they could intelligently evaluate the evidence presented to them by the government.

74. *See infra* Appendix.

Between February 18, 2004, and February 23, 2004, Hart Research conducted a telephone survey in the District of Columbia. Residential phone numbers were chosen at random from the District of Columbia area code. One thousand two hundred ninety-six potential jurors were identified as U.S. citizens who were at least eighteen years of age and not currently on probation or parole. Participants were also asked demographic questions about education, neighborhood, age, employment, party affiliation, prior jury service, language, race, income and exposure to the criminal justice system. Ultimately, 1,007 potential jurors completed the survey. The margin of error (95% confidence) for the survey was plus-or-minus 3.1 percentage points.

1. Juror Misunderstandings of Memory in General

Human memory does not record events like a video recorder.⁷⁵ In the first place, human memory is more selective than a video camera. The sensory environment contains a vast amount of information, but the memory process perceives and accurately records only a very small percentage of that information. Second, because the act of remembering is reconstructive,⁷⁶ akin to putting puzzle pieces together, human memory can change in dramatic and unexpected ways because of the passage of time or subsequent events, such as exposure to “post-event” information like conversations with other witnesses or media reports. Third, memory can also be altered through the reconstruction process. Questioning a witness about what he or she perceived and requiring the witness to reconstruct the experience can cause the witness’ memory to change by unconsciously blending the actual fragments of memory of the event with information provided during the memory retrieval process.

These characteristics of human memory have profound implications with regard to the accuracy of eyewitness claims that they “remember” seeing the accused or other key details about the crime. For a memory to be reliable, the witness must have accurately perceived the event, and the witness’ memory must not have degraded over time or been polluted by postevent information and questioning. But more importantly, for jurors to fairly assess whether this claim is accurate, they must understand memory’s complexity, selectivity, and malleability. Jurors must also understand what specific factors affect perception and encoding of memories, what factors can pollute memory, and what factors in the re-creation process can distort a witness’ “memory” of an event.

PDS’s survey of potential jurors in the District of Columbia suggests that juror understanding of these subjects fails at even the most basic level. Several survey questions, for example, were designed to test jurors’ general understandings of the workings of human memory. One question asked whether

75. EDWARD ARNOLDS ET AL., EYEWITNESS TESTIMONY: STRATEGIES AND TACTICS 14–15 (1984); David M. Shofi, *The New York Courts’ Lack of Direction and Discretion Regarding the Admissibility of Expert Identification Testimony*, 13 PACE L. REV. 1101, 1104 (1994); Gary L. Wells, *Eyewitness Behavior*, 4 LAW & HUM. BEHAV. 237, 238 (1980).

76. KARL HABERLANDT, HUMAN MEMORY: EXPLORATION AND APPLICATION 4 (1999) (defining and describing reconstructive memory).

“the act of remembering a traumatic event [was] like a video recording in that one can recall details as if they had been imprinted or burned into one’s brain.” Over half of the respondents (52%) either thought this statement was true or did not know whether it was true. Indeed, 46% of potential jurors believe that the witness on the stand is effectively narrating a video recording of events that she can see in her “mind’s eye” for jurors.

Other results demonstrated similar deficits of knowledge on the most basic level about how memory works. The survey asked potential jurors to assess the reliability of their own memories. Almost two-thirds of the respondents (66%) thought the statement “I never forget a face” applied “very well” or “fairly well” to them. Likewise, more than three out of four respondents (77%) thought that the phrase “I have an excellent memory” applied “very well or “fairly well” to them. The fact that such large majorities of people tend to believe their memories are above average suggests that potential jurors may begin each trial with unwarranted confidence in memory and the ability to identify faces generally. Such confidence may well be transferred to the testifying witnesses and cause jurors to overestimate the accuracy of witness memories as well.

2. *Specific Reliability Factors—Weapon Focus*

For more than twenty-five years, social scientists have posited that the presence of a weapon during a crime attracts the attention of the witness to the weapon, reducing attention to the culprit’s facial and physical characteristics. This phenomenon is often referred to as “weapon focus.”⁷⁷ A series of controlled studies have now validated the existence of this effect.⁷⁸ For example, experiments have been conducted involving videotaped robberies with some of the culprits brandishing a handgun and others concealing the gun. These studies have repeatedly demonstrated that witness accuracy was better when the gun was concealed than when the gun was brandished.

77. See, e.g., ELIZABETH F. LOFTUS & JAMES M. DOYLE, EYEWITNESS TESTIMONY: CIVIL AND CRIMINAL, § 2.10 (2d ed. 1992); Elizabeth F. Loftus et al., *Some Facts About “Weapon Focus,”* 11 LAW & HUM. BEHAV. 55 (1987); Anne Maass & Gunther Kohnken, *Eyewitness Identification: Simulating the “Weapon Effect,”* 13 LAW & HUM. BEHAV. 397 (1989).

78. An archival study of actual police cases demonstrated that the presence of a weapon “did not reduce the quantity of descriptive information the witness was subsequently able to provide to police about the culprit, but it did impair witnesses’ subsequent ability to recognize the culprit.” See Donald P. Judges, *Two Cheers for the Department of Justice’s Eyewitness Evidence: A Guide for Law Enforcement*, 53 ARK. L. REV. 231, 243 n.37 (2000) (citing Patricia A. Tollestrup et al., *Actual Victims and Witnesses to Robbery and Fraud: An Archival Analysis*, in ADULT EYEWITNESS TESTIMONY: CURRENT TRENDS AND DEVELOPMENTS 144, 158 (David F. Ross et al. eds., 1994)); see also Nancy Mehrkens Steblay, *A Meta-Analytic Review of the Weapon Focus Effect*, 16 LAW & HUM. BEHAV. 413 (1992). Experiments in which eye movements are monitored while subjects witness a scene where a weapon is involved also demonstrate the existence of the phenomenon of “weapon focus.” Brian L. Cutler et al., *The Reliability of Eyewitness Identification*, 11 LAW & HUM. BEHAV. 233, 240, 244 (1987); Elizabeth F. Loftus et al., *Some Facts About “Weapon Focus,”* 11 LAW & HUM. BEHAV. 55, 57–61 (1987).

Some courts have speculated that “weapon focus” is among those features of memory that jurors understand as a “matter of common sense.”⁷⁹ The PDS survey asked potential jurors whether they thought that the fact that “a weapon is involved in the crime” tends to make “an eyewitness’ memory about the details of the crime more reliable, less reliable or [would have] no effect.” Thirty-seven percent of the respondents actually thought the presence of a weapon would make a witness’ memory for event details *more* reliable, while thirty-three percent of the respondents thought that the presence of a weapon either would have no effect or were not sure of what effect a weapon would have. Only three out of ten potential jurors correctly understood that the presence of a weapon tends to make an eyewitness’ memory for details less reliable.

3. *Specific Reliability Factors—Presence of Violence or Stress*

Social science studies have also shown that a person’s ability to recall details of an event is likely worse if a witness has observed a violent event as opposed to a nonviolent one.⁸⁰ This is particularly true for the peripheral details.

To find out whether jurors understand the effect that violence has on witness identifications, the PDS survey asked potential jurors whether they thought that the fact that “a crime is violent” tends to make “an eyewitness’ memory about the details of the crime more reliable, less reliable or [would have] no effect.” Thirty-nine percent of the respondents thought that event violence would make a witness’ memory for event details more reliable,⁸¹ while 33% of the respondents thought that event violence either would have no effect or were not sure of what effect event violence would have. Only three out of ten potential jurors correctly understood that event violence tends to make an eyewitness’ memory for details less reliable.

4. *Specific Reliability Factors—Duration of the Incident*

For over a century, social scientists have been conducting experiments concerning people’s ability to estimate the duration of a stressful incident. Those studies have consistently shown not only that most people have enormous difficulty estimating the length of these events but also that the vast majority of these errors are in the same direction—toward overestimating the duration of a

79. *Taylor v. United States*, 451 A.2d 859, 866–67 n.9 (D.C. 1982).

80. *E.g.*, Morgan, III et al., *supra* note 3. In another study, it was observed that “[p]erceptual abilities actually decrease in a highly stressful situation, and the person under stress is less reliable than he or she would be otherwise. Such a witness becomes less capable of remembering details, less accurate in reading dials, and less certain in detecting signals.” Thomas J. Feeney, *Expert Psychological Testimony on Credibility Issues*, 115 MIL. L. REV. 121, 146 (1987). “One theory indicates that moderate levels of stress or arousal increase performance up to a point. Under this theory, known as the Yerkes-Dodson law, perceptual performance follows a U-shaped curve. At very low levels of arousal, the senses are not yet functioning fully. Performance peaks at moderate levels of arousal and then declines as the stress increases further.” *Id.* at 146 n.163 (citation omitted).

81. This is unsurprising. Researchers have postulated that lay people share “a common” but mistaken “belief that stress heightens a witness’ observation powers and ‘burns’ an image of the scene into the mind.” Feeney, *supra* note 80, at 146.

stressful event. Overestimation can vary substantially depending upon the amount of stress accompanying the event.⁸²

Thus, the longer an eyewitness has to observe a particular face, the more accurate her identification becomes. Although jurors understand this principle as a matter of common sense, they do not also understand the unreliability of witnesses' subjective time estimates. Often, the only piece of information a juror has about the length of exposure time is the witness' estimate. This estimate exaggerates the exposure time.

The PDS survey shows that jurors do not understand this phenomenon as a matter of common sense. Over 40% of survey respondents either thought that witness time estimates were accurate or were not sure whether such estimates were accurate. While that alone indicates that a significant number of jurors would be likely to overestimate exposure times and thus witness reliability, the beliefs of those who are more skeptical of witness time estimates are even more troubling. Of those who correctly understood that witnesses themselves are not good at evaluating how long an event took to unfold, a sizeable portion (about 25%) believed that witnesses *underestimate* the actual time. In all, 63% of the survey respondents do not understand what scientific research has demonstrated about a witness' ability to gauge the duration of an event. The jurors either believed witnesses' subjective time estimates or thought that witnesses tended to actually see a face for longer than claimed. Only 37% of the total respondents correctly understood events unfold faster than witnesses think they do.

5. *Specific Reliability Factors—Confidence*

With regularity, a witness in court will express 100% confidence in an identification. But is the identification of a "confident" witness more reliable than the identification of a less certain one? Witnesses who are highly confident in their identifications are only slightly more likely to be correct as compared to witnesses who are less sure of the identifications. In other words, the correlation between confidence and accuracy is weak.⁸³

Eyewitness accuracy is a complex product of many factors. Factors such as the witness' eyesight and concentration, the amount of lighting, the length of

82. See, e.g., ELIZABETH F. LOFTUS & JAMES M. DOYLE, EYEWITNESS TESTIMONY: CIVIL AND CRIMINAL 26–27 (1987) (explaining that a witness tends to overestimate the duration of an especially stressful or violent event); JAMES MARSHALL, LAW AND PSYCHOLOGY IN CONFLICT 41–81 (1966) (on average, viewers estimated that a 42-second film in which man rocks a baby carriage and then flees when a woman approaches lasted a minute and a half). Another study reported that in a survey of over 100 experimental psychologists, potential jurors, judges, law students, and lawyers, 95% of the experts agreed that witnesses generally overestimate the duration of crimes, whereas fewer than half of the potential jurors did so. A. Daniel Yarmey & Hazel P. Tressillian Jones, *Is the Psychology of Eyewitness Identification a Matter of Common Sense?*, in EVALUATING WITNESS EVIDENCE: RESEARCH AND NEW PERSPECTIVES 33 (Sally M. Lloyd-Bostock & Brian R. Clifford eds., 1983). See also Elizabeth F. Loftus et al., *Time Went by So Slowly: Overestimation of Event Duration by Males and Females*, 1 APPL. COGNITIVE PSYCHOL. 1 (1987).

83. In some instances, studies have shown no meaningful correlation between confidence and accuracy. See, e.g., Cutler et al., *supra* note 78, at 233, 234; Kenneth A. Deffenbacher, *Eyewitness Accuracy and Confidence*, 4 LAW & HUM. BEHAV. 243, 258 (1980).

exposure, the quality of the view, whether a weapon or violence was involved, and the procedures used by police to obtain the identification all help to determine whether a particular identification is an accurate one.

By contrast, confidence is a product of personality and social factors of which accuracy of observation is only a minor part. A witness' confidence will also depend on how self-confident the witness is to begin with and what interactions the witness has had with others to boost or undermine that confidence. For example, studies have shown that confidence is highly malleable and can be substantially increased by many postevent factors, including confirming feedback.⁸⁴ Witness confidence can accordingly increase after the incident through the use of procedures that do not in any way enhance the accuracy of the original identification and may undermine it. The weak correlation between confidence and accuracy that may have existed immediately after the incident is thus often destroyed after a witness' confidence level is raised or lowered through "contaminating" exposure to feedback.

The PDS survey results demonstrate that jurors do not understand the relationship between confidence and accuracy. For example, one survey question asked respondents to compare the reliability of a witness who was "absolutely certain" of an identification with that of a witness who was not. A plurality of respondents, 31%, found the "absolutely certain" witness to be "much more reliable." Moreover, only 17% of the respondents correctly understood the slight correlation between confidence and accuracy. Thus, a majority of the respondents demonstrate a fundamental misunderstanding about the confidence-accuracy correlation.⁸⁵

Another confidence-accuracy survey question confirmed these findings. Nearly 40% of survey respondents agreed that "an eyewitness' level of confidence in his or her identification is an excellent indicator of that eyewitness' reliability." Thus, four out of ten potential jurors, absent education on this subject, would assess witness testimony under the mistaken impression that there is a very strong correlation between witness confidence and witness accuracy. Moreover, even though 55% of polled jurors correctly reject the notion that confidence is an "excellent indicator" of accuracy, the responses to the earlier question demonstrate that these jurors do not understand whether any confidence-accuracy correlation exists and, if so, what that correlation is. Thus, these survey results also make clear that jurors have no meaningful idea of how to evaluate witness statements of confidence and are likely to substantially overestimate the reliability of a confident witness.

84. E.g., Amy L. Bradfield et al., *The Damaging Effect of Confirming Feedback on the Relation Between Eyewitness Certainty and Identification Accuracy*, 87 J. APPLIED PSYCHOL. 112 (2002).

85. Even if survey respondents who said that an identification of a confident witness is "equally reliable" as one by a less confident witness are treated as having correctly understood this phenomenon, 59% of the respondents—more than half of those on any given jury—demonstrate a fundamental misunderstanding of the confidence accuracy relationship.

6. *Specific Reliability Factors—Police Officers*

Studies have shown that police officers are sometimes able to provide more detailed accounts of the event and that they are sometimes less susceptible to the effects of postevent misinformation when compared to laypersons. But research has also shown that police officers perform no better at identifying faces than other citizens,⁸⁶ which means that their eyewitness identifications are generally no more reliable than anyone else's.⁸⁷

To test whether jurors understood this fact, the PDS survey asked respondents to compare the reliability of an eyewitness identification by "a police officer" with the reliability of an identification by "an average citizen." Sixty percent of the respondents failed to understand that the two identifications were equally reliable, and many of these respondents (22% of the total) believed police officer testimony to be "much more reliable."

7. *Specific Reliability Factors—Cross-Racial Impairment*

A variety of studies have shown that eyewitnesses experience a "cross-racial impairment" when identifying members of another race. Eyewitnesses are better at identifying members of their own race and have difficulty identifying members of other races.⁸⁸

When asked to compare the reliability of an identification by an eyewitness "of the same race as the person being identified" with the reliability of an identification by an eyewitness "of a different race" from the suspect, almost two-thirds of jurors surveyed indicated that they are ill-informed about the inaccuracy of cross-racial identification: A large plurality of the survey respondents (48%) thought cross-race and same-race identifications are of equal reliability, and many of the other respondents either did not know or thought a cross-racial identification would be more reliable (11%). Only 36% of the survey respondents understand that a cross-racial identification may be less reliable.

8. *Specific Reliability Factors—Show-Ups*

A show-up occurs when police display a single suspect to the witness and ask whether that suspect is the culprit. Both the Supreme Court and the Attorney General have recognized the inherently suggestive nature of show-up

86. Elizabeth F. Loftus, *Eyewitnesses: Essential But Unreliable*, 18 PSYCHOL. TODAY 22, 24 (1984).

87. Brian Clifford, *Police as Eyewitnesses*, 36 NEW SOC'Y 176 (1976) (demonstrating that police officers perform more poorly than civilians as witnesses because police officers often have a biased interpretation of events).

88. See generally ELIZABETH LOFTUS, EYEWITNESS TESTIMONY § 4.9 (3d ed. 1997 & Supp. 1999); GARY L. WELLS & ELIZABETH LOFTUS, PSYCHOLOGICAL PERSPECTIVES 1 (1984); Sheri Lynn Johnson, *Cross-Racial Identification Errors in Criminal Cases*, 69 CORNELL L. REV. 934 (1984); Stephanie J. Platz & Harmon M. Hosch, *Cross-Racial/Ethnic Eyewitness Identification: A Field Study*, 18 J. APPLIED SOC. PSYCHOL. 972 (1988); John P. Rutledge, *They All Look Alike: The Inaccuracy of Cross-Racial Identifications*, 28 AM. J. CRIM. L. 207 (2001).

procedures,⁸⁹ and the Supreme Court has expressly acknowledged the greater risk of misidentification involved in show-ups as compared to lineups.⁹⁰ There is strong empirical evidence that show-ups are more likely to yield false identifications than properly constructed lineups. The risk of generating an unreliable identification by using a show-up identification procedure, moreover, grows substantially more pronounced over time⁹¹ especially if the suspect is wearing clothing similar to the culprit's.

The PDS survey indicates substantial confusion among potential jurors about the reliability of show-up procedures. While this was one of the few areas where a majority of potential jurors appear to have intuitions similar to research findings, a substantial minority of jurors still did not understand this concept. A quarter of potential jurors believed that a show-up is either *more* reliable than a lineup procedure or that the two procedures are equally reliable.

9. *Specific Reliability Factors—Lineup Instructions*

A lineup procedure occurs when a witness is shown a group of people and asked to attempt an identification. Research demonstrates that during a lineup procedure eyewitnesses tend to engage in a comparative analysis, that is, they identify the person from the lineup who, in the opinion of the eyewitness, *looks most like* the culprit relative to other members of the lineup.⁹² Where the actual culprit is not in the lineup, this relative judgment process poses a grave danger of misidentification because there will always be someone who looks more like the culprit than the remaining lineup members.

Research has demonstrated that a witness' willingness to make a relative judgment about the culprit, in a lineup that does not include the culprit, is considerably less when the witness is warned that the culprit may not be present

89. See *Stovall v. Denno*, 388 U.S. 293, 302 (1967) ("the practice of showing suspects singly to persons for the purpose of identification, not as part of a lineup, has been widely condemned."); UNITED STATES DEPARTMENT OF JUSTICE, EYEWITNESS EVIDENCE: A TRAINER'S MANUAL FOR LAW ENFORCEMENT 30 (2003) (discussing how to reduce the inherent suggestiveness of show-up procedures).

90. See *Moore v. Illinois*, 434 U.S. 220, 229 (1977) ("Indeed, a one-on-one confrontation generally is thought to present greater risks of mistaken identification than a lineup."); *Simmons v. United States*, 390 U.S. 377, 383 (1968) ("[The danger of misidentification] will be increased if the police display to the witness only the picture of a single individual who generally resembles the person he saw, or if they show him the pictures of several persons among which the photograph of a single such individual recurs or is in some way emphasized.").

91. A. Daniel Yarmey et al., *Accuracy of Eyewitness Identifications in Showups and Lineups*, 20 LAW & HUM. BEHAV. 469, 459–77 (1996).

92. For studies supporting the relative judgment phenomenon, see Gary L. Wells & Eric P. Seelau, *Eyewitness Identification: Psychological Research and Legal Policy on Lineups*, 1 PSYCHOL. PUB. POL'Y. & L. 765 (1995); Gary L. Wells, *What Do We Know about Eyewitness Identification?*, 48 AM. PSYCHOL. 553 (1993); Gary L. Wells, *The Psychology of Lineup Identifications*, 14 J. APPLIED SOC. PSYCHOL. 89 (1984).

in the lineup.⁹³ Moreover, this instruction results in the same number of accurate identifications when the culprit is actually present in the lineup.

Potential jurors do not appear to understand the role or importance of such instructions. Over half the respondents in the PDS survey (51%) thought that an identification would be *more* reliable if the eyewitness was *not* instructed about the culprit's potential absence, and an additional 21% either thought it did not matter whether such an instruction was given or were not sure. Only 28% of the respondents thought that a lineup would be more reliable if the eyewitness *was* instructed that the actual culprit "may or may not be in the lineup." These numbers were virtually the same for photographic arrays.⁹⁴ The survey thus demonstrates substantial juror confusion on the importance of lineup and photo array instructions.

10. *Specific Reliability Factors—Sequential Identification*

Another way to avoid the relative-judgment problem is the use of a sequential lineup. Unlike a traditional lineup in which an eyewitness views the lineup members simultaneously, in the sequential lineup the eyewitness views the members one at a time and decides individually whether each person is the culprit before viewing the next member. Studies have shown that this procedure reduces the number of mistaken identifications, particularly when the witness does not know how many members will be viewed and thus cannot anticipate when the process will end. The sequential procedure produces fewer mistaken identifications in lineups that do not contain the actual perpetrator, but it does not significantly impair eyewitnesses' abilities to identify the perpetrator in perpetrator-present lineups.⁹⁵

93. Wells & Seelau, *supra* note 92, at 765, 772–73. *See also* CUTLER & PENROD, *supra* note 2, at 101, 115–23 (concluding that "the research shows that biased instructions substantially increase the likelihood of false identifications"); Roy S. Malpass & Patricia G. Devine, *Eyewitness Identification: Lineup Instructions and the Absence of the Offender*, 66 J. APPLIED PSYCHOL. 482, 482–89 (1981) (failure to give explicit instructions to the eyewitness that explain that the perpetrator might not be in the lineup leads subjects to select someone from the lineup regardless of whether the perpetrator is present; even when these instructions are given, eyewitnesses tend to make relative judgments.).

94. An equal number (51%) thought an identification from a photo array would be *more* reliable if the eyewitness was *not* instructed about the culprit's potential absence, while an additional 19% either thought it did not matter whether such an instruction was given or were not sure. Similarly, only 30% of the respondents correctly understood that an identification from a photo array is more reliable if the witness is instructed that the actual culprit "may or may not be in the photo array."

95. *See* R.C.L. Lindsay et al., *Sequential Lineup Presentation: Technique Matters*, 76 J. APPLIED PSYCHOL. 741, 744 (1991); Brian L. Cutler & Steven D. Penrod, *Improving the Reliability of Eyewitness Identification: Lineup Construction and Presentation*, 73 J. APPLIED PSYCHOL. 281, 288–89 (1988); R.C.L. Lindsay & Gary L. Wells, *Improving Eyewitness Identifications from Lineups: Simultaneous Verses Sequential Lineup Presentations*, 70 J. APPLIED PSYCHOL. 556, 562 (1985); *see also* Nancy M. Steblay et al., *Eyewitness Accuracy Rates in Sequential and Simultaneous Lineup Presentations: A Meta-Analytic Comparison*, 25 LAW & HUM. BEHAV. 459, 471 (2001) (meta-analysis of twenty-three papers showed that a sequential lineup, as opposed to a simultaneous lineup, reduced the rate of mistaken identification in culprit-absent lineups but was also associated with a reduction in accurate identification rates in culprit-present lineups).

Potential jurors are unaware of the benefits of sequential identifications procedures. When asked to compare the reliability of a procedure in which a “witness views a lineup of potential suspects standing next to one another” with a procedure in which the witness “views potential suspects one at a time,” over three-quarters of the respondents (76%) either thought the reliability of a simultaneous live lineup was better than or equal to that of the sequential lineup, or were not sure which process was better. With respect to photo lineups, the numbers are similar—61% of the respondents either thought the reliability of a simultaneous photo lineup was better than or equal to that of a sequential photo lineup or were not sure which process was better. In both cases, therefore, potential jurors seemed not to understand the importance of a sequential lineup in securing an accurate identification.

11. *Specific Reliability Factors—“Double Blind” Procedures*

The behavior of the person who administers the identification procedure can influence the reliability of eyewitness testimony itself.⁹⁶ If the person who administers the live or photographic lineup is the case detective or some other investigator who knows the identity of the suspect, a substantial danger exists that the person conducting the lineup will communicate the suspect’s identity to the witness.⁹⁷ This can happen consciously or unconsciously, and through both verbal and nonverbal means. Moreover, as noted above, the administrator of the lineup can also cause mistaken eyewitnesses to develop high levels of false certainty by providing postidentification feedback about the supposed accuracy of the identification. All of these problems can be substantially reduced through the use of “double blind” procedures, that is, when lineups are administered by someone who does not know which lineup member is the suspect and which ones are fillers.

With respect to live lineups, a bare majority of potential jurors (55%) appears to have at least some grasp of the importance of conducting “a lineup where the police officer running the lineup is unaware who the suspect is,” although a substantial minority of jurors (45%) do not understand the importance of this concept at all. Specifically, one fifth of the jurors incorrectly believe that a live lineup where police know the identity of the suspect is *more* reliable than a “double blind” procedure, and another 27% of respondents believe either that the two procedures are equally reliable or were unsure of the difference between the two procedures. This means that approximately 5 jurors in a panel of 12 will start

96. See, e.g., Ronald P. Fisher, *Interviewing Victims and Witnesses of Crime*, 1 PSYCHOL., PUB. POL'Y, & L. 732, 753–58 (1995) (discussing how interviewers’ expectations affect subjects’ performance); Gary L. Wells & Amy L. Bradfield, “Good, You Identified the Suspect”: *Feedback to Eyewitnesses Distorts Their Reports of the Witnessing Experience*, 83 J. APPLIED PSYCHOL. 360 (1998) (providing studies demonstrating confirming feedback given at the time of an initial identification made subjects significantly more confident of their identification of a suspect).

97. Gary L. Wells et al., *Eyewitness Identification Procedures: Recommendations for Lineups and Photospreads*, 22 LAW & HUM. BEHAV. 603, 627–29 (1998) (police officers aware of the perpetrator’s identity can unconsciously bias an eyewitness’ lineup selection).

a trial with a basic misunderstanding about the importance of “double blind” procedures, a misunderstanding that will obviously continue throughout the trial and into jury deliberations in the absence of accurate, authoritative information.

This problem is even more pronounced with photographic arrays. A majority of potential jurors (52%) do not understand the importance of conducting “a photo array where the police officer running the photo array is unaware who the suspect is.” Specifically, 30% of the jurors incorrectly believed that a photo array where police know the identity of the suspect is *more* reliable than a “double blind” procedure, and another 22% of respondents believed either that the two procedures are equally reliable or were unsure of the difference.

B. Summary of Survey Findings

The PDS survey documents that a substantial number of jurors come to each trial with basic misunderstandings about the way memory works in general and about specific factors that can affect the reliability of eyewitness identifications. The findings undermine previous judicial speculation about what jurors know as a “matter of common sense.” As an empirical matter, the PDS poll shows that significant numbers of jurors (often substantial majorities) do not understand concepts like weapon focus, the effects of stress, the tendency of witnesses to overestimate exposure time, and the lack of meaningful correlation between witnesses’ stated confidence and accuracy in making an identification. Jurors also place unwarranted stock in the eyewitness abilities of police officers, they overestimate the reliability of cross-racial identifications, and they have minimal understanding of how police procedures can affect the accuracy of an eyewitness identification.

C. Potential Limitations of Survey Findings

Any survey is limited in its ability to exactly determine the knowledge of laypersons.⁹⁸ However, if anything, it is likely that the survey methodology used in this instance *overestimates* the juror understanding of eyewitness reliability factors. First, the questions asked often singled out the relevant variables (rather than the juror having to analyze the facts of an identification and say that, for example, the presence of a weapon is significant). Second, there is a base rate of accuracy that comes from survey participants guessing among the multiple-choices, despite being given the option to say they did not know. Therefore, survey participants’ correct responses to the survey questions likely overestimate the extent to which a juror would take proper account of that variable in an actual case.

The precise applicability of these survey results to other jurisdictions cannot be determined, though the pool of potential District of Columbia jurors surveyed is likely similar to many other urban jury pools nationwide. The complete results

⁹⁸. See EYEWITNESS TESTIMONY: PSYCHOLOGICAL PERSPECTIVES (Gary L. Wells & Elizabeth F. Loftus eds. 1984).

of the survey list the detailed demographic information of survey participants. Notably, the education level of participants was quite high (45% received a bachelors or higher degree) and reflected a wide range of ages and incomes.



Over the past 30 years, researchers have made substantial strides in understanding the workings and limitations of human memory. However, the application of these scientific advances to eyewitness identifications in the criminal justice system, though increasing, has been limited. Trial judges in most jurisdictions routinely exercise their discretionary powers to exclude expert testimony about the reliability of eyewitness identifications. This is so despite changes to the rules of evidence, Supreme Court opinions acknowledging defendants' rights to put on testimony in their defense, and attempts by executive and legislative branches to give greater scrutiny to eyewitness identifications.

The most common rationale offered for excluding eyewitness identification expert witnesses is that their findings are not "beyond the ken" of the average juror. To test this rationale, a survey of potential jurors in the District of Columbia was designed to investigate whether jurors understand, as a matter of common sense, what makes some eyewitness identifications more or less reliable than others. The survey results presented above demonstrate that jurors misunderstand how memory generally works and how particular factors, such as the effects of stress or the use of a weapon, affect the accuracy of eyewitness testimony. Jurors also misunderstand how eyewitnesses' stated levels of certainty correspond with accuracy. These findings demonstrate that there are flaws in judicial intuitions about what jurors do and do not understand.

Judges, prosecutors, and defense attorneys alike need to be educated about the perils of eyewitness identification. The common sense assumptions of these groups may be somewhat better than the average juror by virtue of greater experience with the criminal justice system, but even these groups lack an adequate understanding of eyewitness reliability. Defense attorneys will not introduce experts or file suppression motions, prosecutors will not discern credible allegations, and judges will not hear counsel's arguments on eyewitness reliability—unless they all reach beyond their commonsense intuitions. Tens of thousands of convictions each year are made on the basis of eyewitness evidence about which jurors' common sense is mistaken. To safeguard against wrongful convictions on eyewitness evidence, the justice system must replace false intuitions with scientifically based opinions.

APPENDIX

SURVEY QUESTION AND ANSWER DATA

All results are shown as percentages unless otherwise noted. Correct answers to knowledge-based questions are in bold.

1a. What is the last grade that you completed in school?

Grade school	1
Some high school	7
High school graduate	27
Some college, no degree	13
Vocational training/2-year college	6
4-year college/bachelor's degree	22
Some postgraduate work, no degree	3
2-3 years postgraduate work/master's degree	14
Doctoral/law degree	6
Not sure/refused	1

1b. In which quadrant of Washington, D.C., do you live—Southeast, Southwest, Northeast, or Northwest?

Southeast	22
Southwest	4
Northeast	26
Northwest	48
Not sure/refused	-

2. As you may know, to be eligible for jury duty in Washington, D.C., you must be a U.S. citizen, at least eighteen years old, and a resident of the District of Columbia. You must read, speak, and understand English, and you must NOT be on probation or parole. You DO NOT have to be registered to vote. Given these requirements, are you currently qualified for jury duty in Washington, D.C.?

Yes, qualified to serve on a jury	100	CONTINUE
No, not qualified to serve on a jury	-	TERMINATE
Not sure	-	

3. For each of the following phrases, please tell me whether it applies to you very well, fairly well, just somewhat well, or not very well.

	Applies Very Well	Applies Fairly Well	Applies Just Somewhat Well	Does Not Apply Very Well	Not Sure
I never forget a face	38	28	24	9	1
I have an excellent memory	44	33	17	6	-

- 4a. In some criminal trials, an eyewitness may testify that the person on trial, who is also called the defendant, was the person the eyewitness saw committing the crime. In general, do you consider this sort of eyewitness identification to be a very reliable, somewhat reliable, not very reliable, or unreliable form of evidence?

Very reliable	18
Somewhat reliable	65
Not very reliable	11
Unreliable	4
Not sure	2

- 4b. And suppose that an eyewitness has no motivation to lie, and genuinely believes that his or her identification of the defendant is accurate. In those cases, do you consider eyewitness identifications in criminal trials to be very reliable, somewhat reliable, not very reliable, or unreliable forms of evidence?

Very reliable	25
Somewhat reliable	62
Not very reliable	8
Unreliable	3
Not sure	2

5. Now I'm going to describe several pairs of eyewitnesses who might testify in a criminal trial. I'd like you to tell me whether you would consider the first or second eyewitness to be the more reliable ("MR") eyewitness, or whether you would consider both eyewitnesses to be equally reliable ("ER"), or whether neither would be reliable ("N"). **(If necessary ask:)** Would the (first/second) eyewitness be "much more" reliable ("MMR") or only "slightly more" reliable ("SMR")?

	The First Eyewitness		The Second Eyewitness		ER	N	Not Sure
	MMR	SMR	SMR	MMR			
5a. One eyewitness says they are absolutely certain of their identification of the criminal defendant, AND another eyewitness does NOT say they are absolutely certain of their identification of the criminal defendant.							
	31	17	12	5	26	4	5
5b. One eyewitness is a police officer, AND another eyewitness is an average citizen.							
	22	15	7	9	40	3	4
5c. One eyewitness is shown a group of people including the defendant and identifies the defendant as the culprit AND another eyewitness is shown only one person, the defendant, and the eyewitness identifies the defendant as the culprit.							
	50	18	5	4	18	2	3
5d. One eyewitness is of the same race as the person being identified as the culprit, AND another eyewitness is of a different race from the person being identified as the culprit.							
	21	15	4	3	48	5	4

- 6a. Eyewitnesses often are asked to estimate how much time elapsed during the commission of the crime. Do you think eyewitness estimations of the duration of crimes are usually accurate or usually NOT accurate?

Usually accurate	29	Skip to Q.7
Usually not accurate	58	CONTINUE
Not sure	13	Skip to Q.7

(Ask only of respondents who say eyewitness estimates of crime duration are usually not accurate in Question 6a.)

- 6b. What do you think happens more often—that an eyewitness UNDERESTIMATES the time that elapsed during the commission of the crime and says that the event took LESS time than it actually did, or that an eyewitness OVERESTIMATES the time that elapsed during the commission of the crime and says that the event took MORE time than it actually did?

More likely that an eyewitness underestimates the time	14
More likely that an eyewitness overestimates the time	37
Not sure	7
Respondents who say eyewitness estimates of crime duration are usually accurate/not sure (Q.6a)	42

7. In situations in which **(READ ITEM)**, do you think this makes an eyewitness' memory about the details of the crime more reliable, less reliable, or has no effect on the eyewitness' memory about the details of the crime?

	More Reliable	Less Reliable	No Effect On Reliability	Not Sure
A weapon is involved in a crime	37	30	25	8
A crime is violent	39	30	22	9

8. Sometimes police talk to an eyewitness and generate a sketch of the culprit based on that eyewitness' description. Do you think such a sketch is a reliable tool in identifying the culprit or not?

Yes, sketch is a reliable tool	65
No, sketch is not a reliable tool	25
Not sure	10

9. Do you think an identification made by an eyewitness who participated in the creation of such a sketch makes that eyewitness' identification more reliable, less reliable, or just as reliable as an identification provided by an eyewitness who did NOT participate in the creation of such a sketch?

More reliable	34
Less reliable	12
Just as reliable	48
Not sure	6

Ask Questions 10a and 10b to one-half of the respondents respectively.

10a. There are different ways of conducting identification procedures. One type of identification procedure involves showing an eyewitness a lineup, which may involve a number of individuals standing in a line facing the eyewitness. For each of the following pairs of lineup procedures that I describe to you, procedure **A** and procedure **B**, please tell me which one you think is more reliable, or whether you think both are equally reliable.

	A is more reliable	B is more reliable	A & B are equally reliable	Not Sure
Procedure A: A lineup where the eyewitness is instructed that the criminal suspect may or may not be included in the lineup, OR Procedure B: A lineup where the eyewitness is NOT instructed that the criminal suspect may or may not be included in the lineup.	28	51	15	6
Procedure A: A witness views a lineup of potential suspects standing next to one another, OR Procedure B: A witness views potential suspects one at a time.	53	24	16	7
Procedure A: A lineup where the police officer running the lineup is AWARE of who the suspect is, OR Procedure B: A lineup where the police officer running the lineup is UNAWARE of who the suspect is.	18	55	21	6

10b. There are different ways of conducting identification procedures. One type of identification procedure involves showing the eyewitness photographs, which is usually called a photo array. For each of the following pairs of photo array procedures that I describe to you, procedure **A** and procedure **B**, please tell me which one you think is more reliable, or whether you think both are equally reliable.

	A is more reliable	B is more reliable	A & B are equally reliable	Not Sure
Procedure A: A photo array where the eyewitness is instructed that the criminal suspect may or may not be included in the lineup, OR Procedure B: A photo array where the eyewitness is NOT instructed that the criminal suspect may or may not be included in the lineup.	30	51	16	3
Procedure A: A witness views a photo array of potential suspects all at the same time, OR Procedure B: A witness views a photo array of potential suspects one picture at a time.	38	39	19	4
Procedure A: A photo array where the police officer running the photo array is AWARE of who the suspect is, OR Procedure B: A photo array where the police officer running the photo array is UNAWARE of who the suspect is.	30	48	18	4

11. Now I am going to read you a series of statements and I'd like you to tell me whether you believe each one is true or false.

	T	F	Not Sure
11a. An eyewitness' level of confidence in his or her identification is an excellent indicator of that eyewitness' reliability.	39	55	6
11b. The act of remembering a traumatic event is like a video recording in that one can recall details as if they had been imprinted or burned into one's brain.	46	48	6
11c. Once an eyewitness learns from police that the person they identified as the culprit is the suspect the police believe committed the crime, that eyewitness is more likely to express greater confidence in their identification than they did beforehand.	85	11	4
11d. An eyewitness who identifies the same culprit in a number of identification procedures can still be mistaken.	89	9	2
11e. If more than two eyewitnesses identified the defendant as the culprit, it always means the eyewitnesses picked the right person.	19	79	2
11f. Eyewitnesses can believe they remember details about a crime that they actually learned about later from someone else, such as the police.	80	16	4
11g. Eyewitnesses will sometimes identify a person as the culprit because they have seen that person somewhere before and the face is familiar, even though the person was not who they actually saw committing the crime.	73	21	6
11h. Before an eyewitness identifies a defendant at trial, if they learn that someone else has also identified the defendant as the culprit, that eyewitness is more likely to express greater confidence in their identification when they testify in front of the jury.	86	10	4
11i. Generally, eyewitnesses are equally accurate when identifying someone of a different race as when they are identifying someone of their own race.	27	66	7
11j. If an eyewitness was under high stress at the time of the crime, the eyewitness will have better recall for the details of the event.	14	80	6

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Factual Questions:

F1. What is your age? I am going to read you some age categories. Stop me when we get to your category.

18 – 24	11
25 – 29	9
30 – 34	13
35 – 39	9
40 – 44	12
45 – 49	6
50 – 54	8
55 – 59	8
60 – 64	7
65 – 69	6
70 – 74	5
75 and over	4
Refused	2

F2. Are you currently employed? (If “currently employed,” ask:) What type of work do you do? (If “not currently employed,” ask:) Are you a student, a homemaker, retired, or unemployed and looking for work?

Currently Employed	
Professional, manager	29
White-collar worker	25
Blue-collar worker	10
Farmer, rancher	-
Not Currently Employed	
Student	5
Homemaker	3
Retired	20
Unemployed, looking for work	6
Other	-
Not sure	2

F5. Generally speaking, do you think of yourself as a Republican, a Democrat, an independent, or something else? **(If “Republican” or “Democrat,” ask:)** Do you consider yourself a strong (Republican/Democrat) or a not so strong (Republican/Democrat)? **(If “Independent,” ask:)** Would you say that you lean more toward the Republicans or more toward the Democrats?”

Strong Republican	4
Not so strong Republican	3
Independent, leans Republican	2
Independent	15
Independent, leans Democrat	7
Not so strong Democrat	12
Strong Democrat	47
Something else/Other	7
Not sure	3

F6. Have you ever been a juror in a CRIMINAL trial? **(If “Yes,” ask:)** Was that trial in Washington, D.C.?

Yes, have been a criminal juror in Washington, D.C.	37
Yes, have been a criminal juror outside Washington, D.C.	4
No, have not been a criminal juror	58
Not sure/refused	1

F7. Are you from a Hispanic or Spanish-speaking background?

Yes, Hispanic	5
No, not Hispanic	93
Not sure/refused	2

F8. What is your race—white, black, Asian, or something else?

White	32
Black	61
Asian	2
Other	1
Hispanic (VOL)	2
Not sure/refused	2

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F9. Last year, what was your total family income from all sources, before taxes? Just stop me when I get to the right category.

Less than \$20,000	12
Between \$20,000 and \$30,000	14
Between \$30,000 and \$40,000	11
Between \$40,000 and \$50,000	9
Between \$50,000 and \$75,000	13
Between \$75,000 and \$100,000	8
More than \$100,000	13
Not sure/refused	20

F10. Have you or a close family member ever been the victim of a crime?
(If “Yes,” ask:) Was the crime a violent or a nonviolent crime?

Yes, have been the victim of a violent crime	27
Yes, have been the victim of a nonviolent crime	25
Yes, have been the victim of both a violent and a nonviolent crime (VOL)	6
No, have not been the victim of a crime	40
Not sure/refused	2

F11. Have you or a close personal friend or a family member ever been arrested?
(If “Yes,” ask:) And was that you, your friend, or your family member?

Yes, respondent has been arrested	12
Yes, close personal friend has been arrested	12
Yes, family member has been arrested	23
No, have not been arrested	56
Not sure/refused	5