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A Method for Analyzing the Accuracy of Eyewitness Testimony in Criminal Cases

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Although no one knows precisely how many wrongful convictions occur each year, a study examining DNA-exoneration cases estimated that in 3.3% to 5% of the capital rape-murder convictions in the U.S. from 1982-1989, the defendants were innocent.[1] If this percentage of wrongful convictions applied to other types of crimes, there would be 33,000 to 50,000 wrongful felony convictions per year in the U.S.[2]

Eyewitness error is the leading cause of wrongful convictions.[3] In fact, Professor Gary Wells and other prominent eyewitness researchers stated that "cases of proven wrongful convictions of innocent people have consistently shown that mistaken eyewitness identification is responsible for more of these wrongful convictions than all the other causes combined."[4] For example, in the first 271 DNA-exoneration cases, eyewitness error occurred in 75% of the cases.[5] In many of the DNA-exoneration cases, multiple eyewitnesses identified the defendant as the perpetrator of the crime and several of the defendants were on death row when they were exonerated.[6]

Because eyewitness evidence is frequently the sole or primary evidence in a criminal case, the justice system needs to enhance the ability of judges, other legal professionals, and jurors to assess its accuracy.[7] This article presents a method for analyzing the accuracy of eyewitness testimony that can help judges achieve this vital goal (hereafter referred to as "Method").

It consists of four steps. First, determine if during the interviews law enforcement obtained the maximum amount of information from the eyewitness, did not contaminate the eyewitness's memory of the crime, or artificially increased the eyewitness's confidence. Second, ascertain if the identification procedures in the case were fair and unbiased. Third, evaluate how the eyewitness factors at the crime scene likely affected accuracy. Finally, make conclusions about the probable accuracy of the eyewitness testimony. Scientific guidelines for making these determinations are discussed.

This article also describes how judges can use this Method to better perform judicial functions related to eyewitness testimony in criminal cases, such as determining whether to grant a motion to suppress an eyewitness identification, deciding whether an eyewitness expert's testimony should be admitted at trial, and evaluating eyewitness accuracy in bench trials and on appeal.

THE CAUSES OF EYEWITNESS ERROR

To understand why eyewitness error occurs and what safeguards are needed to prevent and reduce eyewitness error, it is first necessary to understand the nature of memory.[8] Although an eyewitness's memory of a crime can be reasonably accurate, it does not operate like a video camera.[9] Accordingly, it is not like a videotape passively created that the eyewitness can replay at will to create an exact replica of the crime. Instead, memory is an active, ongoing, dynamic process that consists of four stages: perception, encoding, storage, and retrieval.[10]

Footnotes

1. D. Michael Risinger, *Innocents Convicted: An Empirically Justified Factual Wrongful Conviction Rate*, 97 J. CRIM. L. & CRIMINOLOGY, 761, 806 (2007).
2. *Id.*; *see* Richard A. Wise et al., *How to Analyze the Accuracy of Eyewitness Testimony in a Criminal Case*, 42 CONN. L. REV. 435, 440-41 (2009). This article contains a more detailed explanation of the Method.
3. *See, e.g.,* C. Ronald Huff, *Wrongful Conviction: Societal Tolerance of Injustice*, 4 RES. IN SOC. PROBS. & PUB. POL'Y 99, 103 (1987); Arye Rattner, *Convicted But Innocent*, 12 LAW & HUM. BEHAV. 283, 289 (1988).
4. Gary L. Wells et al., *Eyewitness Identification Procedures: Recommendations for Lineups and Photospreads*, 22 LAW & HUM. BEHAV. 603, 605 (1998).
5. *Eyewitness Identification*, THE INNOCENCE PROJECT (2011), *available at* http://www.innocenceproject.org/understand/Eyewitness Misidentification.php (last visited May 18, 2011).
6. Rob Warden, *How Mistaken and Perjured Eyewitness Identification Testimony Put 46 Innocent Americans on Death Row*, NW. UNIV. SCH. OF LAW, CTR. ON WRONGFUL CONVICTIONS, *available at* http://www.law.northwestern.edu/wrongfulconvictions/aboutus/; Wells et al., *supra* note 4, at 603.
7. *See* Daniel Goleman, *Studies Point to Flaws in Lineups of Suspects*, N.Y. TIMES, Jan. 17, 1995, at C1.
8. *See* Wise et al., *supra* note 2, at 454-64 (for a more detailed explanation of why eyewitness error occurs).
9. John C. Brigham et al., *Disputed Eyewitness Identification Evidence: Important Legal and Scientific Issues*, 36 CT. REV. 12, 13 (1999).
10. EDITH GREENE ET AL., WRIGHTSMAN'S PSYCHOLOGY AND THE LEGAL SYSTEM, 129-32 (6th ed. 2007).

Perception involves noticing an event or object and paying attention to it.[11] Consequently, to recall a crime an eyewitness must first notice and attend to it. Expectations, needs, attitudes, interests, biases, and knowledge affect what an eyewitness attends to during a crime.[12] Thus, a hairstylist may pay more attention to the perpetrator's hair than other eyewitnesses.

Encoding, the second stage of memory, consists of the mental work required to transform an eyewitness's perceptions into a memory of the crime.[13] Normally an eyewitness is unaware of the process of encoding. Encoding involves interpretation and making inferences, so encoding is colored by the meaning the eyewitness gives to the crime.[14] This meaning, like one's perceptions, is affected by one's expectations, needs, attitudes, interests, biases, and prior knowledge.[15] Moreover, eyewitness factors present during the crime, such as a weapon, disguise, stress, etc., can interfere with the eyewitness's encoding of the crime. Eyewitnesses can also rapidly forget the details of a crime.[16]

Storage, the third stage of memory, concerns the maintenance of information encoded about the crime.[17] The eyewitness's storage of information about a crime is an active and dynamic process rather than a quiet, warehouse type of storage.[18] Consequently, post-event information from a variety of different sources, such as other eyewitnesses, the police, the prosecutor, or the media can permanently alter the eyewitness's memory of the crime.[19] Generally an eyewitness is unaware that his or her memory has been altered by post-event information that may or may not be accurate.[20] Moreover, the post-event information may not only affect the eyewitness's memory of the crime, but also the eyewitness's ability to identify the perpetrator of the crime.[21]

During retrieval, the final stage of memory, the eyewitness recalls the crime or attempts to recognize the perpetrator during an identification procedure.[22] When an eyewitness recalls a crime, he or she unconsciously reconstructs his or her memory of the crime from several different sources of information.[23] They include the eyewitness's memory of the crime, and to fill in gaps in his or her memory, the eyewitness unknowingly uses his or her expectations, attitudes, beliefs, biases, knowledge of similar events, and post-event information.[24] The eyewitness automatically blends these different sources of information together to create a memory of the crime that appears seamless and coherent but that may contain inaccuracies.[25] Furthermore, the eyewitness's ability to recognize the perpetrator during an identification procedure may be compromised by factors present during the crime (e.g., weapon, disguise, stress, etc.), post-event information, or the passage of time.[26]

Not only is an eyewitness's memory of a crime malleable, but so is an eyewitness's confidence.[27] Many factors can increase an eyewitness's confidence but not his or her accuracy,[28] such as repeated questioning of an eyewitness, confirming feedback (e.g., "Good, you have identified the suspect."), or learning that another eyewitness has identified the suspect.[29] Thus, by the time of trial there is little or no relationship between eyewitness confidence and accuracy.

Post-event information has its greatest effect on an eyewitness's confidence for inaccurate information.[30] Generally the eyewitness is unaware that post-event information has increased his or her confidence. Increases in eyewitness confidence can cause wrongful convictions because eyewitness confidence is usually the most important factor the trier of fact relies upon in evaluating eyewitness accuracy.[31]

THE SAFEGUARDS THAT ARE NECESSARY TO PREVENT AND REDUCE EYEWITNESS ERROR

Eyewitness researchers have not only discovered what factors affect eyewitness accuracy during the crime, but have also discovered what safeguards are necessary to minimize eyewitness errors during interviews and identification productions.[32] Conducting fair and unbiased eyewitness interviews and identification procedures is the best means available to the criminal justice system to reduce eyewitness error.[33]

For example, researchers have learned that during eyewitness interviews, law enforcement officers frequently make three types of errors: (1) they fail to obtain much of the information that the eyewitness knows about the crime; (2) they contami-

11. Wayne Weiten, Psychology: Themes and Variations: Briefer Version 206 (7th ed. 2008).
12. Curt R. Bartol & Anne M. Bartol, Psychology and Law: Theory, Research and Applications 228 (3d ed. 2004).
13. Id.
14. Id.
15. Id.
16. Richard A. Wise et al., A Survey of Defense Attorneys' Knowledge and Beliefs About Eyewitness Testimony, The Champion, Nov. 2007, at 23.
17. Greene et al., supra note 10, at 130.
18. Id.
19. See, e.g., Bartol & Bartol, supra note 12, at 229; Ronald P. Fisher, Interviewing Victims and Witnesses of Crime, 1 Psych. Pub. Pol'y & L. 732, 740 (1995).
20. Bartol & Bartol, supra note 12, at 228.
21. Elizabeth F. Loftus & Edith Greene, Warning: Even Memory for Faces May Be Contagious, 4 Law & Hum. Behav. 323, 333 (1980).
22. Weiten, supra note 11, at 214-16.
23. Mark Costanzo, Psychology Applied to the Law 180 (2004).
24. Id.
25. Id. at 228.
26. Wise et al., supra note 16, at 23.
27. Wells, supra note 4, at 624.
28. Gary L. Wells et al., From the Lab to the Police Station: A Successful Application of Eyewitness Research, 55 Am. Psychologist 581, 586 (2000).
29. See, e.g., John S. Shaw III & Kimberley A. McClure, Repeated Postevent Questioning Can Lead to Elevated Levels of Eyewitness Confidence, 20 Law & Hum. Behav. 629, 630 (1996).
30. Donald P. Judges, Two Cheers for the Department of Justice's Eyewitness Evidence: A Guide for Law Enforcement, 53 Ark. L. Rev. 231, 249 (2000).
31. Wells, supra note 4, at 620.
32. Richard A. Wise et al., A Tripartite Solution to Eyewitness Error, 97 J. Crim. L. & Criminology 807, 842-65 (2007).
33. Id. at 865.

nate the eyewitness's memory of the crime with post-event information; and (3) they increase the eyewitness's confidence.[34]

In the 1980s, Fisher and Geiselman began developing a method of interviewing eyewitnesses that significantly reduced law enforcement errors.[35] Scientific studies comparing their cognitive interview with the standard law enforcement interview show that it increases accurate information obtained from eyewitnesses by 35% to 75%.[36] The cognitive interview also decreases the probability that law enforcement will contaminate the eyewitness's memory of the crime or increase the eyewitness's confidence.[37]

Because of the salient role identification procedures play in eyewitness error, researchers have also devoted much time and effort to studying them. In determining what safeguards are necessary for fair and unbiased identification procedures, researchers have learned that many of the same safeguards needed for a valid experiment are also required for fair and unbiased identification procedures.[38] For instance, scientists have long known that they must implement safeguards for experiments to prevent their own biases and expectations from unintentionally affecting the results.[39] Biases and expectations threaten the validity of an experiment because people tend to test their hypotheses in a manner that will confirm them and because of the self-fulfilling nature of expectations.[40] Expectations and biases can also affect the validity of identification procedures.

The lineup-as-experiment analogy helps us identify errors that law enforcement officers often make when conducting identification procedures. They include:

> [T]he presence of demand characteristic (e.g., pressuring the eyewitness to make a choice), the influence of confirmation biases (e.g., asking the eyewitness specifically about the suspect while not asking those same questions about the distracters), the facilitation of response biases (e.g., encouraging a loose recognition criterion threshold in the eyewitness), making inferences from small sample sizes (e.g., making strong judgments of validity based on only one eyewitness), not using control groups (e.g., failing to see if people who did *not* witness the crime [but who have the eyewitness's description of the perpetrator] can identify the suspect), selective recording and interpretation of data (e.g., finding significance in an identification of the suspect, but ignoring the outcome if the eyewitness makes a non-identification), leaking of the hypothesis (e.g., making it obvious to the eyewitness which person in the lineup is

the suspect), and a host of other possible confounds.[41]

In sum, to prevent and reduce eyewitness errors, law enforcement must implement safeguards that ensure that the identification of a suspect is the product of the eyewitness's memory and not how the identification procedure was conducted.

The National Institute of Justice (hereafter "NIJ"), which is the research arm of the U.S. Department of Justice, recognizes the importance of eyewitness research in preventing eyewitness error. Eyewitness research forms the basis for the NIJ's recommendations for conducting interviews and identification contained in its *Eyewitness Evidence: A Guide for Law Enforcement* (hereafter "Guide") and its *Eyewitness Evidence: A Trainer's Manual for Law Enforcement* (hereafter "Trainer's Manual").[42] The purposes of the NIJ's Guide and Trainer's Manual are to develop improved procedures for the collection and preservation of eyewitness evidence for U.S. law enforcement agencies[43] and provide them with training in the guidelines.[44]

Finally, to significantly reduce eyewitness error, the criminal justice system must view eyewitness evidence as a type of trace evidence.[45] Like other types of trace evidence, such as fingerprints, DNA, and firearm patterns, eyewitness evidence has a physiological basis (i.e., biochemical changes in the eyewitness's brain).[46] Consequently, the accuracy of eyewitness testimony, like other types of trace evidence, depends in large part on the use of proper scientific procedures in collecting and preserving it. In short, before admitting eyewitness evidence, a judge should always first determine if valid scientific procedures were followed in producing it. If they were not followed, this failure should generally weigh heavily against admitting the eyewitness testimony at trial just as it would for DNA, fingerprints, ballistics, and other types of trace evidence.[47]

WHY JUDGES NEED A METHOD FOR ANALYZING THE ACCURACY OF EYEWITNESS TESTIMONY

Judges must be able to assess eyewitness accuracy so they can better evaluate its probative value in criminal cases and help prevent wrongful conviction from erroneous eyewitness testimony. For example, trial judges need this ability when determining whether to admit a pretrial eyewitness identification at trial, to permit an eyewitness to make an in-court identification, and to allow an eyewitness expert to testify.[48] They also require this ability when deciding eyewitness evidentiary issues, drafting jury instructions about eyewitness testimony, and evaluating eyewitness accuracy in bench trials.[49] Appellate judges must assess eyewitness accuracy when deciding if the

34. Ronald P. Fisher, *Interviewing Victims and Witnesses of Crime*, 1 PSYCH. PUB. POL'Y & L. 732, 752-56 (1995).
35. Wells et al., *supra* note 28, at 582-83.
36. *Id.* at 584.
37. Fisher, *supra* note 34, at 752.
38. Wells et al., *supra* note 4, at 617-18.
39. WEITEN, *supra* note 11, at 38-40, 48-50.
40. *Id.*
41. Wells et al., *supra* note 4, at 618.
42. Wells et al., *supra* note 28, at 581.

43. NAT'L INST. OF JUSTICE, U.S. DEP'T OF JUSTICE, EYEWITNESS EVIDENCE: A GUIDE FOR LAW ENFORCEMENT (1999) [hereinafter GUIDE] at vii.
44. NAT'L INST. OF JUSTICE, U.S. DEP'T OF JUSTICE, EYEWITNESS EVIDENCE: A TRAINER'S MANUAL FOR LAW ENFORCEMENT III (2003) [hereinafter TRAINER'S MANUAL] at v.
45. Wells et al., *supra* note 4, at 618-19.
46. *Id.*
47. *Id.*
48. Wise et al., *supra* note 2, at 464.
49. *Id.*

TABLE 1: METHOD FOR ANALYZING THE ACCURACY OF EYEWITNESS TESTIMONY

STEP 1: EVALUATING THE EYEWITNESS INTERVIEWS

A. Did the interviews obtain the maximum amount of information from the eyewitness?

B. Did the interviews contaminate the eyewitness's memory?

    1. Did they contaminate the eyewitness's memory of the crime?
    2. Did they contaminate the eyewitness's memory of the perpetrator of the crime?

C. Did the interviews, identification procedures, other eyewitnesses, prosecutor, media, or some other factor significantly increase the confidence of the eyewitness prior to taking a statement of the eyewitness's confidence in the accuracy of his or her identification?

STEP 2: EVALUATING THE IDENTIFICATION PROCEDURES AND IDENTIFICATION ACCURACY

A. Did one of the following circumstances occur that would make the eyewitness's identification of the defendant presumptively inaccurate?

    1. Was the eyewitness interview significantly biased and did the bias pertain to information concerning the description or identity of the perpetrator?
    2. Was an identification procedure significantly biased?

B. Because of the nature of memory, the effects of biased interviews and identification procedures on identification accuracy cannot be corrected by later conducting a fair interview and identification procedure. Accordingly, if an eyewitness's memory of the perpetrator of a crime has been significantly contaminated, identification by the eyewitness of the defendant should be considered presumptively inaccurate.

C. Does one of the two exceptions apply to the general rule that an eyewitness's identification is presumptively inaccurate if an eyewitness interview or identification procedure was significantly biased?

    1. Did some unusual circumstance exist that overcomes the presumptive inaccuracy of the identification (e.g., the eyewitness knew the perpetrator prior to the crime or had prolonged repeated exposure to the perpetrator)?
    2. Was there reliable, valid corroborating evidence that establishes the veracity of the eyewitness testimony?

D. Were the eyewitness interviews and identification procedures fair and impartial or did one of the exceptions to biased interviews and identification procedures apply?
If so, go on to Step 3. If not, the eyewitness's identification should be presumed to be inaccurate.

STEP 3: EVALUATING THE EYEWITNESS FACTORS PRESENT DURING THE CRIME

A. What eyewitness factors during the crime likely increased the accuracy of the eyewitness identification and testimony?

B. What eyewitness factors during the crime likely decreased the accuracy of the eyewitness identification and testimony?

STEP 4: CONCLUSIONS:

    1. Was the maximum amount of information obtained from the eyewitness during the interviews?

    2. Was a statement of the eyewitness's confidence in the accuracy of his or her identification obtained prior to the eyewitness receiving any feedback?

    3. Is there a high, medium, or low probability that the eyewitness's testimony was accurate?

    4. Is there a high, medium, or low probability that the eyewitness identification was accurate?

trial court erred in admitting a pretrial identification, permitting an in-court identification, refusing to permit a jury instruction about eyewitness testimony, or failing to admit an eyewitness expert.[50] This ability also helps appellate judges assess whether the eyewitness testimony in a case is sufficiently reliable to affirm a guilty verdict.[51]

Although the ability to assess eyewitness accuracy is essential to judges, scientific studies show that, like other legal professionals and jurors, judges have limited knowledge of eyewitness factors.[52] For example, Wise and Safer surveyed 160 judges about what they know about eyewitness factors, what they believe jurors know about eyewitness factors, and what legal safeguards they would permit attorneys to use to educate jurors about eyewitness factors.[53] The latter two questions are important because, though jurors have limited knowledge of eyewitness factors, the most common reason judges exclude eyewitness-expert testimony is because they believe jurors are knowledgeable about eyewitness factors.[54] Furthermore, expert testimony is the only legal safeguard that has demonstrated any efficacy in educating jurors about eyewitness testimony.[55] Because eight of the questions in the survey were the same or similar to questions used in an earlier survey of eyewitness experts, the judges' responses for these questions were compared to the experts' responses.

The judges in the survey averaged only 55% correct on the 14-item knowledge scale.[56] They also lacked knowledge of many key eyewitness facts, such as jurors' inability to distinguish between accurate and inaccurate eyewitnesses; sequential lineups reduce erroneous eyewitness identification compared with simultaneous lineups; and eyewitness confidence is not related to accuracy at trial.[57] The judges' responses differed significantly from the experts' responses on 5 of 8 questions that they both answered.[58] They also tended to overestimate jurors' knowledge of eyewitness factors compared to the experts and were reluctant to permit eyewitness-expert testimony even though, as previously mentioned, it is the only legal safeguard that has shown any effectiveness in educating jurors about eyewitness factors.[59]

Other studies of judges' knowledge of eyewitness factors have produced similar results.[60] Judges' lack of knowledge is not surprising. Judges receive little training about eyewitness testimony, the effect of many eyewitness factors on eyewitness accuracy is counterintuitive, and judges do not receive feedback on which eyewitness made inaccurate identification in criminal cases and what factors caused their inaccuracy.[61]

More importantly, even if judges were knowledgeable about eyewitness factors, they would still have difficulty assessing eyewitness accuracy in criminal cases. This result would likely occur because the ability to assess eyewitness accuracy is not just a question of knowledge, but also the ability to integrate that knowledge into the facts of a case.[62] Research shows that even experts have difficulty applying their knowledge to the facts of a case.[63] Accordingly, what judges need is a method for analyzing the accuracy of eyewitness testimony that will enable them to both identify the relevant eyewitness factors in a criminal case and also apply them to the facts. The Method described in the next several sections can help judges to achieve these essential goals.

METHOD FOR ANALYZING THE ACCURACY OF EYEWITNESS TESTIMONY

Professor Wise has developed a method for analyzing the accuracy of eyewitness testimony that consists of four steps.[64] In the first step, determine if during the interview law enforcement: (a) obtained the maximum amount of accurate information from the eyewitness; (b) contaminated the eyewitness's memory of the crime with post-event information; or (c) increased the eyewitness's confidence.

Obtaining the maximum amount of accurate information from an eyewitness helps prevent wrongful convictions. For example, the most important determinant of whether a crime is solved is the completeness and accuracy of the eyewitness testimony.[65] In addition, detailed and accurate eyewitness testimony increases the probability that the trier of fact will render a correct verdict.[66] It also aids law enforcement officers in obtaining confessions from guilty suspects, allows defense attorneys to more effectively represent innocent defendants, and assists district attorneys in prosecuting guilty defendants.[67]

Determining if an eyewitness's memory has been contami-

50. *Id.*
51. *Id.*
52. *Id.*
53. Richard A. Wise & Martin A. Safer, *A Survey of Judges' Knowledge and Beliefs About Eyewitness Testimony*, 40 CT. REV. 6-16 (2003).
54. *Id.* at 7.
55. *Id.*
56. *Id.* at 13.
57. *Id.*
58. *Id.* at 9-11.
59. *Id.* at 11.
60. Tanja Rapus Benton et al., *Eyewitness Memory Is Still Not Common Sense: Comparing Jurors, Judges, and Law Enforcement to Eyewitness Experts*, 20 APPLIED COGNITIVE PSYCHOL. 115, 126 (2006); Pär Anders Granhag et al., *Eyewitness Testimony: Tracing the Beliefs of Swedish Professionals*, 23 BEHAV. SCI. & L. 709, 723 (2005); Svein Magnussen et al., *What Judges Know About Eyewitness Testimony:*

A Comparison of Norwegian and U.S. Judges, 14 PSYCHOL. CRIME & L. 177, 185 (2008); Richard A. Wise et al., *A Comparison of Chinese Judges' and U.S. Judges' Knowledge and Beliefs about Eyewitness Testimony*, 16 PSYCHOL. CRIME & L. 695, 695 (2010).
61. Wise et al., *supra* note 2, at 467.
62. Brian L. Cutler et al., *The Eyewitness, the Expert Psychologist, and the Jury*, 13 LAW & HUM. BEHAV. 311, 313 (1989).
63. Steven D. Penrod & Brian Cutler, *Preventing Mistaken Conviction in Eyewitness Identification Trials: The Case Against Traditional Safeguards*, *in* PSYCHOLOGY AND LAW: THE STATE OF THE DISCIPLINE 89, 217 (Ronald Roesch et al. eds., 1999).
64. *See* Wise et al., *supra* note 2, at 468-508 (more detailed explanation of the Method and the guidelines for the Method).
65. Fisher, *supra* note 34, at 732.
66. *Id.*
67. *Id.*

nated during the interview is crucial, because, as we have seen, eyewitness memory is malleable. Moreover, once it is altered by post-event information, the eyewitness's original memory of the crime cannot be restored.[68] Post-event information not only affects the eyewitness's memory of the crime but can also impair identification accuracy.[69] Assessing if the eyewitness's confidence has been artificially increased prior to obtaining a statement of the eyewitness's confidence is critical because, as previously mentioned, generally eyewitness confidence is the most important factor the trier of fact uses in evaluating eyewitness accuracy.[70]

The second step in the Method is to evaluate whether the identification procedures in the case were fair and unbiased. (*See* Table I, Step 2.) The 11 scientific guidelines delineated later in this article can be used to make this evaluation.

If significant bias existed in how the eyewitness interview or identification procedures were conducted, the accuracy of the eyewitness testimony is highly questionable unless an exception applies. The exceptions include if the eyewitness conditions were unusually good (e.g., the eyewitness had repeated prolonged exposure to the perpetrator or the eyewitness knew the perpetrator prior to the crime) or if there is reliable, valid evidence corroborating the accuracy of the eyewitness testimony.

Because of the nature of memory, if a biased interview or identification procedure is conducted, the error cannot be corrected by later conducting a fair and unbiased interview or identification procedure.[71] Consequently, if a biased identification was conducted, not only should the eyewitness's identification from the biased identification be presumed inaccurate, but any subsequent identification, even from a fair identification procedure, should also be presumed inaccurate. In contrast, if fair and unbiased interviews and identification procedures were conducted, the eyewitness's testimony and identification are more likely to be accurate even if the eyewitness conditions during the crime were somewhat less than ideal. Therefore, when analyzing the accuracy of eyewitness testimony, always first assess how the eyewitness interviews and identification procedures were conducted.

If no significant bias occurred in the eyewitness interviews or identification procedures or if an exception applies, proceed to the third step in the Method; however, if there was significant bias and it likely affected both the accuracy of the eyewitness testimony and the identification and no exception applies, presume the eyewitness testimony is inaccurate and cease the analysis.

The third step in analyzing eyewitness accuracy assesses how the eyewitness factors during the crime likely affected eyewitness accuracy. Separately list factors that likely increased and factors that likely decreased eyewitness accuracy during the crime. The most common eyewitness factors that affect accuracy are discussed later in this article.

In the final step of the Method, make conclusions about the likely accuracy of the eyewitness testimony in the case by answering the following questions: (a) Did law enforcement obtain the maximum amount of information from the eyewitness? (b) Was the eyewitness's confidence increased prior to taking a statement of confidence from the eyewitness? (c) Is there a high, medium, or low probability that the eyewitness testimony was accurate? (d) Is there a high, medium, or low probability that the identification was accurate?

This Method has several benefits. For instance, it offers a comprehensive analytical framework for both identifying and organizing the many different types of eyewitness factors that affect eyewitness accuracy. Perhaps most importantly, it also helps integrate those eyewitness factors into the analysis of the accuracy of the eyewitness testimony. Thus, the Method divides eyewitness factors into three types: those that pertain to interviews, identification procedures, and the crime scene. It provides a specific order for analyzing the different types of eyewitness factors, concrete guidelines for evaluating them, and specific standards for assessing whether they were likely to produce eyewitness error (i.e., if the interview and identification procedures were substantially biased or the eyewitness factors at the crime scene were poor).

Another advantage to using this Method is that it stresses the importance of conducting fair and unbiased interviews and identification procedures. The Method's emphasis on fair and unbiased interviews and identification procedures is warranted for several reasons. First, not only is this emphasis logical and supported by empirical evidence, but it is also justified because the State can usually control how it conducts interviews and identification procedures and can easily document how they were conducted by videotaping them.[72] In contrast, the State cannot control the eyewitness factors at a crime scene, and usually there is no objective record of them.

Second, requiring the State to conduct fair and unbiased eyewitness interviews and identification procedures in criminal cases is congruent with evidentiary rules providing that proper scientific procedures must be followed for trace evidence to be admitted at trial.[73]

Third, this emphasis gives the State a strong incentive for conducting fair and unbiased interviews and identification procedures because they will substantially strengthen the State's case.

Fourth, the State can conduct fair and unbiased eyewitness interviews without incurring either a significant financial or administrative burden.[74]

Finally, the most potent means available to the legal system to prevent and reduce eyewitness error is by conducting fair and unbiased eyewitness interviews and identification procedures.[75]

We recognize there will be limited circumstances when pol-

68. *See, e.g.*, Bartol & Bartol, *supra* note 12, at 229.
69. Loftus & Greene, *supra* note 21, at 333.
70. Wells at al., *supra* note 4, at 620.
71. *See* Bartol & Bartol, *supra* note 12, at 229.
72. Wells et al., *supra* note 28, at 582-87; Wise et al., *supra* note 32, at 864-65.
73. Fed. R. Evid. 403, 702, 901.
74. Amy Klobuchar et al., *Improving Eyewitness Identifications: Hennepin County's Blind Sequential Lineup Pilot Project*, 4 Cardozo Pub. L. Pol'y & Ethics 381, 409 (2006).
75. Wise et al., *supra* note 32, at 865.

icy considerations will necessitate the admission of eyewitness testimony even though the Method indicates that the eyewitness testimony should be presumed inaccurate. We are referring to circumstances where law enforcement acted in good faith but was forced to use a suggestive procedure because of exigent circumstances (e.g., when law enforcement used a show-up rather than a photo array or lineup because a suspect was apprehended shortly after the crime).

The next three sections discuss scientific guidelines for evaluating the fairness of eyewitness interviews and identification procedures and eyewitness factors that are commonly present during a crime. The appendix contains a form that will help judges apply this Method to criminal cases.

EVALUATING THE EYEWITNESS INTERVIEW (TABLE 1, STEP 1)

As stated previously, law enforcement often makes three types of errors when it interviews eyewitnesses: (1) It fails to obtain the maximum amount of information from the eyewitness; (2) it contaminates the eyewitness's memory of the crime with post-event information; and (3) it increases the eyewitness's confidence.

The following guidelines derived from scientific research, and the Guide and Trainer's Manual, can be used to assess whether the eyewitness interviews were conducted properly. The factors for evaluating if law enforcement obtained the maximum amount of information from the eyewitness are divided into three categories: doing pre-interview preparation, conducting the interview, and concluding the interview.

A. FACTORS RELEVANT TO MAXIMIZING THE INFORMATION OBTAINED FROM THE EYEWITNESS:[76]

1. **Pre-interview preparation:**
   a. **When circumstances permit, the interview should be held as soon as possible after the crime.**[77] (Eyewitnesses forget the details of a crime very quickly, so the interview should be conducted as soon as the eyewitness is capable of being interviewed and the exigencies of the investigation permit.[78])
   b. **The interviewer should review all information about the crime prior to the interview.** (Preparation results in a more thorough and complete interview.[79])
   c. **The interview should be conducted in a comfortable**
   environment, and distractions and interruptions should be minimized. (Under these conditions, the eyewitness will recall more information.)[80]
   d. **The resources necessary to conduct the interview (e.g., pens, notepad, video recorder, interview room, etc.) should be obtained prior to the interview so it does not have to be interrupted to get these items.**[81] (Interruptions interfere with the eyewitness's ability to remember the crime.)
   e. **The eyewitness interview should be videotaped.**[82] (Videotaping ensures there is an accurate and complete record of the eyewitness interview.)

2. **When conducting the interview the interviewer should:**
   a. **Establish and maintain rapport with the eyewitness and minimize his or her anxiety.** (Eyewitnesses are often traumatized by a crime and a relaxed eyewitness provides more information.[83] The interviewer can establish rapport and minimize an eyewitness's anxiety by showing understanding and concern for the eyewitness, personalizing the interview, and listening actively.[84])
   b. **Inquire about the eyewitness's condition.** (It helps build rapport and alerts the interviewer to any condition that might impair the eyewitness's memory, such as intoxication, shock, drugs, etc..[85])
   c. **Instruct the eyewitness to (1) volunteer information[86] and (2) report all details he or she remembers about the crime even if the information seems trivial and unimportant.[87] Inform the eyewitness about the type and degree of detail of information the interviewer needs.**[88] (These rules encourage the eyewitness to be active during the interview, which is important because it is the eyewitness who has information about the crime, not the interviewer, and volunteered information is more accurate than information given in answers to questions.[89] These rules also encourage the eyewitness to disclose all the information he or she knows about the crime and helps the eyewitness understand the kind of information and the degree of detail the interviewer needs.[90])
   d. **Ask the eyewitness to mentally recreate the crime.** (The eyewitness can recreate the crime by thinking about his or her thoughts and feelings during the crime—recreating the crime increases recall.[91])

76. *See* Wise et al., *supra* note 2, at 474-484 (for a more detailed explanation of the guidelines for interviews and more extensive and detailed footnotes).
77. TRAINER'S MANUAL, *supra* note 44, at 13; Wise et al. *supra* note 2, at 475.
78. *Id.*
79. *Id.*
80. TRAINER'S MANUAL, *supra* note 44, at 13; Fisher, *supra* note 34, at 756; Wise et al., *supra* note 2, at 476.
81. *Id.*
82. Wise et al., *supra* note 2, at 476.
83. TRAINER'S MANUAL, *supra* note 44, at 14; Wise et al., *supra* note 2, at 477.

84. *Id.*
85. *Id.*
86. TRAINER'S MANUAL, *supra* note 44, at 19; Wise et al., *supra* note 2, at 477.
87. TRAINER'S MANUAL, *supra* note 44, at 20; Wise et al., *supra* note 2, at 477.
88. Fisher, *supra* note 34, at 747; Wise et al. *supra* note 2, at 477.
89. TRAINER'S MANUAL, *supra* note 44, at 16, 19; Wise et al., *supra* note 2, at 477.
90. TRAINER'S MANUAL, *supra* note 44, at 19; Wise et al., *supra* note 2, at 477.
91. TRAINER'S MANUAL, *supra* note 44, at 20; Wise et al., *supra* note 2, at 477-478.

e. **Use primarily open-ended questions during the interview (e.g., "What did the perpetrator look like?").**[92] (Open-ended questions give the eyewitness control of the interview, promote the full disclosure of the details of a crime, produce more accurate information, and improve listening.[93])

f. **Ask closed-ended questions (e.g., "What color was the perpetrator's hair?") only when they are needed to augment open-ended questions.** (Open-ended questions are superior to closed-ended questions, because they do not limit the amount and scope of the information provided by the eyewitness.[94] Nonetheless, close-ended questions should be used to obtain information omitted from answers to open-ended questions.[95])

g. **Avoid interrupting the eyewitness.** (Interruptions interfere with recall and discourage the eyewitness from volunteering information.[96])

h. **Allow for pauses when an eyewitness stops talking before asking the next question.** (Pauses ensure the eyewitness has completed his or her answer.[97])

i. **Tailor questions to the eyewitness's narrative rather than asking a standard set of questions.** (Because each eyewitness's memory of a crime is unique, the interviewer's questions should track what the eyewitness is talking about.[98] For example, if the eyewitness is describing the crime scene, the interviewer should not be asking questions about the perpetrator's appearance.[99])

j. **Encourage nonverbal communications from the eyewitness, such as drawings and gestures, especially from children or eyewitnesses who are not fluent in English.**[100] (Some information about a crime is difficult to express verbally, and some eyewitnesses have limited verbal skills.)

k. **Ask the eyewitness, "Is there anything else I should have asked you?"**[101] (This question helps ensure that the eyewitness has disclosed all important information about the crime.)

3. **Concluding the interview:**
a. **The eyewitness should be encouraged to contact the interviewer if he or she remembers additional facts about the crime.** (Eyewitnesses frequently remember other information about the crime after the interview is completed.[102])

b. **The interviewer should review written documentation with the eyewitness and ask the eyewitness if he or she wishes to change, add, or emphasize anything.** (The review ensures the information was recorded accurately and gives the eyewitness an additional opportunity to recall more information.[103])

c. **Thank the eyewitness for his or her time and cooperation.** (This strengthens rapport with the eyewitness and encourages future cooperation.[104])

B. **"CONTAMINATION" OF THE EYEWITNESS'S MEMORY (TABLE 1, STEP I B. 2): TO AVOID CONTAMINATING THE EYEWITNESS'S MEMORY AND TO ASSESS WHETHER THE EYEWITNESS'S MEMORY HAS BEEN CONTAMINATED, THE INTERVIEWER SHOULD:**

1. **Separate the eyewitnesses and tell them not to discuss the details of the crime with other eyewitnesses**[105] **and to avoid media accounts of the crime.**[106] (This helps prevent post-event information from contaminating the eyewitness's memory.[107])

2. **Determine if an eyewitness has spoken to another eyewitness or anyone else about the crime or been exposed to media accounts of the crime.** (These sources may have altered the eyewitness's memory of the crime.[108])

3. **Ascertain the nature of the eyewitness's prior law enforcement contact related to the crime being investigated. This includes any prior interviews by law enforcement or participation in any type of identification procedure.** (This information allows the interviewer to assess if post-event information or a biased identification procedure has contaminated the eyewitness's memory.[109])

4. **Avoid volunteering any information about the perpetrator or the crime.** (Volunteered information can alter the eyewitness's memory.[110])

5. **Tell the eyewitness not to guess and to indicate if he or she feels any uncertainty about an answer.** (Guessing can contaminate the eyewitness's memory.[111])

92. TRAINER'S MANUAL, *supra* note 44, at 11; Wise et al., *supra* note 2, at 478.
93. *Id.*
94. *Id.*
95. *Id.*
96. TRAINER'S MANUAL, *supra* note 44, at 16; Wise et al., *supra* note 2, at 479.
97. TRAINER'S MANUAL, *supra* note 44, at 17; Wise et al., *supra* note 2, at 479.
98. *Id.*
99. *Id.*
100. TRAINER'S MANUAL, *supra* note 44, at 20; Wise et al., *supra* note 2, at 479.
101. TRAINER'S MANUAL, *supra* note 44, at 19; Wise et al., *supra* note 2, at 479.
102. TRAINER'S MANUAL, *supra* note 44, at 20; Wise et al., *supra* note 2, at 479-480.
103. TRAINER'S MANUAL, *supra* note 44, at 21; Wise et al., *supra* note 2, at 480.
104. *Id.*
105. TRAINER'S MANUAL, *supra* note 44, at 12; Wise et al., *supra* note 2, at 480.
106. *Id.*
107. *Id.*
108. TRAINER'S MANUAL, *supra* note 44, at 12; Wise et al., *supra* note 2, at 480-481.
109. TRAINER'S MANUAL, *supra* note 44, at 14; Wise et al., *supra* note 2, at 481.
110. TRAINER'S MANUAL, *supra* note 44, at 23; Wise et al., *supra* note 2, at 481.
111. TRAINER'S MANUAL, *supra* note 44, at 20; Wise et al., *supra* note 2, at 481.

6. **Refrain from: (a) using suggestive or leading questions (e.g., "Was the car red?");[112] (b) disclosing information to the eyewitness about the crime the interviewer learned from other sources; or (c) using multiple-choice questions.** (They provide post-event information about the crime, which can alter an eyewitness's memory of the crime and his or her ability to identify the perpetrator of the crime.[113])

C. EYEWITNESS CONFIDENCE (TABLE 1, STEP 1 C.): TO PREVENT INCREASING THE EYEWITNESS'S CONFIDENCE AND TO DETERMINE IF IT HAS BEEN ARTIFICIALLY INCREASED, THE INTERVIEWER SHOULD:

1. **Avoid disclosing to the eyewitness: (a) that another eyewitness has identified the same suspect; (b) what another eyewitness said about the crime or the perpetrator; or (c) that other evidence confirms the eyewitness's testimony or identification.** (All these factors increase eyewitness confidence.[114])

2. **Determine whether the eyewitness had contact with other eyewitnesses, the media, or other law enforcement officers, and evaluate the nature of that contact to assess whether it has increased the eyewitness's confidence (e.g., the eyewitness has been told that another eyewitness also identified the suspect).[115]**

3. **Avoid giving the eyewitness any type of confirming feedback (e.g., "Good, you have identified the suspect.") or exposing the eyewitness to unnecessary, repeated questioning.** (These factors can significantly increase eyewitness confidence.[116])

4. **Take a statement of the eyewitness's confidence in the accuracy of his or her identification of the suspect as the perpetrator of the crime immediately after the identification procedure and prior to the eyewitness receiving any feedback about his or her identification.[117]** (Eyewitness confidence can easily be increased. Therefore, it is essential to take a statement of the eyewitness's confidence immediately after the identification and prior to any feedback.[118])

GUIDELINES FOR ANALYZING THE ACCURACY OF IDENTIFICATION PROCEDURES (TABLE 1, STEP 2):

The following 11 scientific guidelines can be used to objectively evaluate whether a lineup or photo array was fair and unbiased.[119] For scientific guidelines for mug books, composite images, and show-ups, see the Guide and Trainer's Manual.[120]

1. **Whenever possible, law enforcement should use a photo array or lineup only when there is probable cause to believe the suspect committed the crime.[121]**
   Erroneous eyewitness identifications occur when the suspect in the photo array or lineup is not the perpetrator. By generally requiring probable cause before placing a suspect in a line, the number of perpetrator-absent lineups will be significantly reduced.

2. **Before conducting an identification procedure, determine whether the eyewitness has previously seen the suspect.[122]**
   When an eyewitness has previously seen the suspect, such as in a mug book, there is significantly greater probability that the eyewitness will identify the suspect in a photo array or lineup even when the suspect is not the perpetrator.

3. **Only one suspect should be included in every identification procedure.[123]**
   Including more than one suspect in an identification procedure significantly increases the probability of an erroneous eyewitness identification because it reduces the number of fillers and increases the probability that a suspect will be selected.

4. **The number of lineup participants should be increased.[124]**
   The typical photo array or lineup contains only five or six participants. Studies show that even if such identification procedures are fair and unbiased they still pose a substantial risk of an erroneous identification.[125] Increasing the number of participants in photo arrays and lineups to twelve reduces erroneous identifications by 50% without a significant decrease in accurate identifications.[126]

5. **The suspect should not stand out from the foils.[127]**
   To prevent this from occurring, several procedures are necessary. First, the foils should generally match the eyewitness's description of the perpetrator of the crime.[128] Second,

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112. Trainer's Manual, *supra* note 44, at 11; Wise et al., *supra* note 2, at 481.

113. Trainer's Manual, *supra* note 44, at 19; Wise et al., *supra* note 2, at 481-82.

114. Helen M. Patterson & Richard I. Kemp, *Comparing Methods of Encountering Post-Event Information: The Power of Co-witness Suggestion,* 20 Applied Cognitive Psychol. 1083, 1098 (2006).

115. Trainer's Manual, *supra* note 44, at 12; Wise et al., *supra,* note 2, at 482.

116. Andrew I. Taslitz, *Convicting the Guilty, the ABA Takes a Stand*, 19 Crim. Just. 18, 23 (2005); Wise et al., *supra* note 2, at 482-83.

117. Wells et al., *supra* note 4, at 635; Wise et al., *supra* note 2, at 483.

118. Michael R. Leippe & Donna Eisenstadt, *Eyewitness Confidence and the Confidence-Accuracy Relationship in Memory for People, in* 2 Handbook of Eyewitness Psychology, Memory for People 377, 417 (Rod C. L. Lindsay et al. eds., 2007); Wells et al., *supra* note

28, at 586.

119. *See* Wise et al., *supra* note 2, at 484-497 (for a more detailed explanation of these guidelines and more extensive and detailed references).

120. Trainer's Manual, *supra* note 44, at 25-27, 30-32.

121. Wise et al., *supra* note 32, at 856; Wise et al., *supra* note 2, at 485.

122. Wise et al., *supra* note 32, at 857; Wise et al., *supra* note 2, at 488.

123. Trainer's Manual, *supra* note 44, at 35; Wise et al., *supra* note 2, at 488.

124. Taslitz, *supra* note 116, at 21; Wise et al., *supra* note 2, at 489.

125. Wells et al., *supra* note 4, at 62; Wise et al., *supra* note 2, at 489.

126. *Id.* at 63; *Id.* at 489.

127. Wise et al., *supra* note 32, at 152; Wise et al., *supra* note 2, at 489-90.

128. Trainer's Manual, *supra* note 44, at 36; Wise et al., *supra* note 2, at 490.

the suspect's position in the lineup should be randomly determined to prevent a suspect's position in an identification procedure from becoming common knowledge.[129] Third, fillers should not be reused with the same eyewitness, because when this occurs the suspect stands out because he or she is the only person who did not appear in a previous identification procedure.[130] Finally, how the lineup is conducted should not draw attention to the suspect.[131]

6. **Law enforcement should use sequential identification procedures.**[132]
Sequential lineups[133] reduced the number of erroneous eyewitness identification compared with simultaneous lineups.[134]

7. **The lineup administrator should not know the identity of the suspect.**[135]
If a lineup administrator knows the suspect's identity, he or she can intentionally or unintentionally cause the eyewitness to choose the suspect.[136] The eyewitness is generally unaware of the administrator's influence on his or her identification.[137]

8. **Eyewitnesses should be given cautionary instructions.**[138]
The lineup administrator should give the following cautionary instructions: (a) it is as important to clear innocent suspects as it is to identify guilt suspects;[139] (b) the perpetrator's appearance may have changed since the crime;[140] (c) the person who committed the crime may not be in the photo array or lineup;[141] (d) the lineup administrator does not know the identity of the suspect;[142] and (e) the investigation will continue regardless of whether the eyewitness makes an identification.[143]

9. **All identifications should be video recorded.**[144]
Videotaping ensures that judges, jurors, and attorneys have a complete and accurate record of how the identifications procedures were conducted.[145]

10. **An eyewitness should make a clear statement of his or her confidence at the time of the identification and prior to receiving any feedback.**[146]
As we have seen, confidence is malleable, and it is the most important factor that the trier of fact relies on in evaluating eyewitness accuracy. Consequently, a statement of confidence should be taken immediately after an identification procedure.

11. **Once a mistake is made in an identification procedure it cannot be corrected.**[147]
Because of the nature of memory, the effects of a biased identification procedure usually cannot be corrected by later conducting a fair identification procedure.

COMMON EYEWITNESS FACTORS DURING THE CRIME THAT AFFECT EYEWITNESS ACCURACY (TABLE 1, STEP 3):

The following eyewitness factors are commonly present during crimes and affect eyewitness accuracy. This list is not comprehensive. Accordingly, it will be necessary for judges in some criminal cases to consult the eyewitness literature or to consult an eyewitness expert to determine how eyewitness factors during the crime likely affected eyewitness accuracy. The eyewitness factors are divided into three categories: Eyewitness characteristics, perpetrator characteristics, and crime characteristics.[148]

A. EYEWITNESS CHARACTERISTICS

1. *Child Eyewitnesses*

Children provide reasonably accurate answers to open-ended questions, but they are much more susceptible to suggestion and social influences than adults.[149] Therefore, it is crucial to not use suggestive questions, provide post-event information, or in any other way influence the child's answers.[150] Children are about as accurate as adults at making identifications when the perpetrator is in the identification procedure but make more erroneous eyewitness identifications in perpetrator-absent lineups.[151]

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129. *Id.*
130. *Id.*
131. Constanzo, *supra* note 23, at 185; Wise et al., *supra* note 2, at 491.
132. Wise et al., *supra* note 2, at 491-492.
133. In a sequential lineup, the participants are presented one at a time, they are shown only one time, and the eyewitness must determine if the current participant is the perpetrator prior to seeing the next participant. In a simultaneous lineup all the participants are shown to the eyewitness at the same time. *Id.* at 491.
134. Trainer's Manual, *supra* note 44, at 44; Wise et al., *supra* note 2 at 491-492.
135. Wise et al., *supra* note 2, at 493.
136. Wells et al., *supra* note 4, at 63; Wise et al., *supra* note 2, a 493.
137. Ryann M. Haw & Ronald P. Fisher, *Effects of Administrator-Witness Contact on Eyewitness Identification Accuracy*, 89 J. Applied Psychol. 1106 (2004); Wise et al., *supra* note 2, at 493.
138. Wise et al., *supra* note 2, at 494.
139. Trainer's Manual, *supra* note 44, at 40; Wise et al., *supra* note 2, at 494.

140. *Id.*
141. *Id.*
142. Wells et al., *supra* note 4, at 630; Wise et al., *supra* note 2, at 494-95.
143. Trainer's Manual, *supra* note 44, at 39; Wise et al., *supra* note 2, at 495.
144. Saul M. Kassin, *Eyewitness Identification Procedures: The Fifth Rule*, 22 Law & Hum. Behav. 649, 649 (1998); Taslitz, *supra* note 116, at 22; Wise et al., *supra* note 2, at 495.
145. Kassin, *supra* note 144, at 650; Wise et al., *supra* note 2, at 495-96.
146. Wise et al., *supra* note 2, at 496.
147. Wise et al., *supra* note 2, at 497.
148. *See* Wise et al., *supra* note 2, at 497-506 (for more detailed explanation of how these eyewitness factors affect accuracy, and for more extensive and detailed references).
149. *Id.* at 498.
150. Costanzo, *supra* note 23, at 183; Wise et al., *supra* note 2, at 498.
151. *Id*; Wise et al., *supra* note 2, at 499.

2. *Elderly Eyewitnesses*

Elderly eyewitnesses perform nearly as well as young adults in identifying a perpetrator from a lineup.[152] In perpetrator-absent lineups, however, they make more mistaken identifications than young adults.[153] Elderly adults appear to recall fewer details about a crime than younger adults.[154]

3. *Law Enforcement Officers*

Law enforcement officers are better than laypersons at recalling the details of a crime, but contrary to what most people expect, they are no better than lay persons at identifying the perpetrator of a crime.[155]

4. *Alcoholic Intoxication*

Intoxicated eyewitnesses remember less about the crime and the perpetrator than sober eyewitnesses, though the information they recall tends to be almost as accurate as sober eyewitnesses.[156] Because they recall less about a crime, they are more likely to make an erroneous identification in a perpetrator-absent lineup than a sober eyewitness.[157]

5. *Minor Details*

An eyewitness who attends to minor or peripheral details during a crime has less attention available to encode the perpetrator's face.[158] Consequently, an eyewitness's ability to recall such details about a crime is inversely related to eyewitness accuracy.[159]

6. *Unconscious Transference*

An eyewitness sometimes identifies as the perpetrator a bystander to the crime or an individual they saw in a different context or situation.[160] This error occurs because the eyewitness makes a source-monitoring error. For example, the eyewitness believes the suspect is familiar because he or she is the perpetrator when in fact his or her familiarity results from the eyewitness having previously seen a mug shot of the suspect.[161]

B. PERPETRATOR CHARACTERISTICS

1. *Cross-Race Bias*

Eyewitnesses make less accurate identifications of perpetrators of crimes when the perpetrators are of another race than when they are the same race as the eyewitness.[162]

2. *Disguises*

Even a simple disguise such as a hat makes it much more difficult for an eyewitness to accurately identify the perpetrator.[163] A hat impairs accuracy because it conceals the perpetrator's hair and facial shape, which are important cues to recognizing a person.[164]

3. *Face Distinctiveness*

Highly attractive or unattractive faces are easier to identify than non-distinctive faces.[165]

4. *Weapon Focus*

A weapon impairs identification accuracy[166] because the eyewitness tends to focus on the weapon, which detracts the eyewitness's attention from the perpetrator's face.[167]

C. CRIME CHARACTERISTICS

1. *Exposure Time*

The time an eyewitness has to observe a crime affects how much the eyewitness remembers about a crime.[168] The type or amount of attention paid to the crime, however, is generally more important than how much time an eyewitness had to view the crime.[169]

152. James C. Bartlett & Amina Memon, *Eyewitness Memory in Young and Older Adults*, *in* 2 HANDBOOK OF EYEWITNESS PSYCHOL.: MEMORY FOR PEOPLE 309, 333 (Rod C. L. Lindsay et al. eds., 2007).
153. Kassin *supra* note 144, at 408, 412; Wise et al., *supra* note 2, at 499.
154. BARTOL & BARTOL, *supra* note 12, at 250-51; Wise et al., *supra* note 2, at 499.
155. Brigham et al., *supra* note 9, at 16; Wise et al., *supra* note 2, at 499-500.
156. John C. Yuille & Patricia A. Tollestrup, *Some Effects of Alcohol on Eyewitness Testimony*, 75 J. APPLIED PSYCHOL. 268, 271 (1990); Wise et al., *supra* note 2, at 500-01.
157. Jennifer E. Dysart et al., *The Intoxicated Witness: Effects of Alcohol on Identification Accuracy from Showups*, 87 J. APPLIED PSYCHOL. 170, 170 (2002); Wise et al., *supra* note 2, at 501.
158. Gary Wells & Michael R. Leippe, *How Do Triers of Fact Infer the Accuracy of Eyewitness Identifications? Using Memory for Peripheral Detail Can Be Misleading*, 66 J. APPLIED PSYCHOL. 682, 682 (1981); Wise et al., *supra* note 2, at 502.
159. *Id.*
160. COSTANZO, *supra* note 23, at 178; Wise et al., *supra* note 2, at 502.
161. Evan Brown et al., *Memory for Faces and the Circumstances of Encounter*, 62 J. APPLIED PSYCHOL. 311, 311-18 (1977); Wise et al., *supra* note 2, at 502.
162. Christian A. Meissner & John C. Brigham, *Thirty Years of Investigating the Own-Race Bias in Memory for Faces: A Metanalytic Review*, 7 PSYCHOL. PUB. POL'Y & L. 3-35 (2001); Wise et al., *supra* note 2, at 502.
163. K. E. Patterson & A. D. Baddeley, *When Face Recognition Fails*, 3 J. EXPERIMENTAL PSYCHOL.: HUM. LEARNING & MEMORY 406, 416; Wise et al., *supra* note 2, at 503.
164. Brian L. Cutler et al., *Improving the Reliability of Eyewitness Identification: Putting Context into Context*, 72 J. APPLIED PSYCHOL., 629-37 (1987); Wise et al., *supra* note 2, at 503.
165. Gary L. Wells & Elizabeth A. Olson, *Eyewitness Testimony*, 54 ANN. REV. OF PSYCHOL. 277, 281 (2003); Wise et al., *supra* note 2, at 503.
166. *See* Elizabeth Loftus et al., *Some Facts about "Weapon Focus,"* 11 LAW & HUM. BEHAV. 55, 55 (1987).
167. COSTANZO, *supra* note 23, at 178; Wise et al., *supra* note 2, 503-04.
168. Deanna D. Caputo & David Dunning, *Distinguishing Accurate Eyewitness Identification from Erroneous Ones: Post-Dictive Indicators of Eyewitness Accuracy, in* 2 HANDBOOK OF EYEWITNESS PSYCHOLOGY: MEMORY FOR PEOPLE 427, 428-29 (Rod C. L. Lindsay et al. eds., 2007).
169. Caputo & Dunning, *supra* note 168, at 429; Wise et al., *supra* note 2, at 504.

2. *Forgetting Curve and Retention Interval*

Memory loss is most rapid immediately after the crime.[170] Consequently, eyewitness interviews and identification procedures should be conducted as soon as possible.

3. *Lighting*

Poor lighting impairs an eyewitness's ability to make an accurate identification.[171]

4. *Stress*

Different levels of stress have diverse effects on memory. Mild stress may improve it. As stress increases, tunnel memory may occur,[172] which causes information central to the crime to be vividly remembered while peripheral information is poorly recalled.[173] Very high levels of stress can cause a major deterioration in memory because they activate the eyewitness's fight-or-flight mechanism, which causes the eyewitness to focus on his or her survival rather than the crime.[174]

HOW JUDGES CAN USE THE METHOD

Besides using this Method to assess eyewitness accuracy, judges can use it for a variety of other purposes. For example, judges can use it when ruling on a motion to suppress an eyewitness's identification. The Method can help assess if there was a substantial bias (i.e., suggestiveness) in either the eyewitness interviews or identification procedures that likely affected identification accuracy. Accordingly, if the Method indicates substantial bias occurred and affected identification accuracy, the motion to suppress should be granted unless the eyewitness conditions were exceptionally good; reliable, valid evidence corroborated the eyewitness identification; or exigent circumstances justified the use of a biased identification procedure.

Furthermore, once a biased identification has been conducted, the bias cannot be corrected by later conducting a fair identification procedure. Accordingly, if a biased identification procedure was conducted, any subsequent identification of the defendant, including in-court identification, should also be inadmissible. In sum, judges can use the Method to systematically and comprehensively determine what eyewitness factors likely affected the accuracy of the eyewitness's identification and thus make a more informed decision about whether to grant a motion to suppress.

Judges can also use the Method to decide whether to admit eyewitness-expert testimony in a criminal case. If the Method indicates there was significant bias in how the eyewitness interview or identification procedures were conducted or if the eyewitness conditions were poor, a judge should admit eyewitness-expert testimony, especially if the eyewitness testimony is the sole or primary evidence of the defendant's guilt. Thus the Method, by identifying the relevant eyewitness factors in a criminal case and how they likely affect eyewitness accuracy, can help judges determine whether to admit eyewitness-expert testimony in criminal cases.

The Method can also facilitate the drafting of better eyewitness jury instructions by ensuring they include all the relevant eyewitness factors a jury needs to assess eyewitness accuracy in a case. Moreover, by incorporating the Method itself into jury instructions, judges may not only improve jurors' assessments of eyewitness accuracy, but they may also reduce the need for eyewitness expert testimony in criminal cases. In addition, the Method, when used with expert testimony, may increase its efficacy.

CONCLUSIONS

Eyewitness researchers are constantly discovering new causes and remedies for eyewitness error. Consequently, the guidelines in the Method will undoubtedly have to be updated in the future to reflect new discoveries about eyewitness testimony. We are currently empirically testing the Method, which may lead to refinements and improvements in its procedures. Nonetheless, we believe the Method in its current form provides judges with a powerful tool for deciding eyewitness issues in criminal cases.

The Method indicates there needs to be a paradigm shift in how the criminal justice system views and handles eyewitness testimony. For example, as previously stated, eyewitness evidence needs to be considered a type of trace evidence. Accordingly, unless exigent circumstances existed or an exception applies, eyewitness testimony should be presumed inaccurate if there was significant bias in how the eyewitness interviews or identification procedures were conducted and it likely affected both the eyewitness's memory of the crime and the identification. This presumption is necessary because only by conducting fair and unbiased eyewitness interviews and identification procedures can the criminal justice system significantly reduce eyewitness error.

Furthermore, though there can be some disagreement about exactly what procedures are necessary, judges should consider the NIJ's Guide and Training Manual as establishing the minimum procedures necessary for fair and unbiased interviews and identification procedures. A blue-ribbon panel of 34 law enforcement officers, prosecutors, eyewitness researchers, and defense attorneys wrote the Guide and Trainer's Manual. Moreover, only when there was a consensus that a procedure was necessary for fair and unbiased interviews or identification procedures was it incorporated into the Guide and Trainer's Manual.

Criminal cases where eyewitness testimony is the sole or primary evidence of the defendant's guilt pose the greatest danger that erroneous eyewitness testimony will result in a wrongful conviction. Accordingly, the State should minimize the number of cases it brings where eyewitness evidence is the sole or primary evidence of the defendant's guilt. Moreover, when the State brings such a case, judges need to be especially care-

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170. *Id.* at 432; *Id.* at 505.
171. Wells & Olson, *supra* note 165, at 282; Wise et al., *supra* note 2, at 505.
172. Martin A. Safer et al., *Tunnel Memory for Traumatic Events*, 12 APPLIED COGNITIVE PSYCHOL. 99, 99-100 (1998); Caputo &

Dunning, *supra* note 168.
173. *Id.*
174. Kenneth A. Deffenbacher et al., *A Meta-Analytic Review of the Effects of High Stress on Eyewitness Memory*, 28 LAW & HUM. BEHAV. 687, 687 (2004); Wise et al., *supra* note 2, 505-06.

ful that the eyewitness interviews and identification procedures in the case were fair and unbiased and that the eyewitness conditions during the crime were good. Finally, judges need to be more cognizant of instances where an eyewitness has identified a foil or did not identify the defendant as the perpetrator of the crime. These misidentifications and non-identifications often provide valuable evidence that should be considered when evaluating the defendant's guilt.

The greatest miscarriage of justice that any legal system can make is to convict an innocent person of a crime. Wrongful convictions also undermine the public's faith in the criminal justice system, especially when the system fails to institute safeguards that could significantly reduce wrongful convictions. By using the Method for analyzing the accuracy of eyewitness testimony discussed in this article, judges can significantly reduce the number of wrongful convictions from eyewitness error.

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APPENDIX: FORM FOR EVALUATING THE ACCURACY OF EYEWITNESS TESTIMONY

I. EYEWITNESS INTERVIEW (EVALUATE SEPARATELY EACH INTERVIEW OF AN EYEWITNESS.)

   A. Factors That Indicate the Interview Was Complete, Fair, and Did Not Increase Eyewitness Confidence:

     1. List Factors that Indicate the Interview Obtained the Maximum Amount of Information from the Eyewitness:

     2. List Factors that Indicate the Interview Was Fair and Did Not Contaminate the Eyewitness's Memory of the Crime:

     3. List Factors that Indicate the Interview Did Not Increase the Eyewitness's Confidence:

   B. Factors that Indicated the Interview Was Incomplete, Biased, and Increased the Eyewitness's Confidence:

     1. List Factors that Indicate the Interview Did Not Obtain the Maximum Amount of Information from the Eyewitness:

     2. List Factors that Indicate the Interview Was Biased and Contaminated the Eyewitness's Memory of the Crime:

     3. List Factors that Indicate the Interview Increased the Eyewitness's Confidence:

II. IDENTIFICATION PROCEDURES (CONDUCT A SEPARATE ANALYSIS FOR EACH IDENTIFICATION PROCEDURE)

   A. List Factors that Indicate the Identification Procedure Was Fair and Impartial:

   B. List Factors that Indicate the Identification Procedure Was Biased :

     If the interviews and identification procedures were substantially fair and unbiased or an exception applies (e.g., the eyewitness knew the perpetrator prior to the crime or had prolonged, repeated exposure to the perpetrator or there is reliable, valid corroborating evidence of the accuracy of the eyewitness testimony) go on to Part III. If an interview or identification procedures were significantly unfair and biased and no exception applies, the eyewitness testimony or any subsequent identification of the defendant by the eyewitness has no probative value and should not be considered in the determination of the defendant's guilt.

III. EYEWITNESS FACTORS DURING THE CRIME THAT LIKELY AFFECTED IDENTIFICATION ACCURACY

   A. List Eyewitness Factors During the Crime that Likely Increased Eyewitness Accuracy:

   B. List Eyewitness Factors During the Crime that Likely Decreased Eyewitness Accuracy:

IV. CONCLUSIONS

   A. Was the maximum amount of information obtained from the eyewitness during the interviews?
     1. yes   2. no

   B. Was a statement of the eyewitness's confidence in the accuracy of the identification obtained prior to any feedback?
     1. yes   2. no

   C. Is there a high, medium, or low probability that the eyewitness testimony was accurate?
     1. high   2. medium   3. low

   D. Is there a high, medium, or low probability that the eyewitness identification was accurate?
     1. high   2. medium   3. low