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Do Judges' Instructions About Eyewitnesses Really Work?: A 2019 Update

Christine M. McDermott & Monica K. Miller

One of the basic tenets of the American legal system is the defendant's right to a jury of one's peers.¹ This process entrusts civilian-jurors who are unfamiliar with legal concepts to settle legal issues. Judges are therefore charged with the difficult task of explaining relevant laws to untrained jurors through judicial instructions. Research on jury instructions indicates that jurors often have difficulty understanding and utilizing instructions when determining verdicts.² These difficulties can be especially relevant in cases involving eyewitnesses since jurors rarely understand the many factors that affect the accuracy of eyewitness testimony, nor the necessarily long and complex judicial instructions.³

Many problems are associated with eyewitness identifications. Perhaps most importantly, eyewitness testimony can predispose jurors toward guilty verdicts,⁴ and has contributed to wrongful convictions and incarcerations.⁵ Indeed, 75% of the wrongfully convicted persons released by DNA evidence were convicted based, at least in part, on eyewitness testimony.⁶ In 2011, New Jersey's Supreme Court in *State v. Henderson* approved new judicial instructions in an attempt to educate jurors about the many factors that can influence the accuracy of an eyewitness,⁷ but subsequent research questions the efficacy of such judicial instructions.⁸ A special issue of *Court Review* released right after the *Henderson*⁹ decision reviewed the psychological research on eyewitnesses. This included an article on judicial instructions in cases involving eyewitnesses, but research regarding *Henderson*

instructions was too new to be included.¹⁰ In the six years since the 2012 review was published, researchers have conducted studies specifically testing the *Henderson* instructions, including the current study which examined the effects of case facts, judicial instructions (including a proposed verdict form), and mock-jurors' pre-existing belief in the fallibility of memory on perceptions of the eyewitness and defendant in a case involving eyewitness testimony. This article has two purposes: 1) to provide an up-to-date summary of the laws and research regarding eyewitnesses and eyewitness memory since the 2012 special issue of *Court Review* and 2) to present the results of a new study testing whether instructions and a verdict form help jurors distinguish between good and bad eyewitnesses. This updated review will ultimately make recommendations for how judges should approach the problem of faulty eyewitnesses and jury instructions—and how jurors interpret their testimony.

THE PROBLEM OF EYEWITNESS MEMORY

There are three main problems associated with eyewitness memory: eyewitness memory is fallible; a variety of factors affect eyewitness accuracy; and jurors have poor understanding of memory.¹¹ These problems were addressed in the 2012 special issue of *Court Review* and we discuss that data below, noting subsequent research as well.

Despite the common perception that memory is like a videotape that can be "rewound" and viewed again accurately, memory

Footnotes

1. The Sixth Amendment guarantees "an impartial jury of the State and district wherein the crime shall have been committed." U.S. Const., amend. VI.
2. c.f., Reid Hastie, David A. Schkade & John W. Payne, *A Study of Juror and Jury Judgments in Civil Cases: Deciding Liability for Punitive Damages*, 22 LAW & HUM. BEHAV. 295, 303-4 (1998); Brian H. Bornstein & Joseph A. Hamm, *Jury Instructions on Witness Identification*, 48 CT. REV. 48, 51-2 (2012).
3. Such instructions were one of the foci of *State v. Henderson*, 208 N. J. 208, 27 A. 3d 872 (2011).
4. c.f. Gary L. Wells et al., *Eyewitness Identification Procedures: Recommendations for Lineups and Photospreads*, 22 LAW & HUM. BEHAV. 603, 624 (1998); Joanna D. Pozzulo, Julie M. T. Lemieux, Elisabeth Wells & Heather J. McCuaig, *The Influence of Eyewitness Identification Decisions and Age of Witness on Jurors' Verdicts and Perceptions of Reliability*, 12 PSYCHOL., CRIME & LAW, 646 (2006).
5. Wells et al., *supra* note 4, at 603, 605 [hereinafter Wells et al., *Eyewitness Identification*]; Gary L. Wells et al., *Eyewitness Evidence: Improving Its Probative Value*, 7 PSYCHOL. SCI. IN THE PUB. INT. 45, 48-9 (2006) [hereinafter Wells et al., *Eyewitness Evidence*]; for up-to date figures on DNA exonerations based on eyewitness testimony, see The Innocence Project website, <http://www.innocenceproject.org>.
6. Wells et al., *Eyewitness Identification*, *supra* note 4; Wells et al., *Eyewitness Evidence*, *supra* note 5.
7. c.f., Gary L. Wells, *Applied Eyewitness-Testimony Research: System Variables and Estimator Variables*, 36 J. PERSONALITY & SOC. PSYCHOL. 1546 (1978); *Henderson*, 208 N. J. 208, *supra* note 3.
8. c.f., Brian L. Cutler, Hedy R. Dexter & Steven D. Penrod, *Nonadversarial Methods for Sensitizing Jurors to Eyewitness Evidence*, 20 J. APPLIED SOC. PSYCHOL., 1197-1207 (1990); Edith Greene, *Judge's Instruction on Eyewitness Testimony: Evaluation and Revision*, 18 J. APPLIED SOC. PSYCHOL. 252-276 (1988); Helen M. Paterson, David W. M. Anderson & Richard I. Kemp, *Cautioning Jurors Regarding Co-Witness Discussion: The Effect of Judicial Warnings*, 19 PSYCHOL., CRIME & LAW 287, 297 (2013).
9. *Henderson*, *supra* note 3.
10. Bornstein & Hamm, *supra* note 2.
11. c.f. Elizabeth F. Loftus, *Planting Misinformation in the Human Mind: A 30-Year Investigation of the Malleability of Memory*, 12 LEARNING & MEMORY 361, 361-366 (2005); Bornstein & Hamm, *supra* note 2; Sarah L. Desmaris & J. Don Read, *After 30 Years, What Do We Know about What Jurors Know? A Meta-Analytic Review of Lay Knowledge Regarding Eyewitness Factors*, 35 LAW & HUM. BEHAV. 203 (2011); Wells, *supra* note 7.

is a complex constructive, dynamic, and selective process.¹² Unlike a videotape, which precisely records all the information in a scene, eyewitnesses get the “gist” of what is happening and construct a memory based on selected pieces of information and what makes sense to the person in the context of the situation.¹³ This constructed memory incorporates (sometimes inaccurate) information acquired *after* the event, and may quickly and constantly lose reliability.¹⁴ Unfortunately, jurors’ misconceptions regarding memory, as well as the difficulty of weighing factors that influence memory, can lead jurors to overvalue eyewitness testimony, often to the detriment of the defendant.¹⁵

THE FALLIBILITY OF EYEWITNESS MEMORY

As memory is constructed by the individual person, and rapidly and continuously decays, it is subject to distortion and contamination.¹⁶ Research conducted over the last half century has indicated that a person’s memory can be altered through interactions with co-witnesses,¹⁷ interviews with law enforcement,¹⁸ feedback received after identifying a suspect in a lineup,¹⁹ receipt of case information after the event (especially when this information is repeated; e.g., news stories),²⁰ and the passage of time.²¹ As the quality of memories erodes with time, people are particularly susceptible to misinformation that is introduced after the memory has faded.²² Most research investigates memory change based on external influence—that is, influence in which an interaction with another person introduces misinformation to the memory holder. Two articles in the 2012

special edition of *Court Review* discussed how co-witness discussion alters the eyewitness’s memory of the event. This is especially likely to happen if the eyewitness is not confident in his own memory, or the information is repeated.²³ Repeated misinformation from a single source influenced eyewitness memory, even more than the same information from multiple sources. This indicates the need for separation of eyewitnesses as quickly as is practicable.²⁴ Since the release of the special issue, researchers have confirmed the susceptibility of eyewitnesses to memory change and contamination following discussions with co-witnesses and investigators.²⁵

Memories also can change *without* external influence.²⁶ Although research into spontaneous memory change is not as developed as the literature on external corruption, researchers posit that automatic or inference-based processes might account for the phenomenon.²⁷

If memories can change, it then brings up the question whether the person knows that their memory has been changed. A memory is more likely to change if the person does not immediately detect a discrepancy between the misinformation and the memory of the original event.²⁸ However, a memory can change even if the person notices such a discrepancy.²⁹ In this case, the memory holder notices the discrepancy and assumes that the

“[C]o-witness discussion alters the eyewitness’ memory of the event.”

12. Lawrence Pathis et al., *Memory*, in *ENCYCLOPEDIA OF DECEPTION* 656-8 (Timothy R. Levine ed., 2014).

13. *Id.*

14. Elizabeth F. Loftus & John C. Palmer, *Reconstruction of Automobile Destruction: An Example of the Interaction Between Language and Memory*, 13 *J. VERBAL LEARNING & VERBAL BEHAV.* 585, 586 (1974).

15. Wells et al., *Eyewitness Identification*, *supra* note 4; Wells et al., *Eyewitness Evidence*, *supra* note 5.

16. Loftus & Palmer, *supra* note 14; Pathis et al., *supra* note 12.

17. Lorraine Hope et al., “*With a Little Help from My Friends*”: *The Role of Co-Witness Relationship in Susceptibility to Misinformation*, 127 *ACTA PSYCHOLOGICA* 476, 481 (2008); Elizabeth F. Loftus & Edith Greene, *Warning: Even Memory for Faces May Be Contagious*, 4 *LAW & HUM. BEHAV.* 323, 328 (1980); Elin M. Skagerberg, *Co-Witness Feedback in Line-ups*, 21 *APPLIED COGNITIVE PSYCHOL.* 489, 494 (2007).

18. Claudia M. Roebbers & Wolfgang Schneider, *The Effect of Misleading Questions on Eyewitness Memory in Children and Adults*, 14 *APPLIED COGNITIVE PSYCHOL.* 509, 516-521 (2000); Elizabeth F. Loftus & Jacqueline E. Pickrell, *The Formation of False Memories*, 25 *PSYCHIATRIC ANNALS* 720 (1995); Christopher M. Heaps & Michael Nash, *Comparing Recollective Experience in True and False Autobiographical Memories*, 27 *J. EXPERIMENTAL PSYCHOL.: LEARNING MEMORY & COGNITION* 920, 923-924 (2001).

19. 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) [hereinafter Wells & Bradfield, *Identification Feedback*]; Gary L. Wells et al., *Distorted Retrospective Eyewitness Reports as Functions of Feedback and Delay*, 9 *J. EXPERIMENTAL PSYCHOL.: APPLIED* 42, 49-50 (2003); Jeffrey S. Neuschatz et al., *The Effects of Post-Identification Feedback and Age on Retrospective Eyewitness Memory*, 19 *APPLIED COGNITIVE PSYCHOL.* 435, 449 (2005).

20. c.f. Elizabeth F. Loftus & M. R. Banaji, *Memory Modification and the Role of the Media*, *SUGGESTION & SUGGESTIBILITY*, 279, 279-293 (1989); Jefferey L. Foster, Maryanne Garry, & Elizabeth F. Loftus, *Repeated Information in the Courtroom*, 48 *CT. REV.* 48, 46-47 (2012).

21. c.f. Kenneth A. Deffenbacher et al., *Forgetting the Once-Seen Face: Estimating the Strength of an Eyewitness’s Memory Representation*, 14 *J. EXPERIMENTAL PSYCHOL.: APPLIED* 139, 142 (2008) [hereinafter Deffenbacher et al., *Forgetting*]; Loftus, *supra* note 11.

22. Elizabeth F. Loftus, David G. Miller & Helen J. Burns, *Semantic Integration of Verbal Information into a Visual Memory*, 4 *J. EXPERIMENTAL PSYCHOL. HUMAN LEARNING & MEMORY* 19, 29-30 (1978).

23. Foster et al., *supra* note 20; Fiona Gabbert, Daniel B. Wright, Amina Memon, Elin M. Skagerberg & Kat Jamieson, *Memory Conformity Between Eyewitnesses*, 48 *CT. REV.* 42-43 (2012)

24. Foster et al., *supra* note 20.

25. c.f. Kazuro Mori & Takeshi Kishikawa, *Co-Witness Auditory Memory Conformity Following Discussion: A Misinformation Paradigm*, 118 *PERCEPTUAL & MOTOR SKILLS* 542 (2014); Fiona Jack, Sarah Zydervelt & Rachel Zajac, *Are Co-Witnesses Special? Comparing the Influence of Co-Witness and Interviewer Misinformation on Eyewitness Reports*, 22 *MEMORY* 3, 251-4 (2014).

26. H. Schmolck, E. A. Buffalo, & Larry R. Squire, *Memory Distortions Develop Over Time: Recollections of the O.J. Simpson Trial Verdict After 15 and 32 Months*, 11 *PSYCHOL. SCI.* 39, 43-44 (2000).

27. Loftus, *supra* note 11.

28. James P. Tousignant, David Hall, & Elizabeth F. Loftus, *Discrepancy Detection and Vulnerability to Misleading Postevent Information*, 14 *MEMORY & COGNITION* 329, 329-338 (1986).

29. Elizabeth F. Loftus & Hunter G. Hoffman, *Misinformation and Memory: The Creation of New Memories*, 118 *J. EXPERIMENTAL PSYCHOL.: GEN.* 100, 100-104 (1989).

“[T]he legal system has incorporated psychological research into standards surrounding eyewitnesses.”

new/misinformation is correct, and the original memory is flawed. This creates a false memory.³⁰ False memories can range from altered details from true memories³¹ to entirely false, detailed, memories.³²

Such research suggests that, rather than being a perfect representation of the past, memories are instead constantly vulnerable to influence and change.³³ The extent

of the susceptibility is affected by several factors, discussed in the following section, that are present during and after the formation of a memory. Therefore, it is important that members of the legal system (including judges, law enforcement officer, and jurors) recall the vulnerabilities of memory when interacting with an eyewitness. Indeed, the legal system has incorporated psychological research³⁴ into standards and practices surrounding eyewitnesses.³⁵

FACTORS THAT AFFECT EYEWITNESS ACCURACY

As just discussed, memory is malleable.³⁶ Indeed, the body of eyewitness identification research demonstrates that many factors can affect eyewitness memory. Psychologists have divided factors that can influence eyewitness accuracy into two categories: system variables and estimator variables.³⁷ System variables are variables that influence memory that are under the legal system's control, while estimator variables are not. It is important to understand both system and estimator variables discussed in this section, as judicial instructions direct jurors to consider the effects of both types of variables.

System variables. System variables are factors that are control-

lable by the legal system, including blind administration of lineups, pre-identification instructions, lineup construction, lack of feedback, showups, simultaneous vs. sequential lineups, and multiple viewings.³⁸ Each of these factors will be discussed in this section.

Information received by witnesses both before and after making an identification (e.g., in a lineup) can affect their memories.³⁹ “Blind” administration of lineups occurs when the police investigator charged with administering the lineup is either unaware if the suspect is in the lineup (double blind administration), or unaware of the suspect's *position* in the lineup (blind administration). Blind administration is important because administrators who are familiar with the suspect might consciously or unconsciously communicate the identity of the suspect to the witness (e.g., through vocal or body cues).⁴⁰ Pre-identification instructions should indicate to the witness that the suspect might or might not be in the lineup and that the witness should not feel pressure to make an identification. This warning is necessary because, otherwise, witnesses are more likely to select the person in the lineup that *most closely resembles the perpetrator*, which increases the risk of misidentification.⁴¹ After making an identification, witnesses should not be told whether their identification matches the suspect. Confirmation that the eyewitness identified the suspect can artificially inflate his confidence in both the quality and accuracy of his identification.⁴²

Lineup construction also affects the reliability of identifications. A properly constructed lineup has four main features.⁴³ First, lineups should only include people who look alike so that the suspect does not look markedly different from the fillers (i.e., people who are not suspects but match the witness' description).⁴⁴ Second, there should be a minimum of five fillers so that witnesses have to carefully examine their memories.⁴⁵ Showups, in which a single suspect is presented to a wit-

30. Loftus & Pickrell, *supra* note 18; Loftus, *supra* note 11.

31. Loftus & Palmer, *supra* note 14; Loftus & Pickrell, *supra* note 18; Elizabeth F. Loftus & Guido Zanni, *Eyewitness Testimony: The Influence of the Wording of a Question*, 5 BULL. PSYCHONOMIC SOC'Y 86 (1975).

32. c.f. Heaps & Nash, *supra* note 18.

33. Loftus, *supra* note 11.

34. Wells & Bradfield, *Identification Feedback*, *supra* note 19; Wells et al., *Eyewitness Identification*, *supra* note 4 at 627-636.

35. *Henderson*, N.J. 27 A.3d 872, *supra* note 3; *State v. Lawson*, 352 Or. 724, 291 P.3d 673 (2012); Int'l Ass'n Chiefs Police, *National Summit on Wrongful Convictions: Building a Systematic Approach to Prevent Wrongful Convictions* (2013); Nat'l Inst. Justice, *Eyewitness Evidence: A Guide for Law Enforcement* (1999); Nat'l Research Council, *Identifying the Culprit: Assessing Eyewitness Identification* (2014).

36. Loftus & Palmer, *supra* note 14; Pathis et al., *supra* note 12.

37. Wells, *supra* note 7.

38. *Id.*

39. Wells & Bradfield, *Identification Feedback*, *supra* note 19; Wells et al., *Eyewitness Evidence*, *supra* note 5; Neuschatz et al., *supra* at 19.

40. Robert Rosenthal & Donald B. Rubin, *Interpersonal Expectancy Effects: The First 345 Studies*, 3 BEHAV. & BRAIN SCI. 377, 377 (1978); Sarah M. Greathouse & Margaret Bull Kovera, *Instruction Bias and Lineup Presentation Moderate the Effects of Administrator Knowledge on Eyewitness Identification*, 33 LAW & HUM. BEHAV. 70, 71 (2009).

41. Nancy Mehrkens Steblay, *Social Influence in Eyewitness Recall: A Meta-Analytic Review of Lineup Instruction Effects*, 21 LAW & HUM. BEHAV. 283, 285-86, 294 (1997); Roy S. Malpass & Patricia G. Devine, *Eyewitness Identification: Lineup Instructions and the Absence of the Offender*, 66 J. APPLIED PSYCHOL. 482, 485 (1981); Steven E. Clark, *A Reexamination of the Effects of Biased Lineup Instructions in Eyewitness Identification*, 29 LAW & HUM. BEHAV. 395, 418-20 (2005).

42. Wells & Bradfield, *Identification Feedback*, *supra* note 19; Wells et al., *Eyewitness Identification*, *supra* note 4; Neuschatz et al., *supra* note 19.

43. Gary L. Wells & Amy L. Bradfield, *Measuring the Goodness of Lineups: Parameter Estimation, Question Effects, and Limits to the Mock Witness Paradigm*, 13 APPLIED COGNITIVE PSYCHOL. S27, S30 (1999) [hereinafter Wells & Bradfield, *Measuring Lineups*]; Roy S. Malpass et al., *Lineup Construction and Lineup Fairness*, in HANDBOOK OF EYEWITNESS PSYCHOLOGY: MEMORY FOR PEOPLE, at 155, 156 (R.C.L. Lindsay et al. eds., 2007).

44. David F. Ross et al., *When Accurate and Inaccurate Eyewitnesses Look the Same: A Limitation of the 'Pop-Out' Effect and the 10- to 12-Second Rule*, 21 APPLIED COGNITIVE PSYCHOL. 677, 687 (2007); Wells & Bradfield, *Measuring Lineups*, *supra* note 43; Malpass et al., *supra* note 43.

45. NAT'L INST. OF JUSTICE, U.S. DEP'T OF JUSTICE, *EYEWITNESS EVIDENCE: A GUIDE FOR LAW ENFORCEMENT* 29 (1999)

ness, increase the risks of misidentifications and should be used sparingly.⁴⁶

Third, people in the lineups should be presented sequentially (one at a time), rather than simultaneously (all at once). A simultaneous lineup forces a witness to say “yes/no, this is/is not the perpetrator” before looking at the next person in the lineup. Once the witness says “yes,” the lineup is over. This reduces the likelihood that the witness will compare all the people at once and select the suspect who most closely represents the perpetrator.⁴⁷ Lineups also should only contain one suspect to reduce the likelihood of a “lucky guess.”

Finally, a suspect should only be presented to a witness once during an investigation to reduce the risk of misidentification. Multiple viewings of the same suspect make it difficult to tell if the witness recalls a familiar looking suspect from the original crime or from earlier lineups.⁴⁸ As system variables can have a profound influence on the accuracy of the eyewitness and are under the control of the legal system, efforts by the legal system to create and maintain best practices are vital.

Estimator variables. Estimator variables are outside the control of the legal system. They are called estimator variables because their exact impact cannot be determined and must be estimated. These variables instead refer to characteristics of the witness, perpetrator, or the event itself.⁴⁹ Known estimator variables include stress, weapon focus, duration of event, distance and lighting, witness characteristics, characteristics of perpetrator, cross-race-bias, exposure to other information, memory decay, and speed of identification. Each of these variables will be discussed in this section.

Some variables present during the crime affect the quality of eyewitness evidence.⁵⁰ The amount of stress an eyewitness is under at the time of the crime can affect his ability to make an accurate identification.⁵¹ While mild amounts of stress can

improve cognitive performance, high levels of stress negatively affect accurate recall of the event and perpetrator.⁵² One source of potential stress is the visibility of a weapon during the crime.⁵³ “Weapon focus” is the tendency for a witness to have his attention drawn from the culprit to the weapon, reducing the reliability of the identification.⁵⁴ This effect is intensified when the interaction is brief, as the witness has no time to adapt to the presence of the weapon and focus on other details.⁵⁵

The witness’s level of intoxication and age also affect the reliability of his identifications.⁵⁶ Greater levels of alcohol consumption reduce eyewitness accuracy compared to lower alcohol levels or sobriety.⁵⁷ The age of the eyewitness also affects identification accuracy. Young children⁵⁸ and older adults tend to be less accurate than young adults.⁵⁹ However, the age of the *perpetrator* might affect these findings, as younger adults are better at recognizing young faces, while seniors either are not affected by perpetrator age, or are better at identifying older perpetrators.⁶⁰

The amount of time a witness has to view the perpetrator, regardless of the presence of a weapon, is important. Brief exposure to the criminal provides less time for the witness to focus on the perpetrator and often results in less accurate identifications than longer periods of exposure.⁶¹ Likewise, the ability to focus on and accurately perceive the suspect is reduced as the physical distance between witness and perpetrator increases, and/or when the lighting becomes poorer.⁶² Witnesses both overestimate the duration of an event and have difficulty estimating distances.⁶³

Factors other than the age of the perpetrator (as discussed above) can affect eyewitness accuracy. Disguises (e.g., sunglasses,

“[H]igh levels of stress negatively affect accurate recall of the event and perpetrator.”

46. Daniel Yarmey et al., *Accuracy of Eyewitness Identifications in Showups and Lineups*, 20 LAW & HUM. BEHAV. 459, 464 (1996). See also several court cases in which showup identifications have been limited in their admissibility, such as *State v. Dubose*, 699 N.W.2d 582, 584-85 (Wis.2005); *Commonwealth v. Martin*, 850 N.E.2d 555, 562-63 (Mass.2006); and *State v. Duuvon*, 571 N.E.2d 654, 656 (N.Y.1991).

47. Nancy Steblay et al., *Eyewitness Accuracy Rates in Sequential and Simultaneous Lineup Presentations: A Meta-Analytic Comparison*, 25 LAW & HUM. BEHAV. 459 (2001).

48. Kenneth A. Deffenbacher et al., *Mugshot Exposure Effects: Retroactive Interference, Mugshot Commitment, Source Confusion, and Unconscious Transference*, 30 LAW & HUM. BEHAV. 287, 299 (2006).

49. Wells, *supra* note 7.

50. 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) [hereinafter Deffenbacher et al., *Stress*]; Nancy M. Steblay, *A Meta-Analytic Review of the Weapon Focus Effect*, 16 LAW & HUM. BEHAV. 413, 415-17 (1992) [hereinafter Steblay, *Weapon Focus*]; R.C.L. Lindsay et al., *How Variations in Distance Affect Eyewitness Reports and Identification Accuracy*, 32 LAW & HUM. BEHAV. 526 (2008).

51. Deffenbacher et al., *Stress*, *supra* note 50.

52. 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 (2004); Deffenbacher et al., *supra* note 50.

53. Anne Maass & Gunther Koehnken, *Eyewitness Identification: Simulating the “Weapon Effect,”* 13 LAW & HUM. BEHAV. 397, 401-02 (1989); Steblay, *Weapon Focus*, *supra* note 50.

54. Maass & Koehnken, *supra* note 53; Steblay, *Weapon Focus*, *supra* note 50.

55. Steblay, *Weapon Focus*, *supra* note 50 at 421.

56. Jennifer E. Dysart et al., *The Intoxicated Witness: Effects of Alcohol on Identification Accuracy from Showups*, 87 J. APPLIED PSYCHOL. 170, 174 (2002); Joanna D. Pozzulo & R.C.L. Lindsay, *Identification Accuracy of Children Versus Adults: A Meta-Analysis*, 22 LAW & HUM. BEHAV. 549, 563, 565 (1998); James C. Bartlett & Amina Memon, *Eyewitness Memory in Young and Older Adults*, in 2 HANDBOOK OF EYEWITNESS PSYCHOLOGY: MEMORY FOR PEOPLE, at 309, 317-19 (R.C.L. Lindsay et al eds., 2007).

57. Dysart et al., *supra* note 56.

58. Pozzulo & Lindsay, *supra* note 56. This meta-analysis only included studies of children 9-13 years of age.

59. Bartlett & Memon, *supra* note 56.

60. *Id.*

61. See Colin G. Tredoux et al., *Eyewitness Identification*, in 1 ENCYCLOPEDIA OF APPLIED PSYCHOLOGY 875, 877 (Charles Spielberger ed., 2004).

62. See, e.g., Lindsay et al., *supra* note 50.

63. *Id.*

“[J]urors can be poor judges of eyewitness quality, which increases the risk of false convictions.”

masks) and other alterations to a perpetrator's face (e.g., plastic surgery, growing facial hair) can affect identification accuracy.⁶⁴ Relatively simple disguises such as a hat⁶⁵ or a beard⁶⁶ reduce identification accuracy. Another relevant characteristic of the perpetrator that can affect identification accuracy is race.⁶⁷ Witnesses are better at identifying perpetrators of their own race

than perpetrators of other races. This effect is called the cross-race identification effect.⁶⁸

Factors that occur *after* a crime is witnessed can also affect identification quality. As discussed earlier in this article, eyewitness memories can be altered through interactions with others. This effect can occur, for example, if a police officer asks leading questions when interviewing the witness.⁶⁹ However, this can also occur when post-event feedback occurs between non-state actors or entities (e.g., other witnesses, newspaper stories). For example, discussions between co-eyewitnesses can affect memories or form false memories.⁷⁰ This effect strengthens when co-witnesses know each other.⁷¹

The amount of time between witnessing a crime and making an identification can also affect identification accuracy. The clarity of a memory declines over time.⁷² This is true for all memories and the process is irreversible, meaning that memories can never improve and the probability of an accurate identification decreases over time.⁷³ For example, a study found that misidentifications rose sharply from two to twenty-four hours after the event.⁷⁴ However, the exact length of time at which memories become unreliable is not known. Further, the speed with which an eyewitness makes an identification might also indicate identi-

fication quality. Research is somewhat mixed, but several studies indicate that witnesses who make identifications quickly (i.e., less than thirty seconds) are more accurate than those who take more time.⁷⁵ As this review suggests, the confluence of system and estimator variables affect the quality of eyewitness identification and testimony. Utilizing this knowledge, an article in the 2012 special edition of *Court Review* posited a method for judges to assess eyewitness accuracy.⁷⁶ It is important for legal professionals to utilize this method or otherwise take such knowledge into account.

According to another article in the 2012 special edition of *Court Review*, conventional legal understanding leads to (a) a failure to appreciate the impact of suggestive procedures, (b) overreliance on eyewitness evidence, (c) failure to understand the factors that influence memory, and (d) generally failure to discourage suggestive procedures.⁷⁷ The need for best practices that are rigorously followed and frequently updated in response to social scientific research is echoed by another article in that 2012 special edition.⁷⁸ The faults of traditional legal understanding, especially concerning understanding of memory, apply to jurors also, as discussed next.

JURORS' UNDERSTANDING OF MEMORY

Several factors that influence eyewitness accuracy discussed above, such as lighting and physical distance from the perpetrator, might seem intuitive; however, jurors generally struggle to properly evaluate eyewitness accuracy.⁷⁹ Due to lack of knowledge of these misconceptions, jurors can be poor judges of eyewitness quality, which increases the risk of false convictions. There are several factors that make it difficult for jurors to evaluate eyewitnesses accurately.⁸⁰ First, jurors are overly influenced by eyewitness testimony, regardless of the quality of the testimony.⁸¹ It is difficult to question a victim who states, “I'm confi-

64. Brian L. Cutler et al., *Improving the Reliability of Eyewitness Identification: Putting Context into Context*, 72 J. APPLIED PSYCHOL. 629, 635 (1987); K.E. Patterson & A.D. Baddeley, *When Face Recognition Fails*, 3 J. EXPERIMENTAL PSYCHOL.: HUM. LEARNING & MEMORY 406, 410, 414 (1977).

65. Cutler et al., *supra* note 64.

66. Patterson & Baddeley, *supra* note 64.

67. See Christian A. Meissner & John C. Brigham, *Thirty Years of Investigating the Own-Race Bias in Memory for Faces: A Meta-Analytic Review*, 7 PSYCHOL. PUB. POLY & LAW 3, 21 (2001).

68. *Id.*

69. Roebbers & Schneider, *supra* note 18; Loftus & Pickrell, *supra* note 18; Heaps & Nash, *supra* note 18.

70. Hope et al., *supra* note 17; Loftus & Greene, *supra* note 17, at 328; Skagerberg, *supra* note 17.

71. Hope et al., *supra* note 17.

72. Schmolck et al., *supra* note 26.

73. Deffenbacher et al., *Forgetting*, *supra* note 21.

74. Carol Kraffka & Steven Penrod, *Reinstatement of Context in a Field Experiment on Eyewitness Identification*, 49 J. PERSONALITY & SOC. PSYCHOL. 65 (1985).

75. David Dunning & Scott Perretta, *Automaticity and Eyewitness Accuracy: A 10- to 12-Second Rule for Distinguishing Accurate from Inaccurate Positive Identifications*, 87 J. APPLIED PSYCHOL. 951, 959 (2002); Ross et al., *supra* note 44; Steven M. Smith et al., *Postdictors of Eyewitness Errors: Can False Identifications Be Diagnosed?*, 85 J.

APPLIED PSYCHOL. 542, 542 (2000).

76. Richard A. Wise & Martin A. Safer, *A Method for Analyzing the Accuracy of Eyewitness Testimony in Criminal Cases*, 48 CT. REV. 31-32 (2012).

77. Laura Smalarz & Gary L. Wells, *Eyewitness-Identification Evidence: Scientific Advances and the New Burden on Trial Judges*, 48 CT. REV. 48, 21 (2012).

78. James M. Doyle, *Ready for the Psychologists: Learning from Eyewitness Errors*, 48 CT. REV. 48, 7 (2012).

79. Tanja Rapus Benton, David F. Ross, Emily Bradshaw, W. Neil Thomas & Gregory S. Bradshaw, *Eyewitness Memory Is Still Not Common Sense: Comparing Jurors, Judges and Law Enforcement to Eyewitness Experts*, 20 APPLIED COGNITIVE PSYCHOL. 115-129 (2006); Daniel J. Simons & Christopher F. Chabris, *What People Believe about How Memory Works: A Representative Survey of the U.S. Population*, 6 PLoS ONE 3 (2011).

80. Benton et al., *supra* note 79; Simons & Chabris, *supra* note 79; Brian L. Cutler, Steven D. Penrod & Thomas E. Stuve, *Juror Decision Making in Eyewitness Identification Cases*, 12 LAW & HUM. BEHAV. 41-55 (1988) [hereinafter known as Cutler et al., *Eyewitness Identification*]; Jennifer L. Devenport, Steven D. Penrod & Brian L. Cutler, *Eyewitness Identification Evidence: Evaluation Commonsense Evaluations*, 3 PSYCHOL., PUBLIC POLY & LAW 338-361 (1997).

81. Wells et al., *Eyewitness Identification*, *supra* note 4; Wells et al., *Eyewitness Evidence*, *supra* note 5.

dent the defendant is the perpetrator.” Second, many jurors hold faulty beliefs about the nature of memory.⁸² Jurors also have demonstrated beliefs about factors that influence eyewitness accuracy that run contrary to knowledge of experts.⁸³ For instance, jurors often believe that the confidence of a witness equates to accuracy—a finding that is somewhat in dispute in academic circles. Finally, even when jurors understand the influence of factors (e.g., the presence of a weapon) on eyewitness accuracy, these factors are not always utilized when assessing eyewitness testimony.⁸⁴ These issues are discussed in depth in this section.

The core issue is that many jurors have misconceptions about how memory works.⁸⁵ In numerous studies conducted over the last 30 years, lay respondents consistently overestimated the reliability and consistency of memory.⁸⁶ Results of a meta-analysis (which compares results across a range of studies on a single subject) revealed that jurors held beliefs contrary to expert opinion roughly 33% of the time across all factors regarding influences on eyewitness accuracy.⁸⁷ This disagreement was strongest on the factors regarding the link between confidence and accuracy, cross-race bias, length of exposure to the perpetrator, length of time between event and identification, unconscious transference, and weapon focus.⁸⁸ Additionally, lay opinion differed from expert opinion, albeit by a smaller margin, when considering confidence malleability, lineup instructions, mugshot-induced bias, presentation of lineup, question wording, alcohol intoxication, attitudes and expectations, child suggestibility, and post-event information.⁸⁹ These beliefs have the potential to make jurors overvalue the witness’s testimony. Indeed, jurors overestimate the ability of others to make correct identifications.⁹⁰ In several studies, when asked “In my opinion, the testimony of one confident eyewitness should be enough evidence to convict a defendant of a crime,” roughly 37.1% of laypersons agreed compared to 0% of experts,⁹¹ indicating that jurors’ pre-existing beliefs about memory both conflict with those of experts, and likely predispose jurors to accept any form of eyewitness evidence to the detriment of the defendant.

Jurors are also often unable to properly utilize knowledge of factors that influence eyewitness accuracy when evaluating an eyewitness and deciding on a verdict.⁹² Several studies have found that jurors focus only on witness confidence, and do not

consider the conditions under which a witness experienced the event and made the identification (e.g., length of exposure).⁹³ This suggests that, even when jurors understand the factors that influence eyewitnesses, this information is not always used when determining the guilt of the defendant. Indeed, the influence of eyewitness testimony—combined with blindness to the limitations of memory, mistaken beliefs about the influences of external factors on eyewitness accuracy, and a tendency to disregard factors other than confidence when making decisions—potentially lead to false convictions. This is demonstrated through DNA exonerations, of which 75% involved mistaken eyewitness testimony.⁹⁴ Some courts have recognized this problem and made attempts to remedy the situation, as discussed next.⁹⁵

“[J]urors overestimate the ability of others to make correct identifications.”

JUDICIAL INSTRUCTIONS AS A SOLUTION TO THE EYEWITNESS PROBLEM: AN OVERVIEW

Judicial instructions have been the legal system’s chosen safeguard against wrongful convictions due to eyewitness misidentifications.⁹⁶ Two court rulings have specifically addressed the need for judges to educate jurors about the fallibility of eyewitness testimony. In *United States v. Telfaire* (1972), an appellate court ruled that judges should inform jurors of the fallibility of eyewitness testimony; this led to the creation of the *Telfaire* instructions. In *State v. Henderson* (2011), the New Jersey Supreme Court ruled that all judges in New Jersey presiding over cases involving eyewitness testimony must inform jurors about factors that influence eyewitness accuracy. These instructions, known as the *Henderson* instructions, largely relied on the more than thirty years and 2,000 psychological research studies on eyewitness memory and testimony.⁹⁷ In the *Henderson* ruling, the Court stated that such studies “have passed a rigorous test and are generally considered worthy of consideration by the greater scientific community.”⁹⁸ Unfortunately, this ruling did not consider psychological research on the effect of judicial instructions on jurors, which indicates that instructions do not have consistent effects on juror decision making.⁹⁹

82. Benton et al., *supra* note 79; Simons & Chabris, *supra* note 79.

83. Simons & Chabris, *supra* note 79; Desmaris & Read, *supra* note 11.

84. Cutler et al., *Eyewitness Identification*, *supra* note 80; Devenport et al., *supra* note 80.

85. Desmaris & Read, *supra* note 11; Simons & Chabris, *supra* note 79.

86. Simons & Chabris, *supra* note 79; Desmaris & Read, *supra* note 11.

87. Desmaris & Read, *supra* note 11.

88. *Id.*

89. *Id.*

90. Devenport et al., *supra* note 80.

91. Desmaris & Read, *supra* note 11; Simons & Chabris, *supra* note 79.

92. Bornstein & Hamm, *supra* note 2; Lori van Wallandael et al., *Mistaken Identification = Erroneous Conviction? Assessing and Improving Legal Safeguards*, in 2 HANDBOOK OF EYEWITNESS PSYCHOLOGY: MEMORY FOR PEOPLE 453 (Roderick C. L. Lindsay et al. eds., 2007); Jennifer L. Devenport et al., *Effectiveness of Traditional Safeguards*

Against Erroneous Conviction Arising from Mistaken Eyewitness Identification, in EXPERT TESTIMONY ON THE PSYCHOLOGY OF EYEWITNESS IDENTIFICATION 51 (Brian L. Cutler ed., 2009).

93. Benton et al., *supra* note 79; Devenport et al., *supra* note 92; R. C. Lindsay, Gary L. Wells & Carolyn M. Rumpel, *Can People Detect Eyewitness-Identification Accuracy Within and Across Situations?*, 66 J. APPLIED PSYCHOL. 79-89 (1981).

94. Wells et al., *Eyewitness Identification*, *supra* note 4; Wells et al., *Eyewitness Evidence*, *supra* note 5.

95. *State v. Henderson*, 208 N. J. 208, 27 A. 3d 872 (2011).

96. Bornstein & Hamm, *supra* note 2.

97. *State v. Henderson*, 208 N. J. 208, 27 A. 3d 872 (2011).

98. *Id.*

99. Cutler et al., *supra* note 64; Greene, *supra* note 8; Paterson et al., *supra* note 8.

“Juror sensitivity is the desired outcome of judicial instructions...”

JUDICIAL INSTRUCTIONS FOR EYEWITNESS EVIDENCE

The *United States v. Telfaire* (1972) ruling was the first to create standardized instructions for judges regarding issues of eyewitness testimony.¹⁰⁰ The *Telfaire* instructions advised jurors to consider (a) if the eyewitness had the *capacity* to observe the crime; (b) the *strength* of

the identification due to the *circumstances* in which the crime was observed; (c) the *credibility* of the eyewitness; and (d) whether the eyewitness evidence, once evaluated, convinces the juror beyond a reasonable doubt.¹⁰¹ Despite the inclusion of guidelines to evaluate eyewitness testimony, the *Telfaire* instructions did not make clear to jurors *how* to determine what factors (e.g., credibility of the eyewitness or the strength of the identification) might have influenced the witness.¹⁰² Furthermore, the instructions failed to direct jurors on how to use or weigh the factors to assess eyewitness accuracy.¹⁰³

More recently, eyewitness memory researchers worked with the State Supreme Court in *State v. Henderson* (2011) to provide research-based instructions to help jurors evaluate eyewitness testimony.¹⁰⁴ The *Henderson* instructions detail numerous factors that affect eyewitness accuracy, as well as the nature of memory itself.¹⁰⁵ Unlike the *Telfaire* instructions, which instruct jurors to generally “consider the circumstances” surrounding an identification, the *Henderson* instructions provide information about the specific factors that can affect eyewitness accuracy in the specific case.¹⁰⁶ Additionally, judges provide explanations regarding how the factors present in the case affect eyewitness accuracy.¹⁰⁷

PSYCHOLOGICAL RESEARCH OF JUDICIAL INSTRUCTIONS REGARDING EYEWITNESS TESTIMONY

Researchers have long examined the effect of judicial instructions on jurors’ assessments of eyewitness testimony.¹⁰⁸ This research categorizes the effects into three categories: juror confusion, juror skepticism, and juror sensitivity.¹⁰⁹ Juror confusion

occurs when jurors become confused or overwhelmed by the information contained in jury instructions and disregard judicial instructions (and by extension disregard witnessing conditions) when making decisions.¹¹⁰ Juror skepticism occurs when, after receiving judicial instructions, jurors evaluate *all* witnesses more harshly, regardless of witnessing conditions.¹¹¹ Thus, skeptical jurors undervalue the testimony of all witnesses, rather than carefully assessing the value of the testimony of each witness. Juror sensitivity occurs when, after receiving judicial instructions, jurors consider witnessing conditions and accurately evaluate eyewitness testimony.¹¹² Juror sensitivity is the desired outcome of judicial instructions because sensitized jurors can differentiate between good and bad eyewitnesses. The justice system uses judicial instructions to sensitize jurors. Unfortunately, previous research using both *Telfaire* and *Henderson* instructions has produced mixed findings regarding the effect of judicial instructions on juror decision making.¹¹³

RESEARCH USING TELFAIRE INSTRUCTIONS

Most research on the effectiveness of judicial instructions has studied *Telfaire* instructions with mixed results. Many studies found that the *Telfaire* instructions fail to sensitize jurors.¹¹⁴ However, a few studies produced juror skepticism¹¹⁵ or sensitivity.¹¹⁶

Because many investigations into the impact of unmodified *Telfaire* instructions have found no effects,¹¹⁷ researchers have focused on potential modifications to the *Telfaire* instructions. These studies have also had mixed results. For example, studies using modified *Telfaire* instructions found inconsistent outcomes on participant-jurors’ abilities to differentiate between “good” and “bad” eyewitnesses, with some finding that instructions sensitize participant-jurors to eyewitness quality,¹¹⁸ and others finding no effects.¹¹⁹

A more consistent result of instruction modification is increased participant-jurors’ confidence in their verdicts and/or in their comprehension.¹²⁰ However, just because jurors are confident in their ability to comprehend instructions does not mean they actually are able to comprehend. Many studies found no link

100. Greene, *supra* note 8; Steven Penrod & Brian Cutler, *Witness Confidence and Witness Accuracy: Assessing Their Forensic Relation*, 1 PSYCHOL., PUBLIC POLY., & LAW 817 (1995). [hereinafter Penrod & Cutler, *Confidence & Accuracy*].

101. *United States v. Telfaire*, 469 F.2d 552 (D.C. Cir. 1972).

102. Penrod & Cutler, *Confidence & Accuracy*, *supra* note 100.

103. *Id.*

104. *State v. Henderson*, 208 N. J. 208, 27 A. 3d 872 (2011).

105. *Id.*

106. *Id.*

107. *Id.*

108. Bornstein & Hamm, *supra* note 2; Cutler et al., *Eyewitness Identification*, *supra* note 80; Greene, *supra* note 8; G. Ramirez, D. Zemba, & R. Geiselman, *Judges’ Cautionary Instructions on Eyewitness Testimony*, 14 AM. J. FORENSIC PSYCHOL. 31-66 (1996); Brian L. Cutler, Hedy R. Dexter, & Steven D. Penrod, *Expert Testimony and Jury Decision Making: An Empirical Analysis*, 7 BEHAV. SCI. & LAW 215, 221 (1989). [Hereinafter Cutler et al., *Expert Testimony*].

109. Cutler et al., *Eyewitness Identification*, *supra* note 80.

110. *Id.*

111. *Id.*

112. *Id.*

113. Bornstein & Hamm, *supra* note 2; Cutler et al., *Expert Testimony*, *supra* note 108; Greene, *supra* note 8; Ramirez et al., *supra* note 108; Paterson et al., *supra* note 8.

114. Bornstein & Hamm, *supra* note 2; Cutler et al., *Expert Testimony*, *supra* note 108; Greene, *supra* note 8; Ramirez et al., *supra* note 108.

115. Greene, *supra* note 8; Ramirez et al., *supra* note 108.

116. Paterson et al., *supra* note 8. It should be noted that this study was conducted in Australia and used an Australian version of the *Henderson* instructions.

117. Bornstein & Hamm, *supra* note 2; Cutler et al., *Expert Testimony*, *supra* note 108; Greene, *supra* note 8; Ramirez et al., *supra* note 108.

118. e.g., Bornstein & Hamm, *supra* note 2.

119. Paterson et al., *supra* note 8.

120. Bornstein & Hamm, *supra* note 2; Cutler et al., *Expert Testimony*, *supra* note 108; Greene, *supra* note 8; Ramirez et al., *supra* note 108; Paterson et al., *supra* note 8.

between increased juror confidence and actual comprehension of instructions¹²¹ or verdict choice.¹²² Indeed, most modifications to the *Telfaire* instructions fail to affect verdicts.¹²³ After *Henderson*, researchers moved away from testing *Telfaire* instructions and began focusing on *Henderson* instructions, as discussed next.

NEWER RESEARCH USING HENDERSON INSTRUCTIONS

The implementation of *Henderson* instructions in New Jersey began research about effectiveness. Unmodified *Henderson* instructions have either produced no effects on jurors or created juror skepticism.¹²⁴ However, some research indicates that modifying *Henderson* instructions could increase juror sensitivity.¹²⁵

Modified instructions have produced mixed results, depending in part on the type of modification.¹²⁶ Changing the timing of the *Henderson* instructions (e.g., presenting instructions at beginning of the case or presenting instructions multiple times) produced juror skepticism that affected verdicts in some studies,¹²⁷ but not in other studies.¹²⁸ The strategy of asking jurors if a specific factor was present, but only after explaining the *Henderson* factor, sometimes led to juror sensitivity¹²⁹ and sometimes had no impact.¹³⁰ The most sensitizing modification currently appears to be summarizing instructions, rather than presenting a full-length charge, and then asking questions of the jurors regarding the presence of a factor, but after each *Henderson* factor is described.¹³¹ However, neither original nor modified *Henderson* instructions affect juror comprehension of the factors that affect eyewitness accuracy, even when jurors demonstrated sensitization.¹³² This is a troubling finding, as a goal of

the *Henderson* instructions is to educate jurors. Taken together, these studies indicate that the current instructions are not sensitizing jurors, but further research into instruction modification could indicate how the instructions could be effectively modified.

JUROR COMPREHENSION OF INSTRUCTIONS – CURRENT STUDY ABOUT EYEWITNESSES

Through the research process, social scientists have found that jurors often do not understand many types of judicial instructions, and therefore do not utilize judicial instructions when making decisions.¹³³ This lack of comprehension can lead to wrongful convictions, as judicial instructions are provided to give jurors the legal knowledge to make appropriate verdicts.¹³⁴ There are many factors that can make it difficult for jurors to understand and properly utilize judicial instructions, the most common of which include inability to understand “legalese,” complicated wording and sentence structure, presentation of instructions, and omissions of important words.¹³⁵ Researchers have explored a number of strategies to improve juror comprehension, including rewriting legal instructions in “Plain English,”¹³⁶ paraphrasing and clarifying portions of instructions that jurors say have been difficult to understand,¹³⁷ allowing jurors to request clarification from judges,¹³⁸ providing instructions multiple times,¹³⁹ providing jurors with written copies of

“[S]tudies indicate that the current instructions are not sensitizing jurors...”

121. Bornstein & Hamm, *supra* note 2; Cutler et al., *Expert Testimony*, *supra* note 108; Greene, *supra* note 8; Ramirez et al., *supra* note 108.
122. Bornstein & Hamm, *supra* note 2; Cutler et al., *Expert Testimony*, *supra* note 108; Greene, *supra* note 8; Ramirez et al., *supra* note 108; Paterson et al., *supra* note 8.
123. Bornstein & Hamm, *supra* note 2; Cutler et al., *Expert Testimony*, *supra* note 108; Greene, *supra* note 8; Ramirez et al., *supra* note 108; Paterson et al., *supra* note 8.
124. Marlee K. Berman, *Eyewitness Identification Jury Instructions: Do They Enhance Evidence Evaluation?* (Ph.D. diss, City University of New York, 2015), 1, 45; Marlee K. Dillon, Angela M. Jones, Amanda N. Bergold, Cora Y. T. Hui & Steven D. Penrod, *Henderson Instructions: Do They Enhance Evidence Evaluation?*, 17 J. FORENSIC PSYCHOL. RES. & PRAC. 1, 12 (2017); Angela M. Jones, Amanda N. Bergold, Marlee K. Dillon & Steven D. Penrod, *Comparing the Effectiveness of Henderson Instructions and Expert Testimony: Which Safeguard Improves Jurors' Evaluations of Eyewitness Evidence?*, 13 J. EXP. CRIMINOLOGY 29, 43 (2017).
125. Berman, *supra* note 124 at 69; Jones et al., *supra* note 124; Lindsay M. Perez, *Examining Effectiveness of Judicial Instructions and Gruesome Evidence on Jurors' Cognitive Processing and Judgments of Eyewitness Evidence* (Ph.D. diss, University of Nevada Reno, 2016), 126.
126. Berman, *supra* note 124 at 51; Dillon et al., *supra* note 124; Jones et al., *supra* note 124; Perez, *supra* note 125.
127. Berman, *supra* note 124.
128. Dillon et al., *supra* note 124.
129. Berman, *supra* note 124; Perez, *supra* note 125.
130. Jones et al., *supra* note 124; Perez, *supra* note 125.
131. Jones et al., *supra* note 124; Perez, *supra* note 125.

132. Jones et al., *supra* note 124 at 186; Perez, *supra* note 125.
133. Shari S. Diamond, Beth Murphy & Mary R. Rose, *The “Kettleful” of Law in Real Jury Deliberations: Successes, Failures, and Next Steps*, 106 NW. U. L. REV., 1537, 1557-1588 (2012). For a complete review of judicial instruction comprehension and potential remedies, see Mauricio A. Alvarez, Monica K. Miller & Brian H. Bornstein, *“It Will be Your Duty...” The Psychology of Criminal Jury Instructions*, in 1 ADVANCES IN PSYCHOLOGY AND LAW 119-158 (M. K. Miller & B. H. Bornstein eds., 2016).
134. Bornstein & Hamm, *supra* note 2 at 48.
135. Nancy S. Marder, *Bringing Jury Instructions into the Twenty-First Century*, 81 NOTRE DAME L. REV., 451, 475-478 (2006); Peter Tiersma & Mathew Curtis, *Testing the Comprehensibility of Jury Instructions: California's Old and New Instructions on Circumstantial Evidence*, 1 J. CT. INNOVATION, 231, 250 (2009); Amy E. Smith & Craig Haney, *Getting to the Point: Attempting to Improve Juror Comprehension of Capital Penalty Phase Instructions*, 35 LAW & HUM. BEHAV., 339, 342 (2011).
136. Marder, *supra* note 135; Tiersma & Curtis, *supra* note 135; Smith & Haney, *supra* note 135.
137. Julianna C. Chomos et al., *Increasing Juror Satisfaction: A Call to Action for Judges and Researchers*, 59 DRAKE L. REV., 707, 720 (2011).
138. Marder, *supra* note 135 at 501-502.
139. Vicki L. Smith, *Affect of Pretrial Instruction on Jurors' Information Processing and Decision Making*, 76 J. APPLIED PSYCHOL., 220, 223-226 (1991); Joel D. Lieberman & Bruce D. Sales, *What Social Science Teaches Us About the Jury Instruction Process*, 3 PSYCHOL. PUB. POL'Y & L., 589, 628-629 (1997); Phoebe C. Ellsworth & Alan Reifman, *Juror Comprehension and Public Policy: Perceived Problems and Proposed Solutions*, 6 PSYCHOL. PUB. POL'Y & L., 788, 796-797 (2000).

“[T]he fallibility of memory significantly related to how participants perceived the eyewitness...”

instructions,¹⁴⁰ and presenting instructions in innovative ways (e.g., flowcharts, linking case facts to appropriate legal standards, explaining common misconceptions about legal concepts).¹⁴¹

To increase juror comprehension, and by extension, to increase the effectiveness of judicial instructions, three of these strategies were implemented in the current study. Specifically, partici-

pants who were assigned to receive judicial instructions were provided *Henderson* instructions both before and after reading case facts; only portions of the *Henderson* instructions relevant to the case were provided; and participant-jurors received written copies of the instructions.

Additionally, the current study tests a new modification: a verdict form. Some of the jurors were given a verdict form which asked them to identify which witness factors were present in the case. They also received the *Henderson* instructions meant to educate jurors about factors that can negatively affect witness memory. Other participants read only the *Henderson* instructions (without a verdict form) or read no instructions and received no form. The main research question—whether instructions—with or without the verdict form—sensitize jurors to be able to differentiate good from bad witnesses.

CURRENT RESEARCH STUDY

The current study examined the effect of eyewitness factors (ideal/poor lighting, cross-race identification, and excessive witness confidence), judicial instructions (no instruction, instruction only, instruction plus a verdict form), and pre-existing belief in the fallibility of memory on perceptions of the eyewitness and defendant in a case involving eyewitness testimony. To investigate the impact of these factors, 206 undergraduate students¹⁴² acted as jurors and read an online trial summary involving a mugging

in which the victim is the eyewitness. To compare the effects of factors that would make an eyewitness more or less accurate, the trial summary indicated that the eyewitness had either ideal witnessing conditions, viewed the perpetrator in poor lighting, was mugged by a man of a different race, or was excessively confident when discussing his identification. Participant-jurors then read either the *Henderson* instructions; the *Henderson* instructions plus a special verdict form, which asked participant-jurors to indicate the presence of each factor¹⁴³; or did not receive instructions or the verdict form. After reading the randomly assigned trial summary and (if applicable) instructions and verdict form, participants rated the accuracy of the eyewitness, rated the likelihood that the defendant was guilty, rendered a verdict, and completed a measure of belief in the fallibility of memory.

Analyses indicate that participant-jurors who were read either *Henderson* instructions alone or with the verdict form had the same perceptions of the eyewitness, perceptions of the defendant, and verdicts as those who received no instructions.¹⁴⁴ However, participant-jurors already knew, without the benefit of judicial instructions, that poor lighting made witnesses less accurate than eyewitnesses in ideal conditions, excessively confident eyewitnesses, and witnesses who made cross-race identifications.¹⁴⁵ This indicates that the participant-jurors were already somewhat familiar with the effect of lighting on eyewitness accuracy. Specifically, participants rated eyewitnesses who viewed the perpetrator in poor lighting as less accurate and viewed the defendant as less guilty when compared to ideal witnessing conditions, but these perceptions did not impact verdicts.

Despite recognizing the impact of lighting on eyewitnesses, participants were not able to differentiate between ideal conditions and excessive confidence¹⁴⁶ or cross-race identifications.¹⁴⁷ Additionally, neither instruction type nor eyewitness condition affected belief in the fallibility of memory,¹⁴⁸ indicating that this belief was pre-existing and somewhat inflexible.

The preexisting belief in the fallibility of memory significantly related to how participants perceived the eyewitness,¹⁴⁹ perceived the defendant,¹⁵⁰ and rendered verdicts.¹⁵¹ As belief in the

140. Geoffrey P. Kramer & Dorean M. Koenig, *Do Jurors Understand Criminal Jury Instructions? Analyzing the Results of the Michigan Juror Comprehension Project*, 23 U. MICH. J. L. REFORM, 401, 428 (1990).

141. Smith & Haney, *supra* note 135 at 346-349; Charles W. Otto, Brandon K. Applegate & Robin K. Davis, *Improving Comprehension of Capital Sentencing Instructions: Debunking Juror Misconceptions*, 53 CRIME & DELINQ., 502, 509-512 (2007); Carolyn Semmler & Neil Brewer, *Using a Flow-Chart to Improve Comprehension of Jury Instructions*, 9 PSYCHIATRY, PSYCHOL. & L., 262, 264-266 (2002).

142. This study was a jury simulation in which participants took on the role of jurors and read an online trial transcript. This is an accepted research practice but raises legitimate concerns about the applicability of results for “real” jurors. For an examination of the effects of student participants in research and online research, see *State v. Henderson*, 208 N. J. 208, 27 A. 3d 872 (2011); Brian H. Bornstein, *The Ecological Validity of Jury Simulations: Is the Jury Still Out?* 23 LAW & HUM. BEHAV. 75 (1999); Kevin M. O’Neil et al., *Web-based Research: Methodological Variables’ Effects on Dropout and Sample Characteristics*, 25 BEHAV. RES. METHODS, INSTRUMENTS, & COMPUTERS 217 (2003); Brian H. Bornstein & Sean G. McCabe, *Jurors of the Absurd? The Role of Consequentiality in Jury Simula-*

tion Research, 32 FLA. ST. UNIV. L. REV. 443 (2005).

143. Verdict forms are occasionally used to help jurors recognize that the instructions are relevant. For example, North Carolina uses a verdict form in death penalty cases to help weigh aggravators and mitigators; see N.C. Gen. Stat. § 15A-2000 (2016).

144. No main effect for instruction type; $F(6, 384) = 1.01, p = .421$

145. Main effect for witness conditions; $F(9, 467) = 3.48, p < .001$

146. Perceptions of the eyewitness ($MDiff = -.17, SE = .18, p = .348$); perceptions of the defendant ($MDiff = .11, SE = .17, p = .518$); verdicts ($MDiff = .08, SE = .10, p = .396$).

147. Perceptions of the eyewitness ($MDiff = .08, SE = .19, p = .685$); perceptions of the defendant ($MDiff = .28, SE = .17, p = .100$); verdicts ($MDiff = .03, SE = .10, p = .801$).

148. Eyewitness type ($F(3, 194) = 1.97, p = .120$); instruction type ($F(2, 194) = 1.15, p = .318$).

149. $r = .37, t(205) = 5.67, p < .001$. Belief in the fallibility of memory also explained a significant proportion of variance in perceptions of the defendant, $R^2_{adj} = .13, F(1, 205) = 31.99, p < .001$.

150. $r = .46, t(205) = 7.47, p < .001$. Belief in the fallibility of memory also explained a significant proportion of variance in perceptions of the eyewitness, $R^2_{adj} = .21, F(1, 205) = 55.77, p < .001$.

151. $t(1) = 36.41, p < .001$

fallibility of memory increased, the eyewitness was perceived as less accurate,¹⁵² the defendant was perceived as less guilty,¹⁵³ and not-guilty verdicts increased.¹⁵⁴ This indicates that increased belief in the fallibility of memory can cause juror skepticism, as not-guilty verdicts increased regardless of whether the witness had ideal witnessing conditions or flawed witnessing conditions.

RECOMMENDATIONS AND CONCLUSIONS

The recommendations and conclusions from the articles contained in the 2012 special issue of *Court Review* remain sound. Evidence-based best practices should be implemented consistently throughout the legal system, and disincentives for deviating best practices should be both created and enforced.¹⁵⁵ An example of one of these best practices is interviewing eyewitness(es). Eyewitnesses should be interviewed using non-suggestive techniques as quickly as possible after the incident.¹⁵⁶ Likewise, co-witnesses should be separated and interviewed separately.¹⁵⁷ When a case reaches court, judges should evaluate the likely accuracy of the eyewitness before allowing him to testify.¹⁵⁸ Finally, judicial instructions should be modified to aid jurors in comprehending and utilizing information regarding eyewitnesses.¹⁵⁹

The findings of the present study largely supported previous findings on jurors' use of judicial instructions in cases involving eyewitnesses, and *Court Review's* 2012 review of the literature.¹⁶⁰ Specifically, instructions produced no effect of participant-jurors' perceptions of the trial parties or verdicts. Even asking participant-jurors to indicate whether a witness factor (e.g., lighting) was present on a verdict form had no effect; this comports with mixed successes found in other studies,¹⁶¹ despite the differing methodologies of a verdict form and asking participants hypothetical questions.

There are several potential reasons our verdict form failed to sensitize jurors. First, perhaps the use of the actual language in the *Henderson* instructions, rather than simplified language utilized in some other studies, prevented participant-jurors from fully comprehending and utilizing the instructions. Also, the presence of only one factor that influences eyewitness accuracy per condition might have left participant-jurors underestimating the effect of the factor on the eyewitness. Perhaps the use of many simultaneous factors would be perceived as more detrimental to eyewitness accuracy than a single factor. Clearly, more research needs to be done to determine which modifications are successful in sensitizing jurors.

As reported in previous research, participant jurors were also insensitive to many of the factors that affect eyewitness accuracy,

as they were largely unable to differentiate between an eyewitness with ideal witnessing conditions and flawed witnessing conditions; however, unlike previous research, participant-jurors were already sensitive to the detrimental impact of poor lighting on eyewitness performance, regardless of instructions. The lack of impact of this knowledge on verdicts remains troubling, however. Perceptions that an eyewitness is less accurate and a defendant is less guilty (compared to other conditions) *should* affect verdicts. However, in our study, poor lighting conditions affected perceptions of the witness and defendant—but not verdicts. Changing jurors' perceptions is a step in the right direction, but it is of little comfort to a wrongfully convicted defendant.

Despite somewhat disappointing findings regarding the effectiveness of the present *Henderson* instructions and verdict form, there are some promising findings from other studies regarding modifications to the instructions. For instance, dynamic jury instructions (e.g., flowcharts) have helped sensitize jurors to judicial instructions.¹⁶² Other modifications, such as simplifying and clarifying the language in the instructions¹⁶³ and allowing jurors to ask for clarification,¹⁶⁴ have also met with some success. Future research will clarify precisely what modifications are most helpful.

Importantly, participant-jurors' belief in memory in the current study had a strong relationship on their perceptions and verdicts.¹⁶⁵ Because preexisting beliefs about memory related to both perceptions and verdicts, one potentially successful effort to reduce wrongful convictions in cases involving eyewitnesses could therefore be to select jurors with varying degrees of belief in the fallibility of memory. The diversity of beliefs would allow for a more thorough evaluation of the eyewitness, as the jury would include jurors predisposed to believe that the eyewitness is accurate and those predisposed to believe the eyewitness is inaccurate. This more thorough and critical evaluation of the eyewitness would likely reduce wrongful convictions based on uncritical acceptance of eyewitness testimony. However, specifically selecting jurors based on such specific beliefs is likely impractical. Instead, promoting general diversity amongst the jury is a simpler solution. There are several benefits of diverse

“Evidence-based best practices should be implemented consistently throughout the legal system...”

152. $F(5, 52) = 3.19, p = .001$

153. $F(5, 52) = 5.96, p < .001$

154. $F(5, 52) = 1.42, p < .001$

155. Smalarz & Wells, *supra* note 77; Doyle, *supra* note 78. The American Psychology-Law Society has sponsored the development of a scientific review paper on best practices for eyewitness identification procedures that is in the final stages of the review process at the time of this publication. This document will help legal and law enforcement officials create and develop evidence-based practices. For a draft version of this paper, c.f. Gary L. Wells, Margaret Bull Kovera, Amy Bradfield Douglass, Neil Brewer, Christian A. Meissner & John T. Wixted, Scientific Review Paper on Eyewitness Identification Procedures (2019).

156. Gabbert et al., *supra* note 23; Foster et al., *supra* note 20.

157. *Id.*

158. Wise & Safer, *supra* note 76.

159. Bornstein & Hamm, *supra* note 2.

160. Bornstein & Hamm, *supra* note 2.

161. Berman *supra* note 124; Jones et al., *supra* note 124; Perez, *supra* note 125.

162. Semmler & Brewer, *supra* note 141.

163. Marder, *supra* note 135; Tiersma & Curtis, *supra* note 135; Smith & Haney, *supra* note 135.

164. Marder, *supra* note 135.

165. These results were insensitive to eye-witnessing conditions, indicating a skepticism effect, $F(21, 459) = 1.31, p = .164$.

juries, including more thorough understanding of case facts and verdict criteria¹⁶⁶ and higher quality deliberations (e.g., more case facts discussed, longer deliberation, fewer inaccuracies).¹⁶⁷ The simplest method for increasing the likelihood of a diverse jury is to convene a twelve-person, rather than a six-person, jury. An analysis of studies examining the effects of jury size found that six-person juries, when compared to twelve-person juries, contain fewer minority members (and therefore fewer minority members' opinions), discuss trial testimony with less accuracy, and remember fewer evidentiary facts.¹⁶⁸

As the consequences of false convictions and identifications are severe, it is highly worthwhile for judges and researchers to continue to attempt to sensitize jurors to the fallibility of eyewitness identifications and testimony. To this end, legal scholars and the courts should partner together to obtain high-quality research on actual jurors/potential jurors. One of the drawbacks of laboratory studies is a lack of verisimilitude. By partnering with select courts regarding creation or implementation of potential modifications to judicial instructions and access to jurors and/or potential jurors, both researchers and courts can gain a more complete understanding of the solutions to the problems posed by mistaken eyewitness testimony.



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