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Abstract

Mistaken eyewitness-identification testimony is at the heart of a large share of the convictions of people whose innocence was later proven using forensic DNA testing. A considerable amount is now known about how to lower the rate of mistaken identifications through the use of better procedures for conducting identification. Several procedural reforms are described, such as double-blind lineups and pristine assessments of eyewitness-identification confidence. Although numerous jurisdictions have made improvements to their identification procedures in recent years, a large share of jurisdictions have still not made significant reforms. Although some courts have been making better use of the scientific findings on eyewitness identification, most courts are still using an approach that is largely unsupported by scientific findings.

Disciplines

Cognition and Perception | Criminology and Criminal Justice | Law and Psychology | Psychology

Comments

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Eyewitness Identification

Gary L. Wells*

Mistaken eyewitness-identification testimony is at the heart of a large share of the convictions of people whose innocence was later proven using forensic DNA testing. A considerable amount is now known about how to lower the rate of mistaken identifications through the use of better procedures for conducting identification. Several procedural reforms are described, such as double-blind lineups and pristine assessments of eyewitness-identification confidence. Although numerous jurisdictions have made improvements to their identification procedures in recent years, a large share of jurisdictions have still not made significant reforms. Although some courts have been making better use of the scientific findings on eyewitness identification, most courts are still using an approach that is largely unsupported by scientific findings.

INTRODUCTION

Mistaken eyewitness identification is a primary cause of the conviction of innocent people. At the same time, eyewitness identification is an important and necessary tool for convicting criminal perpetrators. Problems with eyewitness-identification evidence exist at two levels: (1) the collection and preservation of eyewitness-identification evidence at the level of the investigation by law enforcement and (2) the interpretation and use of eyewitness-identification evidence in court. At the level of the investigation, it is important to recognize that the methods used to collect and preserve eyewitness-identification evidence can themselves be highly unreliable. In general, the reliability of the results from a procedure, such as an eyewitness lineup, cannot be any better than the reliability of the procedures themselves. Accordingly, these identification procedures, which are mainly in the hands of police investigators, need to better conform to pristine protocols that are supported by scientific studies and best practices. This includes issues of when to conduct identification procedures, how to construct fair lineups, using proper pre-lineup instructions to witnesses, using double-blind and blinded procedures, securing witness statements of certainty at the time of the identification, and video-recording of identification procedures. Numerous jurisdictions in the U.S. now serve as

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models for these procedural reforms. In some jurisdictions, reforms have been totally voluntary and even initiated by police agencies themselves. In other jurisdictions, reforms have come about only through legislation or pressure from courts. A large share of jurisdictions in the U.S. have not yet made reforms. In addition, significant resources need to be directed at solutions to the problem of the use of showups, which are highly suggestive one-on-one identification procedures that, by their very nature, tend to have a high risk of mistaken identification. Technological solutions to the showup problem (rapid tablet-based photo lineups in the field) are now theoretically viable but require new resource allocations to refine and support such applications.

The second level at which eyewitness identification is a problem in the legal system concerns how such evidence is used in the courtroom. Courts need to take seriously the task of educating jurors on how to better evaluate eyewitness-identification evidence and courts need to play a stronger role in preventing questionable eyewitness-identification evidence from being admitted in the first place. Concrete progress at the courtroom level of the eyewitness-identification problem can benefit from discarding the U.S. Supreme Court's two-pronged test, as articulated four decades ago in *Manson v. Brathwaite*,¹ an approach that dominates how state and federal courts make determinations of admissibility in eyewitness-identification cases. The problem with the *Manson* approach is that it makes the assumption that self-reports by eyewitnesses of "reliability factors" (e.g., their certainty, how much attention paid during witnessing, etc.) are independent of suggestive identification procedures. But this assumption has been scientifically discredited.

I. HOW DO WE KNOW THERE IS AN EYEWITNESS-IDENTIFICATION PROBLEM?

In 1967, Justice William Brennan wrote that "the vagaries of eyewitness identification are well known; the annals of criminal law are rife with instances of mistaken identification."² This was an interesting statement at the time, given that Brennan was able to cite very little evidence to back up his claim.³ Today, we know much more about mistaken eyewitness identification and we know it from three sources. First, the advent of forensic DNA testing in the 1990s has resulted in the exoneration of 349 people in the U.S. who were

1. See *Manson v. Brathwaite*, 432 U.S. 98 (1977).

2. *United States v. Wade*, 388 U.S. 218, 228 (1967).

3. Brennan's citations on this point were mostly confined to two books of case studies: EDWIN M. BORCHARD, *CONVICTING THE INNOCENT: ERRORS OF CRIMINAL JUSTICE* (1932), and JEROME FRANK & BARBARA FRANK, *NOT GUILTY* (1957).

convicted of crimes that they did not commit.⁴ Approximately 70% of these DNA exonerations are cases that involved mistaken eyewitness identification, often by multiple witnesses. A second source of evidence that eyewitness-identification evidence can be problematic is the now large body of scientific experiments using simulated crimes.⁵ These experiments show that mistaken eyewitness identification can occur at high rates under certain conditions and these experiments have managed to isolate a large number of factors that inflate the chances of mistaken eyewitness identification and false confidence by eyewitnesses. The third source of evidence that eyewitness identification is a problem comes from field studies (both archival and prospective) that have examined the outcomes of police lineups in ongoing criminal investigations.⁶ These field studies of eyewitnesses from actual cases show that eyewitnesses identify known-innocent lineup “fillers” at surprisingly high rates.

A. THE DNA EXONERATIONS

Although experiments describing problems with eyewitness identification were becoming prevalent in scientific psychology journals by the 1970s, it was not until forensic DNA testing began to uncover cases of mistaken identification in the 1990s that the legal system began taking seriously the extent of the problem. In 1997, U.S. Attorney General Janet Reno took careful notice of the fact that a new tool in criminal evidence, forensic DNA testing, was overturning convictions and that most of these exonerations involved mistaken eyewitness identification. Reno directed the National Institute of Justice to convene a working group of eyewitness researchers, prosecutors, police, and defense attorneys to prepare a guide for law enforcement on the collection

4. Cases, INNOCENCE PROJECT, <http://www.innocenceproject.org/all-cases/#exonerated-by-dna>. For a discussion of wrongful convictions, see Brandon L. Garrett, “Actual Innocence and Wrongful Convictions,” in Volume 3 of the present Report. See also Richard A. Leo, “Interrogation and Confessions,” in the present Volume (discussing wrongful convictions as a result of false confessions).

5. See, e.g., 2 THE HANDBOOK OF EYEWITNESS PSYCHOLOGY: MEMORY FOR PEOPLE (Rod C. L. Lindsay et al. eds., 1st ed. 2007).

6. See, e.g., Ruth Horry et al., *Archival Analyses of Eyewitness Identification Test Outcomes: What Can They Tell Us About Eyewitness Memory?*, 38 LAW & HUM. BEHAV. 94, 98–108 (2014); Gary L. Wells, Nancy K. Steblay & Jennifer E. Dysart, *Double-Blind Photo Lineups Using Actual Eyewitnesses: An Experimental Test of a Sequential Versus Simultaneous Lineup Procedure*, 39 LAW & HUM. BEHAV. 1 (2015).

and preservation of eyewitness evidence, which was published in 1999.⁷ This was the first time that a high-ranking official in the law enforcement and prosecution realm took up the cause of exploring the extent of the eyewitness-identification problem and what might be done about it. Notice that this was 30 years after Justice Brennan said that the “vagaries of eyewitness identification are well known.” But, in fact, the vagaries of eyewitness identification were not well known. Instead, the prominent role of mistaken eyewitness identification revealed vividly by the DNA exoneration cases seemed to take judges, prosecutors, police, and the general public by surprise.

Some continue to be dismissive of the DNA exonerations by noting that 245 or so DNA-based exonerations in eyewitness identification cases is a relatively small number given the large number of convictions that occur each year in the U.S. But, that is a misunderstanding of what these DNA-exoneration cases represent. The DNA-exoneration cases can be only a very small slice of the wrongful convictions based on mistaken eyewitness identification. The vast majority of wrongful convictions based on mistaken eyewitness identification are undiscovered and undiscoverable for several reasons. First, those who have been exonerated with DNA testing are a “lucky” small minority for whom the biological evidence was properly collected, properly preserved, not destroyed or lost after conviction, and did not deteriorate. In other words, even though there was no anticipation of the advent of forensic DNA testing, the biological evidence was preserved after the conviction for only a subset of cases and only in some jurisdictions. Second, it should be noted that DNA-exoneration cases are almost exclusively cases that involved sexual assault. It is not the case that sexual-assault witnesses are poor eyewitnesses. Instead, the reason that almost all DNA-proven mistaken identifications are cases of sexual assault is because very few other crimes leave behind DNA-rich biological trace evidence that could provide definitive exculpatory evidence for someone who was convicted based on mistaken identification. In fact, DNA evidence is extremely rare for most eyewitness-identification cases (e.g., robberies, shootings), which means

7. U.S. DEP'T OF JUSTICE, *EYEWITNESS EVIDENCE: A GUIDE FOR LAW ENFORCEMENT* (1999), <https://www.ncjrs.gov/pdffiles1/nij/178240.pdf>. This Guide was mailed to every law enforcement agency in the U.S. in 1999. The Guide described proper pre-lineup instructions, minimal numbers of lineup fillers, how to select lineup fillers, the need to secure a confidence statement from the witness at the time of an identification, and the preserving of clear records, among other things. However, the Guide did not call for double-blind administration, which eyewitness identification experts today consider an essential component of a proper eyewitness identification procedure. Also, the 1999 Guide had no force of law behind it. Jurisdictions across the U.S. were free to ignore it, and most did.

that very few convictions of innocent people based on mistaken eyewitness-identification evidence can ever be definitively overturned and thereby remain hidden injustices.

B. CONTROLLED EXPERIMENTS ON EYEWITNESS IDENTIFICATION

Since the mid-1970s, an extensive published literature has emerged on eyewitness identification that uses experimental methods.⁸ The primary feature of this scientific literature is that the researchers create events, usually simulated crimes, for unsuspecting people, thereby making them eyewitnesses. Because the researchers created the event, there is no question about what constitutes ground truth. In other words, the researchers know exactly what happened in the event, including who the “culprit” was. Hence, when the participant-witnesses are later shown a lineup, the researchers are able to know whether the witness made the correct decision (identified the culprit or rejected the lineup if the culprit was not present) or an incorrect decision (identified an innocent person or rejected the lineup even though the culprit was present). This methodology permits the researchers to systematically manipulate variables (e.g., view, presence/absence of the culprit in the lineup) to see how these variables impact the chances of accurate and mistaken eyewitness identifications.

Early in the development of programmatic science on eyewitness identification, a distinction was drawn between two types of variables that affect eyewitness identification. *System* variables are those that affect the reliability of eyewitness identification over which the justice system has (or could have) control; whereas *estimator* variables are those that affect eyewitness-identification reliability but the justice system can only estimate that influence after the fact rather than control it.⁹ Examples of system variables include pre-lineup instructions to witnesses,¹⁰ suggestive comments/behaviors by lineup

8. See, e.g., Gary L. Wells, Amina Memon & Steven D. Penrod, *Eyewitness Evidence: Improving Its Probative Value*, 7 *PSYCHOL. SCI. PUB. INT.* 45 (2006); Gary L. Wells & Elizabeth F. Loftus, *Eyewitness Memory for People and Events*, in 25 *HANDBOOK OF PSYCHOLOGY* 617 (Irving B. Weiner & Randy K. Otto eds., 2nd ed. 2013).

9. Gary L. Wells, *Applied Eyewitness-Testimony Research: System Variables and Estimator Variables*, 36 *J. PERSONALITY & SOC. PSYCHOL.* 1546 (1978).

10. Pre-lineup instructions should warn the eyewitness that the culprit might not be in the lineup and witnesses should be given an explicit opportunity to not identify anyone. Failure to include such an instruction increases the chances that an eyewitness will identify someone even when the culprit is not in the lineup. See Roy S. Malpass & Patricia G. Devine, *Eyewitness Identification: Lineup Instructions and the Absence of the Offender*, 66 *J. APPLIED PSYCHOL.* 482 (1981).

administrators,¹¹ and characteristics of fillers used in lineups.¹² Examples of estimator variables include whether or not the witness and the culprit are the same race,¹³ the view that the witness had of the culprit at the time of the crime,¹⁴ and stress or fear during witnessing.¹⁵ Both system and estimator variables affect the reliability of an identification. Hence, both system and estimator variables are relevant to the court. However, system variables have tended to receive more attention, both from researchers and from the justice system, because of the potential to use system variables intelligently in ways that help prevent mistaken identifications from occurring in the first place.

In effect, system variables in eyewitness identification generally refer to protocols that are used in the collection and preservation of eyewitness-identification evidence. A critical contribution of controlled experiments on eyewitness identification is that these experiments have vividly shown that mistaken-identification rates and false confidence can inflate dramatically from the use of biased lineups and suggestive procedures, both of which are system variables. False confidence refers to an eyewitness who is positive (certain, highly confident) and yet mistaken. In the DNA-exoneration cases, mentioned in the previous section, nearly every eyewitness expressed high confidence at trial that they had identified the actual perpetrator, but they were mistaken and, hence, were actually cases of false confidence.

11. The lineup administrator should be someone who does not know which lineup member is the suspect and which are fillers. Using a “blind” lineup administrator can prevent the administrator from inadvertently steering the witness or providing confirming feedback regarding their pick. See Sarah Greathouse & Margaret Bull Kovera, *Instruction Bias and Lineup Presentation Moderate the Effects of Administrator Knowledge on Eyewitness Identification*, 33 *LAW & HUM. BEHAV.* 70 (2009).

12. The use of known-innocent fillers in the lineup who fit the description of the culprit is an essential component of a proper identification procedure. See Gary L. Wells, Sheila M. Rydell & Eric P. Seelau, *The Selection of Distractors for Eyewitness Lineups*, 78 *J. APPLIED PSYCHOL.* 835 (1993).

13. The ability of people to identify someone of their own race is considerably higher than their ability to identify someone of another race. 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. POL'Y & L.* 35 (2001).

14. Long distances, for example, severely impair the ability to recognize faces. See Geoffrey R. Loftus & Erin M. Harley, *Why is it Easier to Identify Someone Close than Far Away?*, 12 *PSYCHONOMIC BULL. & REV.* 43 (2005).

15. See, e.g., 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).

It is not the purpose of this article to give an in-depth review of the scientific experiments on eyewitness identification. But it is useful to briefly describe a few core examples that go to the heart of the issue and here I single out three, namely: (1) the biased lineup, (2) confirming feedback, and (3) the mere absence of the culprit.

Biased lineup. The classic biased lineup is one in which the suspect, who might or might not be the culprit, stands out from the others in the lineup for any number of reasons. For example, the eyewitness might have described the culprit as a clean-shaven white male in his mid-20s of medium height with short, dark hair. Suppose the suspect fits that description but the fillers (non-suspects who are merely in the lineup to “fill it out”) do not because they have curly hair, or are not clean-shaven, or are in their 30s, or have light colored hair. Research experiments consistently show that eyewitnesses will identify an innocent person who fits that description if the other members of the lineup do not. In other words, to be at risk of mistaken identification, a person does not have to highly resemble the culprit; the person needs only to look more like the culprit than the remaining members of the lineup.

Confirming feedback. The research literature is now quite clear about the fact that, except in rare cases (e.g., coincidental resemblance), eyewitnesses who identify an innocent person from a fair lineup tend to not be very confident *at the time that they make the identification*. In other words, false confidence tends to not be present at the time of the identification but instead develops later, usually after the eyewitness is given some type of confirming feedback. A large body of research experiments shows that a simple confirmatory comment (e.g., “good, you identified the suspect”) following from a mistaken identification serves to dramatically inflate the confidence of the eyewitness and lead the eyewitness to believe that she or he was highly confident all along. In other words, post-identification confirmations serve to purge eyewitnesses of any memory that they were uncertain at the time of their identification. Moreover, confirmatory post-identification feedback to eyewitnesses not only inflates their recollections of confidence, but also inflates their recollections about how good their view was during the crime and how much attention they paid to the culprit’s face.¹⁶ In fact, this appears to be a major factor leading to convictions of innocent people in the DNA-exoneration cases. An analysis of the first 250 DNA-exoneration cases, for example, showed that even though all

16. See 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).

of the eyewitnesses who mistakenly identified the defendants were positive at trial, almost all of these eyewitnesses showed evidence that they were in fact uncertain at the time of their identifications.¹⁷

Researchers have devised protocol solutions to the problem of confidence inflation: use a *double-blind lineup administrator* (who does not know which lineup member is the suspect), secure an explicit statement from the eyewitness at the time of the identification as to his or her confidence, videotape the identification and confidence statement, and ensure that courts use only the original confidence statement (not an inflated one that occurs later).¹⁸

Double-blind lineup administration is probably the most important single reform that a jurisdiction can make to its eyewitness-identification procedures. Double-blind lineup procedures solve three extremely important problems in the collection and preservation of eyewitness-identification evidence from photographic and live lineups. First, because the lineup administrator (and anyone else present during the lineup) does not know which lineup member is the suspect and which are mere fillers, the lineup administrator cannot intentionally or unintentionally cue the witness toward the suspect. Second, because the lineup administrator does not know which lineup member is the suspect and which are mere fillers, the lineup administrator would not be in a position to intentionally or unintentionally provide confirming feedback to the eyewitness (e.g., “good, you identified the person we suspected”). After all, a double-blind administrator cannot be sure whether the witness possibly picked a filler. Third, double-blind lineup procedures help ensure that the lineup administrator will make a clear and accurate record of the eyewitness’s identification decision. Studies of non-blind photo lineups show that case detectives tend to not make records of filler identifications but they always make a record if the witness identifies the suspect.¹⁹ But if a double-blind administrator is the one who has to make a record of the eyewitness’s decision, filler identifications would be recorded as faithfully as identifications of a suspect, because the lineup administrator would not know the status of the identified person.

17. BRANDON L. GARRETT, *CONVICTING THE INNOCENT: WHERE CRIMINAL PROSECUTIONS GO WRONG* (2012).

18. Nancy K. Steblay, Gary L. Wells & Amy Bradfield Douglass, *The Eyewitness Post Identification Feedback Effect 15 Years Later: Theoretical and Policy Implications*, 20 *PSYCHOL. PUB. POL’Y & L.* 1 (2014).

19. See, e.g., Bruce W. Behrman & Sherrie L. Davey, *Eyewitness Identification in Actual Criminal Cases: An Archival Analysis*, 25 *LAW & HUM. BEHAV.* 475 (2001).

The absence of the culprit. After all these years of experiments on eyewitness identification, it is quite clear that nothing increases the chances of mistaken identification more than the mere absence of the culprit from the lineup.²⁰ As far as we have been able to tell, all of the mistaken identifications in the DNA-exoneration cases were instances in which the eyewitness viewed an identification procedure in which the actual culprit was not present.²¹ This was not a surprise to eyewitness-identification researchers. As early as 1980, eyewitness-identification researchers using controlled experiments were observing that eyewitnesses have great difficulty recognizing the *absence* of the culprit even when warned that the actual culprit might not be in the lineup. As a result, eyewitnesses have a propensity to make affirmative identification decisions even when the culprit is not present in the lineup. This means that there is inherent risk to an innocent suspect from being placed in an eyewitness-identification procedure. The implications of this are immense. Currently, there appear to be no jurisdictions in the U.S. for which there is a standard (e.g., reasonable suspicion) that should be met in order to put an individual's photo into a photo lineup to see if an eyewitness will identify that person. In fact, a field study of lineups conducted in actual cases showed that 40% of the time there was no evidence at all against the person and an additional 30% of the time there was only minimal evidence.²² Similarly, in a national survey of U.S. law enforcement, more than one-third of investigators indicated that they needed no evidence at all to put someone in a lineup in order to try to get an identification.²³ More recently, John Wixted and his colleagues examined lineups conducted by a large U.S. police department and derived an estimate that the culprit was present in those lineups only 35% of the time.²⁴ Using Bayesian statistical methods, researchers have shown that any jurisdiction that

20. Gary L. Wells, *What Do We Know About Eyewitness Identification?*, 48 AM. PSYCHOLOGIST 553 (1993).

21. One seeming exception is the case of John Jerome White. In this case the victim-eyewitness viewed a live lineup in which White was the suspect and White was placed in position #3. Unbeknownst to the police, the "filler" who they placed in position 6 of the lineup was the actual culprit. Although the culprit was present, the eyewitness nevertheless identified the innocent suspect. The victim-witness, however, had already identified White from a photo-lineup. Hence, the original mistake occurred under conditions in which the actual culprit was not in the identification procedure.

22. Bruce W. Behrman & Regina E. Richards, *Suspect/Foil Identification in Actual Crimes and in the Laboratory: A Reality Monitoring Analysis*, 29 LAW & HUM. BEHAV. 279 (2005).

23. Richard A. Wise, Martin A. Safer & Christina M. Maro, *What U.S. Law Enforcement Officers Know and Believe About Eyewitness Factors, Eyewitness Interviews and Identification Procedures*, 25 APPLIED COGNITIVE PSYCHOL. 488 (2011).

24. John T. Wixted et al., *Estimating the Reliability of Eyewitness Identifications From Police Lineups*, 113 PROC. NAT'L ACAD. SCI. 304 (2016).

has a low base rate for the presence of the culprit in its lineups is risking a high rate of mistaken identifications.²⁵ In the eyewitness-identification area, this is known as the base-rate problem. I have called for some kind of standard, such as reasonable suspicion, before placing a possible suspect into the jeopardy of an eyewitness-identification procedure.²⁶

C. IDENTIFICATIONS OF KNOWN-INNOCENT FILLERS IN FIELD STUDIES

The third line of evidence that there is a problem with eyewitness-identification evidence comes from published field studies using data from lineups conducted by police. There are now 11 published studies that used either an archival method (going back through police files) or a prospective method (setting up a procedure to track lineups as they are conducted) to collect data on the outcomes of the lineups.²⁷ When properly constructed, a lineup contains only one possible suspect and the remaining members are known-innocent fillers. In these actual cases, when an eyewitness identifies the suspect, we cannot be positive that the suspect is guilty. However, when the eyewitness identifies a filler, we know that the eyewitness made a mistaken identification. Hence, the rate of filler identifications gives us some sense of how often eyewitnesses make mistaken identifications.

Aggregate data from these 11 published studies appear in the last two lines of Table 1. As Table 1 shows, among the 6,734 attempts by eyewitnesses to identify the perpetrator from a lineup, 2,746 (40.8%) identified the suspect, 1,599 (23.7%) identified a known-innocent filler, and 2,389 (35.5%) identified no one. Of course, as Table 1 shows, there is variation around these estimates

25. Gary L. Wells, Yueran Yang & Laura Smalarz, *Eyewitness Identification: Bayesian Information Gain, Base-Rate Effect-Equivalency Curves, and Reasonable Suspicion*, 39 *LAW & HUM. BEHAV.* 99 (2015).

26. See Gary L. Wells, *Eyewitness Identification: Systemic Reforms*, 2006 *WIS. L. REV.* 615 (2006); Wells, Yang & Smalarz, *supra* note 24.

27. Behrman & Davey, *supra* note 18; Behrman & Richards, *supra* note 21; Horry et al., *supra* note 5; Ruth Horry et al., *Predictors of Eyewitness Identification Decisions From Video Lineups in England: A Field Study*, 36 *LAW & HUM. BEHAV.* 257 (2012); Amy Klobuchar, Nancy K. Mehrkens Steblay & Hilary Lindell Caligiuri, *Improving Eyewitness Identifications: Hennepin County's Blind Sequential Lineup Pilot Project*, 4 *CARDOZO PUB. L. POL'Y & ETHICS J.* 381 (2006); Amina Memon et al., *A Field Evaluation of the VIPER System: A New Technique for Eliciting Eyewitness Evidence*, 17 *PSYCHOL. CRIME & L.* 711 (2011); Tim Valentine, Alan Pickering & Stephen Darling, *Characteristics of Eyewitness Identification that Predict the Outcome of Real Lineups*, 17 *APPLIED COGNITIVE PSYCHOL.* 969 (2003); Wells, Steblay & Dysart, *supra* note 5; Wixted et al., *supra* note 23; Daniel B. Wright & Anne T. McDaid, *Comparing System and Estimator Variables Using Data From Real Lineups*, 10 *APPLIED COGNITIVE PSYCHOL.* 75 (1996); Daniel B. Wright & Elin M. Skagerberg, *Post-Identification Feedback Affects Real Eyewitnesses*, 18 *PSYCHOL. SCI.* 172 (2007).

from sample to sample. Hence, the best estimate of how often to expect suspect identifications, filler identifications, and no identifications from lineups should be based on the stable aggregate data shown in Table 1. For purposes of the current chapter, there are two figures that stand out. First, nearly one out of every four eyewitnesses (23.7%) identified a known-innocent filler. Second, if we restrict our estimate of error to only those who made an identification (35.5% made no identification), then we see that 36.8% of the witnesses who made an identification picked an innocent filler. We do not know how many of the identifications of the suspect were also mistaken identifications.

Table 1. Outcomes from 6,734 attempts by eyewitnesses to identify perpetrators from lineups in actual cases across the 11 peer-reviewed published studies.

Authors	No. of possible IDs	IDs of suspects	IDs of fillers	Rejections (No ID)	suspect%	filler%	no pick%	choosers %	Suspect rate among choosers	Filler rate among choosers
Behrman & Davey (2001)	58	29	14	15	50.0%	24.1%	25.9%	74.1%	67.4%	32.6%
Behrman & Richards (2005)	461	238	68	155	51.6%	14.8%	33.6%	66.4%	77.8%	22.2%
Horry, Halford, & Brewer (2014)	833	382	149	302	45.9%	17.9%	36.3%	63.7%	71.9%	28.1%
Horry, Memon, & Wright (2012)	1039	406	273	360	39.1%	26.3%	34.6%	65.4%	59.8%	40.2%
Klobuchar & Steblay (2006)	178	63	20	95	35.4%	11.2%	53.4%	46.6%	75.9%	24.1%
Memon & Havard (2011)	1044	456	437	151	43.7%	41.9%	14.5%	85.5%	51.1%	48.9%
Valentine & Pickering (2003)	584	237	121	226	40.6%	20.7%	38.7%	61.3%	66.2%	33.8%
Wixted, Mickes, Dunn, Clark, & Wells (2016)	348	114	104	130	32.8%	29.9%	37.4%	62.6%	52.3%	47.7%
Wells, Steblay, & Dysart (2014)	494	132	75	287	26.7%	15.2%	58.1%	41.9%	63.8%	36.2%
Wright & Skagerburg (2007)	134	78	28	28	58.2%	20.9%	20.9%	79.1%	73.6%	26.4%
Wright & McDaid (1996)	1561	611	310	640	39.1%	19.9%	41.0%	59.0%	66.3%	33.7%
Overall Sum	6734	2746	1599	2389						
Weighted means					40.8%	23.7%	35.5%	64.5%	63.2%	36.8%

The frequency with which witnesses identified fillers in these field studies raises the question of whether these eyewitnesses were properly instructed with the warning that the actual culprit might not be in the lineup and whether

they understood that they were free to make no identification. For most of these field studies, we cannot be certain how they were instructed. Lineup administrators might say that they gave this instruction, but we cannot be positive that was the case. But, for one of the field studies,²⁸ we know exactly how witnesses were instructed for every lineup, because the instructions were delivered by a laptop computer and each witness had to affirmatively indicate that they understood each element of the instructions before moving forward. And these instructions emphasized not only that the culprit might not be in the lineup but also that they do not have to make an identification. Nevertheless, the rate of filler identifications among those who made an identification (approximately 36%) in this field study is comparable to the average across all field studies (approximately 37%).

II. EXISTING EFFORTS TO ADDRESS THE EYEWITNESS-IDENTIFICATION PROBLEM

As described in the previous section, there is a great deal of evidence from controlled scientific experiments, field studies of outcomes from police lineups, and DNA exonerations to make the case that eyewitness-identification evidence has not been handled well by the criminal justice system. At the same time, there has been a remarkable amount of progress in many jurisdictions, especially in the last 15 years, to make certain types of reforms to how eyewitness-identification evidence is collected, preserved, and used in court.

These efforts to address the eyewitness-identification problem have operated at two levels, namely, policies implemented by administrative actions or legislative law on the one hand, and judicial rulings on the other hand. Policies implemented by administrative actions or legislative laws have been directed primarily at the procedures that are used by law enforcement for collecting eyewitness-identification evidence. In contrast, judicial rulings tend to revolve around questions of the admissibility of eyewitness-identification testimony, expert testimony by eyewitness experts, and so on.

A. REFORMS TO THE COLLECTION AND PRESERVATION OF EYEWITNESS-IDENTIFICATION EVIDENCE

Spurred in large part by media coverage of the continual unfolding of DNA exonerations, release of the Department of Justice guide on eyewitness evidence, concerted and effective work by the Innocence Project taking up eyewitness reform efforts, and partnerships between eyewitness researchers and policymakers, serious reforms in some jurisdictions began unfolding in

28. See Wells, Steblay & Dysart, *supra* note 5.

2002. New Jersey, through the unique authority of Attorney General John Farmer, became the first state to set out a specific set of requirements for how law enforcement collects eyewitness-identification evidence. Working with eyewitness researchers and members of the New Jersey Department of Justice, the New Jersey procedures laid out a set of requirements about how eyewitnesses need to be instructed prior to a lineup (warning them that the culprit might not be present and that they need not identify anyone), how the lineup needs to be composed (at least five known-innocent fillers who also fit the eyewitness's description of the culprit), the use of a lineup administrator who is uninvolved in the case and does not know which person is the suspect and which are fillers (a double-blind administration), and the collection of a statement of confidence from the witness at the time of identification (before the confidence statement can be contaminated by other events). Like most all of the reform documents adopted by jurisdictions that followed, violations of these procedures did not result in *per se* exclusion of the evidence.

New Jersey is unique because it is the only state for which there is someone who has statutory authority over all law enforcement (i.e., New Jersey's Attorney General). Hence, other jurisdictions could not follow the same model for effecting reforms to their eyewitness-identification procedures. Some states, such as North Carolina, used the legislative process to effect eyewitness-identification reform. In addition, some jurisdictions have made reforms to eyewitness-identification procedures at the local (county) level. Early examples include places such as Suffolk County (Boston and surrounds), Massachusetts, and Santa Clara County, California.

In general, jurisdictions that have made reforms to eyewitness-identification procedures from lineups have five basic elements:²⁹ (1) only one suspect per lineup with at least five fillers, (2) the use of fillers who fit the eyewitness's description of the suspect and do not let the suspect stand out in the lineup, (3) the use of double-blind administration, (4) pre-lineup instructions that the culprit might not be present, and (5) collection of a confidence statement from

29. Some jurisdictions have also adopted the use of the sequential method for lineups rather than the traditional simultaneous method. With the sequential lineup method, eyewitnesses view one lineup member (or one photo) at a time and make an identification decision on that one before going on to the next lineup member (or photo). Also, with the sequential procedure the eyewitness does not know how many people (or photos) are in the sequence. There is debate among scientists about which procedure, simultaneous or sequential, is best. The National Research Council has concluded that the evidence is not conclusive one way or the other. See NAT'L RESEARCH COUNCIL OF THE NAT'L ACADS., *IDENTIFYING THE CULPRIT: ASSESSING EYEWITNESS IDENTIFICATION* (2014). Hence, whatever differences might exist between simultaneous and sequential procedures, those differences appear to be too small to make a strong case for one over the other.

the eyewitness at the time of the identification. Some jurisdictions require other things, such as videotaping of the entire identification procedure. And these reforms have spread fairly widely in recent years to include legislative law in the states of Florida, Ohio, Illinois, North Carolina, Maryland, Vermont, Kansas, Connecticut, and Colorado. In addition, some states have brought in laws requiring that all law enforcement agencies must have written policies on the collection of eyewitness evidence and have provided model policies (e.g., Texas, Wisconsin, West Virginia). These model policies tend to be versions of the same five eyewitness-identification procedures elements already mentioned.

As mentioned earlier, probably the single most important reform is the use of double-blind lineup procedures. Recall that double-blind administration of lineups prevents three problems, namely: (1) lineup administrators steering witnesses toward their suspect, (2) lineup administrators giving feedback to witnesses that can influence their confidence statements, and (3) lineup administrators failing to faithfully make records of filler identifications. At the same time, many jurisdictions have argued that a double-blind requirement is impractical for many police departments. The poster child for this anti-double-blind argument is the small police department that might have only two or five or seven officers. The argument for double-blind lineups being impractical for small police departments is that all their officers are likely to know who the suspect is and, hence, there is no one to be the double-blind administrator. Moreover, training a civilian employee (e.g., a dispatcher) who is not involved in investigations to administer lineups might not be wise because that person might have to provide testimony in court. But, there are two solutions to this problem of double-blind lineups in small departments. First, if the reforms occur at a statewide level (as in New Jersey, North Carolina, etc.), then it would be quite easy for a department to simply turn to a nearby jurisdiction and ask if they could send someone over to administer a lineup. Because the entire state is using the same procedures, no additional training is necessary for this “borrowed” officer. Neighboring police departments can have reciprocal arrangements. This is a highly manageable burden on a small police department because it would be quite rare that it would be needed. After all, a police department that is so small that it has only a handful of officers is one that will be doing an eyewitness-identification task only on very rare occasions. Because most identifications are from photo lineups rather than live lineups, a second solution to the problem of not having a double-blind administrator is the use of the envelope-shuffle method. The envelope-shuffle method is one in which the lineup photos are each placed in their own envelope, the envelopes are shuffled before the

witness views them (one at a time), and the lineup administrator is shielded from knowing which photo the eyewitness is viewing. The use of the envelope method, however, makes it even more important that the entire procedure be videotaped to ensure that the lineup administrator did nothing to influence the eyewitness's choice or the eyewitness's confidence in that choice.

B. EYEWITNESS-IDENTIFICATION EVIDENCE IN COURT

Another level at which there has been some progress in the legal system's treatment of eyewitness-identification evidence is in the courtroom. For example, almost every U.S. state now allows expert testimony on eyewitness identification at the discretion of the trial judge. On the other hand, with only a few exceptions, most states continue to model their rules on the admissibility of eyewitness-identification testimony based on the U.S. Supreme Court's 1977 decision in *Manson v. Brathwaite*.³⁰

Manson addresses the question of how lower courts should decide the admissibility of an identification when there is a claim that the state used suggestive methods to obtain the identification. After the Court's ruling in *Stovall v. Denno* in 1967,³¹ some thought that unnecessarily suggestive procedures would result in automatic exclusion of identification testimony at trial following a due process inquiry. But *Neil v. Biggers*³² and *Manson* made it abundantly clear that unnecessarily suggestive procedures would result in exclusion only if the suggestion created substantial risk of misidentification. Hence, the Court fashioned a two-pronged test. In the first prong, the question to be answered is whether the identification procedure was unnecessarily suggestive. If not, then the identification testimony could be admitted. If it was unnecessarily suggestive, then the inquiry turns to the second prong. The second prong asks the question of whether the identification is reliable despite the suggestiveness of the identification procedure. For the second prong, the Court mentioned five questions to consider: Did the witness provide a good *description* of the culprit? How much *time passed* between the witnessing and the identification? Did the witness have a good opportunity to *view* the culprit? How carefully did the eyewitness pay *attention* to the culprit during the witnessed event? And, how *certain* is the witness in his or her identification? The Court did not intend for these five considerations (description, time passed, view, attention, and certainty) to be exhaustive. But, in practice, these tend to be the criteria used in the second prong.

30. 432 U.S. 98 (1977).

31. See *Stovall v. Denno*, 388 U.S. 293 (1967).

32. See *Neil v. Biggers*, 409 U.S. 188 (1972).

The science that has developed around eyewitness identification has not been kind to the *Manson* approach to making determinations of the reliability of identification evidence that has been obtained under suggestive procedures. The scientific case against the *Manson* approach was summarized in a 2009 article that has held some sway in state supreme courts (e.g., Oregon, New Jersey) as those courts have come to recognize flaws in *Manson*-like approaches. The main problem with the *Manson* approach is that it assumes that the reliability criteria are uninfluenced by the suggestive procedure itself. Research studies clearly show that suggestive procedures not only increase the risk of mistakenly identifying an innocent suspect, but these suggestive procedures also lead eyewitnesses to inflate their recollections of how good their view was, how closely they attended to the culprit's face, and how confident (certain) they were when they made the identification. Hence, it has been described as somewhat ironic that the *Manson* factors of confidence, view, and attention “come into consideration by courts under precisely the circumstances in which they are least likely to be indicators of reliability due to their having been distorted [upward] by the suggestive procedure itself.”³³

Importantly, the majority opinion in *Manson* expressed the view that the two-pronged approach would effectively discourage the use of suggestive procedures. Because suggestive eyewitness-identification procedures inflate eyewitnesses' standing on three of the five *Manson* criteria, however, it is little wonder that *Manson* hearings almost never result in the exclusion of eyewitness-identification testimony, even when the suggestiveness of the identification procedures is relatively extreme. In fact, an argument can and has been made that the *Manson* approach encourages the use of suggestive procedures because suggestive procedures not only help ensure that the witness will identify the suspect but also inflate the perceived credibility of the witness (high confidence, good view, close attention) while risking virtually no chance that the identification testimony will be excluded from trial.

The U.S. Supreme Court has not revisited the question of how eyewitness-identification evidence should be evaluated in the 40 years since *Manson*. In 2012, however, the Supreme Court did consider the question of whether a defendant has a right to a pretrial hearing on the reliability of suggestively

33. Gary L. Wells & Deah S. Quinlivan, *Suggestive Eyewitness Identification Procedures and the Supreme Court's Reliability Test in Light of Eyewitness Science: 30 Years Later*, 33 LAW & HUM. BEHAV. 1, 17 (2009).

obtained eyewitness-identification evidence if state actors did not create the suggestiveness.³⁴ In that case, *Perry v. New Hampshire*, the Court ruled that there is no such constitutional right.

Although the U.S. Supreme Court has been silent for 40 years on the question of how to assess the reliability of eyewitness identification when suggestive procedures were used to obtain an identification, some state courts have taken up the issue. Two prominent examples are the New Jersey Supreme Court in *State v. Henderson*³⁵ and the Oregon Supreme Court in *State v. Lawson*.³⁶ The *Henderson* case is particularly interesting because, as noted earlier in this chapter, New Jersey was the first state to adopt statewide reforms in 2002 for how eyewitness-identification evidence is supposed to be collected. One of the requirements of the 2002 New Jersey eyewitness-identification procedures is that a photographic lineup must be conducted using a double-blind procedure. In other words, the case detectives cannot be present during an identification procedure. But the detectives violated that requirement and engaged in suggestive behaviors to secure an identification from the eyewitness. Like other states that have made reforms to eyewitness-identification procedures, violating the reform identification procedures in New Jersey does not result in *per se* exclusion of the identification evidence. In addition, at the time of *Henderson*, New Jersey followed the U.S. Supreme Court's use of the *Manson* criteria. But the New Jersey Supreme Court knew that there were problems with *Manson* and, hence, appointed a special magistrate to hold hearings with eyewitness experts and provide the New Jersey Supreme Court with the findings. Eventually, the New Jersey Supreme Court made a ruling that replaced the two-prong *Manson* test. Under the new test, the court placed the initial burden of showing some evidence of suggestiveness on the defense and noted that this would usually be linked to a system variable. At that point, the burden would shift to the state to offer proof that the identification is reliable, accounting for system and estimator variables. If, after weighing the evidence and looking at the totality of the circumstances, there is a substantial likelihood of irreparable misidentification, then the court can suppress the identification. If the evidence is admitted despite the suggestiveness, then the court must provide an appropriate, tailored jury instruction.

Like *Henderson*, the Oregon Supreme Court's ruling in *Lawson* changed the way the state's lower courts approach eyewitness-identification evidence in criminal trials. Under *Lawson*'s framework, Oregon courts assess the reliability

34. See *Perry v. New Hampshire*, 565 U.S. 228 (2012).

35. See *State v. Henderson*, 208 N.J. 208 (2011).

36. See *State v. Lawson*, 352 Or. 724 (2012).

of eyewitness identifications under the Oregon Evidence Code (rather than *Manson*) and can provide remedies tailored to that concern. Additionally, the Oregon Supreme Court took judicial notice of an extensive body of research in the field and provided a non-exclusive list of considerations based on that research. In using the Oregon Evidence Code, the Oregon Supreme Court was able to go beyond mere constitutional considerations that have restricted the U.S. Supreme Court.

III. THE NEED FOR ADDITIONAL IMPROVEMENTS

There has been significant progress by many law enforcement agencies and courtrooms on improving the collection, preservation, and use of eyewitness-identification evidence. Nevertheless, a large proportion of law enforcement agencies in the U.S. have not made significant reforms and most courts in the U.S. still use some version of the *Manson* approach to dealing with eyewitness-identification evidence.

Moreover, even jurisdictions that have adopted a basic reform package for how to conduct lineups have generally fallen well short of additional steps that can and ought to be taken. For example, very few jurisdictions require that the identification procedure be videotaped. As few as 10 years ago, this might have been an unreasonable request. Today, however, almost everyone has a video recorder in their pocket, and video-storage costs are nearly zero. Also, many jurisdictions that want to claim that they have made reforms have resisted the important requirement that eyewitnesses be asked about their confidence immediately following any identification. And yet, the scientific evidence is clearer than ever that the only confidence statement that can be trusted for purposes of evaluating the likely accuracy of the identification is the confidence of the eyewitness at the time of the identification. Moreover, few police jurisdictions have concerned themselves with the prevalent use of showups. A showup is an identification procedure in which there are no fillers and instead the police present an eyewitness with only one person. Research has revealed that showups are the most dangerous of all identification procedures because, unlike a lineup, there are no known-innocent fillers to siphon mistaken identifications away from an innocent suspect.³⁷ Police agencies that have made eyewitness-identification reforms have dealt almost exclusively with the lineup. However, policies and procedures on showups (when they are necessary and

37. Andrew M. Smith et al., *Fair Lineups Are Better Than Biased Lineups and Showups, but Not Because They Increase Underlying Discriminability*, 41 LAW & HUM. BEHAV. 127 (2016).

when they can be avoided, how to reduce the suggestiveness of the showup, and so on) need to be a part of the reform packages that law enforcement agencies consider as well.

Another problem that the legal system has not addressed at all thus far is the “base rate” problem. Recall that the base-rate problem concerns the fact that there is no requirement that there be reasonable suspicion before putting a person in a lineup to see if the eyewitness will identify that person. Without any standard for deciding when to conduct an identification procedure, some jurisdictions could be running a high proportion of mistaken identifications purely because they run a large number of culprit-absent identification procedures. This base-rate problem is well known in diagnostic medicine and the problem is paralleled in eyewitness identification. When a medical diagnostic test is performed on individuals for whom there is little reason to suspect have a particular disease, the rate of false positives can be quite high. This is why, for example, prostate screening is not recommended for men under the age of 30. Although the prostate test itself is just as accurate for men under 30 as it is for men over 50, the base rate for prostate cancer for men under the age of 30 is so low that almost all positive test results are actually false positives. This same phenomenon occurs if the base rate for the guilty person being in lineups is low, namely a high percentage of identifications will be of innocent people. But, whereas the public health system has embraced the base-rate problem and regularly issues guidelines for when diagnostic tests (e.g., breast scans, pap smears, PSA) are inappropriate, the legal system has no rules, guidelines, or warnings about using an identification procedure in the absence of reasonable suspicion that the subject of that lineup is the culprit. Given the false-identification rate for culprit-absent lineups in controlled experiments and the rate at which eyewitnesses identify known-innocent fillers in lineups, there can be no doubt that eyewitness-identification procedures have inherent jeopardy for an innocent suspect. Hence, the question of whether there should be some reasonable suspicion that a person is the culprit in question before placing that person in jeopardy of an identification procedure should perhaps be part of a national conversation.

RECOMMENDATIONS

Crime investigators and courts need to begin treating eyewitness-identification evidence more like a form of trace evidence. Like physical trace evidence, eyewitness evidence needs to be collected and preserved using careful protocols, and investigators need to be carefully trained in how to carry out those protocols so as to maximize the probative value of the evidence.

1. **Every law enforcement agency should have written policies and training on how to conduct eyewitness-identification procedures.** There are model procedures based on the science and on best practices that law enforcement agencies can adopt. Minimal standards should include double-blind lineup administration, carefully selected lineup fillers so that the suspect does not stand out, pre-lineup instructions warning the eyewitness that the culprit might not be in the lineup, and the immediate collection of a confidence statement from any witness who makes an identification.
2. **Courts need to play a stronger role in incentivizing law enforcement to use eyewitness-identification procedures that are less suggestive** by imposing costs (e.g., jury instructions, admission of experts, and in some cases exclusion of testimony) when suggestive procedures are used.
3. **Crime investigators should be cautious about placing an individual into the inherent jeopardy of a lineup procedure** if there is not some evidence-based reasonable suspicion.

CONCLUSION

A great deal is known about how to make improvements in the collection, preservation, and use of eyewitness-identification evidence. And improvements have clearly been made in recent years. Nevertheless, a large proportion of U.S. law enforcement agencies have not made significant reforms to their eyewitness-identification procedures. Similarly, most U.S. courts continue to make judgments about the reliability and admissibility of eyewitness-identification evidence based on a problematic version of an approach that was put forward by the U.S. Supreme Court 40 years ago. In general, the U.S. legal system needs to handle eyewitness evidence as if it were like other forms of trace evidence. Like other forms of trace evidence (e.g., hair, fibers, fingerprints), in the case of eyewitness evidence the culprit left behind a trace (memory trace) that can help establish the identity of the culprit. And, like other forms of trace evidence, memory traces can be fragile, deteriorate, are easily contaminated, and need to be collected and preserved using scientifically validated protocols.