A Synthesis of the Science and Law Relating to Eyewitness Misidentifications and Recommendations for How Police and Courts Can Reduce Wrongful Convictions Based on Them

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ABSTRACT

The empirical literature on perception and memory consistently demonstrates the pitfalls of eyewitness identifications. Exoneration data lend external validity to these studies. With the goal of informing law enforcement officers, prosecutors, criminal defense attorneys, judges, and judicial law clerks about what they can do to reduce wrongful convictions based on misidentifications, this Article presents a synthesis of the scientific knowledge relevant to how perception and memory affect the (un)reliability of eyewitness identifications. The Article situates that body of knowledge within the context of leading case law. The Article then summarizes the most current recommendations for how law enforcement personnel should—and should not—conduct eyewitness identification procedures. Finally, the Article concludes by making law and policy recommendations for handling eyewitness identification evidence in ways that can reduce wrongful convictions.

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I thank the editors and staff of the Seattle Law Review for their careful editing and cite-checking of this Article. And I offer my sincere appreciation to Dr. Iris Blandón-Gitlin, Dr. Brian H. Bornstein, Dr. Jon B. Gould, Dr. Richard A. Leo, and Dr. Elizabeth F. Loftus for their comments on earlier drafts of this Article. All mistakes are my own.

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I. INTRODUCTION

A. Prologue

During the 1980–1981 academic year, future best-selling novelist Alice Sebold was a first-year student at Syracuse University.[1] In the early morning hours of May 8, 1981, a stranger viciously raped her in Thornden Park as she was walking back to her dorm.[2] At the time, Sebold was only

1. Corina Knoll, Karen Zraick & Alexandra Alter, *He Was Convicted of Raping Alice Sebold. Then the Case Unraveled*, N.Y. TIMES (Dec. 15, 2021), https://www.nytimes.com/2021/12/15/nyregion/alice-sebold-anthony-broadwater.html [https://perma.cc/YF7F-8A7N].

2. *Id.*; *see also* Marlena Williams, *Why Didn't We Notice the Man Convicted of Alice Sebold's Rape Was Innocent?*, ELEC. LITERATURE (Mar. 17, 2022), https://electricliterature.com/anthony-broadwaters-innocence-condemns-how-publishing-sells-sexual-assault-narratives/ [https://perma.cc/5P5T-YYCP].

eighteen-years-old.[3] Despite her youth and the brutality of the assault, she mustered the wherewithal to study her rapist's appearance—"his small but muscular build, the way he gestured, his eyes and lips."[4] Five months later, Ms. Sebold spotted former U.S. Marine Anthony Broadwater near a restaurant on Marshall Street that was not far from where the attack had occurred; she immediately recognized him as the man who had raped her.[5] Police arrested Broadwater and put him in a lineup.[6] Sebold, however, identified a different man during that identification procedure—someone whom she later would admit she thought "looked identical" to Broadwater.[7] Nonetheless, prosecutors charged the twenty-year-old Broadwater with eight felonies for which he steadfastly denied any responsibility; he insisted "they got the wrong guy."[8]

At Broadwater's trial, the prosecutor asked, "[i]s there any doubt in your mind, Miss Sebold, that the person that you saw on Marshall Street is the person who attacked you on May 8 in Thornden Park?"[9] She responded emphatically, "[n]o doubt whatsoever."[10] She also testified, "I could not have identified him as the man who raped me unless he was the man who raped me."[11] But Broadwater had some distinctive facial features that Sebold had never mentioned, including a scar underneath his chin, a chipped tooth, and an eye that bore the remnants of a surgical procedure.[12] Still, a judge convicted him at a bench trial based on Sebold's in-court

3. Knoll, Zraick & Alter, *supra* note 1.

4. *Id.*

5. *Id.*

6. *Id.*

7. *Id.* In 2021, poet and essayist Camonghne Felix described the procedure as follows:

> In a lineup, Broadwater stares blindly through a two-way mirror at an 18-year-old Sebold. He stands among four other Black men of similar complexion, of varying features but all of the same height, men who could be mistaken for cousins if seen together in a casual setting, but from behind this mirror, they are considered criminals, and Sebold's one job in this moment is to identify the *right* one. But she picks a man out of the lineup who is not Broadwater. In her memoir, Sebold recalls Assistant District Attorney Gail Uebelhoer telling her that Broadwater intentionally tried to trick her by asking his "friend" to scowl and seem more threatening in an effort to confuse her. In fact, the man the attorney said was Broadwater's friend was someone he had met only hours before. In a tactic meant to reinforce her year-old memory, the DA tells her that Broadwater has a criminal history (of which he did not), encouraging her to trust her memory.

Camonghne Felix, *Don't Blame Alice Sebold*, CUT (Dec. 8, 2021), https://www.thecut.com/2021/12/dont-blame-alice-sebold.html [https://perma.cc/C7UY-SDAH].

8. Knoll, Zraick & Alter, *supra* note 1.

9. *Id.*

10. *Id.*

11. *Id.*

12. *Id.*

identification coupled with a hair sample that junk science[13] at the time established "was consistent" with Sebold's.[14] Broadwater spent sixteen years in prison before being paroled with numerous restrictions as a convicted sex offender.[15]

Sebold went on to become a best-selling author of several novels.[16] During the time that Sebold's novel *The Lovely Bones* was being made into a film,[17] a disbarred lawyer turned would-be producer read Sebold's memoir, *Lucky*.[18] He "was struck by how little evidence was presented at [Broadwater's] trial," which caused him to hire a retired detective to investigate the case.[19] The subsequent investigation eventually led to Broadwater's exoneration at the age of sixty-one.[20] Sebold, who is White, had identified the wrong Black man. As will be subsequently explored,[21] this phenomenon of cross-racial misidentification is scarily common—especially in sexual assault cases:

> In half of all sexual assault exonerations with eyewitness misidentifications, Black men were convicted of raping White women, a racial combination that appears in less than 11% of sexual assaults in the United States. According to surveys of crime victims, about 70% of White sexual assault victims were attacked by White men and only about 13% by Black men. But 57% of White-victim sexual assault exonerees are Black . . . and 37% are White—which

13. Forensic scientific matching of hair samples is a pseudo-science that has since been discredited. *See, e.g.*, HARRY T. EDWARDS, CONSTANTINE GATSONIS, MARGARET A. BERGER, JOE S. CECIL, M. BONNER DENTON, MARCELLA F. FIERRO, KAREN KAFADAR, PETE M. MARONE, GEOFFREY S. MEARNS, RANDALL S. MURCH, CHANNING ROBERTSON, MARVIN E. SCHECHTER, ROBERT SHALER, JAY A. SIEGEL, SARGUR N. SRIHARI, SHELDON M. WIEDERHORN & ROSS E. ZUMWALT, COMM. ON IDENTIFYING THE NEEDS OF THE FORENSIC SCI. CMTY. & THE RES. COUNCIL OF THE NAT'L ACADS., STRENGTHENING FORENSIC SCIENCE IN THE UNITED STATES: A PATH FORWARD 155–61 (2009), https://www.ncjrs.gov/pdffiles1/nij/grants/228091.pdf [https://perma.cc/9FJZ-LWLE]; PRESIDENT'S COUNCIL OF ADVISORS ON SCI. & TECH., EXEC. OFF. OF THE PRESIDENT, REPORT TO THE PRESIDENT, FORENSIC SCIENCE IN CRIMINAL COURTS: ENSURING SCIENTIFIC VALIDITY OF FEATURE-COMPARISON METHODS 118–22 (2016), https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/PCAST/pcast_forensic_science_report_final.pdf [https://perma.cc/F6YC-4G6J].

14. Knoll, Zraick & Alter, *supra* note 1; *see also* Laura Miller, *"Try, if You Can, to Remember Everything"*, SLATE (Dec. 3, 2021), https://slate.com/culture/2021/12/alice-sebold-memoir-lucky-rape-exoneration-anthony-broadwater.html [https://perma.cc/R3KH-AUXY] ("The case relied on a now-discredited form of hair analysis and Sebold's identification of Broadwater in court.").

15. Knoll, Zraick & Alter, *supra* note 1.

16. *See* ALICE SEBOLD, THE LOVELY BONES (2002); ALICE SEBOLD, THE ALMOST MOON (2007).

17. *See* THE LOVELY BONES (Dreamworks Pictures 2009) (Peter Jackson, director; Carolynne Cunningham, Marc Ashton, Philippa Boyens, Anne Bruning, Peter Jackson, Ken Kamins, Aimée Peyronnet, Tessa Ross, Steven Spielberg, Fran Walsh & James Wilson, producers).

18. Knoll, Zraick & Alter, *supra* note 1; *see* ALICE SEBOLD, LUCKY (1999).

19. Knoll, Zraick & Alter, *supra* note 1.

20. *Id.*

21. *See infra* notes 200–208 and accompanying text.

> suggests that Black defendants convicted of raping White women are about eight times more likely to be innocent than White men convicted of raping women of their own race.[22]

As Alice Sebold's misidentification of Anthony Broadwater illustrates, eyewitness identifications are fraught with the possibility of error. Yet, triers-of-fact seem to accept the adage "seeing is believing" as a truism when they consider eyewitness testimony, giving it significant weight that is simply not justified.[23] Yet, as the Police Executive Research Forum (PERF) stated, "eyewitness testimony is fallible. Memories can be faulty or incomplete. Eyewitnesses can have questionable vision or can be uncertain or confused. In addition, research demonstrates that some [identification] procedures can actually make it more difficult for eyewitnesses to identify the culprit."[24] Although accurate, PERF understates the fact that there are serious problems with the accuracy of the techniques that law enforcement personnel use in many eyewitness identifications. As a result, mistaken identifications have been one of the leading causes of wrongful convictions in the United States for decades[25]—and still are.[26] Sadly, this ongoing problem has not been

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22. SAMUEL R. GROSS, MAURICE POSSLEY & KLARA STEPHENS, NAT'L REGISTRY OF EXONERATION, NEWKIRK CTR. FOR SCI. & SOC'Y, RACE AND WRONGFUL CONVICTIONS IN THE UNITED STATES 12 (2017), https://www.law.umich.edu/special/exoneration/Documents/Race_and_Wrongful_Convictions.pdf [https://perma.cc/3EJ9-FTSP] (internal citations omitted).

23. Cindy Laub & Brian H. Bornstein, *Juries and Eyewitnesses*, *in* ENCYCLOPEDIA OF PSYCHOLOGY AND LAW 390, 390 (Brian L. Cutler ed., 2008); *see also* ELIZABETH F. LOFTUS & JAMES M. DOYLE, EYEWITNESS TESTIMONY: CIVIL AND CRIMINAL § 1.05 (2d ed. 1992) (reporting that mock jurors were more likely to convict in cases with eyewitness testimony than they were with a variety of types of evidence); John C. Brigham & Robert K. Bothwell, *The Ability of Prospective Jurors to Estimate the Accuracy of Eyewitness Identifications*, 7 LAW & HUM. BEHAV. 19, 19 (1983) (https://doi.org/10.1007/BF01045284) (explaining that "jurors appear to regard eyewitness evidence as one of the most persuasive kinds of evidence that can be presented"); Hal Arkowitz & Scott O. Lilienfeld, *Why Science Tells Us Not to Rely on Eyewitness Accounts: Eyewitness Testimony Is Fickle and, All Too Often, Shockingly Inaccurate*, SCI. AM. (Jan. 1, 2010), https://www.scientificamerican.com/article/do-the-eyes-have-it/ [https://perma.cc/R9NC-3YZ8] (noting that research shows "that most jurors place heavy weight on eyewitness testimony when deciding whether a suspect is guilty").

24. POLICE EXEC. RSCH. F., A NATIONAL SURVEY OF EYEWITNESS IDENTIFICATION PROCEDURES IN LAW ENFORCEMENT AGENCIES 1 (2013) [hereinafter PERF, *ID Procedures*], https://www.policeforum.org/assets/docs/Free_Online_Documents/Eyewitness_Identification/a%20national%20survey%20of%20eyewitness%20identification%20procedures%20in%20law%20enforcement%20agencies%202013.pdf [https://perma.cc/DPE7-RXCC] (citing Roy S. Malpass, Colin G. Tredoux & Dawn McQuiston-Surrett, *Public Policy and Sequential Lineups*, 14 LEGAL & CRIMINOLOGICAL PSYCH. 1 (2009) (https://doi.org/10.1348/135532508X384102); Scott D. Grolund, Shannon M. Andersen & Colton Perry, *Presentation Methods*, *in* REFORM OF EYEWITNESS IDENTIFICATION PROCEDURES 113 (Brian L. Cutler ed. 2013) (https://doi.org/10.1037/14094-006)).

25. *See, e.g.*, Jennifer L. Devenport, Steven D. Penrod & Brian L. Cutler, *Eyewitness Identification Evidence: Evaluating Commonsense Evaluations*, 3 PSYCH. PUB. POL'Y & L. 338, 338 (1997) (https://doi.org/10.1037/1076-8971.3.2-3.338) (noting that "mistaken identifications appear to be the most frequent source of erroneous convictions").

26. *See infra* at notes 55–91 and accompanying text.

handled appropriately by the U.S. Supreme Court. Its jurisprudence on eyewitness identifications is fatally outdated. It does not take into account the scientific research and the best practices that flow from it. It is time for courts, and legislators, if necessary, to change the law. And police executives can also adopt policies that comply with evidence-based best practices regardless of judicial and legislative action (or inaction).

B. The Aims of This Article and Its Target Audiences

Although there is no truly accurate way to know just how often mistaken identifications result in wrongful convictions, eyewitness misidentifications are an important contributing cause to far too many innocent people being incarcerated for crimes they did not commit.[27] Justice professionals can, however, reduce the likelihood that misidentifications send innocent persons to prison. Accordingly, this Article seeks to inform criminal legal system actors (and students of that system in law and the social sciences) about the reasons underlying eyewitness misidentifications, the best practices to minimize such errors from occurring, and what steps can be taken after the fact if those best practices were not followed.

It should be noted that there are several resources to which one could turn to obtain a review of the psychological literature on the (un)reliability of eyewitness identifications,[28] one of the best of which is an official report from the American Psychology-Law Society (APLS) that was published in their official journal, *Law and Human Behavior*.[29] This Article incorporates much of their work and updates it by including empirical literature published in the 2020s, but it does so in a manner that is intended to be easily digestible for judges, lawyers, law enforcement personnel, and students of the criminal-legal system.[30] Moreover, this Article differs from

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27. *See infra* at notes 55–91 and accompanying text; *see also* C. RONALD HUFF, ARYE RATTNER & EDWARD SAGARIN, CONVICTED BUT INNOCENT: WRONGFUL CONVICTION AND PUBLIC POLICY 66, 83–104 (1996); *Eyewitness Identification Reform*, INNOCENCE PROJECT, https://innocenceproject.org/eyewitness-identification-reform/ [https://perma.cc/2KDM-RSGR].

For two excellent books that explore wrongful convictions and why they occur using compelling stories of innocent exonerees, see MARK GODSEY, BLIND INJUSTICE (2017); BARRY SCHECK, PETER NEUFELD & JIM DWYER, ACTUAL INNOCENCE: FIVE DAYS TO EXECUTION AND OTHER DISPATCHES FROM THE WRONGLY CONVICTED (2000).

28. *See, e.g.*, NAT'L RSCH. COUNCIL, IDENTIFYING THE CULPRIT: ASSESSING EYEWITNESS IDENTIFICATION (2015).

29. *See* Gary L. Wells, Margaret B. Kovera, Amy B. Douglass, Neil Brewer, Christian A. Meissner & John T. Wixted, *Policy and Procedure Recommendations for the Collection and Preservation of Eyewitness Identification Evidence*, 44 LAW & HUM. BEHAV. 3, 7 (2020) (https://doi.org/10.1037/lhb0000359).

30. I endeavored to reduce psychological jargon and omit discussions of both theoretical models and statistical analyses that are far more likely to be relevant to researchers than criminal-legal system

most systematic reviews of the eyewitness literature because it incorporates the latest model that leading eyewitness scholars have begun to employ to frame the factors that impact the reliability of eyewitness identifications.[31] Indeed, as of this writing in April 2023, no law review article has even mentioned reflector variables, let alone explained what they are within the context of the updated framework for the study of eyewitness science that appears in the psychological literature.[32]

Additionally, this Article incorporates a significant body of Sixth and Fourteenth Amendment jurisprudence so that the policy recommendations presented in Part VI are contextualized within a legal framework. Finally, by publishing this Article in a law journal, I hope it might be a resource that reaches legal system audiences in venues they are more likely to consult while conducting research (as opposed to the databases in which most psychological science is published).

C. Identification Terminology

Pretrial confrontations of suspected offenders by witnesses or victims have long been an accepted law enforcement technique to identify perpetrators, as well as to clear innocent suspects.[33] As used in this Article, a *confrontation* is any presentation of a suspect to a crime victim or witness for the purpose of identifying the perpetrator.[34] Most eyewitness

professionals. For another review, see 2019 REPORT OF THE THIRD CIRCUIT TASK FORCE ON EYEWITNESS IDENTIFICATIONS (2019) [hereinafter THIRD CIR. TASK FORCE REP.], https://www.ca3.uscourts.gov/sites/ca3/files/2019%20Report%20of%20Third%20Circuit%20Task%20Force%20on%20Eyewitness%20Identifications.pdf [https://perma.cc/6HFY-Z2WN].

31. *See infra* notes 155–233 and accompanying text.

32. Adele Quigley-McBride & Gary L. Wells, *Eyewitness Confidence and Decision Time Reflect Identification Accuracy in Actual Police Lineups*, 47 LAW & HUM. BEHAV. 333, 334 (2023) (https://doi.org/10.1037/lhb0000518) (citing Gary L. Wells, *Psychological Science on Eyewitness Identification and Its Impact on Police Practices and Policies*, 75 AM. PSYCH. 1316, 1318 (2020) (https://doi.org/10.1037/amp0000749). As of late April 2023, I have been able to identify only one other article the explains reflector variables and their role as postdictors of identification accuracy. *See* Dario N. Rodriguez & David M. Zimmerman, *A Taxometric Approach to Base-Rate Estimation and Idiographic Classification in Psycholegal Research*, 46 LAW & HUM. BEHAV. 454, 470 (2022) (https://doi.org/10.1037/lhb0000506).

33. For an interesting account of what might be the origin of police lineups, see Ann Marie Ackermann, *The Royal Origin of the Police Lineup: How a Queen's Funeral Changed Criminal History*, ANNMARIEACKERMANN.COM (Apr. 5, 2017), https://www.annmarieackermann.com/royal-origin-police-lineup/ [https://perma.cc/89AZ-5W33] (relaying the former prosecutor and current true crime author's research into the historical use of confrontations that date back at least into the 1850s).

34. *See generally* Andrea Roth, *What Machines Can Teach Us About "Confrontation"*, 60 DUQ. L. REV. 210, 210–11 (2022) (noting that the U.S. Supreme Court has narrowly constructed the Sixth Amendment right of confrontation to apply to only certain types of evidence—namely "solemn declarations by human witnesses").

identifications occur as a result of one of three techniques: showups, lineups, and photo arrays.[35]

A *showup* is the presentation of a single suspect to a crime victim or witness for the purpose of identifying the perpetrator.[36] A *lineup* serves the same function but involves the presentation of additional persons so that the victim or witness has several choices that may or may not include an actual suspect.[37] The participants who are not suspects are called *foils* or *fillers*.

Showups and lineups can also be conducted using photographs. A *photographic showup* involves the presentation of a single picture of a suspect to a crime victim or witness, whereas a photographic lineup, commonly called a *photo array*, presents several pictures that may or may not include one of a suspect.[38] The most typical type of photo array involves what police often refer to as "a six-pack," a process in which police show six photos in two rows of three.[39] Often, a six-pack contains five pictures of fillers and one of the suspect, although there is no requirement that a suspect be included at all.[40]

According to a national survey of police agencies conducted by PERF, photo arrays were, by far, the most common forms of identification confrontations in the United States by 2013, with 94.1% of police agencies using them, compared to 61.8% that used showups, and only 21.4% that used live lineups.[41] That report, however, is more than a decade old. Given the ubiquity of personal computers, laptops, and tablets, live lineups likely occur even less frequently than they did at the time PERF gathered its data, especially since software programs make photo arrays far easier to administer today than in the past.[42] Perhaps that is why scholarly literature and the popular press alike tend to use the term "lineup" as a catch-all that

35. PERF, *ID Procedures*, *supra* note 24, at 48.

36. *Showup*, BLACK'S LAW DICTIONARY (11th ed. 2019).

37. *Lineup*, BLACK'S LAW DICTIONARY (11th ed. 2019).

38. *Photo Array*, BLACK'S LAW DICTIONARY (11th ed. 2019).

39. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 7.

40. *Id.*

41. PERF, *ID Procedures*, *supra* note 24, at 48.

42. There are several competing software programs that allow law enforcement to produce photo array lineups "quickly and easily." *Photo Lineup Creator*, CRIMESTAR, https://crimestar.com/lineups.html [https://perma.cc/AS72-3HQT]; *see also, e.g.*, *Photo Line-Ups/Arrays*, FACELOGICS, https://www.facelogics.com/lineups.html [https://perma.cc/C5VA-RQPU]; *Police Photo Lineup Software*, ELINEUP, https://elineup.org/ [https://perma.cc/77WM-QRRF]. Some software for managing the booking process not only includes digital mugshot management, but also builds photo arrays for on-screen viewing or for printing. *See, e.g.*, *Themis Image System*, DATAWORKS PLUS, https://www.dataworksplus.com/themisis.html [https://perma.cc/CY3P-BCTJ]. And some comprehensive police software packages include photo lineup capabilities among a number of applications in a suite. *See, e.g.*, *Public Safety Solutions Suite*, OMNIGO, https://www.omnigo.com/brochures/public-safety-solutions-suite-0 [https://perma.cc/Q6EM-D7C8].

does not differentiate whether the presentation of suspects and foils occurs live or using photos.

D. Wrongful Convictions

According to the National Institute of Justice, the term *wrongful convictions* can be used to refer to two distinct types of cases—those in which there were significant procedural errors that violated convicted persons' constitutional rights, and those in which people are factually innocent of the charge(s) of which they were convicted.[43] Regretfully, this dual definition of wrongful convictions conflates the fact that there is a difference between legal innocence and factual innocence.

1. Disentangling Wrongful Convictions and Exonerations

The Innocence Project is an organization devoted to exonerating wrongfully convicted persons and preventing such injustices from occurring in the future.[44] Since its inception, the Innocence Project has used DNA to accomplish the former goal to prove that the legal system convicted a factually innocent person. Thus, as noted law and psychology scholar Richard A. Leo explained, the Innocence Project spurred the modern "Innocence Movement" that made the term "'DNA exoneration' . . . synonymous with actual innocence."[45] In that tradition, this Article also uses the term "wrongful convictions" to refer to cases in which convicted defendants were subsequently cleared based on evidence of factual innocence.

Since the founding of the National Registry of Exonerations (NRoE) in 2012, the term *exoneration* has taken on a somewhat different meaning from the way the Innocent Project used the word in conjunction with DNA clearances.[46] The NRoE created a database of both DNA and non-DNA exonerations and coded for a wide variety of key variables in each case.[47] Like the Innocence Project, the NRoE includes cases of factual innocence in its database of exonerations, but it also includes cases in which persons were "relieved of all the consequences" of criminal convictions under the following circumstances:

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43. *Wrongful Convictions*, NAT'L INST. JUST., https://nij.ojp.gov/topics/justice-system-reform/wrongful-convictions [https://perma.cc/NVE7-PZUV].

44. *About*, INNOCENCE PROJECT, https://innocenceproject.org/about/ [https://perma.cc/VS4R-QX8H].

45. Richard A. Leo, *Has the Innocence Movement Become Exoneration?: The Risks and Rewards of Redefining Innocence*, *in* WRONGFUL CONVICTIONS AND THE DNA REVOLUTION: TWENTY-FIVE YEARS OF FREEING THE INNOCENT 57, 59 (Daniel S. Medwed ed. 2017).

46. *Id.* at 59–60.

47. *About the Registry*, NROE, https://www.law.umich.edu/special/exoneration/Pages/about.aspx [https://perma.cc/AB46-LDHN].

> (i) a complete pardon by a governor or other competent authority, whether or not the pardon is designated as based on innocence, or (ii) an acquittal of all charges factually related to the crime for which the person was originally convicted, in a court of the jurisdiction in which the person was convicted, or (iii) a dismissal of all charges related to the crime for which the person was originally convicted, by a court or by a prosecutor with the authority to enter that dismissal. The pardon, acquittal, or dismissal must have occurred after evidence of innocence became available that either (i) was not presented at the trial at which the person was convicted; or (ii) if the person pled guilty, was not known by the defendant and the defense attorney at the time the plea was entered. The evidence of innocence need not be an explicit basis for the official act that exonerated the person. A person who otherwise qualifies has not been exonerated if there is unexplained physical evidence of that person's guilt.[48]

Thus, the NRoE subtly shifted the meaning of an exoneration from one signifying relief from a wrongful conviction based on factual innocence to a more legalistic definition that "is essentially an erasure of a preexisting conviction by a governor, prosecutor, judge, or jury based on some new evidence of factual innocence."[49] This definitional shift likely occurred for at least two reasons. First, because the NRoE includes non-DNA cases, its database contains many times more cases than those tracked by the Innocence Project, making it a richer data source for scholars and journalists.[50] Second, the registry provides so much data in an online repository that is easily accessible, without charge, that it became "the definitive go-to source on wrongful convictions" in the United States.[51]

Richard Leo offered a thoughtful exposition on the drawbacks and benefits of the subtle shift from factual DNA innocence to the more inclusive definition of exonerations, but stressed that the primary advantage is the NRoE "allows researchers access to more valuable information and data—about the regularity, distribution, causes, correlates, and consequences of many near certain wrongful convictions—than would be available if we limited ourselves solely to those fewer cases in which we can prove factual innocence to an absolute certainty."[52] To wit, NRoE data allowed for the creation of Figure 1.[53] Certainly, both

48. *Glossary*, NROE, https://www.law.umich.edu/special/exoneration/Pages/glossary.aspx [https://perma.cc/MFK6-93CN] [hereinafter NROE, *Glossary*].

49. Leo, *supra* note 45, at 60.

50. *See id.* at 59.

51. *Id.*

52. *Id.* at 72.

53. *See infra* note 61 and accompanying data.

approaches to exonerations, legal and factual, offer valuable insights into criminal legal system failures. And there are other merits to focusing on both types of systemic errors, as Leo's thoughtful book chapter explained.[54] Regardless of whether one focuses on convictions obtained against factually innocent defendants or a broader range of those that are legally innocent, as the following sections make clear, eyewitness misidentifications contribute to large percentages of both types of injustices.

2. An Overview of Exonerations

It is impossible to know how many people are convicted of crimes they did not commit. Empirical studies estimate that between 1.4% and 15% of all incarcerated people in U.S. prisons are factually innocent of the crimes for which they were imprisoned.[55] Notably, most of these studies focus on serious criminal offenses involving violence and, therefore,

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54. Leo, *supra* note 45, at 66–73.

55. Samuel R. Gross & Barbara O'Brien, *Frequency and Predictors of False Conviction: Why We Know So Little, and New Data on Capital Cases*, 5 J. EMPIRICAL LEGAL STUD. 927, 945 (2008) (reporting exoneration rate of 2.3% in capital murder cases between 1973 and 1984); Samuel R. Gross, Barbara O'Brien, Chen Hu & Edward H. Kennedy, *Rate of False Conviction of Criminal Defendants Who Are Sentenced to Death*, 111 PROC. NAT'L ACAD. SCI. 7230, 7230, 7233 (2014) (https://doi.org/10.1073/pnas.1306417111) (reporting exoneration rate of 4.1% in an expanded study of capital murder cases between 1973 and 2014); Charles E. Loeffler, Jordan Hyatt & Greg Ridgeway, *Measuring Self-Reported Wrongful Convictions Among Prisoners*, 35 J. QUANTITATIVE CRIMINOLOGY 259, 259, 261 (2018) (https://doi.org/10.1007/s10940-018-9381-1) (estimating 6% wrongful conviction rate); Tony G. Poveda, *Estimating Wrongful Convictions*, 18 JUST. Q. 689, 697–98 (2001) (https://doi.org/10.1080/07418820100095061) (estimating a 1.4% error rate for homicide convictions in New York); D. Michael Risinger, *Innocents Convicted: An Empirically Justified Factual Wrongful Conviction Rate*, 97 J. CRIM. L. & CRIMINOLOGY 761, 762, 778–80 (2007) (https://doi.org/10.2139/ssrn.931454) (estimating 3.3% to 5.0% error rate in capital rape-murder cases nationally); JOHN ROMAN, KELLY WALSH, PAMELA LACHMAN & JENNIFER YAHNER, URB. INST., POST-CONVICTION DNA TESTING AND WRONGFUL CONVICTION 57 (2012), https://www.urban.org/sites/default/files/publication/25506/412589-Post-Conviction-DNA-Testing-and-Wrongful-Conviction.PDF [https://perma.cc/DEH7-XSV6] (reporting a range of wrongful conviction rates for serious crimes in Virginia from 8% to 15%, and suggesting that the overall rate likely falls "somewhere between the two extremes"); KELLY WALSH, JEANETTE HUSSEMANN, ABIGAIL FLYNN, JENNIFER YAHNER & LAURA GOLIAN, URB. INST., ESTIMATING THE PREVALENCE OF WRONGFUL CONVICTIONS 10 (NCJRS Doc. No. 251115, 2017), https://www.ojp.gov/pdffiles1/nij/grants/251115.pdf [https://perma.cc/8EML-BASD] (estimating 11.6% rate of wrongful convictions in Virginia).

There are several studies that were not published in peer-reviewed journals which challenge these estimates as being far too high. Criminologists Marvin Zalman and Robert Norris criticized these studies, which often estimate the rate of wrongful convictions between 0.016% and 0.84%, for using questionable methodologies that rely on untested assumptions rather than "concrete empirical data." Marvin Zalman & Robert J. Norris, *Measuring Innocence: How to Think About the Rate of Wrongful Conviction*, 24 NEW CRIM. L. REV. 601, 632 (2021) (https://doi.org/10.1525/nclr.2021.24.4.601) (internal citations omitted).

cannot be generalized to less serious felonies, never mind misdemeanor offenses.

One of the difficulties in estimating the rate of wrongful convictions is the limited data available. Consider, for example, that the Innocence Project reports data only from cases "that were reinvestigated, that produced viable evidence of innocence, and achieved legal victory often after lengthy post-conviction litigation and appeals."[56] Thus, whatever the "true" numbers of wrongful convictions might be, it is "certainly much greater than the number of known [factually innocent] exonerations, perhaps by several orders of magnitude."[57]

In contrast to the limitations of relying on exoneration data for estimating the *rates* of wrongful convictions (about which we can guestimate, but really never know), those data are well-suited for shedding light on the actual *causes* of the exonerations about which we do know.[58] Using data from the NRoE, Figure 1 depicts the most common factors that contribute to convictions of persons who are subsequently exonerated for legal or factual innocence. As the figure illustrates, mistaken eyewitness identifications are one of the top three such factors.[59] The percentage of

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56. Zalman & Norris, *supra* note 55, at 603. The NRoE purports to use a similar definition, but scholars have questioned how it codes data that may include cases other than those in which courts made evidentiary findings of factual innocence. *See, e.g.*, Jon B. Gould & Richard A. Leo, *The Path to Exoneration*, 79 ALB. L. REV. 325, 355 (2016) (noting that definitions of innocence vary such that the NRoE would count "a prosecutor's failure to refile charges following dismissal likely would have counted even if no official acknowledged the defendant were factually innocent"); *id.* at 362 (noting again the NRoE sometimes "incorporates a more inclusive definition of exoneration"); *id.* at 370 ("Although the [NRoE requires that an overturned conviction be] 'the result, at least in part, of evidence of innocence,' that evidence 'need not be an explicit basis for the official action that exonerated the person.' Put another way, a case might count in the [NRoE] even though the defendant was not, in fact, innocent of the crime." (quoting NROE, *Glossary*, *supra* note 48)).

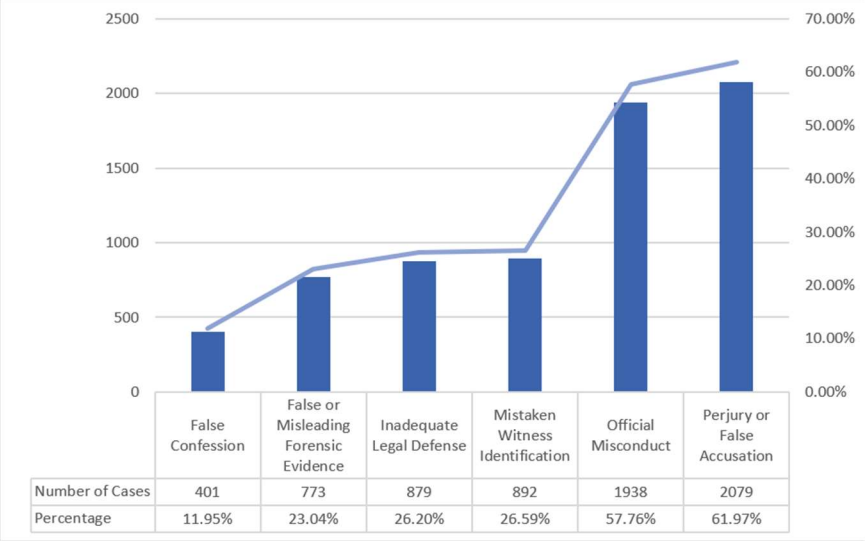
57. Zalman & Norris, *supra* note 55, at 603–04 (citing James R. Acker, *Taking Stock of Innocence: Movements, Mountains, and Wrongful Convictions*, 33 J. CONTEMP. CRIM. JUST. 8, 9–12 (2017) (https://doi.org/10.1177/1043986216673008)); *see also* Samuel R. Gross, Kristen Jacoby, Daniel J. Matheson, Nicholas Montgomery & Sujata Patil, *Exonerations in the United States, 1989 Through 2003*, 95 J. CRIM. L. & CRIMINOLOGY 523, 551 (2005)).

58. Without a control group, it is impossible to actually know the causes of wrongful convictions. That is because the factors influencing case outcomes for innocent people who are convicted compared to innocent people who are not convicted might be different from those that affect innocent people who are convicted versus guilty people who are convicted. *See* JON B. GOULD, JULIA CARRANO, RICHARD LEO & JOSEPH YOUNG, NCJ 241389, PREDICTING ERRONEOUS CONVICTIONS: A SOCIAL SCIENCE APPROACH TO MISCARRIAGES OF JUSTICE 24 (2013), https://www.ojp.gov/pdffiles1/nij/grants/241389.pdf [https://perma.cc/GCN7-MKDN]. Nonetheless, given the limited data we have, Figure 1 summarizes the causes that the NRoE coded in 3,284 cases as of March 29, 2023.

59. Because the NRoE includes cases that do not meet the Innocence Project's stricter definition of an exoneration, see *supra* notes 48 & 56, the percentage of cases in which eyewitness misidentifications contributed to a wrongful conviction varies between the two sources. According to leading eyewitness memory expert Dr. Elizabeth Loftus, the "coding issues" for the cases in the NRoE data explains, in part, why the percentage of cases involving eyewitness errors is so much lower in

mistaken identifications skyrockets to 69% in cases where the Innocence Project used DNA evidence to clear factually innocent people, making it the leading contributing factor to known wrongful convictions.[60]

Figure 1: Factors Contributing to Wrongful Convictions in 3,284 Cases[61]



E. The Role of Eyewitness Misidentifications in Wrongful Convictions

Unreliable eyewitness identifications have many potential causes.[62] First, an eyewitness may be lying. In a study of 1,886 exonerations, the NRoE found that in 482 (25.6%) cases, "witnesses deliberately misidentified the exonerees as the guilty parties in crimes that were

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NRoE data than in Innocence Project data. Personal communication from Elizabeth Loftus, Distinguished Professor, Criminology, Law & Society; Psychological Science; and the School of Law at the University of California, Irvine, to author (Mar. 23, 2023) (on file with author). Figure 1, therefore presents the more conservative estimate of eyewitness errors in roughly 26.6% of exonerations with the caveat that the percentage is likely much higher in factual innocence cases, as the Innocence Project data suggest.

60. *DNA Exonerations in the United States: Fast Facts*, INNOCENCE PROJECT, https://innocenceproject.org/dna-exonerations-in-the-united-states/ [https://perma.cc/4P4C-Y2XF] [hereinafter INNOC. PROJ., *DNA Exonerations*].

61. *Get Data as a Spreadsheet*, NROE, https://www.law.umich.edu/special/exoneration/Pages/Spread-Sheet-Request-Form.aspx (downloaded March 29, 2023) [hereinafter NROE, *Data Spreadsheet*]. Totals exceed 100% because wrongful convictions often have more than one cause.

62. *See generally* THE PSYCHOLOGY AND SOCIOLOGY OF WRONGFUL CONVICTIONS: FORENSIC SCIENCE REFORM (Wendy J. Koen & C. Michael Bowers eds., 2018); BRANDON L. GARRETT, CONVICTING THE INNOCENT: WHERE CRIMINAL PROSECUTIONS GO WRONG (2011); George Vallas, *A Survey of Federal and State Standards for the Admission of Expert Testimony on the Reliability of Eyewitnesses*, 39 AM. J. CRIM. L. 97 (2011); Henry F. Fradella, *Why Judges Should Admit Expert Testimony on the Unreliability of Eyewitness Testimony*, 2 FED. CTS. L. REV. 1 (2007).

committed by other people."[63] And in another 315 (16.7%), "supposed eyewitnesses—usually the alleged victims of violent crimes—accused the exonerees of committing crimes that never happened at all."[64]

Concerns about truthful witnesses can be traced back millennia: "Thou shalt not bear false witness against thy neighbour."[65] But "juries are expected to assess the veracity of all witnesses, and cross-examination is presumed to reveal when eyewitnesses have motivation to lie, just as it would with any other witness."[66] Arguably, the more troubling situation occurs when eyewitnesses honestly believe their testimony conveys the truth, but they are factually incorrect[67]—just as occurred with Alice Sebold's misidentification of Anthony Broadwater.[68] As the late U.S. Supreme Court Justice William Brennan noted in 1981, "despite its inherent unreliability, much eyewitness identification evidence has a powerful impact on juries. . . . [T]here is almost nothing more convincing than a live human being who takes the stand, points a finger at the defendant, and says, '*That's the one!*'"[69] This observation is confirmed by Innocence Project data revealing that mistaken identification was *the* leading cause of the wrongful convictions on which they successfully worked.[70]

As psychologists Gary L. Wells and Deah S. Quinlivan explained, though, the actual number of cases in which wrongful convictions are based on mistaken identifications is likely much higher than exoneration data reveals:

> First, in a large percentage of the old cases (in which convicted persons claim to have been misidentified) the biological evidence for DNA testing has deteriorated, has been lost, or has been destroyed. Moreover, virtually all DNA exoneration cases involved sexual

63. Kaitlin Jackson & Samuel Gross, *Tainted Identifications*, NROE (Sept. 22, 2016), https://www.law.umich.edu/special/exoneration/Pages/taintedids.aspx [https://perma.cc/CM9U-DEFJ].

64. *Id.*

65. Fradella, *supra* note 62, at 3 (quoting EXODUS 20:16 (King James)).

66. Fradella, *supra* note 62, at 3.

67. *Id.* ("Even back in Ancient Greece, Plato cautioned, 'have sight and hearing any truth in them? Are they not, as the poets are always telling us, inaccurate witnesses?'" (quoting PLATO, PORTRAIT OF SOCRATES, BEING THE APOLOGY, CRITO, AND PHAEDO OF PLATO 99 (R.W. Livingstone ed., Oxford Univ. Press 1938)).

68. *See supra* notes 1–23 and accompanying text.

69. Watkins v. Sowders, 449 U.S. 341, 352 (1981) (Brennan, J., dissenting) (internal citation omitted) (italics added). For research supporting Justice Brennan's observation, see sources cited *supra* note 23.

70. As of this writing, the Innocence Project reports they have helped overturn 375 convictions using DNA evidence from their founding in 1989 and 2020—the most recent year for which they reported data. INNOC. PROJ., *DNA Exonerations*, *supra* note 60. The organization stopped maintaining this list in early 2020.

> assault because those are the cases for which definitive biological evidence (contained in semen) is available to trump the mistaken identification. Such biological evidence is almost never available for murders, robberies, drive-by shootings, and other common crimes that have relied on eyewitness identification evidence. A recent study of lineups in Illinois indicates that only 5% of lineups conducted in Chicago, Evanston, and Joliet were sexual assault cases. Most lineup identifications were for non-sexual assaults, robberies, and murders for which there is almost no chance that DNA would be available to trump a mistaken identification. In addition, we would normally expect sexual assault victims to be among the most reliable of eyewitnesses because sexual assault victims usually have a longer and closer look at the culprit than other crime witnesses (compared to robberies, for instance). For these reasons, the DNA exoneration cases can only represent a fraction, probably a very small fraction, of the people who have been convicted based on mistaken eyewitness identification.[71]

NRoE data confirm Wells and Quinlivan's logic. As previously mentioned, that organization maintains a database of all exonerations, not just those involving DNA. Of the 3,284 exonerations they tracked between 1989 and the end of the first quarter of 2023, only 574 (17.5%) had DNA evidence available.[72] Thus, focusing on DNA exonerations omits more than four out of every five people who were exonerated of criminal convictions. When all the cases are considered, mistaken identification remains one of the most common factors contributing to convictions that are subsequently exonerated, as Figure 1 illustrates.[73]

In 2016, NRoE researchers conducted an in-depth examination of 1,886 cases involving tainted identifications.[74] They reported that in nearly one-third of those cases, witnesses identified someone because of suggestive police procedures or outright misconduct:

- Nearly half of tainted identifications occurred after police told the witness whom to pick, sometimes in the context of a deal.
- In 12%, police not only told witnesses whom to identify, but also threatened those who were reluctant to do so.
- In 32%, police inappropriately highlighted suspects by placing them in lineups in which they were the only members of their racial

71. 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, 2 (2009) (https://doi.org/10.1007/s10979-008-9130-3).

72. NROE, *Data Spreadsheet*, *supra* note 61.

73. *See also* Jackson & Gross, *supra* note 63.

74. *Id.*

> group, showing them in inmate attire while the fillers were in plain clothes, or dressing them, but not foils, in the manner the perpetrator was described as having worn.
>
> - In 14% of tainted identifications, the exoneree was displayed to the witness repeatedly, usually in lineups in which he or she was the only person included in multiple confrontations.
>
> - And in 7% of cases, police used false information to explain away discrepancies between the suspect's actual appearance when it varied from the eyewitness's initial description.[75]

Cases in which mistaken identifications occur have devastating consequences for the person wrongfully identified.[76] Clearly, wrongfully convicted people bear the most significant of the harms that these travesties of justice cause. They suffer the loss of liberty while they are unjustifiably imprisoned. As a result, they lose years of their lives while enduring the stigma and traumas associated with incarceration.[77] This, in turn, strains relationships with family members and friends, exacerbates financial problems, and limits future employment opportunities. It can also cause psychological issues, including "higher dependence on institutional structure, hypervigilance, psychological distancing, [and] a lowered sense of self-worth."[78] Wrongful imprisonment can even cause depression, post-traumatic stress disorder, and sleep problems, just to name a few of the health consequences that wrongfully convicted persons routinely face.[79] And family members suffer, too, as they face, among other stressors, changed economic circumstances, strained or lost friendships, and both estrangement from their family members during the periods of wrongful incarceration and the challenges of dealing with their loved ones' changed psyches after their release from custody.[80]

Moreover, wrongful convictions also hurt the victims of crime. "Persuaded that the person convicted is the perpetrator, victims frequently experience a subsequent exoneration as a fresh injury, if not the reawakening of an old wound."[81] Some victims also experience intense

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75. *Id.*

76. INNOC. PROJ., *DNA Exonerations*, *supra* note 60.

77. *See generally* GRESHAM M. SYKES, THE SOCIETY OF CAPTIVES: A STUDY OF A MAXIMUM SECURITY PRISON 63–84 (rev. ed. 2007) (1958) (expounding upon the "pains of imprisonment").

78. Lily Goldberg, Nicole Guillen, Nicole Hernandez & Lora M. Levett, *Obstacles and Barriers After Exoneration*, 83 ALB. L. REV. 829, 842 (2020).

79. *See* Samantha K. Brooks & Neil Greenberg, *Psychological Impact of Being Wrongfully Accused of Criminal Offences: A Systematic Literature Review*, 61 MED. SCI. & L. 44, 47–48 (2021) (https://doi.org/10.1177/0025802420949069).

80. *Id.* at 48.

81. Daniel Givelber, *Meaningless Acquittals, Meaningful Convictions: Do We Reliably Acquit the Innocent?*, 49 RUTGERS L. REV. 1317, 1394 (1997).

guilt for having cooperated in the prosecution of an innocent person, especially if they provided an incorrect eyewitness identification.[82] And, of course, when people are convicted of crimes they did not commit, the real perpetrators are not held responsible for their crimes. If the guilty remain free while the innocent take the blame for their actions, these culprits might victimize others, thereby endangering public safety in ways that could have been avoided if the correct person had been apprehended.[83] Alice Sebold's apology to Anthony Broadwater evidences several of these themes:

> [Forty] years ago, as a traumatized [eighteen]-year-old rape victim, I chose to put my faith in the American legal system. My goal in 1982 was justice—not to perpetuate injustice. And certainly not to forever, and irreparably, alter a young man's life by the very crime that had altered mine.
>
> . . . .
>
> I will continue to struggle with the role that I unwittingly played within a system that sent an innocent man to jail. I will also grapple with the fact that my rapist will, in all likelihood, never be known, may have gone on to rape other women, and certainly will never serve the time in prison that Mr. Broadwater did.[84]

Finally, wrongful convictions decrease trust in the criminal legal system and damage its legitimacy because "people value accuracy in criminal adjudications."[85] Consider that when the Innocence Project ushered in the age of DNA exonerations, one of its primary effects was to undercut the oft-mentioned rarity of wrongful convictions by "demonstrating that the problem of wrongful conviction in [the United States] is structural and persistent."[86] It is not surprising, therefore, that

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82. *See* Seri Irazola, Erin Williamson, Julie Stricker & Emily Niedzwiecki, *Addressing the Impact of Wrongful Convictions on Crime Victims*, 274 NAT'L INST. JUST. J. 34 (2014).

83. Keith A. Findley, *Learning from Our Mistakes: A Criminal Justice Commission to Study Wrongful Convictions*, 38 CAL. W. L. REV. 333, 338 (2002).

84. Alice Sebold, *Statement from Alice Sebold*, MEDIUM (Nov. 30, 2021), https://medium.com/@Alice_Sebold/statement-from-alice-sebold-c109361d6150 [https://perma.cc/9DCE-FZXG].

85. Gregory M. Gilchrist, *Trial Bargaining*, 101 IOWA L. REV. 609, 635–36 (2016).

86. Leo, *supra* note 45, at 59.

> There is a long history of skepticism about the phenomenon and frequency of wrongful conviction in America, even though more wrongful convictions have been documented in America than in all other First World nations combined. Prior to the publication of [Edwin] Borchard's [1932] book [*Convicting the Innocent*], a district attorney in Worcester County, Massachusetts, was reported to have said, "Innocent men are never convicted. Don't worry about it, it never happens in the world. It is a physical impossibility." More famously, Judge Learned Hand declared in 1923, "Our dangers do not lie in too little tenderness to the accused. Our procedure has always been haunted by the ghost of the innocent man

when factually innocent persons are exonerated, their wrongful convictions often become "fodder for many press reports questioning the legitimacy of [the] criminal justice system."[87] Indeed, when the public learns the stories of the innocent who languished in prison for crimes they did not commit, those stories prompt "dissonance" with "the façade of certainty of guilt."[88]

F. Error Rates

It is one thing to acknowledge that eyewitness identifications are fraught with the possibility of error. It may be surprising to many people, however, to learn just how high the error rates are. Laboratory research conducted under "ideal" viewing conditions for simple face-matching tasks reveals that "[c]orrect identifications of the target when present in lineups ranged between 60% and 80% in almost all studies. Correct identification of the target in a comparison photo was higher—in the mid-80% range."[89] Error rates increase to between 30% and 57% when the task is harder due to less than ideal viewing conditions that require people "to observe complex events and then, relying on memory, to attempt to identify the target person in question."[90] Given these mistakes in laboratory settings, the added complexities of observing criminal activity could lead to even higher error rates, although some research suggests the rates of mistaken identifications are roughly comparable.[91]

> convicted. It is an unreal dream." Even after the publication of Borchard's book, Edmund Pearson wrote in *The New Yorker* in 1935 that "the vision of American criminal law as a ravening monster, forever hounding innocent people into the electric chair, is one with which emotional persons like to chill their blood. It is a substitute for tales of ghosts and goblins." Lest one think these views belong to a different era, one need look no further than the views of former Attorney General Edwin Meese or the late Supreme Court Justice Antonin Scalia. Modern critics of the study of wrongful conviction in America no longer characterize it as the stuff of ghosts and goblins, but they nevertheless argue that the problem of "innocence" or "factual innocence" is a "myth," and that the risk of executing an innocent person "is too small to be a significant factor in the debate over the death penalty. . . . [But] the DNA revolution and its ripple effects in American criminal justice during the last 25 years have refuted such views.

Id. at 58.

87. JON B. GOULD, THE INNOCENCE COMMISSION: PREVENTING WRONGFUL CONVICTIONS AND RESTORING THE CRIMINAL JUSTICE SYSTEM 52 (2007); *see also id.* at 8 ("Taxpayers must foot the bill for incarcerating and then compensating the innocent suspect, not to mention the cost of reopening a case to seek the actual perpetrator. In the process, the public may come to doubt the legitimacy of the justice process.").

88. Talia Fisher, *Conviction Without Conviction*, 96 MINN. L. REV. 833, 871 (2012).

89. Deborah Davis & Elizabeth F. Loftus, *Eyewitness Science in the 21st Century: What Do We Know and Where Do We Go from Here?*, *in* THE STEVENS' HANDBOOK OF EXPERIMENTAL PSYCHOLOGY AND COGNITIVE NEUROSCIENCE 529, 533 (John T. Wixted, Elizabeth A. Phelps & Lila Davachi eds., 4th ed. 2018).

90. *Id.* at 534.

91. *Id.* at 535.

G. Structure of This Article: A Roadmap

Having provided an overview of the eyewitness misidentification problem in the Introduction, Part II surveys the science of eyewitness identification by presenting a primer on perception and memory as they relate to identification procedures. The remainder of Part II then presents a comprehensive synthesis of the scientific knowledge on the many factors known to affect eyewitnesses' perception and memory in particular situations that scholars refer to as *estimator variables*,[92] as well as those *reflector variables* that can provide indicators as to the accuracy of identifications.[93]

Part III summarizes the key legal cases governing how the Sixth Amendment impacts eyewitness identification processes after the initiation of formal criminal proceedings against a suspect. Part IV similarly surveys the leading cases on eyewitness identifications, but does so from a due process perspective that applies to all pretrial identifications, regardless of whether Sixth Amendment rights attached in any given case.

With the basics of eyewitness science and the legal framework governing eyewitness confrontations in mind, Part V describes the *system variables* that law enforcement officers can control during the administration of lineups and photo arrays to promote fair identification procedures.[94] This information should also help court personnel assess whether law enforcement complied with evidence-based best practices in any given case.

Part VI makes recommendations for reducing wrongful convictions as a function of mistaken identifications. It does so not only by summarizing leading scientific and policy recommendations, but also by offering a new proposed framework for handling eyewitness evidence in criminal courts. Part VII concludes by offering some final thoughts.

II. AN OVERVIEW OF (MIS)IDENTIFICATIONS[95]

In 1908, Hugo Münsterberg published *On the Witness Stand*, a groundbreaking tome that is still cited more than a century later for its contributions to building the intersectional study of law and psychology,

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

93. Quigley-McBride & Wells, *supra* note 32, at 334.

94. *Id.*

95. This portion of the present Article presents an adaptation of Fradella, *supra* note 62, updated with both newer studies published in the past seventeen years, and revised recommendations based on the evolving body of research.

broadly, and its insights into eyewitness errors, in particular.[96] His experiments involving eyewitness identification led him to report not only high error rates, but also frequent omissions of important event details, as well as the inclusion of factually incorrect information in witness statements by laypersons and trained observers alike.[97] His research—as well as the contributions of Münsterberg's predecessors, contemporaries, and successors[98]—undoubtedly undergirded the dissenters' statement in the U.S. Supreme Court's *Manson v. Brathwaite* decision that the "vagaries of eyewitness identification are well-known; the annals of criminal law are rife with instances of mistaken identification."[99]

In *Brathwaite*, the Court reiterated its belief in the criteria for examining the reliability of identifications it had first set down in *Neil v. Biggers*.[100] Those criteria include "the opportunity of the witness to view the criminal at the time of the crime, the witness' degree of attention, the accuracy of the witness' prior description of the criminal, the level of certainty demonstrated by the witness at the confrontation, and the length of time between the crime and the confrontation."[101] All of these factors seem straightforward, but they depend on complex psychological issues pertaining to perception and memory—some of which are quite counterintuitive. Indeed, [a]mong the most important lessons learned from scientific studies of face perception and eyewitness performance is the fact that facial recognition, particularly of strangers, is a more difficult task than is commonly recognized."[102]

A. Perception

Memories are not exact recordings of events. First and foremost, memory depends on perception. *Perception* is the recognition and interpretation of stimuli received through our basic senses.[103] Perception

96. *See generally* HUGO MÜNSTERBERG, ON THE WITNESS STAND (1908); *see also, e.g.*, Elizabeth F. Loftus, *Eyewitness Science and the Legal System*, 14 ANN. REV. L. & SOC. SCI. 1 (2018) (https://doi.org/10.1146/annurev-lawsocsci-101317-030850) (noting Münsterberg's contributions).

97. *See generally* Amina Memon, Serena Mastroberardino & Joanne Fraser, *Münsterberg's Legacy: What Does Eyewitness Research Tell Us About the Reliability of Eyewitness Testimony?*, 22 APPLIED COGNITIVE PSYCH. 841 (2008) (https://doi.org/10.1002/acp.1487).

98. Brian H. Bornstein & Steven D. Penrod, *Hugo Who? G.F. Arnold's Alternative Early Approach to Psychology and Law*, 22 APPLIED COGNITIVE PSYCH. 759 (2008) (https://doi.org/10.1002/acp.1480).

99. Manson v. Brathwaite, 432 U.S. 98, 119 (1977) (Marshall, J. & Brennan, J., dissenting) (internal quotation marks omitted).

100. *Id.* at 114.

101. Neil v. Biggers, 409 U.S. 188, 199–200 (1972).

102. Davis & Loftus, *supra* note 89, at 533.

103. *See, e.g.*, DANIEL REISBERG, THE SCIENCE OF PERCEPTION AND MEMORY: A PRAGMATIC GUIDE FOR THE JUSTICE SYSTEM 30–36 (2014). For an accessible explanation of the science of visual sensation and visual perception, see NAT'L RSCH. COUNCIL, *supra* note 28, at 46–59.

is a complicated neurological process: "the total amalgam of sensory signals received and then processed by an individual at any one time."[104] This process is highly selective. It is as dependent upon psychological factors as it is on physical senses because it is an "interpretive process."[105] The sensory data we perceive is "processed in light of experience, learning, preferences, biases, and expectations."[106]

Most obviously, perception depends on the acuity of the senses. Of course, organic physical deficits in sensory systems, such as poor eyesight, color blindness, or hearing impairments, interfere with perception.[107] Environmental factors—such as dim lighting, loud music, and viewing angle—can also impair the senses and related perception, as can the ingestion of alcohol or other drugs.[108] And even when a person's senses are working optimally, they are always subject to noise. *Noise* refers to interference with the accuracy of sensory perception due to signals from random or irrelevant stimuli, such as sun glare, shadows, distracting lights or sounds, and so on.[109]

Another factor that affects perception is *attention*. When people concentrate on a task, for instance, they may not perceive certain stimuli because their attention is focused elsewhere.[110] "In some cases, unattended content is effectively invisible: It does not reach awareness, it is not perceived, and it is not available for use in guiding decisions or actions, or for storage in memory."[111]

Further, one of the most important factors that affects our ability to perceive is the sheer volume of sensory stimulation that bombards us. "Perception is highly selective because the number of signals or amount of information impinging upon the senses is so great that the mind can process only a small fraction of the incoming data."[112] We focus on certain

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104. Steven I. Friedland, *On Common Sense and the Evaluation of Witness Credibility*, 40 CASE W. RES. L. REV. 165, 181 (1990). *See generally* STANLEY COREN, LAWRENCE M. WARD & JAMES T. ENNS, SENSATION AND PERCEPTION 356 (6th ed., Wiley & Sons 2003).

105. Robert Buckhout, *Psychology and Eyewitness Identification*, 2 LAW & PSYCH. REV. 75, 76 (1976).

106. Frederick E. Chemay, *Unreliable Eyewitness Evidence: The Expert Psychologist and the Defense in Criminal Cases*, 45 LA. L. REV. 721, 724 (1985); *see also* Fredrik H. Leinfelt, *Descriptive Eyewitness Testimony: The Influence of Emotionality, Racial Identification, Question Style, and Selective Perception*, 29 CRIM. JUST. REV. 317 (2004) (https://doi.org/10.1177/07340168040290020 4).

107. NAT'L RSCH. COUNCIL, *supra* note 28, at 50.

108. *Id.*

109. *Id.* at 47.

110. *Id.* at 52–55.

111. *Id.* at 53.

112. Friedland, *supra* note 104, at 181 (quoting Chemay, *supra* note 106, at 723) (internal quotation marks omitted).

stimuli while filtering out others.[113] This results not only in incomplete acquisition of sensory data but also in differential processing (i.e., interpretation) of events.[114] Thus, even when lighting and distance conditions are good for observation, a person may experience *sensory overload*—being "overwhelmed with too much information in too short a period of time."[115] This, in turn, can lead to *incomplete sensory acquisition* which produces gaps that the human mind fills-in to make a story that makes logical sense, but may be inaccurate.[116]

Finally, the type of stimuli involved also affects perception. In particular, people are poor perceivers of duration (we tend to overestimate how long something takes), time (it "flies by" or "drags on"), speed, distance, height, and weight.[117] It is important to keep in mind that people are not aware of their individual variations in the process of perception because how we perceive and synthesize sensory data occurs unconsciously.

B. Memory

Memory is another unconscious process.[118] It is a bit of a misnomer to speak of *memory* because the term refers to several different abilities, including "holding information briefly while working with it (working memory), remembering events in one's life (episodic memory), and our general knowledge of facts of the world (semantic memory), among other types."[119] Each of these types of memory involves three phases: acquisition, retention, and recall of past experiences. All three component phases are affected by several physical and psychological factors that can lead to forgetting or the impairment of memory accuracy, a phenomenon commonly called *false memories*. "[W]e regularly encode events in a biased manner and subsequently forget, reconstruct, update, and distort the things we believe to be true."[120]

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113. *See generally* Nelson Cowan, *The Magical Number 4 in Short-Term Memory: A Reconsideration of Mental Storage Capacity*, 24 BEHAV. & BRAIN SCI. 87 (2000) (discussing sensory overload as one of the many factors that affect perception and memory).

114. *See* CURT R. BARTOL & ANNE M. BARTOL, PSYCHOLOGY AND LAW 219 (2d ed. 1994).

115. Chemay, *supra* note 106, at 726.

116. *Id.* at 724; *see also* Andrew Roberts, *The Problem of Mistaken Identification: Some Observations on Process*, 8 INT'L J. EVID. & PROOF 100 (2004).

117. Friedland, *supra* note 104, at 181–82.

118. Chemay, *supra* note 106, at 724; Friedland, *supra* note 104, at 182.

119. Kathleen B. McDermott & Henry L. Roediger III, *Memory (Encoding, Storage, Retrieval)*, *in* NOBA: PSYCHOLOGY (Robert Biswas-Diener & Ed Diener eds., 2023), https://nobaproject.com/modules/memory-encoding-storage-retrieval [https://perma.cc/J7PA-ZJDU].

120. NAT'L RSCH. COUNCIL, *supra* note 28, at 60.

1. Acquisition/Encoding Phase

The first phase in the development of memory is the *acquisition or encoding phase*.[121] During this phase, sensory data, as perceived by the individual, are encoded in the appropriate areas of the cerebral cortex.[122] Accordingly, the acquisition of memories depends on perception and all of the factors that affect perception, such as distance, lighting, and duration of exposure.[123] And because perception also depends on several individualized factors, the encoding phase of developing memories is affected by many of those same criteria:

> The contents of short-term memory are limited and highly subject to interference by subsequent sensory, cognitive, emotional, or behavioral events; the contents can also be biased by prior knowledge, expectations, or beliefs, resulting in a distorted representation of experience. Short-term memories of events that happened early in a witnessed proceeding may simply be forgotten with the passage of time or badly compromised by attention directed to subsequent emotional events or cognitive and behavioral demands (e.g., anxiety, fear, the need to escape). In such cases, the compromised information may never be consolidated fully into long-term storage or that storage may contain distorted content. At the same time, the quality of encoding of stimuli that are attended is commonly enhanced by highly emotional content.[124]

Sensory overload has particular relevance to the encoding phase. It can lead to so much incomplete sensory acquisition that *confabulation*—"the creation or substitution of false memories through later suggestion"—can occur to fill in the many gaps that exist.[125]

Perceptual variability aside, other important factors also affect memory acquisition. A person's expectations influence how details about an event are encoded. An observer tends to seek out some information and avoid other data, an effect called *confirmation bias* in which we see what

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121. *Id.* at 60–61; McDermott & Roediger, *supra* note 119. For an accessible description of memory encoding for laypersons, see *Memory Encoding*, HUM. MEMORY (May 20, 2022), https://human-memory.net/memory-encoding/ [https://perma.cc/XN9V-7FBR].

122. *Memory Encoding*, *supra* note 121. *See generally* Ralph Norman Haber & Lyn Haber, *Experiencing, Remembering and Reporting Events*, 6 PSYCH. PUB. POL'Y & L. 1057 (2000) (https://doi.org/10.1037/1076-8971.6.4.1057).

123. *See supra* notes 103–117 and accompanying text.

124. NAT'L RSCH. COUNCIL, *supra* note 28, at 61 (citing JOHN ROBERT ANDERSON, THE ARCHITECTURE OF COGNITION (1983); JOHN ROBERT ANDERSON & CHRISTIAN LEBIERE, THE ATOMIC COMPONENTS OF THOUGHT (1998)).

125. Chemay, *supra* note 106, at 726; *see also* Giuliana A.L. Mazzoni, Manila Vannucci & Elizabeth F. Loftus, *Misremembering Story Material*, 4 LEGAL & CRIMINOLOGICAL PSYCH. 93 (1999) (https://doi.org/10.1348/135532599167815).

we are expecting to see.[126] Thus, what gets encoded is partially dependent on what an observer is looking for.

2. Retention/Storage Phase

The next part of the memory process is the *retention or storage phase*. During this phase, the brain stabilizes and consolidates memories for storage until they are called upon for retrieval.[127]

The amount of data being encoded and retained is one factor that affects this phase. The greater the amount of data presented, especially in shorter periods of time, the less that will be retained.[128]

A second important factor is the *retention interval*—how much time passes between storage of the memory and retrieval of it.[129] Stored memories are "more likely to be forgotten with the increasing passage of time and can easily become 'enhanced' or distorted by events that take place during this retention interval."[130]

A third, far less obvious factor has the most potentially negative effect on memory retention: the *postevent misinformation effect*. Exposure to subsequent information affects how earlier memories are retained and retrieved.[131] This means that an eyewitness exposed to postevent

126. D. Michael Risinger, Michael J. Saks, William C. Thompson & Robert Rosenthal, *The* Daubert/Kumho *Implications of Observer Effects in Forensic Science: Hidden Problems of Expectation and Suggestion*, 90 CAL. L. REV. 1, 7 (2002); *see also* Karl Ask & Pär Anders Granhag, *Motivational Sources of Confirmation Bias in Criminal Investigations: The Need for Cognitive Closure*, 2 J. INVESTIG. PSYCH. OFFENDER PROFIL. 43 (2005) (https://doi.org/10.1002/jip.19); Greg O. Niemeyer, *The Function of Stereotypes in Visual Perception*, 106 DOCUMENTA OPHTHALMOLOGICA 61 (2003) (https://doi.org/10.1023/A:1022412800694); John M. Darley & Paget H. Gross, *A Hypothesis-Confirming Bias in Labeling Effects*, 44 J. PERSONALITY & SOC. PSYCH. 20 (1983) (https://doi.org/10.1037/0022-3514.44.1.20); Anthony G. Greenwald, *The Totalitarian Ego: Fabrication and Revision of Personal History*, 35 AM. PSYCH. 603, 606 (1980) (https://doi.org/10.1037/0003-066X.35.7.603).

127. NAT'L RSCH. COUNCIL, *supra* note 28, at 62; McDermott & Roediger, *supra* note 119.

128. *See, e.g.*, Mark W. Schurgin, *Visual Memory, the Long and the Short of It: A Review of Visual Working Memory and Long-Term Memory*, 80 ATTENTION PERCEPTION & PSYCHOPHYSICS 1035 (2018) (https://doi.org/10.3758/s13414-018-1522-y).

129. NAT'L RSCH. COUNCIL, *supra* note 28, at 74, 98–99.

130. *Id.* at 98.

131. Peter J. Cohen, *How Shall They Be Known?* Daubert v. Merrell Dow Pharmaceuticals *and Eyewitness Identification*, 16 PACE L. REV. 237, 246 (1996) (citing ELIZABETH F. LOFTUS, EYEWITNESS TESTIMONY 35, 54 (1979)); *see also* Carl Martin Allwood, Jens Knutsson & Pär Anders Granhag, *Eyewitnesses Under Influence: How Feedback Affects the Realism in Confidence Judgements*, 12 PSYCH. CRIME & L. 25 (2006) (https://doi.org/10.1080/10683160512331316316); John C. DeCarlo, A Study Comparing the Eyewitness Accuracy of Police Officers and Citizens (Aug. 2010) (Ph.D. dissertation, City University of New York) (ProQuest); Charles A. Morgan III, Steven Southwick, George Steffian, Gary A. Hazlett & Elizabeth F. Loftus, *Misinformation Can Influence Memory for Recently Experienced, Highly Stressful Events*, 36 INT'L J.L. & PSYCHIATRY 11 (2013) (https://doi.org/10.1016/j.ijlp.2012.11.002); Helen M. Paterson & Richard I. Kemp, *Co-Witnesses Talk: A Survey of Eyewitness Discussion*, 12 PSYCH. CRIME & L. 181 (2006) (https://doi.org/10.1080/10683160512331316334).

misinformation, can accept erroneous or even nonexistent details as if they were true.[132] "When witnesses later learn new information which conflicts with the original input, many will compromise between what they saw and what they were told later on."[133]

Fourth, the physical condition of our bodies affects both encoding and storage processes.[134] Sleep deprivation,[135] vitamin B-12 deficiency,[136] excessive multi-tasking,[137] mood and anxiety disorders (like depression[138]

132. *See generally* Shari R. Berkowitz & Elizabeth F. Loftus, *Misinformation in the Courtroom*, *in* FINDING THE TRUTH IN THE COURTROOM: DEALING WITH DECEPTION, LIES, AND MEMORIES 11 (Henry Otgaar & Mark L. Howe eds., 2018); John C. Brigham, Adina W. Wasserman & Christian A. Meissner, *Disputed Eyewitness Identification Evidence: Important Legal and Scientific Issues*, 36 CT. REV. 12, 15 (1999). *See also* John S. Shaw III, Sena Garven & James M. Wood, *Co-Witness Information Can Have Immediate Effects on Eyewitness Memory Reports*, 21 LAW & HUM. BEHAV. 503 (1997) (https://doi.org/10.1023/A:1024875723399); Felicity Jenkins & Graham Davies, *Contamination of Facial Memory Through Exposure to Misleading Composite Pictures*, 70 J. APPLIED PSYCH. 164 (1985) (https://doi.org/10.1037/0021-9010.70.1.164).

133. Cohen, *supra* note 131, at 246–47.

134. *See Memory Encoding*, *supra* note 121.

135. *See, e.g.*, Robbert Havekes, Alan J. Park, Jennifer C. Tudor, Vincent G. Luczak, Rolf T. Hansen, Sarah L. Ferri, Vibeke M. Bruinenberg, Shane G. Poplawski, Jonathan P. Day, Sara J. Aton, Kasia Radwańska, Peter Meerlo, Miles D. Houslay, George S. Baillie & Ted Abel, *Sleep Deprivation Causes Memory Deficits by Negatively Impacting Neuronal Connectivity in Hippocampal Area CA1*, ELIFE 1, 1 (2016) (https://doi.org/10.7554/eLife.13424).

136. *See, e.g.*, Shazia Jatoi, Abdul Hafeez, Syeda U. Riaz, Aijaz Ali, Muhammad I. Ghauri & Mahem Zehra, *Low Vitamin B12 Levels: An Underestimated Cause of Minimal Cognitive Impairment and Dementia*, 12 CUREUS e6976 (2020) (https://doi.org/10.7759/cureus.6976); Theresa Köbe, A. Veronica Witte, Ariane Schnelle, Ulrike Grittner, Valentina A. Tesky, Johannes Pantel, Jan Philipp Schuchardt, Andreas Hahn, Jens Bohlken, Dan Rujescu & Agnes Flöel, *Vitamin B-12 Concentration, Memory Performance, and Hippocampal Structure in Patients with Mild Cognitive Impairment*, 103 AM. J. CLINICAL NUTRITION 1045 (2016) (https://doi.org/10.3945/ajcn.115.116970).

137. *See, e.g.*, Kevin P. Madore, Anna M. Khazenzon, Cameron W. Backes, Jiefeng Jiang, Melina R. Uncapher, Anthony M. Norcia & Anthony D. Wagner, *Memory Failure Predicted by Attention Lapsing and Media Multitasking*, 587 NATURE 87 (2020) (https://doi.org/10.1038/s41586-020-2870-z); Kevin P. Madore & Anthony D. Wagner, *Multicosts of Multitasking*, CEREBRUM, Apr. 2019, at 1, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7075496/ [https://perma.cc/2G8N-5KR2].

138. *See, e.g.*, Daniel G. Dillon & Diego A. Pizzagalli, *Mechanisms of Memory Disruption in Depression*, 41 TRENDS NEUROSCI. 137 (2018) (https://doi.org/10.1016/j.tins.2017.12.006); Cynthia Fu, *People with Depression Can Sometimes Experience Memory Problems—Here's Why*, CONVERSATION (Feb. 9, 2021), https://theconversation.com/people-with-depression-can-sometimes-experience-memory-problems-heres-why-153392 [https://perma.cc/FS9F-2XQJ].

and PTSD[139]), drug or alcohol abuse,[140] and Alzheimer's[141] are just some of the conditions that affect memory encoding. Some of these also increase people's susceptibility to suggestibility and false memories.[142]

Finally, even without exposure to subsequent misinformation, the information we store in our brains is not stable. "We forget, qualify, or distort existing memories as we acquire new perceptual experiences and encode new content and associations into memory."[143]

3. Retrieval Phase

Finally, during the *retrieval phase*, "the brain searches for the pertinent information, retrieves it, and communicates it."[144] This process occurs when eyewitnesses describe what they observed to police, when they participate in identification confrontations, and when they testify in court. Several factors affect retrieval.

Time is a very important factor in memory retrieval. As a rule, the longer the period between acquisition, retention, and retrieval, the more difficulty we have retrieving the memory, a phenomenon referred to as *memory decay*.[145] Memories begin to weaken shortly after encoding, often

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139. *See, e.g.*, Florence Durand, Clémence Isaac & Dominique Januel, *Emotional Memory in Post-Traumatic Stress Disorder: A Systematic PRISMA Review of Controlled Studies*, 10 FRONTIERS PSYCH. 1 (2019) (https://doi.org/10.3389/fpsyg.2019.00303).

140. *See, e.g.*, Manoj K. Doss, Harriet de Wit & David A. Gallo, The Acute Effects of Psychoactive Drugs on Emotional Episodic Memory Encoding, Consolidation, and Retrieval (June 2, 2022) (manuscript) (https://doi.org/10.31234/osf.io/tkczm); Aaron M. White, *What Happened? Alcohol, Memory Blackouts, and the Brain*, 27 ALCOHOL RSCH. & HEALTH 186 (2003).

141. *See, e.g.*, William D.S. Killgore, *Effects of Sleep Deprivation on Cognition*, *in* 185 PROGRESS IN BRAIN RESEARCH 105, 115–18 (Gerard A. Kerkhof & Hans P.A. Van Dongen eds., 2010); Ian M. McDonough, Sara B. Festini & Meagan M. Wood, *Risk for Alzheimer's Disease: A Review of Long-Term Episodic Memory Encoding and Retrieval FMRI Studies*, 62 AGEING RSCH. REV. 101133 (2020) (https://doi.org/10.1016/j.arr.2020.101133).

142. Lilian Kloft, Lauren A. Monds, Arjan Blokland, Johannes G. Ramaekers & Henry Otgaar, *Hazy Memories in the Courtroom: A Review of Alcohol and Other Drug Effects on False Memory and Suggestibility*, 124 NEUROSCI. & BIOBEHAV. REV. 291, 302–04 (2021) (https://doi.org/10.1016/j.neubiorev.2021.02.012).

143. NAT'L RSCH. COUNCIL, *supra* note 28, at 62 (citing, *inter alia*, John T. Wixted, *The Psychology and Neuroscience of Forgetting*, 55 ANN. REV. PSYCH. 235 (2004) (https://doi.org/10.1146/annurev.psych.55.090902.141555)); *see also* Endel Tulving & Donald M. Thomson, *Encoding Specificity and Retrieval Processes in Episodic Memory*, 80 PSYCH. REV. 352 (1973) (https://doi.org/10.1037/h0020071); Yadin Dudai, *Reconsolidation: The Advantage of Being Refocused*, 16 CURRENT OPINION IN NEUROBIOLOGY 174 (2006) (https://doi.org/10.1016/j.conb.2006.03.010); Elizabeth F. Loftus, *Planting Misinformation in the Human Mind: A 30-Year Investigation of the Malleability of Memory*, 12 LEARNING & MEMORY 361 (2005) (https://doi.org/10.1101/lm.94705).

144. Chemay, *supra* note 106, at 725 (quoting CURT BARTOL, PSYCHOLOGY AND AMERICAN LAW 171 (1983)); *see also* BARTOL & BARTOL, *supra* note 114, at 219.

145. NAT'L RSCH. COUNCIL, *supra* note 28, at 15 ("As time passes, memories become less stable."); *see also* BARTOL & BARTOL, *supra* note 114, at 220; Neil Brewer, Nathan Weber & Carolyn

by so much that eyewitness misidentification rates substantially increase between two and twenty-four hours after a crime.[146] Moreover, not only are memories "more likely to be forgotten with the increasing passage of time," but also they "can easily become 'enhanced' or distorted by events that take place during [the] retention interval"—the time that passes from the initial observation and encoding to the time that observation is recalled from memory.[147]

It has also been repeatedly demonstrated that retrieval of memories can be affected by *unconscious transference*. In this phenomenon, different memory images may become combined or confused with one another.[148] For example, this effect can manifest when an eyewitness accurately recalls an innocent bystander at the scene of a crime but incorrectly identifies that person as the perpetrator.[149] Unconscious transference can occur when witnesses search through mugshots,[150] see

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Semmler, *Eyewitness Identification*, *in* PSYCHOLOGY AND LAW: AN EMPIRICAL PERSPECTIVE 177, 191–92 (Neil Brewer & Kipling D. Williams eds., 2005).

146. Kenneth A. Deffenbacher, Brian H. Bornstein, E. Kiernan McGorty & Steven D. Penrod, *Forgetting the Once-Seen Face: Estimating the Strength of an Eyewitness's Memory Representation*, 14 J. EXPERIMENTAL PSYCH. APPLIED 139, 144 (2008) (https://doi.org/10.1037/1076-898X.14.2.139); Carol Krafka & Steven Penrod, *Reinstatement of Context in a Field Experiment on Eyewitness Identification*, 49 J. PERSONALITY & SOC. PSYCH. 58, 65 (1985) (https://doi.org/10.1037/0022-3514.49.1.58).

147. NAT'L RSCH. COUNCIL, *supra* note 28, at 98.

148. Brigham, Wasserman & Meissner, *supra* note 132, at 15; *see also* Kenneth A. Deffenbacher, Brian H. Bornstein & Steven D. Penrod, *Mugshot Exposure Effects: Retroactive Interference, Mugshot Commitment, Source Confusion, and Unconscious Transference*, 30 LAW & HUM. BEHAV. 287 (2006) (https://doi.org/10.1007/s10979-006-9008-1); Mark R. Phillips, R. Edward Geiselman, David Haghighi & Cynthia Lin, *Some Boundary Conditions for Bystander Misidentification*, 24 CRIM. JUST. & BEHAV. 370 (1997) (https://doi.org/10.1177/0093854897024003004); R. Edward Geiselman, David Haghighi & Ronna Stown, *Unconscious Transference and Characteristics of Accurate and Inaccurate Eyewitnesses*, 2 PSYCH. CRIME & L. 197 (1996) (https://doi.org/10.1080/10683169608409778); Elizabeth F. Loftus, *Unconscious Transference in Eyewitness Identification*, 2 LAW & PSYCH. REV. 93 (1976).

149. Timothy J. Perfect & Lucy J. Harris, *Adult Age Differences in Unconscious Transference: Source Confusion or Identity Blending?*, 31 MEMORY & COGNITION 570, 570 (2003) (https://doi.org/10.3758/BF03196098); J. Don Read, Patricia Tollestrup, Richard Hammersley, Eileen McFadzen & Albert Christensen, *The Unconscious Transference Effect: Are Innocent Bystanders Ever Misidentified?*, 4 APPLIED COGNITIVE PSYCH. 3, 25–29 (1990) (https://doi.org/10.1002/acp.2350040103).

150. *See, e.g.*, Kenneth A. Deffenbacher, Brian H. Bornstein & Steven D. Penrod, *Mugshot Exposure Effects: Retroactive Interference, Mugshot Commitment, Source Confusion, and Unconscious Transference*, 30 LAW & HUM. BEHAV. 287 (2006) (https://doi.org/10.1007/s10979-006-9008-1); Charles A. Goodsell, Jeffrey S. Neuschatz & Scott D. Gronlund, *Effects of Mugshot Commitment on Lineup Performance in Young and Older Adults*, 23 APPLIED COGNITIVE PSYCH. 788 (2009) (https://doi.org/10.1002/acp.1512); Alan W. Kersten & Julie L. Earles, *Feelings of Familiarity and False Memory for Specific Associations Resulting from Mugshot Exposure*, 45 MEMORY & COGNITION 93 (2017) (https://doi.org/10.3758/s13421-016-0642-7); *cf.* Hunter A. McAllister, John T. Blaze, Crystal A. Brandon, Joseph D. Deschamps, Christine A. Fultyn, Christina C. Parker, Amanda

images on television news,[151] or when they conduct their own internet searches, including on social media.[152] In fact, some research on the so-called *mugshot exposure effect* demonstrates that when people view mugshots and then participate in subsequent identification confrontations, they are "significantly more likely to choose a nontarget face that was shown among the mugshot photographs than a nontarget face that had not been seen before," resulting in nontarget faces being chosen just as often as true target faces.[153]

Finally, long-term memory storage is affected by the retrieval process itself, especially when we recount events:

> With each implicit retrieval or explicit telling of a story, we may unconsciously smooth over inconsistencies or modify content based on our prior beliefs, the accounts of others, or through the lens of new information. We may add embellishments that reflect opinions, emotions, or prejudices rather than observed facts; or we may simply omit disturbing content and pass over fine details.[154]

D. Salcido, Christopher D. Tarver & Jennifer L. Thibodeaux, *Mug Book Exposure Effects: Retroactive Interference or Criterion Shift?*, 25 APPLIED COGNITIVE PSYCH. 127 (2011) (https://doi.org/10.1002/acp.1651) (reporting "qualified support" for delay as moderating the mugshot effect). *But see* Michelle R. Blunt & Hunter A McAllister, *Mug Shot Exposure Effects: Does Size Matter?*, 33 LAW & HUM. BEHAV. 175 (2009) (https://doi.org/10.1007/s10979-008-9126-z) (finding no support for a transference effect from mugshots, speculating it may be masked by other psychological phenomenon, including the volume of photos in a mugshot book).

151. *See, e.g.*, Travis L. Dixon, *Good Guys Are Still Always in White? Positive Change and Continued Misrepresentation of Race and Crime on Local Television News*, 44 COMMC'N RSCH. 775 (2017) (https://doi.org/10.1177/0093650215579223); Jennifer Hoewe, *Memory of an Outgroup: (Mis)Identification of Middle Eastern-Looking Men in News Stories About Crime*, 26 J. MEDIA PSYCH. 161 (2014) (https://doi.org/10.1027/1864-1105/a000121).

152. *Compare* Heather M. Kleider-Offutt, Beth B. Stevens & Megan Capodanno, *He Did It! Or Did I Just See Him on Twitter? Social Media Influence on Eyewitness Identification*, 30 MEMORY 493, 500–02 (2022) (https://doi.org/10.1080/09658211.2021.1953080) (reporting that viewing photos of a perpetrator on social media increased both the likelihood of accurate identifications and witness confidence, but seeing foils reduced accuracy and confidence), *with* Catriona Havard, Alisa Strathie, Graham Pike, Zoe Walkington, Haley Ness & Virginia Harrison, *From Witness to Web Sleuth: Does Citizen Enquiry on Social Media Affect Formal Eyewitness Identification Procedures?*, 38 J. POLICE & CRIM. PSYCH. 309, 313–16 (2023) (https://doi.org/10.1007/s11896-021-09444-z) (reporting that in some circumstances, social media searches negatively affect eyewitness identification accuracy target-absent lineups, but not necessary in target present lineups).

153. Amina Memon, Lorraine Hope, James Bartlett & Ray Bull, *Eyewitness Recognition Errors: The Effects of Mugshot Viewing and Choosing in Young and Old Adults*, 30 MEMORY & COGNITION 1219, 1219 (2002) (https://doi.org/10.3758/BF03213404).

154. NAT'L RSCH. COUNCIL, *supra* note 28, at 62 (citing, *inter alia*, FREDERIC C. BARTLETT, REMEMBERING: A STUDY IN EXPERIMENTAL AND SOCIAL PSYCHOLOGY (1932); Elizabeth F. Loftus & Hunter G. Hoffman, *Misinformation and Memory: The Creation of New Memories*, 118 J. EXPERIMENTAL PSYCH. 100, 103 (1989) (https://doi.org/10.1037/0096-3445.118.1.100); Giuliana Mazzoni & Amina Memon, *Imagination Can Create False Autobiographical Memories*, 14 PSYCH. SCI. 186, 188 (2003) (https://doi.org/10.1046/j.1432-1327.1999.00020.x)).

C. Estimator Variables Impacting Perception and Memory

Memory is also affected by phenomena that collectively are referred to as *estimator variables*—factors over which the criminal justice system has no control.[155] Estimator variables can be broken down into two categories: event factors and witness factors.

Event factors include time, "lighting conditions, changes in visual adaptation to light and dark, duration of the event, speed and distance involved, and the presence or absence of violence."[156] *Witness factors* include stress, fear, physical limitations on sensory perception (e.g., poor eyesight, hearing impairment, alcohol or drug intoxication), expectations and stereotypes, age, race/ethnicity, and (to a lesser degree) sex.[157]

1. Time as an Event Factor

Both common sense and our own experience inform us about how time affects memory. As an event factor, time impacts memory in three distinct ways. First, the *exposure duration* matters. The longer one has to examine something, the better the memory formation will be and the more accurate recall will be.[158] Conversely, the less time someone has to witness an event, the less complete—and less accurate—both perception and memory will be.[159] Of course, exposure duration in and of itself is not determinative; it's not just how long the event lasts, but the type and

155. Gary L. Wells, *Applied Eyewitness-Testimony Research: System Variables and Estimator Variables*, 36 J. PERSONALITY & SOC. PSYCH. 1546, 1548 (1978) (https://doi.org/10.1037/0022-3514.36.12.1546).

156. Cohen, *supra* note 131, at 242 (citing Elizabeth F. Loftus, Edith L. Greene & James M. Doyle, *The Psychology of Eyewitness Testimony, Psychological Methods in Criminal Investigation and Evidence*, *in* CRIMINAL INVESTIGATION AND EVIDENCE 3, 6–13 (David C. Raskin ed., 1989)).

157. *Id.* at 242–43 (citing LOFTUS & DOYLE, *supra* note 23, at 45); *see also* Davis & Loftus, *supra* note 89, at 540–42.

158. NAT'L RSCH. COUNCIL, *supra* note 28, at 97–98 (citing Brian H. Bornstein, Kenneth A. Deffenbacher, Steven D. Penrod & E. Kiernan McGorty, *Effects of Exposure Time and Cognitive Operations on Facial Identification Accuracy: A Meta-Analysis of Two Variables Associated with Initial Memory Strength*, 18 PSYCH. CRIME & L. 473 (2012) (https://doi.org/10.1080/1068316X.2010.508458)); *see also* BRIAN L. CUTLER & STEVEN D. PENROD, MISTAKEN IDENTIFICATION: THE EYEWITNESS, PSYCHOLOGY, AND THE LAW 105 (1995).

159. Amina Memon, Lorraine Hope & Ray Bull, *Exposure Duration: Effects on Eyewitness Accuracy and Confidence*, 94 BRIT. J. PSYCH. 339, 348 (2003) (https://doi.org/10.1348/000712603767876262); *see also* BARTOL & BARTOL, *supra* note 114, at 220 (citing, *inter alia*, Geoffrey R. Loftus, *Eye Fixations and Recognition Memory*, 3 COGNITIVE PSYCH. 525 (1972) (https://doi.org/10.1016/0010-0285(72)90021-7)); Steven D. Penrod, Elizabeth F. Loftus & John D. Winkler, *The Reliability of Eyewitness Testimony: A Psychological Perspective*, *in* THE PSYCHOLOGY OF THE COURTROOM 119 (Norbert L. Kerr & Robert M. Bray eds., 1982).

quality of attention during that period that will affect acquisition and encoding.[160]

Second, the rate at which events happen is a related factor. Given the limitations of human perception, when things happen very quickly, memory can be negatively affected. This is true even when an eyewitness has a reasonable period of time to observe something because attention is focused on processing a fast-moving series of events, rather than on a particular aspect of the occurrence.[161]

Third, the *retention interval* can also affect memories.[162] We all know that memories tend to fade over time, which in the eyewitness context, can reduce the frequency of correct identifications and increase the frequency of incorrect identifications.[163] Research confirms that time delay impacts the accuracy of identification, but to a much smaller degree than might be expected.[164] This may be due to the fact that memory does not disappear in increments over time, but rather tends to fade fairly rapidly immediately following the event.[165] Moreover, after the initial fade, confabulation is more likely.[166] Such filling in or alteration of memories by postevent discussions has a much more powerful negative impact on the accuracy of recall than the passage of time alone.[167]

2. Event Significance

Event significance plays an important role in the accuracy of memory recall. When people fail to perceive that a significant event is occurring,

160. Wells & Quinlivan, *supra* note 71, at 10–11. Dr. Brian Bornstein offered an example about an eyewitness who spent several minutes in a car with the defendant in a case. The witness, however, was driving in bad weather, while the defendant was in the backseat. Accordingly, the witness spent very little time looking at or even talking to the defendant. Personal communication from Brian H. Bornstein, Professor Emeritus of Psychology and Law at the University of Nebraska, Lincoln, and Research Professor of Psychology at Arizona State University, to author (Apr. 21, 2023, 8:12 AM MST) (on file with author).

161. Haber & Haber, *supra* note 122, at 1060–62.

162. NAT'L RSCH. COUNCIL, *supra* note 28, at 99; REISBERG, *supra* note 103, at 83.

163. NAT'L RSCH. COUNCIL, *supra* note 28, at 99 (citing Deffenbacher, Bornstein, McGorty & Penrod, *supra* note 146); *see also* CUTLER & PENROD, *supra* note 158, at 101, 106; REISBERG, *supra* note 103, at 83.

164. Deffenbacher, Bornstein, McGorty & Penrod, *supra* note 146, at 142; *see also* Aldert Vrij, *Psychological Factors in Eyewitness Testimony*, *in* PSYCHOLOGY AND LAW: TRUTHFULNESS, ACCURACY, AND CREDIBILITY 111 (Amina Memon, Alder Vrij & Ray Bull eds., 1998).

165. Friedland, *supra* note 104, at 183 (citing LOFTUS, *supra* note 131, at 53); *see also* REISBERG, *supra* note 103, at 83–84; Haber & Haber, *supra* note 122, at 1060–61. *See generally* Sverker Sikström, *Forgetting Curves: Implications for Connectionist Models*, 45 COGNITIVE PSYCH. 95 (2002) (https://doi.org/10.1016/S0010-0285(02)00012-9).

166. *See supra* note 125 and accompanying text; *see also* REISBERG, *supra* note 103, at 83–84.

167. Friedland, *supra* note 104, at 183 (citing LOFTUS, *supra* note 131, at 54–78); Penrod, Loftus & Winkler, *supra* note 159, at 134–38.

their attention is not focused on what is transpiring.[168] This lack of attention leads to poorer perception and memory of the event. Conversely, when people are aware that a significant event is taking place, their attention is better focused, thereby improving perception and memory of the event.[169]

In terms of eyewitness accuracy, this phenomenon often translates into high levels of inaccuracy in identifications of the perpetrator of a petty theft due to a lack of attention to something that is not perceived as a significant event. On the other hand, eyewitness accuracy is higher for more significant, albeit nonviolent crimes.[170] The use of the word "nonviolent" is important because even when witnesses understand that they are watching a significant event, the more violent the act, the less accurate and complete perception and memory are.[171] This is a function of the negative impact that high levels of arousal, stress, and fear can produce.

3. Arousal, Stress, and Fear as Event Factors

Research suggests that perception and memory acquisition function most accurately when the subject is exposed to a moderate amount of stress.[172] This is often referred to as the *Yerkes–Dodson law* and is illustrated in Figure 2. This law holds that when stress levels are too low, people do not pay sufficient attention; when stress levels are too high, the abilities to concentrate and perceive are negatively impacted.[173]

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168. *See* Michael R. Leippe, Gary L. Wells & Thomas M. Ostrom, *Crime Seriousness as a Determinant of Accuracy in Eyewitness Identification*, 63 J. APPLIED PSYCH. 345, 345 (1978) (https://doi.org/10.1037/0021-9010.63.3.345) (noting that the more serious the crime, the more likely it is the witness will identify the correct criminal).

169. *Id.*; *see also* Chemay, *supra* note 106, at 728.

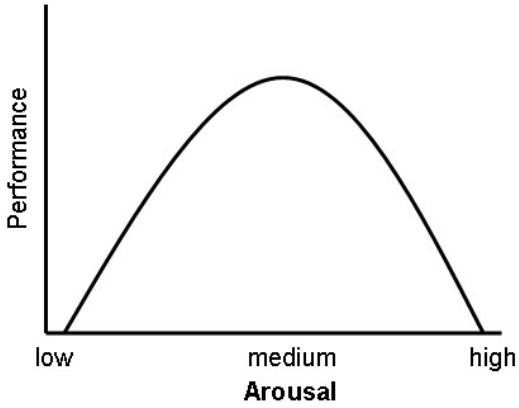
170. Chemay, *supra* note 106, at 728.

171. *Id.* (citing Brian Clifford, *Eyewitness Testimony: The Bridging of a Credibility Gap*, *in* PSYCHOLOGY, LAW AND LEGAL PROCESSES 167, 176–77 (David P. Farrington, Keith Hawkins, Sally M. Lloyd-Bostock eds., 1979)).

172. *See, e.g.*, LOFTUS, *supra* note 131, at 33; Louis S. Katz & Jeremiah F. Reid, *Expert Testimony on the Fallibility of Eyewitness Identification*, 1 CRIM. JUST. J. 177, 184–86 (1977); Kathy Pezdek & Daniel Reisberg, *Psychological Myths About Evidence in the Legal System: How Should Scientists Respond?*, 11 J. APPLIED RSCH. MEMORY & COGNITION 143, 145–46 (2022) (https://doi.org/10.1037/mac0000037) (explaining that although there is some conflicting evidence, most research finds that high levels of acute stress impairs encoding, likely as a function of high levels of certain hormones that interfere with brain-based memory mechanisms) (citing Oliver T. Wolf, *Stress and Memory in Humans: Twelve Years of Progress?*, 1293 BRAIN RSCH. 142 (2009) (https://doi.org/10.1016/j.brainres.2009.04.013)).

173. *See generally* Robert M. Yerkes & John D. Dodson, *The Relation of Strength of Stimulus to Rapidity of Habit-Formation*, 18 J. COMPAR. NEUROLOGY & PSYCH. 459 (1908) (https://doi.org/10.1002/cne.920180503); Elizabeth F. Loftus, *Ten Years in the Life of an Expert Witness*, 10 LAW & HUM. BEHAV. 241, 254–55 (1986) (https://doi.org/10.1007/BF01046213).

Figure 2: Yerkes–Dodson Law



Regarding episodic memory (*i.e.*, recall of an event one experiences, as opposed to when one can repeat a task or memorize information until it is learned), the Yerkes–Dodson law suggests that people's ability to perceive and remember certain details of an event depends on an optimal level of arousal. Researchers who study its effects in the eyewitness setting refined the concept and explained that "at relatively high levels of cognitive anxiety [worry], continuous gradual increases in somatic anxiety (physiological activation) will at first result in continuous, gradual increases in performance, followed at some point by a catastrophic, discontinuous drop in performance."[174] Thus, "under conditions of high stress, a witness'[s] ability to identify key characteristics of an individual's face (e.g., hair length, hair color, eye color, shape of face, presence of facial hair) may be significantly impaired."[175]

The ability to focus on key suspect characteristics may be impaired by other event factors, such as when someone focuses on *detail significance*—the minutiae of a crime scene—as opposed to its overall significance. When people are concerned about personal safety, they tend to focus their attention on the details that most directly affect their safety, such as "blood, masks, weapons, and aggressive actions."[176] While focusing on these details, they pay less attention to other important specifics, such as the characteristics of the perpetrator or the crime scene

174. Kenneth A. Deffenbacher, Brian H. Bornstein, Steven D. Penrod & E. Kiernan McGorty, *A Meta-Analytic Review of the Effects of High Stress on Eyewitness Memory*, 28 LAW & HUM. BEHAV. 687, 689 (2004) (https://doi.org/10.1007/s10979-004-0565-x).

175. NAT'L RSCH. COUNCIL, *supra* note 28, at 94 (citing, *inter alia*, Deffenbacher, Bornstein, Penrod & McGorty, *supra* note 174, *passim*; Morgan, Southwick, Steffian, Hazlett, Loftus, *supra* note 131, *passim*).

176. BARTOL & BARTOL, *supra* note 114, at 221.

itself.[177] This phenomenon manifests particularly when a weapon is present. The *weapon-focus effect* describes crime situations in which a weapon is used, and witnesses spend more time and psychic energy focusing on the weapon rather than on other aspects of the event.[178] The weapon-focus effect can result in incomplete or inaccurate information about crimes and their perpetrators,[179] especially when weapon use comes as a surprise to witnesses.[180]

4. Expectancies and Stereotypes as Witness Factors

"A person's expectations and stereotypes can also affect both perception and memory: what [w]e perceive[] and encode[] is, to a large extent, determined by cultural biases, personal prejudices, effects of training, prior information, and expectations induced by motivational

177. Charles A. Morgan III, Gary Hazlett, Anthony Doran, Stephan Garrett, Gary Hoyt, Paul Thomas, Madelon Baranoski & Steven M. Southwick, *Accuracy of Eyewitness Memory for Persons Encountered During Exposure to Highly Intense Stress*, 27 INT'L J. L. & PSYCHIATRY 265, 274 (2004) (https://doi.org/10.1016/j.ijlp.2004.03.004); Tim Valentine & Jan Mesout, *Eyewitness Identification Under Stress in the London Dungeon*, 23 APPLIED COGNITIVE PSYCH. 151, 160 (2009) (https://doi.org/10.1002/acp.1463) (describing prior studies that documented significant declines in the accuracy of eyewitness identification at high anxiety levels and reporting on the results of an experiment demonstrating the "catastrophic failure of the ability to describe and identify a person encountered under high state anxiety"). *See generally* NAT'L RSCH. COUNCIL, *supra* note 28, at 94.

178. Jonathan M. Fawcett, Emily J. Russell, Kristine A. Peace & John Christie, *Of Guns and Geese: A Meta-Analytic Review of the 'Weapon Focus' Literature*, 19 PSYCH. CRIME & L. 35, 55–56 (2013) (https://doi.org/10.1080/1068316X.2011.599325) (noting that the weapon-focus effect is most pronounced, and therefore prone to more errors in eyewitness identifications, during threatening scenarios); Kerri L. Pickel, *Eyewitness Memory*, *in* THE HANDBOOK OF ATTENTION 485, 490 (Jonathan M. Fawcett, Evan F. Risko & Alan Kingstone eds., 2015); Kerri L. Pickel, *The Influence of Context on the "Weapon Focus" Effect*, 23 LAW & HUM. BEHAV. 299, 299 (1999) (https://doi.org/10.1023/A:1022356431375); *see also* Cohen, *supra* note 131, at 244 (citing LOFTUS & DOYLE, *supra* note 23, at 34).

179. Although there is ample empirical support for the weapon-focus effect—especially as it affects the accuracy of witness descriptions of crime perpetrators, it should be noted that there are other factors that appear to ameliorate moderate the weapon-focus effect when it comes to both correct identifications in target-present lineups, and on false identifications in target-absent lineups. *See generally* Kerstin Kocab & Siegfried L. Sporer, *The Weapon Focus Effect for Person Identifications and Descriptions: A Meta-Analysis*, *in* 1 ADVANCES IN PSYCHOLOGY AND LAW 71 (Monica K. Miller & Brian H. Bornstein eds., 2016) (https://doi.org/10.1007/978-3-319-29406-3_3).

180. LOFTUS, *supra* note 131, at 35–36; *see also* Kerri L. Pickel, *The Weapon Focus Effect on Memory for Female Versus Male Perpetrators*, 17 MEMORY 664, 675–77 (2009) (https://doi.org/10.1080/09658210903029412) (reporting that witnesses remembered targets equally well, whether they were armed or not, when they expected to see the targets holding a weapon compared to those who were surprised by the presence of a weapon); Pickel, *The Influence of Context on the "Weapon Focus" Effect*, *supra* note 178, at 299. *See generally* Nancy Mehrkens Steblay, *A Meta-Analytic Review of the Weapon Focus Effect*, 16 LAW & HUM. BEHAV. 413 (1992) (https://doi.org/10.1007/BF02352267) (summarizing the data on the weapon-focus effect hypothesis).

states, among others."[181] Unfortunately, stereotypes affect expectations in terms of who looks like a criminal.[182] For example:

> [I]n one experiment a "semi-dramatic" photograph was shown to a wide variety of subjects, including [W]hites and [B]lacks of varying backgrounds. The photograph showed several people sitting in a subway car, with a [B]lack man standing and conversing with a [W]hite man, who was also standing, but holding a razor. Over half of the subjects reported that the [B]lack man had been holding the razor, and several described the [B]lack man as "brandishing it wildly." Effectively, expectations and stereotypes cause people to see and remember what they want or expect to see or to remember. This phenomenon should be of concern to the criminal justice system as "[t]here is evidence that some people may in fact incorporate their stereotype of 'criminal' in their identification of suspects."[183]

Researchers have replicated this effect not only as it applies to racial and ethnic stereotypes, but also to sex as well.[184]

5. Age and Sex as Witness Factors

Age is an important factor affecting witnesses' memories. Children usually fail to retain as many details as adults, but the percentage of "correct" information that children can recall is proportionally similar to that of adults.[185] In terms of making accurate identifications, preschoolers

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181. Chemay, *supra* note 106, at 726–27 (citing Penrod, Loftus & Winkler, *supra* note 159, at 129–30).

182. Michael R. Leippe, *Effects of Integrative Memorial and Cognitive Processes on the Correspondence of Eyewitness Accuracy and Confidence*, 4 LAW & HUM. BEHAV. 261, 267 (1980) (https://doi.org/10.1007/BF01040618); Penrod, Loftus & Winkler, *supra* note 159, at 129–30.

183. Chemay, *supra* note 106, at 727 (citing LOFTUS, *supra* note 131, at 37–39). *See generally* Heather M. Kleider-Offutt, Alesha D. Bond & Shanna E. A. Hegerty, *Black Stereotypical Features: When a Face Type Can Get You in Trouble*, 26 CURRENT DIRECTIONS PSYCH. SCI. 28 (2017) (https://doi.org/10.1177%2F0963721416667916); Heather M. Kleider-Offutt, Leslie R. Knuycky, Amanda M. Clevinger & Megan M. Capodanno, *Wrongful Convictions and Prototypical Black Features: Can a Face-Type Facilitate Misidentifications?*, 22 LEGAL & CRIMINOLOGICAL PSYCH. 350 (2017) (https://doi.org/10.1111/lcrp.12105).

184. Pickel, *The Weapon Focus Effect on Memory for Female Versus Male Perpetrators*, *supra* note 180, at 676 (reporting that the weapon focus effect was stronger with a female perpetrator sex); Kerri L. Pickel & Danielle E. Sneyd, *The Weapon Focus Effect Is Weaker with Black Versus White Male Perpetrators*, 26 MEMORY 29, 29 (2018) (https://doi.org/10.1080/09658211.2017.1317814) (reporting that the weapon focus effect is weaker with Black male perpetrators—especially when they are dressed in style of clothing strongly associated with Black men—as a function of people's stereotypes associating that racial and sex combination with an expectation of weapons use); *cf.* John Paul Wilson, Kurt Hugenberg & Nicholas O. Rule, *Racial Bias in Judgments of Physical Size and Formidability: From Size to Threat*, 113 J. PERSONALITY & SOC. PSYCH. 59, 59 (2017) (https://doi.org/10.1037/pspi0000092) (reporting that young, Black men—particular those who are either taller, heavier, or more muscular—were not only perceived as being more threatening than young White men of similar stature, but also as requiring more aggressive measures to be controlled).

185. Brigham, Wasserman & Meissner, *supra* note 132, at 16.

are much less likely than adults to make a correct identification,[186] but after the age of five or six, children do not differ significantly from adults in this regard.[187] Children up to the age of thirteen, however, are more likely than adults to correctly reject a target-absent lineup (i.e., a lineup that does not contain an actual suspect, but rather contains all foils).[188] And one study suggested that teenagers are particularly prone to unconscious transference which, in turn, might make them more likely to misidentify innocent bystanders as culprits compared to adults and even younger children.[189]

Elderly witnesses can be even less reliable than younger ones.[190] The elderly frequently believe events they imagined were actually perceived, a mistake known as a *reifying error*.[191] Overall, older persons are far more

186. Joanna D. Pozzulo & R. C. L. Lindsay, *Identification Accuracy of Children Versus Adults: A Meta-Analysis*, 22 LAW & HUM. BEHAV. 549, 557, 559 (1998) (https://doi.org/10.1023/A:1025739514042). *See generally* Dawn J. Dekle, Carole R. Beal, Rogers Elliott & Dominique Huneycutt, *Children as Witnesses: A Comparison of Lineup Versus Showup Identification Methods*, 10 APPLIED COGNITIVE PSYCH. 1 (1996) (https://doi.org/10.1002/(SICI)1099-0720(199602)10:1<1::AID-ACP354>3.0.CO;2-Y) (reporting that children were more likely than adults to identify perpetrators correctly when suspects were present in lineups or showups, but that children also had a higher rate of false positives in that they were more likely than adults to make an incorrect identification of another person when perpetrators were not present in lineups or showups).

187. Pozzulo & Lindsay, *supra* note 186, at 557, 559, 563, 565; *see also* Ryan J. Fitzgerald & Heather L. Price, *Eyewitness Identification Across the Life Span: A Meta-Analysis of Age Differences*, 141 PSYCH. BULL. 1228, 1228 (2015) (https://doi.org/10.1037/bul0000013) (replicating the findings of "[c]hildren's increased tendency to erroneously select a culprit-absent lineup member" and decreased tendency "to correctly identify the culprit" when present).

188. Pozzulo & Lindsay, *supra* note 186, at 557, 559, 563, 565.

189. Nathalie Brackmann, Melanie Sauerland & Henry Otgaar, *Developmental Trends in Lineup Performance: Adolescents Are More Prone to Innocent Bystander Misidentifications Than Children and Adults*, 47 MEMORY & COGNITION 428, 436–37 (2019) (https://doi.org/10.3758/s13421-018-0877-6); David F. Ross, Dorothy F. Marsil, Tanja Rapus Benton, Rebecca Hoffman, Amye R. Warren, R. C. L. Lindsay & Richard Metzger, *Children's Susceptibility to Misidentifying a Familiar Bystander from a Lineup: When Younger Is Better*, 30 LAW & HUM. BEHAV. 249, 255–56 (2006) (https://doi.org/10.1007/s10979-006-9034-z).

190. Jean H. Searcy, James C. Bartlett & Amina Memon, *Age Differences in Accuracy and Choosing in Eyewitness Identification and Face Recognition*, 27 MEMORY & COGNITION 538, 538 (1999) (https://doi.org/10.3758/BF03211547). *See generally* A. Daniel Yarmey, *The Elderly Witness*, *in* PSYCHOLOGICAL ISSUES IN EYEWITNESS IDENTIFICATION 259 (Siegfried L. Sporer, Roy S. Malpass & Guenter Koehnken eds., 1996).

191. *See generally* Gillian Cohen & Dorothy Faulkner, *The Effects of Aging on Perceived and Generated Memories*, *in* EVERYDAY COGNITION IN ADULTHOOD AND LATE LIFE 222 (Leonard W. Poon, David C. Rubin & Barbara A. Wilson eds., 1989) (https://doi.org/10.1017/CBO9780511759390.015); Amina Memon & Fiona Gabbert, *Improving the Identification Accuracy of Senior Witnesses: Do Prelineup Questions and Sequential Testing Help?*, 88 J. APPLIED PSYCH. 341 (2003) (https://doi.org/10.1037/0021-9010.88.2.341). *Cf., e.g.*, Memon, Hope, Bartlett & Bull, *supra* note 153, at 1224–25 (reporting older participants made more incorrect choices in mugshot identifications and subsequent lineups); Kersten & Earles, *supra* note 150, at 93 ("[O]lder adults were more likely to falsely recognize a novel conjunction of a familiar actor and action if they had seen a mugshot of that actor, regardless of whether the mugshot had accompanied a question about that action. In contrast,

likely to apply lenient criteria in identification tasks, which increases the risk of misidentification of innocent suspects.[192] And both children and the elderly are particularly "susceptible to the effects of suggestive questioning or post-event misinformation."[193]

Another age-related estimator variable concerns what researchers call the *own-age bias effect*. Most of us are far better at accurate facial recognition of other people who are close to our own age than we are at identifying others who are either much younger or much older than ourselves.[194] This holds true across the lifespan insofar as children, younger adults, and older adults all exhibit own-age bias for superior memory recognition of faces.[195]

In contrast to age, sex has much less significance on memory accuracy than age. Some studies suggest that women might have slightly higher accuracy rates in facial recognition,[196] and other studies suggest that recall is consistent with gender stereotypes.[197] For example, a woman might pay more attention to clothing, while a man might take notice of the make of a car.[198] These gender differences, however, are generally considered to have little significance on the overall accuracy of eyewitness identifications.[199]

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young adults were more likely to falsely recognize a conjunction event only if it involved an actor whose mugshot had accompanied a question about that particular action.").

192. Natalie Martschuk & Siegfried L. Sporer, *Memory for Faces in Old Age: A Meta-Analysis*, 33 PSYCH. & AGING 904, 905, 916–17 (2018) (https://doi.org/10.1037/pag0000282).

193. ROGER J.R. LEVESQUE, THE PSYCHOLOGY AND LAW OF CRIMINAL JUSTICE PROCESSES 36 (2006). *See generally* Gail S. Goodman & Rebecca S. Reed, *Age Differences in Eyewitness Testimony*, 10 LAW & HUM. BEHAV. 317 (1986) (https://doi.org/10.1007/BF01047344); Rachel Zajac & Nicola Henderson, *Don't It Make My Brown Eyes Blue: Co-Witness Misinformation About a Target's Appearance Can Impair Target-Absent Line-Up Performance*, 17 MEMORY 266 (2009) (https://doi.org/10.1080/09658210802623950).

194. Martschuk & Sporer, *supra* note 192, at 916 ("Age effects differed as a function of face age: Differences between young and older adults were larger for young and mixed-age faces than for older faces, and reversed for hits for older faces, indicating the presence of an own-age bias."); Matthew G. Rhodes & Jeffrey S. Anastasi, *The Own-Age Bias in Face Recognition: A Meta-Analytic and Theoretical Review*, 138 PSYCH. BULL. 146, 164 (2012) (https://doi.org/10.1037/a0025750) ("The meta-analyses reported examined the finding that memory is superior for individuals of one's own age group compared with individuals of another age group.").

195. Martschuk & Sporer, *supra* note 192, at 916; Rhodes & Anastasi, *supra* note 194, at 164.

196. Torun Lindholm & Sven-åke Christianson, *Gender Effects in Eyewitness Accounts of a Violent Crime*, 4 PSYCH. CRIME & L. 323, 323, 334 (1998) (https://doi.org/10.1080/1068316980840 1763).

197. Douglas J. Herrmann, Mary Crawford & Michelle Holdsworth, *Gender-Linked Differences in Everyday Memory Performance*, 83 BRIT. J. PSYCH. 221, 221 (1992) (https://doi.org/10.1111/j.20 44-8295.1992.tb02436.x).

198. *See* Elizabeth F. Loftus, Mahzarin R. Banaji, Jonathan W. Schooler & Rachael A. Foster, *Who Remembers What?: Gender Differences in Memory*, 26 MICH. Q. REV. 64, 77 (1987).

199. *See* Vrij, *supra* note 164, at 108.

6. Race of the Offender as a Witness Factor

As Alice Sebold's misidentification of Anthony Broadwater illustrates, eyewitnesses are much more likely to identify accurately someone of their own race than someone of a different race.[200] Research has long documented an *own-race bias* which "describes the phenomenon in which faces of people of races different from that of the eyewitness are harder to discriminate (and thus harder to identify accurately) than are faces of people of the same race as the eyewitness."[201] The same is true, although arguably to a lesser extent, for cross-ethnic identifications.[202] Notably, such biases occur "across a range of races, ethnicities, and ages" such that cross-racial misidentification appears to have been present in roughly 42% of all cases in which an erroneous eyewitness identification occurred.[203]

Because of cross-racial identification bias, people apply more lenient criteria in identifying someone of a different race or ethnicity and use more stringent requirements when identifying someone of the same racial or ethnic group.[204] The result of cross-racial bias is a higher rate of false-positive identifications, especially when a White eyewitness identifies a

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200. Alexandra J. Golby, John D. E. Gabrieli, Joan Y. Chiao & Jennifer L. Eberhardt, *Differential Responses in the Fusiform Region to Same-Race and Other-Race Faces*, 4 NATURE NEUROSCI. 845, 845, 847 (2001) (https://doi.org/10.1038/90565); Heather M. Kleider & Stephen D. Goldinger, *Stereotyping Ricochet: Complex Effects of Racial Distinctiveness on Identification Accuracy*, 25 LAW & HUM. BEHAV. 605, 605, 622 (2001) (https://doi.org/10.1023/A:1012706323913); Michael R. Leippe, *The Case for Expert Testimony About Eyewitness Memory*, 1 PSYCH. PUB. POL'Y & L. 909, 917 (1995) (https://doi.org/10.1037/1076-8971.1.4.909).

201. NAT'L RSCH. COUNCIL, *supra* note 28, at 96 (citing Roy S. Malpass & Jerome Kravitz, *Recognition for Faces of Own and Other Race*, 13 J. PERSONALITY & SOC. PSYCH. 330 (1969) (https://doi.org/10.1037/h0028434)). As several commentators previously noted, the problems with cross-racial identifications are "so commonplace as to be the subject of both cliché and joke: 'They all look alike.'" John P. Rutledge, *They All Look Alike: The Inaccuracy of Cross-Racial Identifications*, 28 AM. J. CRIM. L. 207, 214 n.52 (2001) (quoting Sheri Lynn Johnson, *Cross-Racial Identification Errors in Criminal Cases*, 69 CORNELL L. REV. 934, 942 (1984)).

202. Siegfried L. Sporer, *Recognizing Faces of Other Ethnic Groups: An Integration of Theories*, 7 PSYCH. PUB. POL'Y & L. 36, 38–39, 48, 87 (2001) (https://doi.org/10.1037/1076-8971.7.1.36).

203. NAT'L RSCH. COUNCIL, *supra* note 28, at 96; *see also* John Paul Wilson, Kurt Hugenberg & Michael J. Bernstein, *The Cross-Race Effect and Eyewitness Identification: How to Improve Recognition and Reduce Decision Errors in Eyewitness Situations*, 7 SOC. ISSUES & POL'Y REV. 83, 86–87 (2013) (https://doi.org/10.1111/j.1751-2409.2012.01044.x) (noting that the racial bias toward more accurate identification of people belonging to one's own race has been "empirically demonstrated by perceivers of virtually every racial group in our society and indeed has been demonstrated across multiple cultures and ethnic groups across the globe") (internal citations omitted).

204. NAT'L RSCH. COUNCIL, *supra* note 28, at 96; James M. Doyle, *Discounting the Error Costs: Cross-Racial False Alarms in the Culture of Contemporary Criminal Justice*, 7 PSYCH. PUB. POL'Y & L. 253, 253 (2001) (https://doi.org/10.1037/1076-8971.7.1.253) ("Are White eyewitnesses simply more willing to guess where the identification of a Black suspect is concerned?").

Black suspect.[205] Combinations of event factors (e.g., duration and conditions of viewing) interact with cross-racial bias to further inhibit the reliability of cross-racial identifications.[206] Courts have begun to take notice of this significant limitation on identification accuracy. For example, in 1999, the Supreme Court of New Jersey mandated that juries be instructed on the own-race bias when an "identification is a critical issue in the case, and an eyewitness's cross-racial identification is not corroborated by other evidence giving it independent reliability."[207] The highest court in New York followed suit in 2017.[208]

7. Physical Appearance of the Offender as a Witness Factor

Another variable that affects the accuracy of an eyewitness's identification is the facial distinctiveness of the suspect. Suspects with faces that an eyewitness perceives as either highly attractive or highly unattractive are much more likely to be remembered accurately than faces that lack distinctiveness.[209] A complicating matter, however, is that some characteristics of facial distinctiveness are easily changed. For example, suspects might wear disguises while committing crimes. Or perpetrators might change their appearance by altering hairstyle, hair color, the

205. John C. Brigham, L. Brooke Bennett, Christian A. Meissner & Tara L. Mitchell, *The Influence of Race on Eyewitness Memory*, *in* HANDBOOK OF EYEWITNESS PSYCHOLOGY: MEMORY FOR PEOPLE 257, 258–59 (R. C. L. Lindsay, David F. Ross, J. Don Read & Michael P. Toglia eds., 2007); Christian A. Meissner & John C. Brigham, *Thirty Years of Investigating the Own-Race Bias in Memory for Faces: A Meta-Analytic Review*, 7 PSYCH. PUB. POL'Y & L. 3, 18–19 (2001) (https://doi.org/10.1037/1076-8971.7.1.3); Joseph A. Vitriol, Jacob Appleby & Eugene Borgida, *Racial Bias Increases False Identification of Black Suspects in Simultaneous Lineups*, 10 SOC. PSYCH. & PERSONALITY SCI. 722, 730–31 (2019) (https://doi.org/10.1177/1948550618784889).

206. Otto H. MacLin, M. Kimberly MacLin & Roy S. Malpass, *Race, Arousal, Attention, Exposure, and Delay: An Examination of Factors Moderating Face Recognition*, 7 PSYCH. PUB. POL'Y & L. 134, 146–49 (2001) (https://doi.org/10.1037/1076-8971.7.1.134).

207. State v. Cromedy, 727 A.2d 457, 467 (N.J. 1999). The court in *Cromedy* directed that the charge be given "only when . . . identification is a critical issue in the case, and an eyewitness's cross-racial identification is not corroborated by other evidence giving it independent reliability." *Id.* Since then, the additional research on own-race bias discussed in Section VI.B.8, and the more complete record about eyewitness identification in general, justify giving the charge whenever cross-racial identification is in issue at trial.

208. People v. Boone, 91 N.E.3d 1194, 1203 (N.Y. 2017) (holding that when an eyewitness identification is at issue, and the identifying witness and defendant appear to be of different races, a trial court is required to give, upon request, a jury charge on the cross-race effect).

209. Julie A. Sarno & Thomas R. Alley, *Attractiveness and the Memorability of Faces: Only a Matter of Distinctiveness?*, 110 AM. J. PSYCH. 81, 89–90 (1997) (https://doi.org/10.2307/1423702); John C. Brigham, *Target Person Distinctiveness and Attractiveness as Moderator Variables in the Confidence-Accuracy Relationship in Eyewitness Identifications*, 11 BASIC & APPLIED SOC. PSYCH. 101, 111–13 (1990) (https://doi.org/10.1207/s15324834basp1101_7).

presence or absence of facial hair, the wearing of glasses, and so on.[210] These easily changed facial features are called *malleable characteristics*. Although some distinctive facial features might increase subsequent recognition of a person, to be accurate, the two comparisons must use nonmalleable characteristics—such as the shape of someone's nose, the distinctiveness of eyes, dimples, scars, and so on. That, however, is often easier said than done.

In 1999, the U.S. Department of Justice recommended that eyewitnesses be given an "appearance-change instruction" (ACI) before participating in a lineup in which a suspect appeared with some malleable characteristic change.[211] Subsequent research, however, cautions against doing so. It is unwise to give an ACI instruction because it "increases false identifications without increasing correct identifications."[212]

D. System Variables Impacting Perception and Memory

In addition to the various events and witness factors affecting the accuracy of identifications, several factors under the control of the criminal legal system influence the reliability of eyewitness identifications. These variables primarily concern how pretrial confrontations between suspects and victims or witnesses occur, including the conduct of law enforcement officers during the administration of a confrontation.[213] These systemic factors are discussed in detail in Part V, after a review of the requirements that the law imposes on justice system professionals when conducting pretrial identification procedures. Before moving on to that body of law, however, it is important to note that there is another type of variable that does not influence eyewitness accuracy, but rather can "indicate how much that eyewitness can be relied on."[214]

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210. Vrij, *supra* note 164, at 109; *see also* John W. Shepherd & Hadyn D. Ellis, *Face Recall—Methods and Problems*, *in* PSYCHOLOGICAL ISSUES IN EYEWITNESS IDENTIFICATION 87 (Siegfried Ludwig Sporer, Roy S. Malpass & Guenter Koehnken eds., 1996).

211. U.S. DEP'T OF JUST., TECH. WORKING GRP. FOR EYEWITNESS EVID., EYEWITNESS EVIDENCE: A GUIDE FOR LAW ENFORCEMENT (1999), www.ncjrs.gov/pdffiles1/nij/178240.pdf [https://perma.cc/JN46-QXUV].

212. Peter. F. Molinaro, Andrea Arndorfer & Steve D. Charman, *Appearance-Change Instruction Effects on Eyewitness Lineup Identification Accuracy Are Not Moderated by Amount of Appearance Change*, 37 LAW & HUM. BEHAV. 432, 440 (2013) (https://doi.org/10.1037/lhb0000049); *see also* Devon Porter, Alexa Moss & Daniel Reisberg, *The Appearance-Change Instruction Does Not Improve Line-Up Identification Accuracy*, 28 APPLIED COGNITIVE PSYCH. 151 (2014) (https://doi.org/10.1002/acp.2985).

213. Wells, *supra* note 92, *passim*.

214. Quigley-McBride & Wells, *supra* note 32, at 334 (citing Wells, *supra* note 32, *passim*).

E. Reflector/Postdiction Variables

Neither estimator nor system variables predict the accuracy of eyewitness identifications.[215] By contrast, *reflector variables*, sometimes referred to as postdiction variables, "are clearly affected by whether the suspect is the culprit."[216] Reflector variables, such as witnesses' confidence levels in their identifications and the time it took them to make those decisions, can not only be measured during confrontations, but also provide after-the-fact data about the reliability of eyewitness identifications.

> There is long-standing evidence in the recognition memory literature that some of the hallmarks of true recognition are fast decisions and subjective feelings of confidence associated with those decisions, whereas inaccurate recognition judgments tend to be slower and made with less certainty. In the context of eyewitness identification, this occurs when the eyewitness has a strong memory trace of the culprit. Because a strong memory trace results in a quick and automatic feeling of familiarity when someone closely matches that memory, the eyewitness can make a quick judgment about a lineup that they are sure about. A weaker memory trace requires a slower, more effortful evaluation of the people in a lineup and a less definitive determination about the lineup.[217]

1. Confidence

Researchers have studied witness confidence more extensively than other reflector variables, likely as a function of the fact that "the level of certainty demonstrated at the confrontation" is one of the factors that U.S. Supreme Court precedents have long recognized as an indicator of the reliability of eyewitness identifications.[218] By 1998, laboratory research supported the positive relationship between witness confidence and accuracy to such a degree that an APLS workgroup recommended "obtaining a confidence statement . . . as one of only four core research-based recommendations for collecting and preserving eyewitness

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215. Quigley-McBride & Wells, *supra* note 32, at 334.

216. *Id.* Indeed, a meta-analysis published in 1995 reported that eyewitness confidence, if not tainted by post-event misinformation or suggestive procedures, can be good indicator of the identification accuracy. Sigfried Ludwig Sporer, Steven Penrod, Don Read & Brian Cutler, *Choosing, Confidence, and Accuracy: A Meta-Analysis of the Confidence-Accuracy Relation in Eyewitness Identification Studies*, 118 PSYCH. BULL. 315, 322 (1995) (https://doi.org/10.1037/0033-2909.118.3.315).

217. Quigley-McBride & Wells, *supra* note 32, at 334–35 (internal citations omitted).

218. Manson v. Brathwaite, 432 U.S. 98, 114 (1977); Neil v. Biggers, 409 U.S. 188, 199 (1972). For a more complete discussion, see *infra* Sections IV.C–IV.D.

identification evidence."[219] Since that time, research has continued to confirm this positive association, but only when identification procedures "are pristine" insofar as they use all of the best practices for avoiding contamination of witnesses' memories that are outlined in Part V of this Article.[220] Accordingly, the APLS continues to recommend that lineup administrators obtain confidence statements as soon as eyewitnesses make identifications.[221] Such statements might be expressed "on a scale from 0% confident to 100% confident" or they could be more qualitatively expressed using descriptors such as "'positive,' 'probably,' 'maybe'" and so on.[222]

The recommendation to obtain immediate confidence statements from witnesses comes with a substantial qualifier because, to have any meaningful postdiction of accuracy, reflector variables cannot be tainted by poor procedures.[223] Specifically, instructions to witnesses must not imply the presence of a culprit, the lineups must be blindly administered (i.e., lineup administrators should not know who is the suspect and who are the foils), the entirety of the confrontation procedures must be fair, and the confidence statements must be *immediately* obtained to avoid contamination of witnesses' confidence reports by any post-decision comments or events.[224] The use of the word "immediately" is key; even a short delay of five minutes can undermine the predictive value of a witness's confidence in an identification.[225]

Moreover, immediately obtaining confidence statements from witnesses helps to minimize a phenomenon called *confidence malleability*—the tendency for eyewitnesses "to become more or less confident in [their] identification[]s as a function of events that occur after

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219. Quigley-McBride & Wells, *supra* note 32, at 335 (citing Sporer, Penrod, Read & Cutler, *supra* note 216, *passim* (presenting results of a meta-analysis on witness confidence); Gary L. Wells, Mark Small, Steven D. Penrod, Roy S. Malpass, Solomon M. Fulero & C. A. E. Brimacombe, *Eyewitness Identification Procedures: Recommendations for Lineups and Photospreads*, 22 LAW & HUM. BEHAV. 603, 619–27 (1998) (https://doi.org/10.1023/A:1025750605807) (summarizing research on witness confidence)).

220. Wells, Small, Penrod, Malpass, Fulero & Brimacombe, *supra* note 219, at 638 (citing John T. Wixted & Gary L. Wells, *The Relationship Between Eyewitness Confidence and Identification Accuracy: A New Synthesis*, 18 PSYCH. SCI. PUB. INT. 10 (2017) (https://doi.org/10.1177/1529100616686966)).

221. Wells, Small, Penrod, Malpass, Fulero & Brimacombe, *supra* note 219, at 635 (citing Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 21–23).

222. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 21.

223. Quigley-McBride & Wells, *supra* note 32, at 335.

224. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 22. The many facets that are involved in constructing fair lineups are discussed in detail *infra* Part V.

225. *Id.* (citing Neil Brewer, Amber Keast & Amanda Rishworth, *The Confidence-Accuracy Relationship in Eyewitness Identification: The Effects of Reflection and Disconfirmation on Correlation and Calibration*, 8 J. EXPERIMENTAL PSYCH. APPLIED 44 (2002) (https://doi.org/10.1037/1076-898X.8.1.44)).

[them]."[226] Thus, assuming that blind procedures are followed, confidence statements must be obtained *before* the case detective or any other "nonblind" individuals are allowed into the room to avoid their ability to intentionally or inadvertently impact the witness's confidence statement by saying something like, "good job," "well done," or "are you sure?,"[227] or using "nonverbal cues," such as smiles or grimaces, that can signal accuracy.[228] When pristine processes are employed, research suggests that high confidence statements, operationalized at levels of more than 80% confident, "almost always selected the suspect."[229]

2. Time to Decision

Quick decisions across all types of identification confrontations tend to be more accurate than slower ones.[230] This stems from the fact that "speed is associated with automatic processes or *fluency*"; "stimuli that are quick and easy to process feel that way because they are familiar or have been encountered before.[231] Researchers report that eyewitnesses who make quick decisions, operationalized as six seconds for sequential lineups and thirty seconds for simultaneous ones, "were much more likely to have selected the suspect than a filler."[232] That being said, given the

226. Wells, Small, Penrod, Malpass, Fulero & Brimacombe, *supra* note 219, at 624; Steven D. Penrod & Brian L. Cutler, *Witness Confidence and Witness Accuracy: Assessing Their Forensic Relation*, 1 PSYCH. PUB. POL'Y & L. 817, 827 (1995) (https://doi.org/10.1037/1076-8971.1.4.817); Gary L. Wells & Amy L. Bradfield, *"Good, You Identified the Suspect": Feedback to Eyewitnesses Distorts Their Reports of the Witnessing Experience*, 83 J. APPLIED PSYCH. 360, 374 (1998) (https://doi.org/10.1037/0021-9010.83.3.360).

227. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 21.

228. *Id.* at 22 (citing Kureva Matuku, Amy Bradfield Douglass & Steve D. Charman, *A Cautionary Note About Videotaped Identification Procedures* (Paper presented at the annual meeting of the American Psychology-Law Society, Mar. 2018)).

229. Quigley-McBride & Wells, *supra* note 32, at 344.

230. *Id.* at 336 (citing Neil Brewer & Nathan Weber, *Eyewitness Confidence and Latency: Indices of Memory Processes Not Just Markers of Accuracy*, 22 APPLIED COGNITIVE PSYCH. 827 (2008) (https://doi.org/10.1002/acp.1486); David Dunning & Scott Perretta, *Automaticity and Eyewitness Accuracy: A 10- to 12-Second Rule for Distinguishing Accurate from Inaccurate Positive Identifications*, 87 J. APPLIED PSYCH. 951 (2002) (https://doi.org/10.1037/0021-9010.87.5.951); Jesse H. Grabman, David G. Dobolyi, Nathan L. Berelovich & Chad S. Dodson, *Predicting High Confidence Errors in Eyewitness Memory: The Role of Face Recognition Ability, Decision-Time, and Justifications*, 8 J. APPLIED RSCH. MEMORY & COGNITION 233 (2019) (https://doi.org/10.1037/h0101835); Melanie Sauerland & Siegfried L. Sporer, *Fast and Confident: Postdicting Eyewitness Identification Accuracy in a Field Study*, 15 J. EXPERIMENTAL PSYCH. APPLIED 46 (2009) (https://doi.org/10.1037/a0014560)).

231. Quigley-McBride & Wells, *supra* note 32, at 336 (citing Colleen M. Kelley & D. Stephen Lindsay, *Remembering Mistaken for Knowing: Ease of Retrieval as a Basis for Confidence in Answers to General Knowledge Questions*, 32 J. MEMORY & LANGUAGE 1 (1993) (https://doi.org/10.1006/jmla.1993.1001); Roger Ratcliff & Jeffrey J. Starns, *Modeling Confidence Judgments, Response Times, and Multiple Choices in Decision Making: Recognition Memory and Motion Discrimination*, 120 PSYCH. REV. 697 (2013) (https://doi.org/10.1037/a0033152)).

232. Quigley-McBride & Wells, *supra* note 32, at 344.

relatively scant research on decision time and eyewitness accuracy, as well as some of the limitations of the key studies to date, researchers caution against using these findings to create arbitrary cut-offs.[233]

F. Summary

Having synthesized the key psychological research on perception, memory, and the estimator variables that affect the reliability of eyewitness identifications, this Article turns to explore the legal parameters of eyewitness identifications. It then reviews the best practices for law enforcement to comply with both that body of law and the empirical recommendations from eyewitness science research.

III. SIXTH AMENDMENT REQUIREMENTS FOR PRETRIAL IDENTIFICATIONS

The Sixth Amendment guarantees defendants the right to the effective assistance of counsel at "critical stages" in all criminal prosecutions.[234] Between 1967 and 1973, the U.S. Supreme Court decided several important cases applying this principle to pretrial identifications.[235]

A. The Wade–Gilbert Rule

In *United States v. Wade*[236] and *Gilbert v. California*,[237] the Court expressed concerns about law enforcement's use of suggestive identification techniques.[238] The *Wade* decision listed several such procedures that had been documented in numerous published judicial opinions:

> [T]hat all in the lineup but the suspect were known to the identifying witness, that the other participants in a lineup were grossly dissimilar in appearance to the suspect, that only the suspect was required to wear distinctive clothing which the culprit allegedly wore, that the witness is told by the police that they have caught the culprit after which the defendant is brought before the witness alone or is viewed in jail, that the suspect is pointed out before or during a lineup, and that the participants in the lineup are asked to try on an article of clothing which fits only the suspect.[239]

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233. *Id.*

234. Kirby v. Illinois, 406 U.S. 682, 689 (1972).

235. United States v. Ash, 413 U.S. 300 (1973); *Kirby*, 406 U.S. 682; United States v. Wade, 388 U.S. 218 (1967); Gilbert v. California, 388 U.S. 263 (1967).

236. *Wade*, 388 U.S. at 228–29.

237. *Gilbert*, 388 U.S. at 272.

238. *Wade*, 388 U.S. at 228–29.

239. *Id.* at 233 (internal citation omitted).

To combat such practices, the Court held that conducting a post-indictment lineup "without notice to and in the absence of his counsel denies the accused his Sixth Amendment right to counsel and calls in question the admissibility at trial of the in-court identifications of the accused by witnesses who attended the lineup."[240] As with other critical stages of criminal prosecutions, if suspects are unable to afford a lawyer, they are entitled to have one appointed by the court to assist at the confrontation. Additionally, when suspects request the advice and presence of their own lawyers and those lawyers are not immediately available, substitute lawyers may be called to assist with confrontations.[241]

B. When the Wade–Gilbert Right to Counsel Attaches

The right to counsel guaranteed under *Wade–Gilbert* does not apply at the outset of a criminal case. Rather, the right must "attach" upon a triggering event.

1. Applies to Live Confrontations at or after Initiation of Adversarial Criminal Proceedings

In *Kirby v. Illinois*, the U.S. Supreme Court held that the right to counsel attaches to pretrial identification procedures that are conducted "at or after the initiation of adversary judicial criminal proceedings—whether by way of formal charge, preliminary hearing, indictment, information, or arraignment."[242]

> The initiation of judicial criminal proceedings is far from a mere formalism. It is the starting point of our whole system of adversary criminal justice. For it is only then that the government has committed itself to prosecute, and only then that the adverse positions of government and defendant have solidified. It is then that a defendant finds himself faced with the prosecutorial forces of organized society, and immersed in the intricacies of substantive and procedural criminal law. It is this point, therefore, that marks the commencement of the "criminal prosecutions" to which alone the explicit guarantees of the Sixth Amendment are applicable.[243]

Applying this reasoning, the Court held in *Moore v. Illinois* that a defendant has a right to counsel during any identification procedure once adversarial proceedings have begun, even if no indictment has been issued in a case.[244] Specifically, *Moore* ruled that the *Wade–Gilbert* rule for

240. *Gilbert*, 388 U.S. at 272.
241. *Wade*, 388 U.S. at 237 n.27; *see also, e.g.*, Zamora v. Guam, 394 F.2d 815 (9th Cir. 1968).
242. Kirby v. Illinois, 406 U.S. 682, 689 (1972).
243. *Id.* at 689–90.
244. *See* Moore v. Illinois, 434 U.S. 220, 228–29 (1977).

counsel attached during a preliminary hearing because that process began adversarial proceedings under the applicable Illinois statute.[245]

There is no Sixth Amendment right to counsel at any pretrial confrontation *before* adversary judicial criminal proceedings begin.[246] So, when someone is merely a suspect and has not been formally charged with any crime, *Wade–Gilbert* does not apply; hence, suspects against whom criminal proceedings have not yet begun need not be advised of any right to counsel at pretrial identifications, at least as a matter of federal constitutional law.[247] Thus, neither the filing of a complaint that seeks an arrest warrant nor an arrest are critical stages of criminal proceedings that trigger the right to counsel in the federal system and many states.[248] Note, however, that the law differs in some jurisdictions in that they consider the issuance of an arrest warrant as starting formal adversarial proceedings.[249]

2. Does Not Apply to Identifications Not Requiring the Defendant's Presence

In *United States v. Ash*, the U.S. Supreme Court held that there is no right under the Sixth Amendment to have counsel present to observe a photo lineup, even after indictment.[250] The Court reasoned that "since the accused . . . is not present at the time of the photographic display, . . . no possibility arises that the accused might be misled by his lack of familiarity with the law or overpowered by his professional adversary."[251] The same logic applies to the showing of videotaped lineups[252] and the playing of tape-recorded voice arrays.[253] Importantly, *Ash* has the practical effect of nullifying the Sixth Amendment right to counsel in the overwhelming majority of cases in light of the fact photo lineups have all but replaced live lineups in contemporary police practice.[254]

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245. *Id.* (citing ILL. REV. STAT., ch. 38, § 111 (1975)).

246. *Kirby*, 406 U.S. at 689.

247. *See id.*

248. *See* United States v. Gouveia, 467 U.S. 180, 190 (1984); Anderson v. Alameida, 397 F.3d 1175, 1180 (9th Cir. 2005); Beck v. Bowersox, 362 F.3d 1095, 1101–02 (8th Cir. 2004); State v. Pierre, 890 A.2d 474, 507 (Conn. 2006).

249. *See, e.g.*, Cannaday v. State, 455 So. 2d 713, 722 (Miss. 1984), *cert. denied*, 469 U.S. 1221 (1985); Commonwealth v. Richman, 320 A.2d 351, 353 (Pa. 1974); People v. Blake, 320 N.E.2d 625, 632 (N.Y. 1974); *cf.* People v. Bustamante, 634 P.2d 927, 935–36 (Cal. 1981) (holding that the California Constitution affords defendants the right to the presence of counsel at preindictment lineups), *abrogated, in part, as recognized by* People v. Johnson, 842 P.2d 1, 20 (1992).

250. United States v. Ash, 413 U.S. 300, 321 (1973).

251. *Id.* at 317.

252. *See, e.g.*, State v. Jones, 849 So. 2d 438, 440–42 (Fla. Ct. App. 2003); United States v. Amrine, 724 F.2d 84, 87 (8th Cir. 1983).

253. United States v. Dupree, 553 F.2d 1189, 1192 (8th Cir. 1977).

254. *See supra* notes 41–42 and accompanying text.

Similarly, *Wade–Gilbert* does not apply to investigatory identification procedures that do not involve confrontations. Thus, there is no right that counsel be present for the analysis of the accused's "fingerprints, blood sample, clothing, hair, and the like."[255]

Finally, a defendant has no right to have counsel present at a post-lineup police interview with an identifying witness.[256]

C. Waiver of the Wade–Gilbert Right to Counsel

Post-indictment pretrial identifications that are conducted in violation of *Wade–Gilbert* are inadmissible unless a valid waiver of Sixth Amendment rights was obtained before the confrontation.[257] Waivers must be knowing, intelligent, and voluntary.[258] Whether this standard is met is determined under the totality of the circumstances of each case—"including the background, experience, and conduct of the accused."[259] This standard mirrors the one used to determine the validity of waivers of the Fifth and Sixth Amendment rights to the presence of counsel at interrogations.[260]

Miranda warnings in their standard form do not adequately advise defendants of their rights at pretrial identification procedures. Rather, a waiver of *Wade–Gilbert* rights at confrontations requires that suspects be advised that (1) the results of the confrontation can and will be used against them in court; (2) they have the right to have an attorney of their choice present at any such confrontation; and (3) if they cannot afford an attorney of their choosing, then, an attorney will be appointed for them, free of charge, before any confrontation occurs.[261] As with the waiver of *Miranda*

255. United States v. Wade, 388 U.S. 218, 227–28 (1967).

256. *See, e.g.*, Sams v. Walker, 18 F.3d 167, 170 (2d Cir. 1994).

257. Gilbert v. California, 388 U.S. 263, 272 (1967); Moore v. Illinois, 434 U.S. 220, 231 (1977).

258. *Wade*, 388 U.S. at 237. This mirrors the requirements for waivers of Fifth Amendment rights under *Miranda*, see Moran v. Burbine, 475 U.S. 412, 421 (1986) (quoting Miranda v. Arizona, 384 U.S. 436, 444, 475 (1966)), and waivers of the Sixth Amendment right to counsel at trial. *See* Faretta v. California, 422 U.S. 806, 835 (1975) (quoting Adams v. United States *ex rel.* McCann, 317 U.S. 269, 279 (1942)). *See generally* Jessica Wilen Berg, *Understanding Waiver*, 40 HOUS. L. REV. 281 (2003).

259. Johnson v. Zerbst, 304 U.S. 458, 464 (1938).

260. *See, e.g.*, *Moran*, 475 U.S. at 421 (discussing the requirements for Fifth Amendment waivers of *Miranda* rights); Patterson v. Illinois, 487 U.S. 285, 296, 298–99 (1988) (explaining that, in the context of interrogations, Sixth Amendment waivers do not qualitatively differ from than those under *Miranda*).

261. Such warnings would establish a valid waiver in most cases. Consider, for instance, that Dallio v. Spitzer, 343 F.3d 553 (2d Cir. 2003), upheld a waiver of Sixth Amendment rights under *Wade–Gilbert* even though the warning did not explicitly warn the suspect of the dangers and disadvantages of consenting to participation in a lineup.

rights, although having suspects sign explicit waivers provides the best evidence of valid waivers, signed waivers are not formal requirements.[262]

IV. DUE PROCESS AND PRETRIAL IDENTIFICATIONS

The Due Process Clauses of the Fifth and Fourteenth Amendments guarantee suspects the right to have all identification procedures conducted fairly and impartially. These due process rights during confrontations apply regardless of whether the pretrial procedures occur before or after the attachment of Sixth Amendment rights under *Wade–Gilbert*.

A. The Stovall v. Denno *Rule*

In 1967, the U.S. Supreme Court acknowledged in *Stovall v. Denno* that due process forbids any pretrial identification procedure that is unnecessarily suggestive and conducive to mistaken identification.[263] The defendant in *Stovall* was arrested for stabbing a physician to death in his kitchen and seriously wounding the physician's wife, who had "jumped at the assailant" in an attempt to stop the fatal attack on her husband, resulting in her receiving eleven stab wounds.[264] A day after she underwent major surgery to save her life, police brought a suspect, in handcuffs, to her hospital room without affording him any time to retain counsel.[265] He was the only Black person in the room at the time. She "identified him from her hospital bed after being asked by an officer whether he 'was the man' and after [the defendant] repeated at the direction of an officer a 'few words for voice identification.'"[266] Despite the highly suggestive nature of this confrontation, the Court upheld the admissibility of both the identification in the hospital and the subsequent in-court identification during the defendant's trial.[267] The Court's reasoning in support of its conclusion was based on a number of factors.

First, because *Stovall* was being decided at the same time as *Wade* and *Gilbert*, the Court needed to determine whether the right to counsel

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262. *See, e.g.*, N.C. GEN. STAT. ANN. § 7A-457(c) (West 2023) ("[A] person who has been informed of his right to be represented by counsel at any out-of-court proceeding, may, either orally or in writing, waive the right to out-of-court representation by counsel.").

263. *See* Stovall v. Denno, 388 U.S. 293, 302 (1967) (stating that a confrontation can be "so unnecessarily suggestive and conducive to irreparable mistaken identification" as to deny due process of law such that it can be a "ground of attack upon a conviction independent of any right to counsel claim").

264. *Id.* at 295.

265. *Id.*

266. *Id.*

267. *Id.* at 302.

established by those cases applied retroactively. In answering that question in the negative, the Court said:

> [W]hile we feel that the exclusionary rules set forth in *Wade* and *Gilbert* are justified by the need to assure the integrity and reliability of our system of justice, they undoubtedly will affect cases in which no unfairness will be present. Of course, we should also assume there have been injustices in the past which could have been averted by having counsel present at the confrontation for identification . . . . But the certainty and frequency with which we can say in the confrontation cases that no injustice occurred differs greatly enough from the cases involving absence of counsel at trial or on appeal to justify treating the situations as different in kind for the purpose of retroactive application, especially in light of the strong countervailing interests [we will discuss later in this decision], and because it remains open to all persons to allege and prove, as Stovall attempts to do in this case, that the confrontation resulted in such unfairness that it infringed his right to due process of law.[268]

One of the "strong countervailing interests" the Court went on to discuss was how the "retroactive application of *Wade* and *Gilbert* 'would seriously disrupt the administration of our criminal laws'" by invalidating countless convictions obtained before the Court mandated the right to counsel at pretrial confrontations.[269] The other interest that proved central to the Court's reasoning in *Stovall* centered around the exigent circumstances in the case.

> Here was the only person in the world who could possibly exonerate Stovall. Her words, and only her words, "He is not the man" could have resulted in freedom for Stovall. The hospital was not far distant from the courthouse and jail. No one knew how long [the woman] might live. Faced with the responsibility of identifying the attacker, with the need for immediate action and with the knowledge that [she] could not visit the jail [after her major surgery], the police followed the only feasible procedure and took Stovall to the hospital room. Under these circumstances, the usual police station line-up . . . was out of the question.[270]

Stovall is important because it tied pretrial confrontations to due process. Thus, it provided a constitutional framework for challenging identification procedures that are unnecessarily suggestive regardless of whether they occurred before or after the initiation of formal criminal

268. *Id.* at 299 (citing Palmer v. Peyton, 359 F.2d 199 (4th Cir. 1966)).
269. *Id.* at 299–300.
270. *Id.* at 302.

proceedings.[271] Nonetheless, *Stovall* committed what one commentator referred to as the "original sin" that clouded jurisprudence in subsequent eyewitness identification cases.[272]

> The question of whether the police should be able to conduct such procedures is independent of the question of whether those procedures should be admissible. The Court conflated these two questions, both in framing the issue and then in resolving it, stating that since a proper lineup was out of the question, admitting evidence of the showup was thereby constitutional.
>
> But the Court's most glaring mistake was its failure to consider the identification's reliability. Despite its reference to the totality of the circumstances, the *Stovall* opinion admitted testimony of a highly suggestive identification procedure by relying solely on the practical necessity of the procedure without examining how reliable the identification actually was—that is, without examining the factual basis for the witness's ability to identify the defendant as the perpetrator of the crime. This makes little sense. No matter how necessary an identification procedure might have been, if the procedure was suggestive and the identification not reliable, its admission at trial would violate the "fundamental fairness" guaranteed by the Due Process [C]lause. A determination of reliability is indispensable for assuring that such highly influential evidence—which can easily decide the fate of a trial—is not merely the creation of a biased identification procedure put together by the prosecution or the police.[273]

1. Showups Under *Stovall*: The Role of Exigent Circumstances

Showups are highly suggestive and, accordingly, produce high levels of false identifications.[274] Moreover, showups have a biasing effect on any

271. Kirby v. Illinois, 406 U.S. 682, 690–91 (1972).

272. Ofer Raban, *On Suggestive and Necessary Identification Procedures*, 37 AM. J. CRIM. L. 53, 56 (2009).

273. *Id.* at 56–57.

274. *See generally* Steven E. Clark, *Costs and Benefits of Eyewitness Identification Reform: Psychological Science and Public Policy*, 7 PERSPS. ON PSYCH. SCI. 238 (2012) (https://doi.org/10.1177/1745691612439584); Nancy Steblay, Jennifer Dysart, Solomon Fulero & R.C.L. Lindsay, *Eyewitness Accuracy Rates in Police Showup and Lineup Presentations: A Meta-Analytic Comparison*, 27 LAW & HUM. BEHAV. 523 (2003) (https://doi.org/10.1023/A:1025438223608); Jeffrey S. Neuschatz, Stacy A. Wetmore, Kylie N. Key, Daniella K. Cash, Scott D. Gronlund & Charles A. Goodsell, *A Comprehensive Evaluation of Showups*, *in* ADVANCES IN PSYCHOLOGY AND LAW 43 (Monica K. Miller & Brian H. Bornstein eds., 2016); A. Daniel Yarmey, *Person Identification in Showups and Lineups*, *in* EYEWITNESS MEMORY: THEORETICAL AND APPLIED PERSPECTIVES 131 (Charles P. Thompson, Douglas J. Herrmann, J. Don Read, Darryl Bruce & David G. Payne eds., 1998). For a review of the relative scant literature on showups, see Mattias Per Sjöberg, *The Show-Up Identification Procedure: A Literature Review*, 4 OPEN J. SOC. SCI. 86 (2016) (https://doi.org/10.4236/jss.2016.41012).

subsequent identification at a lineup or in court.[275] Showups should, therefore, not be used unless some extenuating circumstances prevent a photo array or lineup from being used.[276] In such cases, identifications might not be "unnecessarily suggestive," but rather might be suggestive as a function of some emergency that makes the confrontation necessary, as was the case in *Stovall*.[277] For these purposes, an emergency can be defined as a witness in danger of blindness or death (as was the case in *Stovall*), or even when a suspect is in danger of death.[278] As a practical matter, I advise law enforcement to conduct identification procedures involving critically injured persons only with the approval of medical authorities because the importance of obtaining an identification should be secondary to treating and caring for an injured person.

Some states have adopted *per se* rules that showups that occur without some showing as to the necessity of having conducted such an inherently suggestive confrontation will be deemed inadmissible.[279] Other states and the federal courts view exigencies as just one factor to be considered as part of the totality of the circumstances surrounding a confrontation, as *Stovall* illustrates.[280] Under such an approach, when showups occur either because they were unplanned or due to some exigent circumstance, law enforcement officers need to exercise great care to

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275. *See generally* Bruce W. Behrman & Lance T. Vayder, *The Biasing Influence of a Police Showup: Does the Observation of a Single Suspect Taint Later Identification?*, 79 PERCEPTUAL & MOTOR SKILLS 1239 (1994) (https://doi.org/10.2466/pms.1994.79.3.1239); Ryann M. Haw, Jason J. Dickinson & Christian A. Meissner, *The Phenomenology of Carryover Effects Between Show-Up and Line-Up Identification*, 15 MEMORY 117 (2007) (https://doi.org/10.1080/09658210601171672); Tim Valentine, Josh P. Davis, Amina Memon & Andrew Roberts, *Live Showups and Their Influence on a Subsequent Video Line-Up*, 26 APPLIED COGNITIVE PSYCH. 1 (2012) (https://doi.org/10.1002/acp.1796).

276. For a thoughtful exploration of courts have grappled with the suggestibility of showups, as well as suggestions for reforms, see Michael D. Cicchini & Joseph G. Easton, *Reforming the Law on Show-Up Identifications*, 100 J. CRIM. L. & CRIMINOLOGY 381 (2010).

277. Stovall v. Denno, 388 U.S. 293, 302 (1967) ((“The practice of showing suspects singly to persons for the purpose of identification, and not as part of a lineup, has been widely condemned. However, . . . the record in the present case reveals that the showing of Stovall to [the woman] in an immediate hospital confrontation was imperative.”) (internal footnotes and citations omitted)).

278. *See, e.g.*, PITTSBURGH BUREAU OF POLICE, ORDER NO. 43–17: EYEWITNESS IDENTIFICATION PROCEDURES § 7.4 3 (Nov. 11, 2016) [hereinafter PITT. ORDER 43–17], https://pittsburghpa.gov/files/police/orders/ch4/43-17-Eyewitness-Identification-Procedures.pdf [https://perma.cc/32ST-9GVC] (offering examples of an "emergency situation" justifying a show-up that including witnesses or victims being "in imminent danger of death or in critical condition in a hospital").

279. *See, e.g.*, State v. Dubose, 699 N.W.2d 582, 584 (Wis. 2005), *overruled by* State v. Roberson, 935 N.W.2d 813, 828 (Wis. 2019); Commonwealth v. Johnson, 650 N.E.2d 1257, 1260–61 (Mass. 1995); People v. Adams, 423 N.E.2d 379, 384 (N.Y. 1981).

280. *Stovall*, 388 U.S. at 302 ("[A] claimed violation of due process of law in the conduct of a confrontation depends on the totality of the circumstances surrounding it.").

ensure that the identification procedures are not unnecessarily suggestive. When officers do so, the following types of showups have been held to be admissible.

a. Spontaneous Showups

Unarranged, spontaneous showups are not considered impermissibly suggestive for federal constitutional law purposes. For example, in *United States v. Boykins*, an unaccompanied witness, while walking toward the courtroom on the day of trial, recognized the defendant as one of the armed intruders who had previously broken into her home.[281] In that person's subsequent trial, she identified him again in court.[282] A federal appeals court upheld the in-court identification, finding that the witness had recognized the defendant without any suggestion from the government: "While a line-up is certainly the preferred method of identification, a witness who spontaneously recognizes a defendant should be allowed to testify to that fact."[283] But as Alice Sebold's mistaken identification of Anthony Broadwater exemplifies, just because the law permits identifications stemming from spontaneous showups to be used as evidence, that does not mean they are accurate; all of the factors discussed in Part II still impact the (un)reliability of such confrontations.[284]

b. Cruising Crime Area

Showups resulting from a crime victim or witness cruising the area of the crime in a police car also rarely present constitutional problems of suggestiveness. Cruising the area is an accepted investigative technique when police have no suspects for crimes that just occurred.[285] Witness memories are still fresh, and perpetrators are still likely to be in the area with their clothes or appearance unaltered.[286] Of course, police should not

281. *See* United States v. Boykins, 966 F.2d 1240, 1241 (8th Cir. 1992).

282. *Id.* at 1242.

283. *Id.* at 1243.

284. *See generally supra* Part II.

285. *See, e.g.*, PITT. ORDER 43–17, *supra* note 278, § 7.11, at 4 ("Officers may transport victims or witnesses in police vehicles to cruise the area where a crime has just occurred in order for them to attempt to point out the offender. While checking the area, officers must be careful not to make any statements or comments to the witnesses which could be considered suggestive."); VT. DEP'T PUB. SAFETY, EYEWITNESS IDENTIFICATION: SAMPLE MODEL POLICY 4, https://dps.vermont.gov/sites/pspd/files/pdfs/leab/Eyewitness-Identification-Model-Policy.pdf [https://perma.cc/UCN3-PJ4A] [hereinafter VT. MODEL POLICY].

286. *See, e.g.*, PITT. ORDER 43–17, *supra* note 278, § 7.2, at 3 ("A show-up should occur within a reasonable time from the witness's observation of the offender. The close proximity of time and location offers the advantages that the witness's memory is fresh and the suspect's appearance is ordinarily unchanged.").

coach witnesses by suggesting that certain persons look suspicious or have bad reputations.

Cruising the crime area encompasses requirements of both geographic and temporal proximity that courts in some states have adopted.[287] Put differently, the search must take place near the scene of the crime and shortly thereafter. Thus, for instance, even though New York law strongly disfavors showups to the point that they are typically excluded from evidence without a showing of some need to have resorted to the procedure, the highest court in the state upheld a showup in *People v. Duuvon*, reasoning as follows:

> The showup identification was made upon defendant's return to the robbery scene approximately two minutes after his arrest, three to four minutes after the commission of the crime, and literally around the corner from the arrest scene. This was one unbroken chain of events—crime, escape, pursuit, apprehension and identifications—all within minutes and within a New York City block and a half.[288]

Relying on the *Duuvon* case, a lower appellate court in New York excluded a showup from evidence in *People v. Cruz*.[289]

> Although the complainant's identification of defendants was made in close geographic and temporal proximity to the crime, this was not a situation where the showup was unavoidable because of a fast-paced situation. The complainant had already been driven away from the scene to the precinct, where she was being tended to by EMS for her injuries. Her treatment was interrupted so that she could return to the garage, one hour after the crime, to identify the suspects who were already under arrest.
>
> Nor were there exigent circumstances warranting a showup identification. The [fifty-five]-year-old complainant, though bruised and visibly shaken, was not suffering from any life-threatening wounds that would have made her otherwise unable or unavailable to make an identification at a later time or at the precinct where she was already located.[290]

c. Certain Arranged, "On-the-Scene" Showups

Although courts differ, the prevailing view is that practical considerations may justify a prompt on-the-scene showup under the *Stovall* test. These arranged showups involve suspects who are arrested or apprehended at or near a crime scene and are immediately brought before

287. *See, e.g.*, People v. Duuvon, 571 N.E.2d 654, 656 (N.Y. 1991).
288. *Id.*
289. People v. Cruz, 10 N.Y.S.3d 214, 220 (App. Div. 2015).
290. *Id.* (internal citations omitted).

victims or witnesses by a law enforcement officer for identification purposes.[291] A federal appeals court expressed the majority approach to this tactic:

> Although show-ups are widely condemned, immediate confrontations allow identification before the suspect has altered his appearance and while the witness' memory is fresh, and permit the quick release of innocent persons. Therefore, show-ups are not unnecessarily suggestive unless the police aggravate the suggestiveness of the confrontation.[292]

d. Photographic or Video Evidence from a Crime Scene

Duly authenticated photos or videos of suspects in the act of committing crimes (e.g., footage from closed-circuit surveillance cameras) rarely present any problems of suggestiveness or mistaken identification. Absent suggestive commentary or conduct by police, such procedures simply show perpetrators committing crimes, rather than suggesting culprits. Courts, therefore, reason that surveillance photos or videos serve to refresh witnesses' memories and strengthen the reliability of subsequent in-court identifications.[293]

2. Lineups and Photo Arrays Under *Stovall*

Lineups and photo arrays must be conducted in ways that are not unnecessarily suggestive or otherwise conducive to mistaken identification. Nothing should be done, therefore, that makes the suspect "stand out" from the other people used in a lineup or from the other pictures used in a photo array.[294] Following the procedures outlined in Part V of this Article should not only help to ensure that the due process mandates of *Stovall* are met, but also increase the reliability of any identification resulting from these confrontation procedures.

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291. *See, e.g.*, PITT. ORDER 43–17, *supra* note 278, § 7.6, at 4 ("A suspect stopped within a short time after the commission of the crime may be taken to a location where he can be viewed by a witness for possible identification, or be detained at the site of the stop and the witness taken there to view him. Transporting the witness to the site of the stop is preferred if circumstances permit."); VT. MODEL POLICY, *supra* note 285, § 6, at 3 ("If a suspect is stopped within a short time after the commission of the crime, he/she may be taken to a location where he/she can be viewed by a witness for possible identification; or, he/she may be detained at the site of the stop and the witness taken there to view him/her. Transporting the witness to the site of the stop is preferred if circumstances permit.").

292. Johnson v. Dugger, 817 F.2d 726, 729 (11th Cir. 1987) (internal citations omitted).

293. *See, e.g.*, Greene v. State, 229 A.3d 183, 193 (Md. 2020) (holding that video-surveillance identifications are "not governed by the due process analysis in *Biggers* and *Manson*"); United States v. Browne, 829 F.2d 760, 764–65 (9th Cir. 1987).

294. *See infra* Part V.

B. Simmons v. United States *Further Muddies the Waters*

The year after the U.S. Supreme Court decided the triumvirate of *Wade*, *Gilbert*, and *Stovall*, it tackled yet another case involving a suggestive identification procedure. In *Simmons v. United States*, FBI agents investigating a bank robbery showed photos to several eyewitnesses that repeatedly contained images of the defendants.[295] Using those photos, at least five witnesses identified the defendant Thomas Simmons as one of the bank robbers. At trial, the prosecution did not introduce evidence of the prior photo identifications, but rather had all five of these witnesses identify Simmons while testifying in court.[296] After being convicted, Simmons challenged the admissibility of those in-court identifications as having been tainted by the unnecessarily suggestive photo identification process the FBI had used.[297]

The Court began its evaluation of Simmons' claims by stating that in-court identifications by an eyewitness who had previously identified a suspect would only be set aside if the "identification procedure was so impermissibly suggestive as to give rise to a very substantial likelihood of irreparable misidentification."[298] The Court then "repeated *Stovall*'s mistake of conflating the constitutionality of administering suggestive identification procedures with the constitutionality of admitting such procedures (and consequent in-court identifications) as evidence at the trial."[299] In doing so, the Court focused, as it did in *Stovall*, on the necessity of the prior identification:

> In the first place, it is not suggested that it was unnecessary for the FBI to resort to photographic identification in this instance. A serious felony had been committed. The perpetrators were still at large. The inconclusive clues which law enforcement officials possessed led to Andrews and Simmons. It was essential for the FBI agents swiftly to determine whether they were on the right track, so that they could properly deploy their forces in Chicago and, if necessary, alert officials in other cities. The justification for this method of procedure was hardly less compelling than that which we found to justify the "one-man lineup" in *Stovall v. Denno*.[300]

Put differently, and as law professor Ofer Raban eloquently stated, "the Court unabashedly equated the necessity of presenting a suspect to a dying witness with the necessity of determining whether the police were

295. Simmons v. United States, 390 U.S. 377, 380–81 (1968).
296. *Id.* at 381.
297. *Id.*
298. *Id.* at 384.
299. Raban, *supra* note 272, at 58.
300. *Simmons*, 390 U.S. at 384–85.

'on the right track.'"[301] Many courts continue to employ such a "ridiculously broad definition[] of necessity" when considering challenges to suggestive identification procedures.[302]

The Court concluded in *Simmons* there was "little chance" that the photo procedures had led to any misidentifications.[303] It did so by reasoning that witnesses had observed unmasked bank robbers for at least five minutes under good lighting conditions.[304] And although Simmons appeared in several of the photos that the FBI had shown to witnesses, there was "no evidence to indicate that the witnesses were told anything about the progress of the investigation, or that the FBI agents in any other way suggested which persons in the pictures were under suspicion."[305] Thus, *Simmons* "corrected *Stovall*'s most important failure" by considering the reliability of identifications in addition to the alleged necessity of how they were initially conducted.[306] Although consideration of reliability continued to be a part of the Court's subsequent eyewitness identification jurisprudence, the factors the Court stated should be considered are severely flawed as the next sections elucidate.

C. "Reliability" Becomes the "Linchpin" to Admissibility

If a pretrial confrontation is not unnecessarily suggestive, then the identification is admissible. If, however, the confrontation is deemed to have been impermissibly suggestive, that fact alone does not necessarily mean that the identification will be inadmissible. Under federal law and that of most states, such an identification may still be used in court if it is deemed to be reliable despite the suggestive nature of the confrontation.

1. The "Reliability" Factors of *Neil v. Biggers* and *Manson v. Brathwaite*

In 1972, the U.S. Supreme Court decided *Neil v. Biggers*.[307] The case involved a defendant who had been convicted of rape on evidence consisting, in part, of a victim's visual and voice identification during a police station showup that occurred seven months after the assault.[308] The victim was in her assailant's presence for nearly a half-hour during the crime, and she directly observed the assailant both indoors and outside under the light of a full moon.[309] The victim testified at trial that she had

301. Raban, *supra* note 272, at 59.
302. *Id.* (citing, e.g., Ramirez v. Taylor, 103 F. App'x 248, 250 (9th Cir. 2004)).
303. *Simmons*, 390 U.S. at 385.
304. *Id.*
305. *Id.*
306. Raban, *supra* note 272, at 59.
307. Neil v. Biggers, 409 U.S. 188 (1972).
308. *Id.* at 193–95.
309. *Id.* at 200.

no doubt that the defendant was her assailant.[310] Immediately after the crime, she gave the police a thorough description of the culprit that matched the description of the defendant.[311] The victim made no identifications of other people who had been presented to her at previous showups or lineups.[312]

The Court acknowledged that suggestive confrontations "increase the likelihood of misidentification" and that "unnecessarily suggestive ones are condemned for the further reason that the increased chance of misidentification is gratuitous."[313] Despite these concerns, the Court held that the central question was "whether under 'the totality of the circumstances' the identification was reliable even though the confrontation procedure was suggestive."[314] The Court listed the following five factors to be considered in evaluating the likelihood of misidentification: (1) the witness's opportunity "to view the criminal at the time of the crime," (2) "the witness'[s] degree of attention," (3) "the accuracy of the witness'[s] prior description of the criminal," (4) "the level of certainty demonstrated by the witness at the confrontation," and (5) "the length of time between the crime and the confrontation."[315] Applying these factors, the Court found no substantial likelihood of misidentification in *Biggers* and, therefore, upheld the admissibility of the identification.[316]

Five years after *Biggers*, the U.S. Supreme Court decided *Manson v. Brathwaite*, in which it said, "reliability is the linchpin in determining the admissibility of identification testimony."[317] The Court reiterated the five factors announced in *Biggers* and emphasized that they should be balanced against the corrupting effect of the suggestive identification.[318]

In *Brathwaite*, two days after a drug sale, an undercover drug officer viewed a single photo of a suspect that had been left in his office by a fellow officer.[319] After determining that the single-photo display was unnecessarily suggestive, the Court considered the five *Biggers* factors affecting reliability and found that the undercover officer had made an accurate identification.[320] The Court noted that he (1) was a trained police officer, not a casual observer, (2) had sufficient opportunity to view the suspect for two or three minutes in natural light, (3) accurately described

310. *Id.*
311. *Id.*
312. *Id.* at 201.
313. *Id.* at 198.
314. *Id.* at 199.
315. *Id.* at 199–200 (bulleted list formatting added).
316. *Id.* at 200–01.
317. Manson v. Brathwaite, 432 U.S. 98, 114 (1977).
318. *Id.*
319. *Id.* at 100–01.
320. *Id.* at 114–17.

the suspect in detail within minutes of the crime, (4) positively identified the photograph in court as that of the drug seller, and (5) made the photographic identification only two days after the crime.[321]

The Court then analyzed the corrupting effect of the suggestive identification and weighed it against the factors indicating reliability:

> Although identifications arising from single-photograph displays may be viewed in general with suspicion, we find in the instant case little pressure on the witness to acquiesce in the suggestion that such a display entails. D'Onofrio had left the photograph at Glover's office and was not present when Glover first viewed it two days after the event. There thus was little urgency and Glover could view the photograph at his leisure. And since Glover examined the photograph alone, there was no coercive pressure to make an identification arising from the presence of another. The identification was made in circumstances allowing care and reflection.[322]

Under the totality of the circumstances, the Court held the identification reliable and the evidence admissible.[323]

2. Applying the Reliability Factors

The lesson of the *Biggers* and *Brathwaite* cases is that, even though a pretrial confrontation may have been unnecessarily suggestive, the evidence may still be admissible in court if the identification was otherwise "reliable." For the reasons discussed in Part II of this Article, however, decades of psychological science call into question whether such reliability can be achieved after a tainted identification process. Thus, scholars urge that the *Biggers–Brathwaite* reliability test is not "a satisfactory method of measuring reliability."[324] The framework of these cases

> lacks the architecture to serve two functions intended by the [C]ourt, namely the safeguard against wrongful convictions function and the incentive to avoid suggestive procedures function. Both biological science (via DNA) and social science (via eyewitness identification experiments) have shed new light on the eyewitness identification

321. *Id.* at 114–15.

322. *Id.* at 116 (citation omitted).

323. *Id.* ("Surely, we cannot say that under all the circumstances of this case there is a very substantial likelihood of irreparable misidentification. Short of that point, such evidence is for the jury to weigh." (internal quotation marks and citations omitted)).

324. Benjamin E. Rosenberg, *Rethinking the Right to Due Process in Connection with Pretrial Identification Procedures: An Analysis and a Proposal*, 79 KY. L.J. 259, 276 (1990).

> errors and have revealed these errors to be much more prevalent than the 1977 Court could have surmised.[325]

Notwithstanding such criticisms, two commentators noted in 2006 that the U.S. Supreme Court had not "confront[ed] the need to overhaul" the constitutional test for determining the reliability of identifications.[326] In the nearly two decades since they made that observation, psychological science has continued to confirm the unreliability of eyewitness identifications.[327] Additionally, as the Introduction to this Article explained, the number of exonerations involving mistaken identifications collectively evidence *Biggers–Brathwaite*'s failed approach to reliability.[328] The U.S. Supreme Court has still not yet revisited these cases as of this writing in 2023.

a. Cases Upholding Identifications as Reliable

Courts appear to loathe excluding eyewitness identifications. As the following examples from both federal and state appellate courts illustrate, even when identifications occur under highly suggestive circumstances, courts routinely find them reliable whenever one or more of the *Biggers–Brathwaite* factors provide grounds for doing so.

Consider, for example, *United States v. Thody*, which upheld the admissibility of an identification of a bank robber as reliable despite an impermissibly suggestive lineup.[329] The court reasoned as follows:

> Each witness had an adequate opportunity to observe Thody closely during the two robberies. All three witnesses testified at the suppression hearing that at least once they were within a few feet of Thody, and that they were able to observe McIntosh and him for several minutes. Woods and Harshfield were within arm's reach of Thody while complying with his instructions. The light was good, and there is no question that the attention of these three employees was riveted on Thody and his companion. Dillard testified that she had been trained to remember the descriptions of robbers. When the second robbery took place Harshfield immediately recognized Thody from the July 12 robbery, exclaiming to Woods, "It's him!" The descriptions of the robbers given by Harshfield, Woods, and Dillard after the robberies also corroborated one another to the degree that descriptions of subtleties in nose size, presence or lack of facial hair,

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325. Wells & Quinlivan, *supra* note 71, at 21.

326. Timothy P. O'Toole & Giovanna Shay, Manson v. Brathwaite *Revisited: Towards a New Rule of Decision for Due Process Challenges to Eyewitness Identification Procedures*, 41 VAL. U. L. REV. 109, 116 (2006).

327. *See supra* Part II; *infra* Part V.

328. *See supra* notes 59–61 and accompanying text.

329. United States v. Thody, 978 F.2d 625, 629–30 (10th Cir. 1992).

> and hair color corresponded significantly. The witnesses were unequivocal in their testimony, both at trial and at the suppression hearing. Despite attempts by defense counsel to unearth inconsistencies, no significant inconsistencies materialized. Also, only one week separated the confrontation from the robbery.[330]

In *Clark v. Caspari*, the court ruled that a showup following the robbery of a liquor store was unnecessarily suggestive for the following reasons:

> The record reveals that prior to the identifications, [the witnesses] were asked to identify several suspects that had been apprehended by the police. When they arrived on the scene, [they] saw only [the two African American defendants]. Both individuals were handcuffed, and were surrounded by white police officers, one of whom was holding a shotgun. Under these circumstances, [the witnesses] may have felt obligated to positively identify [the defendants], so as not to disagree with the police, whose actions exhibited their belief that they had apprehended the correct suspects. Essentially, [the witnesses] were given a choice: identify the apprehended suspects, or nobody at all. This coercive scenario increased the possibility of misidentification.[331]

Nonetheless, the court ruled that the witnesses' identifications were reliable and, therefore, admissible even though neither of the two witnesses had been able to describe the robbers. Key to the court's rationale was that both witnesses "had the opportunity to clearly view the perpetrators at the time of the robbery" and the fact that only thirty minutes had passed from the time of the robbery to the showup.[332]

Howard v. Bouchard upheld an identification of a shooting suspect even though the identifying witness had seen the defendant in court, sitting with his lawyer at the defense table, just an hour before a lineup was conducted.[333] In addition, the defendant stood out in the lineup due to his height (he was at least three inches taller than the foils) and his hairstyle—a "high-fade haircut that the witnesses later said was so distinctive."[334] The court found that these factors were only "minimally suggestive."[335] Moreover, the court found that the suggestiveness was outweighed by the

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330. *Id.* at 629; *see also, e.g.*, United States v. Diaz, 986 F.3d 202, 207 (2d Cir. 2021) (finding an identification reliable due, in part, to the witness having had a well-lighted, "face-to-face" view of the defendant for more than roughly one minute).

331. Clark v. Caspari, 274 F.3d 507, 511 (8th Cir. 2001).

332. *Id.* at 512.

333. Howard v. Bouchard, 405 F.3d 459, 470 (6th Cir. 2005).

334. *Id.* at 471.

335. *Id.* at 470, 472.

reliability of the identification.[336] This conclusion, however, is remarkable because the eyewitness initially only "got a glance" at the shooter while passing by the scene in a moving truck at a distance of three to six feet[337] and then viewed the shooter for "a split-second again" when he heard the sound of shots being fired at a distance of approximately fifteen feet.[338] The witness then viewed the shooter a third time as he was picking up shells for sixty to ninety seconds at a distance of thirty to forty feet.[339] All three opportunities to view the shooter from the truck occurred in the early morning hours while the area was lit by street lamps.[340] The court was nonetheless persuaded that the opportunity for the witness to have viewed the shooter was sufficient because the witness was "participating in a repossession, which by its stressful nature generally demands heightened attention" and because the witness expressed certainty as to the identification.[341]

In *State v. Thompson*, during the time that police transported a witness to a showup, one officer told the witness that the person they were holding was "probably the shooter," that they believed they "have the person," and that police "need[ed the witness] to identify him."[342] Although the court found the confrontation to be "highly and unnecessarily suggestive," the court ruled the identification was reliable because the witness had a "good, hard look" at the shooter in daylight, the identification occurred less than two hours after the shooting, and the witness was sure of his identification.[343]

In *State v. Johnson*, the wife of a murder victim had been unable to identify the defendant from a photo array conducted approximately one month following the homicide.[344] Seven months later, however, she identified the defendant in court at a preliminary hearing.[345] During that proceeding, the defendant "was dressed in clothing from the Department of Youth Services and may have been handcuffed and . . . he was the only young African-American male seated at the defense table."[346] The court nonetheless ruled that the identification was reliable because the witness had observed the gunman for more than a minute at the time of the shooting from a distance of only a few feet and had an opportunity to stare

336. *Id.* at 472–75.
337. *Id.* at 472.
338. *Id.*
339. *Id.*
340. *Id.*
341. *Id.* at 473.
342. State v. Thompson, 839 A.2d 622, 629 (Conn. App. Ct. 2004) (internal characters omitted).
343. *Id.*
344. State v. Johnson, 836 N.E.2d 1243, 1249 (Ohio Ct. App. 2005).
345. *Id.*
346. *Id.* at 1258.

into his eyes.[347] When she identified the defendant in court, she testified: "Those eyes, those eyes. I will never forget those eyes."[348] Given her level of certainty, the court dismissed her initial inability to identify the defendant at the photo array and admitted her subsequent in-court identification.[349]

b. Cases Excluding Identifications as Unreliable

Courts usually only exclude an impermissibly suggestive identification under highly limited circumstances. To warrant exclusion, either none of the *Biggers–Brathwaite* factors provide a basis for the reliability of the identification,[350] or the factors that provide indicia of reliability have to be significantly outweighed by some glaring inconsistency in one of the other *Biggers–Brathwaite* factors.[351]

For instance, *United States v. de Jesus-Rios* found that a boat captain's identification of a woman who had contracted for cargo transport was not otherwise reliable after an impermissibly suggestive one-person showup.[352] Before the confrontation, the witness had twice described the suspect as being White with a height of roughly 5'2".[353] After an arranged showup prior to which he had been informed that agents were meeting with their suspect, he changed his description to being a person with light-brown skin and four inches taller.[354]

In *Raheem v. Kelly*, two witnesses to a shooting gave police a description of the perpetrator that included mention of a distinctive article of clothing: a three-quarter-length black leather coat.[355] The defendant was placed in a lineup in which he was the only person wearing such attire, which led the court to rule the lineup was unduly suggestive.[356] The court excluded the identification as unreliable because the witnesses had an

347. *Id.* at 1259.

348. *Id.* at 1250.

349. *Id.* at 1259.

350. *See, e.g.*, United States v. Honer, 225 F.3d 549, 554–55 (5th Cir. 2000) (determining that an identification was unreliable because the witness "could not recall anything distinctive" about suspect).

351. *See, e.g.*, Finch v. McKoy, 914 F.3d 292, 300 (4th Cir. 2019); United States v. de Jesus-Rios, 990 F.2d 672, 678 (1st Cir. 1993).

352. *de Jesus-Rios*, 990 F.2d at 678.

353. *Id.* at 675.

354. *Id.* at 678; *see also Finch*, 914 F.3d at 300 (determining an identification was unreliable due, in part, to the witness have failed to describe the suspects' facial hair). *But see, e.g.*, United States v. Shavers, 693 F.3d 363, 384–85 (3d Cir. 2012) (upholding the reliability of identifications even though the witnesses only gave general descriptions of the suspects due, in part, to the witness having "had the opportunity, albeit brief, to view the [defendants'] clothing and faces"), *vacated on other grounds* 570 U.S. 913 (2013).

355. Raheem v. Kelly, 257 F.3d 122, 135–36 (2d Cir. 2001).

356. *Id.*

opportunity to see various people in a dimly lit bar before the shooting, during which their degree of attention was low due to watching football, drinking, and talking with others.[357] Moreover, after a shot was fired, the witnesses admitted that they focused their attention on the gun, not on the person holding it.[358] Other than the witnesses' description of the shooter's coat, they had been able to provide only "general information as to the shooter's age, height, and weight" while being unable to provide any details about the shooter's face.[359] Additionally, the witnesses were not confident in their identifications.[360]

In *United States v. Rogers*, police inadvertently placed one drug offender in the same jail cell as a suspect that he had earlier been unable to identify in a photo array.[361] The court not only found this to have been unnecessarily suggestive, but it also held the subsequent identification to be unreliable.[362] Key facts included that eleven months had passed from the date of the alleged drug transaction and the confrontations, the eyewitness did not have a good opportunity to observe the defendant, he had not been paying significant attention as an acquaintance allegedly purchased drugs from the defendant, and he admitted he could not pick the defendant out of the earlier photo array because "most Black guys look alike" to him.[363]

3. Due Process Depends on State Action

In 2012, the U.S. Supreme Court decided *Perry v. New Hampshire*, its first case in thirty-five years concerning the admissibility of eyewitness

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357. *Id.* at 138–40.

358. *Id.* at 138.

359. *Id.*; *see also* Young v. Conway, 698 F.3d 69, 80–81 (2d Cir. 2012) (finding an identification was unreliable partly because witness's description provided only the most general description of the suspect's sex, height, and race without any specific identifying criteria and because the witness previously identified other people); Tomlin v. Myers, 30 F.3d 1235, 1241–42 (9th Cir. 1994) (determining an identification was unreliable partly because witness's description differed too much from the suspect's height, hairstyle, and general build); Thigpen v. Cory, 804 F.2d 893, 896–97 (6th Cir. 1986) (determining an identification was unreliable because it was based on a very general description that did not specifically align with the defendants' characteristics and because the witness was not confident in the identification), *abrogated on other grounds by* Perry v. New Hampshire, 565 U.S. 228 (2012).

360. *Raheem*, 257 F.3d at 140; *see also* Grant v. City of Long Beach, 315 F.3d 1081, 1088 (9th Cir. 2002) (ruling identifications were unreliable because two witnesses had preliminarily identified others before the defendant), *amended by* 334 F.3d 795 (9th Cir. 2003); United States v. Sanders, 479 F.2d 1193, 1198 (D.C. Cir. 1973) (finding an identification was unreliable, in part, because the witness "was never positive" about the identification of the defendant).

361. United States v. Rogers, 387 F.3d 925, 937 (7th Cir. 2004).

362. *Id.* at 938–39.

363. *Id.* at 931, 938; *see also* Thomas v. Varner, 428 F.3d 491, 503 (3d Cir. 2005) (finding an identification was unreliable partly because the witness was not paying attention when an armed robbery began and because he subsequently focused on attempting to flee the scene).

identifications.[364] In *Perry*, police responded to a call at approximately 3:00 a.m., reporting that an African-American male was trying to break into cars parked in the lot of the caller's apartment building.[365] When an officer arrived on the scene and asked an eyewitness to describe the man, she pointed to her kitchen window and identified a man in the parking lot.[366] That man was Perry.[367] He subsequently argued that due process required the suppression of the identification even though the police had not done anything wrong in the case.[368] Rather, he argued that independent of police conduct, the events had unfolded in a manner that rendered the identification unreliable for several reasons, including the significant distance between the witness's window and the parking lot; the fact that the events transpired in the middle of the night; the presence of a van that obstructed the witness's line of sight; the witness's concession she had been so scared that she "really didn't pay attention" to what Perry was wearing; the witness's inability to describe Perry's facial features or other identifying marks; the witness's failure to pick Perry out of a photo array; and the fact that at the time the witness pointed to Perry through her kitchen window, he was in the parking lot standing next to "a uniformed, gun-bearing police officer" who was investigating the scene.[369]

In rejecting Perry's arguments, the Court stated that "[t]he fallibility of eyewitness evidence does not, without the taint of improper state conduct, warrant a due process rule requiring a trial court to screen such evidence for reliability before allowing the jury to assess its creditworthiness."[370] Thus, law enforcement must do something to render an identification unnecessarily suggestive before the Due Process Clause requires judicial inquiry into the reliability of eyewitness identification.

D. Problems with the Biggers–Brathwaite Approach to Reliability

Despite the shortcomings of perception and memory, jurors cling to misunderstandings about the nature of eyewitness identifications. For instance, researchers published a study in 2006 reporting the results of surveying 1,000 potential jurors in the District of Columbia about their perceptions of eyewitness testimony.[371] They reported that:

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364. Perry v. New Hampshire, 565 U.S. 228 (2012).
365. *Id.* at 233.
366. *Id.* at 234.
367. *Id.*
368. *Id.* at 234–35.
369. *Id.* at 247–48.
370. *Id.* at 245.
371. *See generally* Richard S. Schmechel, Timothy P. O'Toole, Catharine Easterly & Elizabeth F. Loftus, *Beyond the Ken? Testing Juror's Understanding of Eyewitness Reliability Evidence*, 46 JURIMETRICS J. 177 (2006).

- 46% believed that witnesses on the stand are "effectively narrating a video recording of events that [they] can see in [their] 'mind's eye' for jurors."[372]

- "Almost two-thirds of the respondents (66%) thought the statement, 'I never forget a face' applied 'very well' or 'fairly well' to them."[373]

- 37% "thought the presence of a weapon would make a witness'[s] memory for event details *more* reliable" while 33% "thought that the presence of a weapon either would have no effect or were not sure of what effect a weapon would have. Only three out of ten potential jurors correctly understood that the presence of a weapon tends to make an eyewitness'[s] memory for details less reliable."[374]

- 39% "thought that event violence would make a[n] eyewitness'[s] memory for event details [of the crime] *more* reliable," while 33% stated that they believed it "either would have no effect" or that they were "not sure of what effect event violence would have." Only "three out of ten potential jurors correctly understood that event violence tends to make an eyewitness'[s] memory for details less reliable."[375]

- Over 40% "either thought that witness time estimates were accurate or were not sure whether such estimates were accurate." And roughly 23% "believed that witnesses *underestimate* the actual time." In contrast to the 63% of respondents who did not understand a witness's general inability to gauge the duration of an event, "[t]he jurors either believed witnesses' subjective time estimates or thought that witnesses tended to actually see a face for longer than claimed"—while "[o]nly 37% of the total respondents correctly understood events unfold faster than witnesses think they do."[376]

- Nearly 40% agreed with the statement that "an eyewitness'[s] level of confidence in his or her identification is an excellent indicator of that eyewitness'[s] reliability."[377]

- Nearly half (48%) erroneously believed that "cross-race and same-race identifications are of equal reliability" and an additional

372. *Id.* at 196.
373. *Id.*
374. *Id.* at 197.
375. *Id.* (emphasis added).
376. *Id.* at 198.
377. *Id.* at 199.

> 11% thought that cross-racial identifications would be even *more* reliable than those between members of the same race.[378]
>
> - "A quarter of potential jurors believed that a show-up is either *more* reliable than a lineup procedure or that the two procedures are equally reliable."[379]

Justice professionals typically labor under similar misperceptions. A survey of judges and law enforcement officers in one study showed that they disagreed with psychological experts on 60% of the issues affecting eyewitness identifications.[380] In a subsequent study, researchers reported that police officers had limited knowledge of eyewitness factors—including those who worked in departments that had implemented U.S. Department of Justice guidelines to improve identification procedures.[381] Even practicing psychologists (i.e., not psychological scientists specializing in memory research) operate under the same sorts of misconceptions about the unreliability of eyewitness identification.[382]

The misconceptions many jurors and justice professionals have about eyewitness identifications illustrate the problems with the *Biggers–Brathwaite* approach to adjudicating due process arguments concerning mistaken identifications.[383] Those problems can be compounded at trial by the "independent source doctrine."

1. Independent Source Doctrine

If a pretrial identification is ruled inadmissible on either Sixth Amendment or due process grounds, an eyewitness may still be allowed

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378. *Id.* at 200.

379. *Id.* at 201.

380. Tanja R. 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 PSYCH. 115, 120–21 (2006) (https://doi.org/10.1002/acp.1171).

381. 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 PSYCH. 488, 497–98 (2011) (https://doi.org/10.1002/acp.1717). This phenomenon is not limited to law enforcement officers in the United States. *See, e.g.*, Nathanael Sumampouw, Ludvig D. Bjørndal, Svein Magnussen, Henry Otgaar & Tim Brennen, *Knowledge About Eyewitness Testimony: A Survey of Indonesian Police Officers and Psychologists*, 28 PSYCH. CRIME & L. 763, 771 (2022) (https://doi.org/10.1080/1068316X.2021.1962868).

382. Sumampouw, Bjørndal, Magnussen, Otgaar & Brennen, *supra* note 381, at 771 (reporting that the overall "average accuracy for items assessing knowledge of eyewitness factors" among police officers was 57%, while accuracy on specific criteria was as low as only 9%); Svein Magnussen & Annika Melinder, *What Psychologists Know and Believe About Memory: A Survey of Practitioners*, 26 APPLIED COGNITIVE PSYCH. 54, 58–59 (2012) (https://doi.org/10.1002/acp.1795).

383. For an in-depth explanation of how cognitive psychology demonstrates a multiplicity of problems with the *Biggers-Brathwaite* factors, see Wells & Quinlivan, *supra* note 71, at 6–18.

to make an in-court identification.[384] In *Gilbert v. California*, the U.S. Supreme Court held that such an in-court identification would be constitutionally permissible if based on a source independent of the tainted pretrial confrontation.[385] Courts generally rule that an in-court identification has an independent source when the identifying witness, by drawing on personal memory of the crime and observations of the defendant during the crime, possesses such a clear and definite image of the defendant that the witness can make an identification unaffected by the illegal confrontation.[386]

If the defendant does not make a threshold showing that an in-court identification was tainted by impermissible suggestiveness, then "independent reliability [of the in-court identification] is not a constitutionally required condition of admissibility and the reliability of the identification is simply a question for the jury."[387] But if the defendant makes a *prima facia* case that an in-court identification was tainted by unnecessarily suggestive pretrial identification procedures, then the prosecution bears the burden of persuasion to prove, by clear and convincing evidence, that a witness has an independent source for identifying the perpetrator.[388]

The factors to be considered by judges in determining an independent source claim were set out in *Wade*; they include:

> the prior opportunity to observe the alleged criminal act, the existence of any discrepancy between any pre-lineup description and the defendant's actual description, any identification prior to the lineup of another person, the identification by picture of the defendant prior to lineup, failure to identify the defendant on a prior occasion, and the lapse of time between the alleged act and the lineup identification.

384. Coleman v. Alabama, 399 U.S. 1, 3–7 (1970); *see also* United States v. Crews, 445 U.S. 463, 472–73, 473 n.18 (1980) (upholding the admissibility of an in-court identification despite a tainted pretrial identification because the witness testified that she based her identification on independent source—namely that she had "viewed her assailant at close range for a period of 5–10 minutes under excellent lighting conditions and with no distractions").

385. Gilbert v. California, 388 U.S. 263, 272–73 (1967); *see also Crews*, 445 U.S. at 472–73, 473 n.18 (reaffirming the independent source doctrine).

386. *See, e.g.*, Corn v. Zant, 708 F.2d 549, 566–67 (11th Cir. 1983) (finding an independent source because a witness had interacted with the defendant for up to ten minutes), *vacated and remanded on other grounds by* Corn v. Kemp, 772 F.2d 681 (11th Cir. 1985); Branch v. Estelle, 631 F.2d 1229, 1235 (5th Cir. 1980) (holding that an in-court identification had an independent source because the witness had "ample" time to view the defendant's face during a burglary and had identified the defendant on multiple occasions).

387. Jarrett v. Headley, 802 F.2d 34, 42 (2d Cir. 1986) (internal citations omitted).

388. *See, e.g.*, Tomlin v. Myers, 30 F.3d 1235, 1244 (9th Cir. 1994) (George, J., dissenting).

> It is also relevant to consider those facts which, despite the absence of counsel, are disclosed concerning the conduct of the lineup.[389]

Additionally, the independent source doctrine is also undermined by research on unconscious transference.[390]

Respected law professor Brandon Garrett criticized the independent source doctrine by rhetorically asking, "[h]ow could there be such a basis? The same eyewitness is testifying at trial with a memory affected by the showup" or other suggestive pretrial procedures.[391] There would likely only be a truly independent source if the witness had previously been well-acquainted with a suspect.[392] For example, in *McKinon v. Wainwright*, a federal appeals court ruled there was an independent source for the identification of the accused at trial because the witness had known the accused long before the crime was committed and had spent several hours with the accused on the day of the crime.[393] But when there is no prior relationship between the witness and the suspect, the notion of an independent source for an in-court identification is a myth premised on the fallacy of eyewitness memory "as if it were a fixed image."[394]

> [A]s social scientists have demonstrated over many hundreds of studies, eyewitness memory is highly malleable and is nothing like a photo or a video. An eyewitness's memory must be carefully preserved or it can become contaminated. Each effort to test an eyewitness's memory will reshape that memory. In the courtroom, the eyewitness cannot access a memory of what happened that is "independent" of the suggestive lineups that came before. While courts discuss the "independent recollection" of the eyewitness at trial, there is nothing independent about that recollection at trial. Indeed, the Supreme Court recognized as much early on. In *Simmons*, the Court noted that "the witness thereafter is apt to retain in his memory the image of the photograph rather than of the person actually seen, reducing the trustworthiness of subsequent lineup or courtroom identification."[395]

For these reasons, the high courts of Massachusetts and Connecticut both ruled that no in-court identifications are permitted after any out-of-

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389. United States v. Wade, 388 U.S. 218, 241 (1967).

390. *See supra* notes 148–153 and accompanying text.

391. *See* Brandon L. Garrett, *Eyewitnesses and Exclusion*, 65 VAND. L. REV. 449, 478 (2012).

392. *Id.* at 481–82.

393. McKinon v. Wainwright, 705 F.2d 419, 422 (11th Cir. 1983); *see also* United States v. Burgos, 55 F.3d 933, 942–43 (4th Cir. 1995) (ruling that an in-court identification had an independent origin because the witnesses had been "well-acquainted" with the defendant).

394. Garrett, *supra* note 391, at 485.

395. *Id.* at 485–86 (citing Simmons v. United States, 390 U.S. 377, 383 (1968)).

court identifications that were suppressed as unduly suggestive.[396] Other courts should follow their lead and abandon the legal fiction of the independent source doctrine absent some prior relationship between a witness and a suspect in a particular case.

2. States Rejecting *Biggers–Brathwaite*

Addressing the problem that the *Biggers–Brathwaite* factors are unsupported by scientific data, a few states tinkered with narrow aspects of these factors by incorporating "reliability factors that have a firmer grounding in the social science."[397] For instance, Georgia no longer considers witnesses' certainty as part of evaluating the reliability of eyewitness identifications despite suggestive procedures.[398] In so ruling, the Georgia Supreme Court said: "In the [decades] since the decision in *Neil v. Biggers*, the idea that a witness's certainty in his or her identification of a person as a perpetrator reflected the witness's accuracy has been 'flatly contradicted by well-respected and essentially unchallenged empirical studies.'"[399] Note, though, that the court's statement is not entirely accurate. As previously discussed, confidence statements have utility, provided they are taken *immediately* after a witness makes an identification in a double-blind process; they are useless, however, following tainted confrontations.[400]

When the Georgia Supreme Court issued its opinion about witness certainty, it quoted a Utah Supreme Court decision from 1986 that had ordered one of the earliest, albeit modest safeguards, to counter misconceptions about the reliability of eyewitness testimony.[401] Utah had mandated trial court judges give cautionary instructions to juries considering eyewitness testimony.[402] But even if jurors understand those instructions (and there is ample data they do not),[403] jury instructions are still inadequate:

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396. Commonwealth v. Johnson, 45 N.E.3d 83, 88–89 (Mass. 2016); State v. Dickson, 141 A.3d 810, 820–27 (Conn. 2016).

397. O'Toole & Shay, *supra* note 326, at 115.

398. Brodes v. State, 614 S.E.2d 766, 770 (Ga. 2005); State v. Long, 721 P.2d 483, 491 (Utah 1986).

399. *Brodes*, 614 S.E.2d at 770 (quoting *Long*, 721 P.2d at 491).

400. *See supra* notes 215–229 and accompanying text.

401. *Brodes*, 614 S.E.2d at 770 (quoting *Long*, 721 P.2d at 491).

402. For a brief discussion of the conflicting ways in which courts have ruled on the admissibility of expert testimony regarding the (un)reliability of eyewitness testimony, see Fradella, *supra* note 62, at 21–23. For an in-depth analysis of this variability by jurisdiction, see Vallas, *supra* note 62, at 110–28.

403. CUTLER & PENROD, *supra* note 158, at 264 ("[J]udges' instructions do not serve as an effective safeguard against mistaken identifications and convictions . . . ."); Bettina E. Brownstein,

> Jury instructions do not explain the complexities about perception and memory in a way a properly qualified person can. Expert testimony about the cognitive biases and errors can do that far better than "being told the results of scientific research in a conclusory manner by a judge[,]" especially since jury instructions are given far too late in a trial to help jurors evaluate relevant eyewitness testimony with information beyond their common knowledge.[404]

Because jury instructions are insufficient,[405] some courts have adopted rules that permit defendants to call expert witnesses at trial to explain the

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It's Time to Make Jury Instructions Understandable, 37 ARK. LAW. 24, 24 (2002) ("Jury instructions are too difficult and are thus unintelligible to a large portion of jurors. They are poorly worded, and their meaning is arcane."); Joel D. Lieberman & Bruce D. Sales, *What Social Science Teaches Us About the Jury Instruction Process*, 3 PSYCH. PUB. POL'Y & L. 589, 591 (1997) ("Jurors do not understand a large portion of the judicial instructions delivered to them even when they are pattern instructions. This is not surprising, because the emphasis in both nonpattern and pattern instructions has been on legal accuracy, with minimal attention paid to comprehensibility to anyone outside the legal community." (internal citations omitted)); 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, 1542 (2012); Richard A. Wise, Kirsten A. Dauphinais & Martin A. Safer, *A Tripartite Solution to Eyewitness Error*, 97 J. CRIM. L. & CRIMINOLOGY 807, 830–34 (2007) (advocating for expert testimony rather than jury instructions).

For empirical studies on jurors' low comprehension of jury instructions, see Robert P. Charrow & Veda R. Charrow, *Making Legal Language Understandable: A Psycholinguistic Study of Jury Instructions*, 79 COLUM. L. REV. 1306, 1313 (1979); Amiram Elwork, James J. Alfini & Bruce D. Sales, *Toward Understandable Jury Instructions*, 65 JUDICATURE 432, 436 (1982); Mona Lynch & Craig Haney, *Capital Jury Deliberation: Effects on Death Sentencing, Comprehension, and Discrimination*, 33 LAW & HUM. BEHAV. 481, 486 (2009) (https://doi.org/10.1007/s10979-008-9168-2); 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, 429 (1990) ("[J]ury instructions are often lost on jurors, and can sometimes even backfire."); James R.P. Ogloff, *A Comparison of Insanity Defense Standards on Juror Decision Making*, 15 LAW & HUM. BEHAV. 509, 519 (1991) (https://doi.org/10.1007/BF01650292); Laurence J. Severance & Elizabeth F. Loftus, *Improving the Ability of Jurors to Comprehend and Apply Criminal Jury Instructions*, 17 LAW & SOC'Y REV. 153, 179–80 (1982) (https://doi.org/10.2307/3053535); Richard L. Wiener, Christine C. Pritchard & Minda Weston, *Comprehensibility of Approved Jury Instructions in Capital Murder Cases*, 80 J. APPLIED PSYCH. 455, 460 (1995) (https://doi.org/10.1037/0021-9010.80.4.455). *See also* Dan Simon, *More Problems with Criminal Trials: The Limited Effectiveness of Legal Mechanisms*, 75 LAW & CONTEMP. PROBS. 167, 174 n.37 (2012) (citing studies regarding jury-instruction comprehension levels).

404. Fradella, *supra* note 62, at 25.

405. This holds true for *Telfaire* instructions, stemming from United States v. Telfaire, 469 F.2d 552, 555–57 (D.C. Cir. 1972) and the more contemporary *Henderson* instructions, crafted in the wake of State v. Henderson, 27 A.3d 872, 916–18 (N.J. 2011). *See, e.g.*, Amanda N. Bergold, Angela M. Jones, Marlee K. Dillon & Steven D. Penrod, *Eyewitnesses in the Courtroom: A Jury-Level Experimental Examination of the Impact of the* Henderson *Instructions*, 17 J. EXPERIMENTAL CRIMINOLOGY 433, 447–49 (2021) (https://doi.org/10.1007/s11292-020-09412-3); Brian L. Cutler, Steven D. Penrod & Hedy R. Dexter, *Juror Sensitivity to Eyewitness Identification Evidence*, 14 LAW & HUM. BEHAV. 185, 190–91 (1990) (https://doi.org/10.1007/BF01062972); Marlee K. Dillon, Angela M. Jones, Amanda N. Bergold, Cora Y. T. Hui & Steven D. Penrod, Henderson *Instructions:*

unreliability of eyewitness identifications to jurors.[406] Although far too many courts have yet to embrace this approach, it is essential that expert testimony, despite its limitations, be admitted at trials "to ensure the fairness and accuracy of verdicts" in cases in which disputed eyewitness identifications constitute key evidence against defendants.[407]

A few states went further than Georgia with attempts to address the problems with eyewitness reliability determinations. Utah refined some of the *Biggers–Brathwaite* factors to focus on the effects of suggestion.[408] Both Connecticut and Kansas followed Utah's lead.[409] And recall that New Jersey mandated juries be instructed on the risks of inaccuracies whenever cross-racial identifications are "not corroborated by other evidence giving it independent reliability."[410]

a. Excluding from Evidence Any Impermissible Identifications

In 1976, the Supreme Judicial Court of Massachusetts established a *per se* rule of inadmissibility for all identifications resulting from unnecessarily suggestive confrontations.[411] In subsequent cases, that same court reaffirmed the *per se* approach and imposed limits on the use of showups in light of their inherent suggestibility.[412] This limitation requires exclusion unless a judge determines police had good reasons for using a showup rather than a less suggestive confrontation.[413] New York applies a similar *per se* rule,[414] as does Wisconsin:

> [E]vidence obtained from an out-of-court showup is inherently suggestive and will not be admissible unless, based on the totality of the circumstances, the procedure was necessary. A showup will not be necessary, however, unless the police lacked probable cause to make an arrest or, as a result of other exigent circumstances, could

Do They Enhance Evidence Evaluation?, 17 J. FORENSIC PSYCH. RSCH. & PRAC. 1, 14–16 (2017) (https://doi.org/10.1080/15228932.2017.1235964).

In contrast to jury instructions, expert testimony can help jurors understand the quality of eyewitness evidence, especially in cases with questionable identifications. *See* Michael R. Leippe & Donna Eisenstadt, *The Influence of Eyewitness Expert Testimony on Jurors' Beliefs and Judgments*, *in* EXPERT TESTIMONY ON THE PSYCHOLOGY OF EYEWITNESS IDENTIFICATION 169 (Brian L. Cutler ed., 2009) (https://doi.org/10.1093/acprof:oso/9780195331974.003.008).

406. *See, e.g.*, Ferensic v. Birkett, 501 F.3d 469, 477–80 (6th Cir. 2007).

407. Vallas, *supra* note 62, at 135.

408. State v. Ramirez, 817 P.2d 774, 780–81 (Utah 1991).

409. State v. Marquez, 967 A.2d 56, 69–71 (Conn. 2009); State v. Hunt, 69 P.3d 571, 576 (Kan. 2003).

410. State v. Cromedy, 727 A.2d 457, 467 (N.J. 1999).

411. Commonwealth v. Botelho, 343 N.E.2d 876, 880 (Mass. 1976).

412. Commonwealth v. Johnson, 650 N.E.2d 1257, 1261 (Mass. 1995).

413. Commonwealth v. Austin, 657 N.E.2d 458, 461 (Mass. 1995).

414. People v. Duuvon, 571 N.E.2d 654, 656 (N.Y. 1991); People v. Adams, 423 N.E.2d 379, 383–84 (N.Y. 1981).

> not have conducted a lineup or photo array. A lineup or photo array is generally fairer than a showup, because it distributes the probability of identification among the number of persons arrayed, thus reducing the risk of a misidentification . . . . In a showup, however, the only option for the witness is to decide whether to identify the suspect.[415]

Courts should consider following the lead of these states by applying a bright-line, categorical rule that any out-of-court identifications stemming from an unnecessarily or impermissibly suggestive confrontation are inadmissible at trial.[416]

b. Excluding from Evidence All In-Court Identifications Following Impermissible Out-of-Court Ones

Recall that Massachusetts and Connecticut do not allow *in-court* identifications following out-of-court identifications that were suppressed because they were a product of unduly suggestive confrontations.[417] As of this writing, however, no other states have adopted this approach; rather, they cling to the flawed "independent source" doctrine that permits in-court identifications that follow impermissibly suggestive out-of-court identifications.[418] As previously mentioned, courts should abandon the independent source doctrine and hold that unless there was some prior relationship between the witness and suspect that predates the observation at issue, in-court identifications are inadmissible after any out-of-court identifications are suppressed as unduly suggestive.

c. Excluding First-Time Identifications That Occur in Court

In 2014, the Supreme Judicial Court of Massachusetts expanded its rule against unnecessary showups when it held that "[w]here an eyewitness has not participated before trial in an identification procedure, we shall treat the in-court identification as an in-court showup, and shall admit it in evidence only where there is 'good reason' for its admission."[419] Most courts have refused, however, to follow Massachusetts's lead in this

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415. State v. Dubose, 699 N.W.2d 582, 593–94 (Wis. 2005) (citing Richard Gonzalez, Phoebe C. Ellsworth & Maceo Pembroke, *Response Biases in Lineups and Showups*, 64 J. PERSONALITY & SOC. PSYCH. 525, 527 (1993) (https://doi.org/10.1037/0022-3514.64.4.525)), *overruled by* State v. Roberson, 935 N.W.2d 813, 828 (Wis. 2019).

416. *See, e.g.*, Commonwealth v. Johnson, 650 N.E.2d 1257, 1261 (Mass. 1995); People v. Adams, 423 N.E.2d 379, 383–84 (N.Y. 1981).

417. Commonwealth v. Johnson, 45 N.E.3d 83, 88–89 (Mass. 2016); State v. Dickson, 141 A.3d 810, 820–27 (Conn. 2016).

418. *See* Garrett, *supra* note 391, at 476–88.

419. Commonwealth v. Crayton, 21 N.E.3d 157, 169 (Mass. 2014).

regard.[420] But given the high level of suggestibility of any initial identification that occurs in court against the very person charged by the government, states should reevaluate their stance and follow Massachusetts's lead.

d. Reliability Review Without the Biggers–Brathwaite Factors

Several states have significantly modified the *Biggers–Brathwaite* factors or even abandoned them completely.[421] Most of these states shifted the focus in identification cases to a more scientific evaluation of reliability.[422] Under such an approach, judges analyze the estimator, systems, and reflector variables described in Parts II and V of this Article, often with the assistance of expert witnesses. That said, such reforms only go so far in preventing wrongful convictions based on misidentifications unless states also address the problem of "independent source" determinations for in-court identifications that follow defective identification processes.[423]

V. GUIDELINES FOR LINEUP IDENTIFICATION PROCEDURES

In 1998, drawing on the empirical research demonstrating systemic problems with eyewitness identification, the APLS published a peer-reviewed guide for reforming how the criminal justice system approaches eyewitness evidence.[424] The following year, the U.S. Department of Justice used that guide as the basis for issuing recommendations for law enforcement on the most scientifically valid ways to collect and preserve eyewitness evidence.[425] In 2004, the American Bar Association relied on these reports when it issued a summary of best practices they recommended apply to the administration of live and photo lineups.[426] The

420. *See, e.g.*, State v. Doolin, 942 N.W.2d 500, 513 (Iowa 2020); Garner v. People, 436 P.3d 1107, 1120 (Colo. 2019); Jeter v. Commonwealth, 531 S.W.3d 488, 494–95 (Ky. 2017).

421. State v. Harris, 191 A.3d 119, 143 (Conn. 2018); Young v. State, 374 P.3d 395, 427–28 (Alaska 2016); State v. Lawson, 291 P.3d 673, 685–90 (Or. 2012); State v. Henderson, 27 A.3d 872, 916–18 (N.J. 2011); *cf.* State v. Ramirez, 817 P.2d 774, 779–81 (Utah 1991) (modifying *Biggers–Brathwaite* factors, rather than rejecting them wholesale), *abrogated by* State v. Lujan, 459 P.3d 992, 999 (Utah 2020); State v. Hunt, 69 P.3d 571, 576–78 (Kan. 2003) (adopting *Ramirez* framework).

422. *Harris*, 191 A.3d at 143; *Young*, 374 P.3d at 427–28; *Lawson*, 291 P.3d at 685–90; *Henderson*, 27 A.3d at 916–18.

423. As previously discussed, both mugshot searches and witnesses' independently-initiated social media searches can taint the reliability of memory via unconscious transference. The independent source doctrine ignores this fact. *See supra* notes 150–153 and accompanying text.

424. *See generally* Wells, Small, Penrod, Malpass, Fulero & Brimacombe, *supra* note 219.

425. *See generally* U.S. DEP'T OF JUST., *supra* note 211.

426. AM. BAR ASS'N, REP. NO. 111C, STATEMENT OF BEST PRACTICES FOR PROMOTING THE ACCURACY OF EYEWITNESS IDENTIFICATION PROCEDURES (2004) [hereinafter ABA EYEWITNESS BEST PRACTICES], https://www.nacdl.org/getattachment/ff7ea91a-f7d7-494c-8243-

following sections summarize those procedures, integrating the most recent recommendations that the APLS made in 2020 when it updated its guidelines with empirical data from the twenty-two years since its initial report.[427]

At the outset, it is important to note that most of the principles outlined in this Part apply equally to live lineups and photo arrays. The scientific evidence to date suggests that there are no statistically significant differences in the accuracy of identifications between these two practices.[428] Given the complexities of orchestrating live lineups, which range from finding a sufficient number of suitable participants to create fair lineups to the nervousness of suspects who participate in lineups, "live lineups are rarely the best option in practice."[429] That may explain, in part, why they have become such rarities in police practice.[430]

That said, both lineups and photo arrays are superior to showups because, as repeated throughout this Article, showups are suggestive by their very nature.[431] Moreover, "there should never be such a thing as a photographic showup. . . . If investigators are merely in possession of a photo of a suspect, there is no reasonable excuse for not taking the time to embed the photo among filler photos and conduct a proper photo lineup."[432] The only exception to this rule would be when the witness was previously well-acquainted with the suspect, and a photo is used to confirm that the witness and law enforcement personnel are talking about the same person.[433]

8e7a6a3316a5/aba-adopts-statement-of-best-practices-for-promoting-the-accuracy-of-eyewitness-identification-procedures-august-2004.pdf [https://perma.cc/EHB7-KUUS].

427. *See generally* Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29; NAT'L RSCH. COUNCIL, *supra* note 28.

428. Ryan J. Fitzgerald, Heather L. Price & Tim Valentine, *Eyewitness Identification: Live, Photo, and Video Lineups*, 24 PSYCH. PUB. POL'Y & L. 307, 320–21 (2018) (https://doi.org/10.1037/law0000164).

429. *Id.* at 307.

430. *See supra* notes 41–42 and accompanying text.

431. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 7.

432. *Id.*; United States v. Jones, 652 F. Supp. 1561, 1570 (S.D.N.Y. 1986) ("In the absence of exigent circumstances, presentation of a single photograph to the victim of a crime amounts to an unnecessarily suggestive photographic identification procedure."); *see also* Simmons v. United States, 390 U.S. 377, 383 (1968) ("Even if the police subsequently follow the most correct photographic identification procedures and show him the pictures of a number of individuals without indicating whom they suspect, there is some danger that the witness may make an incorrect identification. This danger will be increased if the police display to the witness only the picture of a single individual who generally resembles the person he saw, or if they show him the pictures of several persons among which the photograph of a single such individual recurs or is in some way emphasized."); United States v. Smith, 429 F. Supp. 2d 440, 450 (D. Mass. 2006) ("It is axiomatic that identifications achieved through the use of a single photo are highly problematic. A single photo shown to an eyewitness (the proverbial 'Is this the man you saw?' question) plainly suggests the guilt of the person pictured.").

433. NAT'L RSCH. COUNCIL, *supra* note 28, at 28.

> "Is this the Jack Smith you're talking about?" If the police and witness are talking about the same person, the witness says so; if not, he or she says that instead. Here the single photograph is not suggestive because the witness, and not the police, have implicated the suspect's involvement and the photo is simply for confirmation of the person's identity. Otherwise, where investigators simply happen to have a photograph of a suspect, it should be placed in a photo array. Showing a single confirmatory photograph to an eyewitness who does not already know the suspect should be avoided as a basis for identification.[434]

On what should be the rare occasions that a live showup is necessary for the reasons previously discussed (e.g., the impending blindness or death of an eyewitness), then officers need to take special care to eliminate suggestive cues, warn the witness that the detained person may not be the culprit, video record the procedure, and secure an immediate statement about the witness's confidence in the identification.[435] Importantly, before showups occur, law enforcement personnel should let witnesses know that if the detained person is not the culprit, the witnesses will have additional opportunities to view other potential suspects in the future.[436]

A. Considerations Before the Administration of Lineups

Although the police, the prosecution, or the court may grant a suspect's request for a lineup, a suspect has no right to a lineup.[437] Rather, law enforcement and judicial personnel have discretion whether to conduct either live lineups or photo arrays (which, for convenience, are collectively referred to as lineups throughout the remainder of this Article unless specifically separated).

If a lineup is conducted, it needs to occur "out of earshot and view of others and in a location that avoids exposing the witness to information or evidence that could influence the witness's identification, including information about the case, the progress of the investigation, or the

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434. THIRD CIR. TASK FORCE REP., *supra* note 30, at 72 (citing NAT'L RSCH. COUNCIL, *supra* note 28, at 28–29).

435. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 9.

436. *Id.* at 27 (citing Andrew M. Smith, Gary L. Wells, Rod C.L. Lindsay & Tiffany Myerson, *Eyewitness Identification Performance on Showups Improves with an Additional-Opportunities Instruction: Evidence for Present-Absent Criteria Discrepancy*, 42 LAW & HUM. BEHAV. 215 (2018) (https://doi.org/10.1037/lhb0000284)).

437. Sims v. Sullivan, 867 F.2d 142, 145 (2d Cir. 1989); *see also* Jones v. Smith, No. 16-1196, 2016 WL 11849371, at *4 (6th Cir. Aug. 29, 2016); Branch v. Marshall, No. 08 CIV 8381 PKC JLC, 2010 WL 5158632, at *17 (S.D.N.Y. Oct. 12, 2010), *report and recommendation adopted*, 2010 WL 5158633 (S.D.N.Y. Dec. 16, 2010).

suspect."[438] "Neither the suspect nor any photographs of the suspect (including wanted posters) should be visible in any area where the witness will be present."[439]

1. Prelineup Interviews

Before a lineup is even contemplated, officers should interview witnesses as soon as possible after the commission of a crime. This will allow law enforcement to document witnesses'

> descriptions of the culprit, obtain their self-report of viewing conditions and attention during the crime, document any claims of prior familiarity with the culprit, instruct witnesses to not discuss the event with other cowitnesses, and warn the witnesses against attempting to identify the culprit on their own. The entire interview should be video-recorded.[440]

As a rule, interviewers should invite open-ended responses from witnesses,[441] "followed by *specific probes* associated with key details such as the culprit's physical characteristics (e.g., height, build, age, race, sex, etc.), clothing, or any distinguishing characteristics."[442] Interviewers should also elicit information about other estimator variables that can influence the reliability of a witness's memory, such as lighting conditions, distance at the time of observation, length of exposure to the culprit, the presence of a weapon, the witness's use of drugs or alcohol, and other factors described in Part II of this Article.[443]

Because the ways that police conduct interviews can strengthen or weaken the reliability of descriptions that eyewitnesses provide, researchers have developed evidence-based protocols for effective

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438. Memorandum from Sally Q. Yates, Deputy Att'y Gen., U.S. Dep't of Just., on Eyewitness Identification: Procs. for Conducting Photo Arrays to Heads of Dep't L. Enf't Components All Dep't Prosecutors § 1.1, at 1 (Jan. 6, 2017) [hereinafter Yates Eyewitness Memo], https://www.justice.gov/file/923201/download [https://perma.cc/WQQ6-CGQZ].

439. *Id.* § 1.2, at 1.

440. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 8.

441. *Id.* at 10 (citing Colin Clarke, Rebecca Milne & Ray Bull, *Interviewing Suspects of Crime: The Impact of PEACE Training, Supervision and the Presence of a Legal Advisor*, 8 J. INVESTIGATIVE PSYCH. & OFFENDER PROFILING 149 (2011) (https://doi.org/10.1002/jip.144); Dave Walsh & Ray Bull, *What Really Is Effective in Interviews with Suspects? A Study Comparing Interviewing Skills Against Interviewing Outcomes*, 15 LEGAL & CRIMINOLOGICAL PSYCH. 305 (2010) (https://doi.org/10.1348/135532509X4633560)).

442. *Id.* (citing Evan Brown, Kenneth A. Deffenbacher & William Sturgill, *Memory for Faces and the Circumstances of the Encounter*, 62 J. APPLIED PSYCH. 311 (1977) (https://doi.org/10.1037/0021-9010.62.3.311); Céline Launay & Jacques Py, *Methods and Aims of Investigative Interviewing of Adult Witnesses: An Analysis of Professional Practices*, 21 PRATIQUES PSYCHOLOGIQUES 55 (2015) (https://doi.org/10.1016/j.prps.2014.11.001)). *See generally* Wise, Safer & Maro, *supra* note 381.

443. *Id.* (internal citations omitted).

interviewing techniques with both adults and children[444] that avoid practices that can taint the process with suggestive or misleading questions or behaviors.[445] There are specific techniques that help with collecting crime details and person descriptions—such as the Cognitive Interview and the Person Description Interview—that should be integrated into law enforcement training, policies, and practices.[446] Interviewers are well advised to consult these resources, and law enforcement leaders should not only provide training on these protocols but also integrate compliance with them into formal policies.[447]

2. Other Prelineup Considerations

After prelineup interviews are completed, law enforcement officers should consider the following before conducting a lineup:

- Police should not conduct lineups before discussing the legal advisability of a lineup with a prosecuting attorney. That is due, in large part, to the recommendation that there always be evidence-based suspicion of the person's involvement in a crime *before* a suspect is included in any identification.[448] Not only does this help to honor suspects' constitutional rights but also helps to reduce

444. *Id.* at 9 (citing Coral J. Dando, R. Edward Geiselman, Nicci MacLeod & Andy Griffiths, *Interviewing Adult Witnesses and Victims*, *in* COMMUNICATION IN INVESTIGATIVE AND LEGAL CONTEXTS: INTEGRATED APPROACHES FROM FORENSIC PSYCHOLOGY, LINGUISTICS AND LAW ENFORCEMENT 79–106 (Gavin Oxburgh, Trond Myklebust, Tim Grant & Rebecca Milne eds., 2015); Ronald P. Fisher, Nadja Schreiber Compo, Jillian Rivard & Dana Hirn, *Interviewing Witnesses*, *in* THE SAGE HANDBOOK OF APPLIED MEMORY 559–78 (Timothy J. Perfect & D. Stephen Lindsay eds., 2014)). *See generally* David J. La Rooy, Sonja P. Brubacher, Anu Aromaki-Stratos, Mireille Cyr, Irit Hershkowitz, Julia Korkman, Trond Myklebust, Makiko Naka, Carlos E. Peixoto, Kim P. Roberts, Heather Stewart & Michael E. Lamb, *The NICHD Protocol: A Review of an Internationally-Used Evidence-Based Tool for Training Child Forensic Interviewers*, 1 J. CRIMINOLOGICAL RSCH. POL'Y & PRAC. 76 (2015) (https://doi.org/10.1108/JCRPP-01-2015-0001).

445. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 9 (citing, *inter alia*, Elizabeth F. Loftus, *Eavesdropping on Memory*, 68 ANN. REV. PSYCH. 1 (2017) (https://doi.org/10.1146/annurev-psych-010416-044138); Eryn J. Newman & Maryanne Garry, *False Memory*, *in* PERFECT & LINDSAY, *supra* note 444, at 110–26)).

446. *Id.* (citing, *inter alia*, Samuel Demarchi, Jacques Py, S. Groud-Than, T. Parain & Maïté Brunel, *Describing a Face Without Overshadowing Effect: Another Benefice of the Person Description Interview*, 58 PSYCHOLOGIE FRANÇAISE 123 (2013) (https://doi.org/10.1016/j.psfr.2013.01.002); Fiona Gabbert & Lorraine Hope, *Suggestibility and Memory Conformity*, *in* SUGGESTIBILITY IN LEGAL CONTEXTS: PSYCHOLOGICAL RESEARCH AND FORENSIC IMPLICATIONS 63–84 (Anne M. Ridley, Fiona Gabbert & David J. La Rooy eds., 2013); Amina Memon, Christian A. Meissner & Joanne Fraser, *The Cognitive Interview: A Meta-Analytic Review and Study Space Analysis of the Past 25 Years*, 16 PSYCH. PUB. POL'Y & L. 340 (2010) (https://doi.org/10.1037/a0020518); Geri E. Satin & Ronald P. Fisher, *Investigative Utility of the Cognitive Interview: Describing and Finding Perpetrators*, 43 LAW & HUM. BEHAV. 491 (2019) (https://doi.org/10.1037/lhb0000326)).

447. For an in-depth exploration on the efficacy of having clear administrative policies on which police receive ongoing training and management consistent enforce, see SAMUEL E. WALKER & CAROL A. ARCHBOLD, THE NEW WORLD OF POLICE ACCOUNTABILITY 13–23 (3d ed. 2020).

448. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 11–14.

misidentifications. That is because "culprit-absent lineups inflate the rate at which eyewitnesses identify known-innocent fillers."[449] Moreover, the evidence giving rise to such suspicion "should be documented in writing prior to the lineup."[450]

- A copy of the descriptions witnesses provided during prelineup interviews should be made available to the suspect's counsel *before* a lineup takes place.

- A lineup should be conducted as soon after the arrest of a suspect as practicable. Promptly conducted lineups enable innocent arrestees to be released, guarantee that witnesses' memories are fresh, and ensure that crucial identification evidence is obtained before the suspect is released on bail or for other reasons. When possible, lineup arrangements (e.g., contacting witnesses and selecting foils) should be completed before the arrest of the suspect.

- Most courts hold that once people are in custody, their liberty is not further infringed under the Fourth Amendment by being presented in a lineup for witnesses to view.[451] Additionally, assuming that the right to counsel under *Wade–Gilbert* is scrupulously honored, the Fifth Amendment is not violated by "compelling the accused merely to exhibit his person for observation by a prosecution witness prior to trial [which] involves no compulsion of the accused to give evidence having testimonial significance. It is compulsion of the accused to exhibit his physical characteristics, not compulsion to disclose any knowledge he might have."[452]

- Compelling people who are not in custody to appear in a lineup involves a much greater intrusion on liberty and, therefore, implicates the Fourth Amendment. Forcing someone who is not in custody to appear for a lineup is usually accomplished by order of a court or grand jury, although some states have enacted statutes authorizing "temporary detention orders" that create special procedures for compelling participation in lineups, as well as obtaining "fingerprints, photographs, blood samples and other physical evidence when reasonable grounds exist."[453] U.S. jurisdictions are

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449. *Id.* at 11 (citing Andrew M. Smith, Miko M. Wilford, Adele Quigley-McBride & Gary L. Wells, *Mistaken Eyewitness Identification Rates Increase when Either Witnessing or Testing Conditions Get Worse*, 43 LAW & HUM. BEHAV. 358 (2019) (https://doi.org/10.1037/lhb0000334)).

450. *Id.*

451. State v. Wilks, 358 N.W.2d 273, 279–80 (Wis. 1984) (holding that a person in lawful custody for a civil offense may be required to participate in a lineup for an unrelated criminal offense); People v. Hodge, 526 P.2d 309, 310 (Colo. 1974) (holding that a person properly detained on criminal charges "can be exhibited in a line-up" after being advised of applicable rights).

452. United States v. Wade, 388 U.S. 218, 222 (1967).

453. WILLIAM E. RINGEL, JUSTIN D. FRANKLIN & STEVEN C. BELL, SEARCHES AND SEIZURES, ARRESTS AND CONFESSIONS § 18:4 (2d ed. 2007 & 2022 Supp.).

split on whether such orders require reasonable suspicion, probable cause, or some other standard.

> The "reasonable grounds" standard generally requires that reasonable suspicion exist that the person from whom the evidence is sought is connected to the commission of an offense. Some states, however, require only that there be reasonable cause to believe a crime has been committed and that the ordered identification procedure "may contribute to the identification of the individual who committed such offense." One court has held that appearance similar to that of the alleged perpetrator or similarity in *modus operandi* between a previously committed offense and the one under investigation is insufficient, standing alone, to meet the latter standard.[454]

Some courts have upheld the ordering of a person not in custody to appear in a lineup in serious cases, reasoning that the public interest in law enforcement outweighed the privacy interests of the person.[455] Other courts have held that a person not in custody cannot be ordered to participate in a lineup unless there is probable cause to arrest.[456]

- If the suspect has a right to counsel at a lineup, the suspect should be informed of that right. If the suspect chooses to waive the right to counsel, a careful record should be made of the suspect's waiver and agreement to voluntarily participate in the lineup.

- Even when the suspect's counsel is not required at a lineup because formal criminal proceedings have not yet been instituted or the suspect has knowingly, intelligently, and voluntarily waived the right to counsel, the officer conducting the lineup should consider allowing counsel to be present to minimize subsequent challenges to the fairness of the lineup.[457]

- If the suspect chooses to have an attorney present at the lineup, the lineup should be delayed a reasonable time to allow the attorney to appear. The attorney must be allowed to be present from the beginning of the lineup or "the moment [the suspect] and the other lineup members were within the sight of witnesses."[458] The attorney

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454. *Id.*

455. State v. Hall, 461 A.2d 1155, 1158–59 (N.J. 1983); Wise v. Murphy, 275 A.2d 205, 212–14 (D.C. 1971).

456. State v. White, 640 A.2d 572, 587 (Conn. 1994); *In re* Armed Robbery, Albertson's, 659 P.2d 1092, 1094 (Wash. 1983); Alphonso C. v. Morgenthau, 376 N.Y.S.2d 126, 129–130 (App. Div. 1975).

457. State v. Taylor, 210 N.W.2d 873, 882 (Wis. 1973) ("While the presence of counsel at a lineup prior to the institution of formal charges is not mandatory henceforth, we nevertheless believe it is good police practice and in the interest of justice to afford such counsel where practicable.").

458. United States v. LaPierre, 998 F.2d 1460, 1464 (9th Cir. 1993).

should be allowed to consult with the suspect before the lineup, as well as observe all the proceedings, take notes, and record the identification process in whole or in part. If the attorney has suggestions that might improve the fairness of the proceedings, the lineup administrator may follow them if they are reasonable and practicable. The suspect's attorney should not, however, be allowed to control the proceedings.

- The names of all persons participating in the lineup, the names of the persons conducting the lineup, and the name of the suspect's attorney, if any, should be recorded and preserved.

- Witnesses should not be allowed to view photographs of the suspect before the lineup. If a witness has viewed such a photo before the lineup, this information must be disclosed to the suspect's counsel and the court handling the case.

B. Guidelines for Administering Lineups

1. Double-Blind Administration

Lineups should be administered using a *double-blind* procedure.[459] That means the person who conducts a lineup and all others present (except for defense counsel, when applicable) should be unaware of which of the participants is the suspect.[460] A double-blind administration procedure significantly reduces, if not eliminates, suggestive behaviors by lineup administrators that can unduly influence the witness, consciously or unconsciously.[461] To enhance the reliability of blind procedures, eyewitnesses should be instructed that they should not assume that the person administering the lineup knows who the suspect is. Doing so helps to decrease the likelihood of witnesses looking for cues from the lineup administrator.[462] Correspondingly, blind administration prevents lineup

459. Gary L. Wells, *Eyewitness Identification*, *in* 2 REFORMING CRIMINAL JUSTICE 259, 266 (Erik Luna ed., 2018) ("Double-blind lineup administration is probably the most important single reform that a jurisdiction can make to its eyewitness-identification procedures.").

460. *See* Gary L. Wells & Eric P. Seelau, *Eyewitness Identification: Psychological Research and Legal Policy on Lineups*, 1 PSYCH. PUB. POL'Y & L. 765, 775–76 (1995) (https://doi.org/10.1037/1076-8971.1.4.765).

461. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 8, 15 (citing, *inter alia*, Steve D. Charman & Vanessa Quiroz, *Blind Sequential Lineup Administration Reduces Both False Identifications and Confidence in Those False Identifications*, 40 LAW & HUM. BEHAV. 477 (2016) (https://doi.org/10.1037/lhb0000197); Margaret B. Kovera & Andrew J. Evelo, *The Case for Double-Blind Lineup Administration*, 23 PSYCH. PUB. POL'Y & L. 421 (2017) (https://doi.org/10.1037/law0000139); David M. Zimmerman, Jacqueline A. Chorn, Lindsey M. Rhead, Andrew J. Evelo & Margaret B. Kovera, *Memory Strength and Lineup Presentation Moderate Effects of Administrator Influence on Mistaken Identifications*, 23 J. EXPERIMENTAL PSYCH. APPLIED 460 (2017) (https://doi.org/10.1037/xap0000147)).

462. Wells & Seelau, *supra* note 460, at 776.

administrators from being able to give cues, either intentionally or subconsciously, that can artificially inflate the confidence level of any identification.[463]

Even small police departments can administer double-blind lineups. The State of New Jersey mandated double-blind lineups in 2002, and there have not been any reports of difficulties in compliance, likely because very small or even single-person departments can enter into cooperation agreements with neighboring agencies to assist each other whenever lineups need to be conducted.[464] But even if such cooperation proves unworkable in a particular case, that should not prevent the use of a double-blind process because photo arrays can be administered using a "computer with software that delivers prelineup instructions, randomizes and presents the photo lineup, records any identification decision from mouse clicks, and collects a confidence statement from the eyewitness."[465] If access to such software is a barrier, then a "low-tech alternative . . . is the self-administered envelope method," which is sometimes called the folder-shuffle method.[466] This tactic presents a witness with a photo array that uses numbered photos and a page with a set of instructions that complies with all of the other recommendations discussed in this section, including a confidence question.[467] The photos are placed in a large envelope and sealed.[468] "After giving complete instructions to the eyewitness, the lineup administrator should tell the eyewitness that the photos are inside of the envelope."[469]

In light of the foregoing, there is no reason to not use either a double-blind procedure or the envelope method. Still, if neither of these is used (the reasons for which will likely need to be justified in court), then it is essential that a nonblind lineup administrator not engage in unnecessary conversation with witnesses. Most importantly, the administrator should not indicate by words or any other means of communication any opinion as to the identity or guilt of the suspect. The administrator especially should not coax, coach, or tell witnesses that they have chosen the person suspected of the crime, made the "correct" decision, or did a "good job." A recording documenting compliance with these directives will likely be

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463. *See* sources cited *supra* note 461.

464. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 16. Since then, other states have also mandated blind procedures. *See, e.g.*, CAL. PENAL CODE § 859.7(2) (2019 & 2023 Supp.).

465. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 16.

466. *Id.*; Yates Eyewitness Memo, *supra* note 438, § 5.3, at 3.

467. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 16; Yates Eyewitness Memo, *supra* note 437, § 5.3, at 3.

468. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 16.

469. *Id.* (internal reference omitted).

essential in establishing the admissibility of such an identification into evidence, presuming a judge is even willing to consider whatever reasons are offered for not using either a double-blind protocol or the envelope method.

2. Sequestration of Witnesses

If more than one witness is called to view a lineup, those who have already viewed the lineup should not be allowed to converse with persons who have not yet viewed the lineup. Indeed, to avoid contamination, especially via the postevent misinformation effect, investigators should "instruct witnesses not to discuss their accounts with or in front of one another."[470]

Witnesses who have viewed the lineup should be kept in a room separate from witnesses who have not yet viewed the lineup. Furthermore, only one witness should be present in the room where the lineup is being conducted, helping minimize co-witness discussions that can distort memories or even create false memories.[471] Regrettably, however, the physical separation of witnesses may not stop them from talking with each other either in person (outside the presence of law enforcement personnel) or online.[472] Because either type of discussion can lead to confabulation, it bears reiterating that witnesses should be warned not to discuss the case with each other.[473]

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470. *Id.* at 10.

471. *See generally, e.g.*, Mitchell L. Eisen, Fiona Gabbert, Rebecca Ying & Joseph Williams, *"I Think He Had a Tattoo on His Neck": How Co-Witness Discussions About a Perpetrator's Description Can Affect Eyewitness Identification Decisions*, 6 J. APPLIED RSCH. MEMORY & COGNITION 274 (2017) (https://doi.org/10.1016/j.jarmac.2017.01.009); Hiroshi Ito, Krystian Barzykowski, Magdalena Grzesik, Sami Gülgoz, Ceren Gürdere, Steve M.J. Janssen, Jessie Khor, Harriet Rowthorn, Kimberley A. Wade, Karlos Luna, Pedro B. Abluquerque, Devvarta Kumar, Arman Deep Singh, William W. Cecconello, Sara Cadavid, Nicole C. Laird, Mario J. Baldassari, D. Stephen Lindsay & Kazuo Mori, *Eyewitness Memory Distortion Following Co-Witness Discussion: A Replication of Garry, French, Kinzett, and Mori (2008) in Ten Countries*, 8 J. APPLIED RSCH. MEMORY & COGNITION 68 (2019) (https://doi.org/10.1016/j.jarmac.2018.09.004); Elin M. Skagerberg & Daniel B. Wright, *The Prevalence of Co-Witnesses and Co-Witness Discussions in Real Eyewitnesses*, 14 PSYCH. CRIME & L. 513 (2008) (https://doi.org/10.1080/10683160801948980); Craig Thorley & Devvarta Kumar, *Eyewitness Susceptibility to Co-Witness Misinformation Is Influenced by Co-Witness Confidence and Own Self-Confidence*, 23 PSYCH. CRIME & L. 342 (2017) (https://doi.org/10.1080/1068316X.2016.1258471).

472. *See generally* Sara Cadavid & Karlos Luna, *Online Co-Witness Discussions Also Lead to Eyewitness Memory Distortion: The MORI-v Technique*, 35 APPLIED COGNITIVE PSYCH. 621 (2021) (https://doi.org/10.1002/acp.3785).

473. Some research suggests that when witnesses discuss a case together, their *collaborative recall* may assist in reducing errors. *See generally* Tara E. Karns, Sara J. Irvin, Samantha L. Suranic & Mark G. Rivardo, *Collaborative Recall Reduces the Effect of a Misleading Post Event Narrative*, 11 N. AM. J. PSYCH. 17 (2009); Clelia Rossi-Arnaud, Pietro Spataro, Divya Bhatia & Vincenzo Cestari, *Collaborative Remembering Reduces Suggestibility: A Study with the Gudjonsson Suggestibility Scale*, 27 MEMORY 603 (2019) (https://doi.org/10.1080/09658211.2018.1542004).

3. One Suspect per Lineup

Only one suspect should appear in a lineup.[474] Having more than one suspect included in a lineup "produces sharply inflated lineup false identification rates in comparison with the single-suspect model."[475] Thus, if two or more persons are suspected of involvement in a crime, separate lineups need to be conducted to ensure that no two suspects appear together in the same lineup.[476]

4. Foils/Fillers

Foils should be chosen for their similarity to the witness's description of the perpetrator. For a lineup to be fair, the actual suspect should not stand out from the other participants.[477] A meta-analysis of seventeen independent studies using data from 6,650 participants found that "[c]ompared with lineups with moderate or high similarity fillers, lineups with low similarity fillers were far more likely to elicit suspect identifications. This was true regardless of whether the suspect was guilty or innocent, underscoring the importance of ensuring the suspect does not stand out from the fillers."[478] Notably, some police departments rely on facial matching software to select photos of fillers that meet these criteria.[479] If used, police should be sure that such software does not draw on too large a pool of potential foils because research suggests that this can result in lineups where fillers are too similar to the suspect, which lowers overall identification accuracy.[480]

Other research reports that the alleged "benefits of collaborative recall in reducing misinformation effects" are not empirically supported; the misinformation shared among witnesses not only persists, but may even be magnified. *See, e.g.*, Mark G. Rivardo, Anna T. Rutledge, Cortney Chelecki, Brooke E. Stayer, Macie Quarles & Ashley Kline, *Collaborative Recall of Eyewitness Event Increases Misinformation Effect at 1 Week*, 15 N. AM. J. PSYCH. 495, 495 (2013). Given the inconclusive state of this science, law enforcement personnel should err on the side of caution by instructing witnesses not to talk with each other, thereby reducing the possibility of confabulation.

474. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 8, 17–19; Wells & Seelau, *supra* note 460, at 766.

475. Wells & Seelau, *supra* note 460, at 766 (citing Gary L. Wells & John W. Turtle, *Eyewitness Identification: The Importance of Lineup Models*, 99 PSYCH. BULL. 320 (1986) (https://doi.org/10.1037/0033-2909.99.3.320)).

476. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 19.

477. *Id.* at 8, 17–19; Wells & Seelau, *supra* note 460, at 779.

478. Ryan J. Fitzgerald, Heather L. Price, Chris Oriet & Steve D. Charman, *The Effect of Suspect-Filler Similarity on Eyewitness Identification Decisions: A Meta-Analysis*, 19 PSYCH. PUB. POL'Y & L. 151, 151 (2013) (https://doi.org/10.1037/a0030618).

479. *See, e.g.*, Amanda N. Bergold & Paul Heaton, *Does Filler Database Size Influence Identification Accuracy?*, 42 LAW & HUM. BEHAV. 227, 227 (2018) (https://doi.org/10.1037/lhb0000289).

480. *Id.* at 239; *see also* Ryan J. Fitzgerald, Chris Oriet & Heather L. Price, *Suspect Filler Similarity in Eyewitness Lineups: A Literature Review and a Novel Methodology*, 39 LAW & HUM.

Constructing a truly fair lineup can be difficult. Although the participants should not be clones of each other, they should be of the same race, be similarly dressed (although preferably not in clothing matching witnesses' descriptions of clothing worn by the culprit), share the same general body build (i.e., no one should be of substantially differing height and weight than others in the lineup), and should not have visible distinctive features (e.g., all should have similar or absent facial hair; either all or none should have tattoos, etc.).[481]

If photo arrays are used, then care must be taken to make sure that "the background of the photos, the size or brightness of the images, and the source of the photo[s]" are similar enough that the suspect's photo does not stand out from those of fillers.[482] Photographs of fillers may be digitally altered to achieve such similarity in a photo array.[483] They may also be altered to show what persons might look like with certain characteristics (e.g., a beard) or clothing (e.g., a particular type of hat), so long as all other photographs of fillers in the array are altered in the same way, but the photo of the suspect is not altered.[484] Photos should either all be color pictures or all black-and-white because some courts deem arrays that mix color and black-and-white photos unnecessarily suggestive.[485]

BEHAV. 62, 70–72 (2015) (https://doi.org/10.1037/lhb0000095) (reporting that higher correct identification rates were observed when software produced lineups with moderately high similarity between foils and suspects, and lower accuracy when the software produce fillers with very high similarity to suspects).

481. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 18 (citing Rod C.L. Lindsay, Ronald Martin & Lisa Webber, *Default Values in Eyewitness Descriptions*, 18 LAW & HUM. BEHAV. 527 (1994) (https://doi.org/10.1007/BF01499172); Melissa F. Colloff, Kimberley A. Wade & Deryn Strange, *Unfair Lineups Make Eyewitnesses More Likely to Confuse Innocent and Guilty Suspects*, 27 PSYCH. SCI. 1227 (2016) (https://doi.org/10.1177/0956797616655789)); *see also* Donald P. Judges, *Two Cheers for the Department of Justice's Eyewitness Evidence: A Guide for Law Enforcement*, 53 ARK. L. REV. 231, 258–59 (2000).

482. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 19; Yates Eyewitness Memo, *supra* note 438, § 3.4, at 2.

483. Yates Eyewitness Memo, *supra* note 438, § 3.3, at 2.

> Where the suspect has a unique feature, such as a scar, tattoo, or mole, or distinctive clothing that would make him or her stand out in a photo array, filler photographs should include that unique feature either by selecting fillers who have such a feature themselves or by altering the photographs of fillers to the extent necessary to achieve a consistent appearance. . . . The administrator should document any alterations . . . as well as the reason(s) for doing so.

Id.

484. *See, e.g.*, United States v. Dunbar, 767 F.2d 72, 73–74 (3d Cir. 1985); United States v. Ellis, 121 F. Supp. 3d 927, 934, 944–45 (N.D. Cal. 2015); Solomon v. State, 469 S.W.3d 641, 643–47 (Tex. App. 2015). For explorations of when and how digital manipulations of photos of fillers in an array might be acceptable, see generally Nicholas Drews, Note, *Picture Perfect: Reforming Law Enforcement Use of Image Editing in Eyewitness Identification*, 89 GEO. WASH. L. REV. 429 (2021); Molly Eyerman, *Police Using Photoshop to Alter a Suspect's Photo in Lineup and Courts Allowing It: Does it Violate Due Process*?, 70 CATH. U. L. REV. 469 (2021).

485. *E.g.*, O'Brien v. Wainwright, 738 F.2d 1139, 1141 (11th Cir. 1984).

Furthermore, mugshots should not be used because they may prejudice the suspect by implying a criminal history.[486] If, however, the use of mugshots is unavoidable, only frontal views should be used, and their identity as mugshots should be disguised, such that arrest information (e.g., names and height markings) are not visible.[487] Moreover, if mugshots are used, they should not be displayed in an array alongside ordinary photographs.[488]

That is not to say, however, that if law enforcement officers have no suspects, they should avoid showing victims or witnesses a collection of mugshots. That technique is permissible because it presents few concerns of being suggestive so long as a reasonable number of photographs are shown, no suggestive comments or nonverbal cues are made, and careful records are kept of both (1) all pictures shown and (2) those that resulted in even a tentative identification.[489] But once such a process occurs, to minimize the possibility of unconscious transference vis-à-vis the mugshot effect, subsequent lineups should never occur after witnesses view collections of mugshots.[490]

a. Number of Foils

Lineups must use a sufficient number of foils to reasonably reduce the risk of an eyewitness selecting a suspect by guessing rather than by recognition.[491] When photo arrays are used, witnesses should not know how many individuals will be shown to them so that they will not feel pressured to make a selection as they reach the end.[492] Rather, they should be instructed that they "will be shown a group of photographs" without specifying the number of photos.[493]

The minimum recommended number of foils is *at least* five known innocent fillers, thereby creating a six-person lineup when including a

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486. Yates Eyewitness Memo, *supra* note 438, § 3.5, at 2 ("Nothing should appear on the photos that suggests a person's name, his or her inclusion in a previous array, or any information about previous arrests or identifications.").

487. *E.g.*, Cikora v. Dugger, 840 F.2d 893, 894 (11th Cir. 1988).

488. Perry v. Lockhart, 871 F.2d 1384, 1391 (8th Cir.), *cert. denied*, 493 U.S. 959 (1989).

489. The Yates Eyewitness Memo, *supra* note 438, specifically stated that the use of "mug books" to obtain investigative leads was "outside the scope" of the policies set forth in that memorandum. *Id.* at 1 n.1. And none of the authorities advancing evidence-best practices in eyewitness identifications cautions against the use of a collection of mugshots for investigative purposes so long as subsequent lineups are not conducted that contain any of the people whose mugshots were in those collections. *See* Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 25 (warning about repeated identifications that can occur when eyewitnesses "view a mug book that contains the suspect prior to viewing a lineup that includes that suspect").

490. *Id.*; *see also supra* notes 150–153 and accompanying text.

491. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 19.

492. NAT'L RSCH. COUNCIL, *supra* note 28, at 27.

493. Yates Eyewitness Memo, *supra* note 438, § 6.3.1, at 3.

suspect.[494] It should be noted, however, that five is not a magic number; some research suggests that the number of fillers should be much higher.[495] Some U.S. jurisdictions and numerous other countries, therefore, require lineups consisting of eight, ten, or twelve persons.[496] Simple mathematics dictates that the more people participating in a lineup, the less likely a suspect will be identified merely by chance. But there is an important caveat: Lineups with a larger number of foils provide "more protection for the innocent suspect than would a six-person lineup," but that depends on the extra fillers being a "good match to the suspect."[497] If the extra foils do not fit the prelineup description of the suspect, then adding the extra people does not increase the reliability of the lineup.[498]

b. Sequential Versus Simultaneous Presentation of Foils

Historically, it was common to have all of the participants in a lineup presented to the witness at the same time—a practice known as the *simultaneous* lineup.[499] Starting in the mid-1980s, however, researchers began to advocate for *sequential* lineups during which witnesses viewed lineup participants one after another rather than viewing them all at once.[500] This sequential procedure reduces witnesses' use of relative decision-making by encouraging them to use an absolute threshold.[501]

> A relative judgement is said to occur when a witness selects the lineup item most similar to their memory of the target relative to the other items. Such a strategy would tend to lead to a high false positive rate because there is a basis for identification even when memory of the perpetrator is poor or the target is not a member of the lineup. An absolute judgement is said to occur when an identification judgement does not depend on the similarity of other lineup items to the

494. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 19; Yates Eyewitness Memo, *supra* note 438, § 3.1, at 1.

495. *See generally* Avraham M. Levi, *Much Better than the Sequential Lineup: A 120-Person Lineup*, 18 PSYCH. CRIME & L. 631, 631 (2012) (https://doi.org/10.1080/1068316X.2010.526120).

496. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 19 (citing Levi, *supra* note 495, *passim*).

497. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 19; *see also* Yates Eyewitness Memo, *supra* note 438, § 3.2, at 1 ("Fillers should generally fit the witness's description of the perpetrator, including such characteristics as gender, race, skin color, facial hair, age, and distinctive physical features.").

498. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 19.

499. Rod C.L. Lindsay & Gary L. Wells, *Improving Eyewitness Identifications from Lineups: Simultaneous versus Sequential Lineup Presentation*, 70 J. APPLIED PSYCH. 556, 556–67 (1985) (https://doi.org/10.1037/0021-9010.70.3.556).

500. *See id.* at 557.

501. *See id.* at 558–59. *See generally* Steven E. Clark, Michael A Erickson & Jesse Breneman, *Probative Value of Absolute and Relative Judgments in Eyewitness Identification*, 35 LAW & HUM. BEHAV. 364 (2011) (http://doi.org/10.1007/s10979-010-9245-1).

> witness'[s] memory of the target. Such a strategy would tend to lead to lower false positive rates because witnesses have a basis to reject the lineup when memory of the target is poor or if the target is not present. Lindsay and Wells suggested that the sequential lineup would encourage an absolute decision strategy by removing the opportunity to compare lineup items. Consistent with this, Lindsay and Wells found that sequential presentation led to significantly fewer innocent suspect identifications than simultaneous presentation, accompanied by a relatively small reduction in target identifications.[502]

This research led to a shift in both policies and practices such that nearly one-third of U.S. jurisdictions, in addition to country-wide changes in Canada and the UK, adopted sequential presentation lineups.[503] Law enforcement agencies even developed a method for the self-administered envelope method of photo lineups to be administered sequentially,

> with photos placed individually in smaller, numbered envelopes and instructions to look at each photo in numerical order and record an identification decision and a confidence judgment before replacing the photo in its envelope and proceeding to the next envelope. Backloading of the lineup could be achieved by placing additional envelopes with blank photo pages in the later numbered envelopes, with an instruction in the first envelope used for backloading that the lineup procedure is complete and witnesses should return all materials to the large envelope and let the administrator know that they are done.[504]

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502. Matthew Kaesler, John C. Dunn, Keith Ransom & Carolyn Semmler, *Do Sequential Lineups Impair Underlying Discriminability?*, COGNITIVE RSCH., Aug. 2020, at 1, 2 (https://doi.org/10.1186/s41235-020-00234-5) ("This pattern of results, termed the sequential superiority effect, has been identified in many subsequent studies and in two meta-analyses.") (citing Nancy K. Mehrkens Steblay, Jennifer E. Dysart, Solomon Fulero & Rod C.L. Lindsay, *Eyewitness Accuracy Rates in Sequential and Simultaneous Lineup Presentations: A Meta-Analytic Comparison*, 25 LAW & HUM. BEHAV. 459 (2001) (https://doi.org/10.1023/A:1012888715007); Nancy K. Mehrkens Steblay, Jennifer E. Dysart & Gary L. Wells, *Seventy-Two Tests of the Sequential Lineup Superiority Effect: A Meta-Analysis and Policy Discussion*, 17 PSYCH. PUB. POL'Y & L. 99 (2011) (https://doi.org/10.1037/a0021650)); *see also* Wells & Seelau, *supra* note 460, at 772. *See generally* 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); Gary L. Wells, Nancy K. Mehrkens 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) (https://doi.org/10.1037/lhb0000096).

503. Kaesler, Dunn, Ransom & Semmler, *supra* note 502, at 2 (citing PERF, *ID Procedures*, *supra* note 24, at 70–72; Travis M. Seale-Carlisle & Laura Mickes, *US Line-Ups Outperform UK Line-Ups*, 3 ROYAL SOC'Y OPEN SCI. 160300 (2016) (https://doi.org/10.1098/rsos.160300)).

504. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 16–17.

In the 2010s, however, some research challenged the sequential superiority effect, arguing that simultaneous presentation of lineup participants better facilitated witnesses' ability to compare differences in features critical to identifications while discounting shared features that cannot support a correct identification.[505] This led researchers to reexamine the data from earlier studies, often employing more sophisticated statistical analyses, such as measuring the areas under "receiver operating characteristic" (ROC) curves.[506] Some of these studies reported that simultaneous presentation outperforms sequential presentation,[507] while others did not.[508] There are complicated theoretical, methodological, and statistical reasons why these results differ.[509] From a practical standpoint, though, due to the conflicting evidence on whether the simultaneous or sequential presentation of lineup participants yields the most reliable identifications, the most recent publication from APLS (as of this writing) did not take a stand on recommending one as opposed to the other.[510]

Given this, if lineup administrators present participants sequentially, there are some best practices to guide its accomplishment. First, witnesses should not know when they are viewing the last person or photo in an array; this reduces the pressure to identify the final person.[511] A common way to avoid signaling that a photo is the last in the sequential presentation is to "backload" the array with empty envelopes or folders at the bottom

505. *See, e.g.*, John T. Wixted & Laura Mickes, *A Signal-Detection-Based Diagnostic-Feature-Detection Model of Eyewitness Identification*, 121 PSYCH. REV. 262 (2014) (https://doi.org/10.1037/a0035940).

506. *See* Sarang Narkhede, *Understanding AUC—ROC Curve*, TOWARD DATA SCI. (June 26, 2018), https://towardsdatascience.com/understanding-auc-roc-curve-68b2303cc9c5 [https://perma.cc/59E3-YMY8].

507. *See generally* Curt A. Carlson & Maria A. Carlson, *An Evaluation of Lineup Presentation, Weapon Presence, and a Distinctive Feature Using ROC Analysis*, 3 J. APPLIED RSCH. MEMORY & COGNITION 45 (2014) (https://doi.org/10.1016/j.jarmac.2014.03.004); David G. Dobolyi & Chad S. Dodson, *Eyewitness Confidence in Simultaneous and Sequential Lineups: A Criterion Shift Account for Sequential Mistaken Identification Overconfidence*, 19 J. EXPERIMENTAL PSYCH. APPLIED 345 (2013) (https://doi.org/10.1037/a0034596); Travis Seale-Carlisle, Stacy A. Wetmore, Heather Flowe & Laura Mickes, *Designing Police Lineups to Maximize Memory Performance*, 25 J. EXPERIMENTAL PSYCH. APPLIED 410 (2019) (https://doi.org/10.1037/xap0000222/).

508. Kaesler, Dunn, Ransom & Semmler, *supra* note 502, at 17 ("[A]lthough some more recent studies have observed a simultaneous advantage in underlying discriminability, the evidence to date taken as a whole suggests that this effect is close to zero.").

509. For a discussion, see generally Brent M. Wilson, Kristin Donnelly, Nicholas Christenfeld & John T. Wixted, *Making Sense of Sequential Lineups: An Experimental and Theoretical Analysis of Position Effects*, 104 J. MEMORY & LANGUAGE 108 (2019) (https://doi.org/10.1016/j.jml.2018.10.002).

510. *See also* NAT'L RSCH. COUNCIL, *supra* note 28, at 3, 24 (noting the lack of scientific consensus whether simultaneous or sequential presentation is preferable during eyewitness confrontations).

511. *Id.* at 27.

of the stack containing the array.[512] Second, the witness should be asked to make a decision on each person or photo; thus, they should not be permitted to set one photo aside to review later.[513] Third, witnesses should see the entire array of people or photos; thus, even if they make an identification, they should still be shown the remaining persons or photos.[514] Finally, administrators should never suggest a second viewing; if witnesses ask to see one or more persons or photos again, they should view the entire array a second time, but not more than that number (i.e., no third or subsequent viewings).[515]

c. Foil Behavior at Live Lineups

Suspects should be allowed to choose their position in live lineups and should change that position after each viewing.[516] This promotes fairness and eliminates any claim that the positioning of the suspect in the lineup was unduly suggestive.[517] If any body movements or gestures are necessary, they should be made one time only by each person in the lineup and repeated only at the express request of the observing witness or victim. The lineup administrator should keep a careful record of any person's failure to cooperate.

The law permits lineup participants to be compelled to speak for purposes of voice identification.[518] If that occurs, each person in the lineup should speak the same words in roughly the same tone (e.g., all should whisper, all should shout, or all should talk "normally").[519] Moreover,

512. *Id.* at 27.

513. THIRD CIR. TASK FORCE REP., *supra* note 30, at 75.

514. *Id.* (citing NAT'L RSCH. COUNCIL, *supra* note 28, at 7).

515. THIRD CIR. TASK FORCE REP., *supra* note 30, at 76.

516. The United Kingdom has mandated this for some time. *See* The Police and Criminal Evidence Act 1984 (Codes of Practice) (Revision of Codes C, D and H) Order 2017, SI 2017/103 (UK) (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/903812/pace-code-d-2017.pdf [https://perma.cc/6UDE-6GQF]).

517. As Palmer and colleagues explained, "Choices from arrays often exhibit position effects such as edge-aversion, whereby people favor middle options and avoid those at the edges. . . [E]dge-aversion is thought to occur because centrally located options are more representative than edge ones and, therefore, come to mind more easily." Matthew A. Palmer, James D. Sauer & Glenys A. Holt, *Undermining Position Effects in Choices from Arrays, with Implications for Police Lineups*, 23 J. EXPERIMENTAL PSYCH. APPLIED 71, 71–72 (2017) (https://doi.org/10.1037/xap0000109).

518. United States v. Wade, 388 U.S. 218, 222–23 (1967). *See generally* Cindy E. Laub, Lindsey E. Wylie & Brian H. Bornstein, *Can the Courts Tell an Ear from an Eye? Legal Approaches to Voice Identification Evidence*, 37 LAW & PSYCHOL. REV. 119 (2013) (documenting the unreliability of "earwitness" voice identifications while exploring how commonly they are used). Laub and colleagues reviewed 226 appellate cases and found that they ruled voice identifications inadmissible in only eleven (5%) of the cases. *Id.* at 126.

519. *See, e.g.*, Commonwealth v. Miles, 648 N.E.2d 719, 727–29 (Mass. 1995) (upholding an identification based on five people having read identical passages from a fifth-grade reader over a

lineup administrators must make sure that one voice does not stand out among the others.[520] For example, in *United States v. Garcia-Alvarez*, a federal appeals court held that a voice identification was impermissibly suggestive because the suspect had a Dominican accent, but the other lineup participants did not.[521] That said, voice identification has its own set of problems that are beyond the scope of this Article.[522] Suffice it to say that "earwitness" identification is even more fraught with misidentification errors than eyewitness ones because auditory memory is not only "associated with poorer performance than visual memory" but also "is subject to distinct sources of unreliability."[523] They should, therefore, be avoided to minimize the possibility of their contributing to wrongful convictions.[524]

5. Prelineup Witness Instructions

Based on a large body of empirical research, the APLS recommends the following:

> First, when inviting an eyewitness to attend a lineup procedure, police should not suggest that a suspect has been arrested or that the culprit will be present in the identification procedure. Second, in our experience some witnesses seem to be under the misconception that the investigation hinges on their identification decision. Consequently, witnesses should also be told that the investigation

challenge that the accused's comparative youth made his voice stand out); *see also* Jason A. Cantone, *"Do You Hear What I Hear?": Empirical Research on Earwitness Testimony*, 17 TEX. WESLEYAN L. REV. 123, 128 (2011) (emphasizing that vocal line-ups "should match the emotion and tone of the suspect at the time of the crime"). That being said, some courts disallow the use of voice identifications when suspects are compelled to speak the exact words that were used during the commission of a crime. *E.g.,* Commonwealth v. Powell, 405 N.E.2d 991, 993 (1980); Beachem v. State, 162 S.W.2d 706, 709 (Tex. Crim. App. 1942), *overruled in part by* Olson v. State, 484 S.W.2d 756 (Tex. Crim. App. 1969). Cantone also notes that research demonstrates "that the easiest way to effectively disguise a voice is also one of the simplest: whispering." Cantone, *supra*, at 126.

520. *See Miles*, 648 N.E.2d 719, 728–29 (outlining procedures that should be followed to minimize suggestive voice identifications).

521. United States v. Garcia-Alvarez, 541 F.3d 8, 14–15 (1st Cir. 2008).

522. *See generally* Laub, Wylie & Bornstein, *supra* note 518; Paul Gordon McGorrery & Marilyn McMahon, *A Fair 'Hearing': Earwitness Identifications and Voice Identification Parades*, 21 INT'L J. EVID. & PROOF 262 (2007) (https://doi.org/10.1177/1365712717690753); A. Daniel Yarmey, *The Psychology of Speaker Identification and Earwitness Memory*, *in* 2 THE HANDBOOK OF EYEWITNESS PSYCHOLOGY: MEMORY FOR PEOPLE 101–36 (Rod C.L. Lindsay, David F. Ross, J. Don Read & Michael P. Toglia eds., 2007).

523. McGorrery & McMahon, *supra* note 522, at 262.

524. If this advice is not heeded, at minimum, so-called earwitness voice identification procedures should employ as many procedural safeguards as possible. For empirically-supported suggestions, see generally Harriet M.J. Smith, Jens Roeser, Nikolas Pautz, Josh P. Davis, Jeremy Robson, David Wright, Natalie Braber & Paula C. Stacey, *Evaluating Earwitness Identification Procedures: Adapting Pre-Parade Instructions and Parade Procedure*, 31 MEMORY 147 (2023) (https://doi.org/10.1080/09658211.2022.2129065).

> will continue even if no identification is made. Third, it should be made quite clear to the witness that the culprit may or may not be in the lineup and that they do not have to select any of the lineup members. . . . Fourth, to ensure that the witness does not lose sight of the fact that such response options are appropriate, there should be an explicit not present response option accompanying the lineup members from which the eyewitness can choose. . . . Finally, lineup administration procedures should accommodate the possibility that the witness may look at the lineup and be unwilling to pick someone or to respond not present because, for example, they cannot decide between two or more lineup members or they are uncertain about whether the culprit is in the lineup.[525]

Explicitly informing a witness that the suspect may or may not be in the lineup reduces the pressure on the witness to make an identification. This, in turn, decreases the risk that the witness will make a questionable identification by selecting "the person who best resembles the culprit relative to the others in the lineup."[526] It is essential to instruct witnesses that they need not identify anyone,[527] but if they do so, they will be expected to state their certainty regarding any identification they make or the lack thereof.[528]

Before entering the room where a lineup is conducted, a witness should be provided a form for use in the identification like the one in Figure 3.[529] In addition to being provided with such written instructions,

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525. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 21 (citing, *inter alia*, Neil Brewer & Gary L. Wells, *The Confidence-Accuracy Relationship in Eyewitness Identification: Effects of Lineup Instructions, Foil Similarity, and Target-Absent Base Rates*, 12 J. EXPERIMENTAL PSYCH. 11 (2006) (https://doi.org/10.1037/1076-898X.12.1.11); Steven E. Clark, *A Re-Examination of the Effects of Biased Lineup Instructions in Eyewitness Identification*, 29 LAW & HUM. BEHAV. 395 (2005) (https://doi.org/10.1007/s10979-005-5690-72005); Amber Keast, Neil Brewer & Gary L. Wells, *Children's Metacognitive Judgments in an Eyewitness Identification Task*, 97 J. EXPERIMENTAL CHILD PSYCH. 286 (2007) (https://doi.org/10.1016/j.jecp.2007.01.007); Amina Memon, Fiona Gabbert & Lorraine Hope, *The Ageing Eyewitness*, *in* FORENSIC PSYCHOLOGY: DEBATES, CONCEPTS AND PRACTICE 96–112 (Joanna R. Adler ed. 2004); Nancy K. Mehrkens Steblay, *Lineup Instructions*, *in* REFORM OF EYEWITNESS IDENTIFICATION PROCEDURES 65–86 (Brian Cutler ed., 2013) (https://doi.org/10.1037/14094-004); Nancy K. Mehrkens Steblay, *Social Influence in Eyewitness Recall: A Meta-Analytic Review of Lineup Instruction Effects*, 21 LAW & HUM. BEHAV. 283 (1997) (https://doi.org/10.1023/A:1024890732059); Gary L. Wells, *What Do We Know About Eyewitness Identification?*, 48 AM. PSYCH. 553 (1993) (https://doi.org/10.1037/0003-066X.48.5.553); Wixted & Wells, *supra* note 220, *passim*)).

526. Wells & Seelau, *supra* note 460, at 778.

527. *Id.* at 778–79; Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 21.

528. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 21–22.

529. Yates Eyewitness Memo, *supra* note 438, §§ 9.1–9.4, at 5–6 (detailing all U.S. Department of Justice documentation procedures for photo arrays); Wells, Small, Penrod, Malpass, Fulero & Brimacombe, *supra* note 219, at 610 (describing lineup identification forms and brief directions for its use). Note that the form contained in this Article was created by the author of this Article to

"the lineup administrator should read the instructions aloud to witnesses, pausing after each point to make sure that the witness understands . . . ."[530] The form should be signed by the witness and the person conducting the lineup.[531] A copy of the witness identification form should be given to the suspect's attorney at the time a witness completes viewing the lineup.[532]

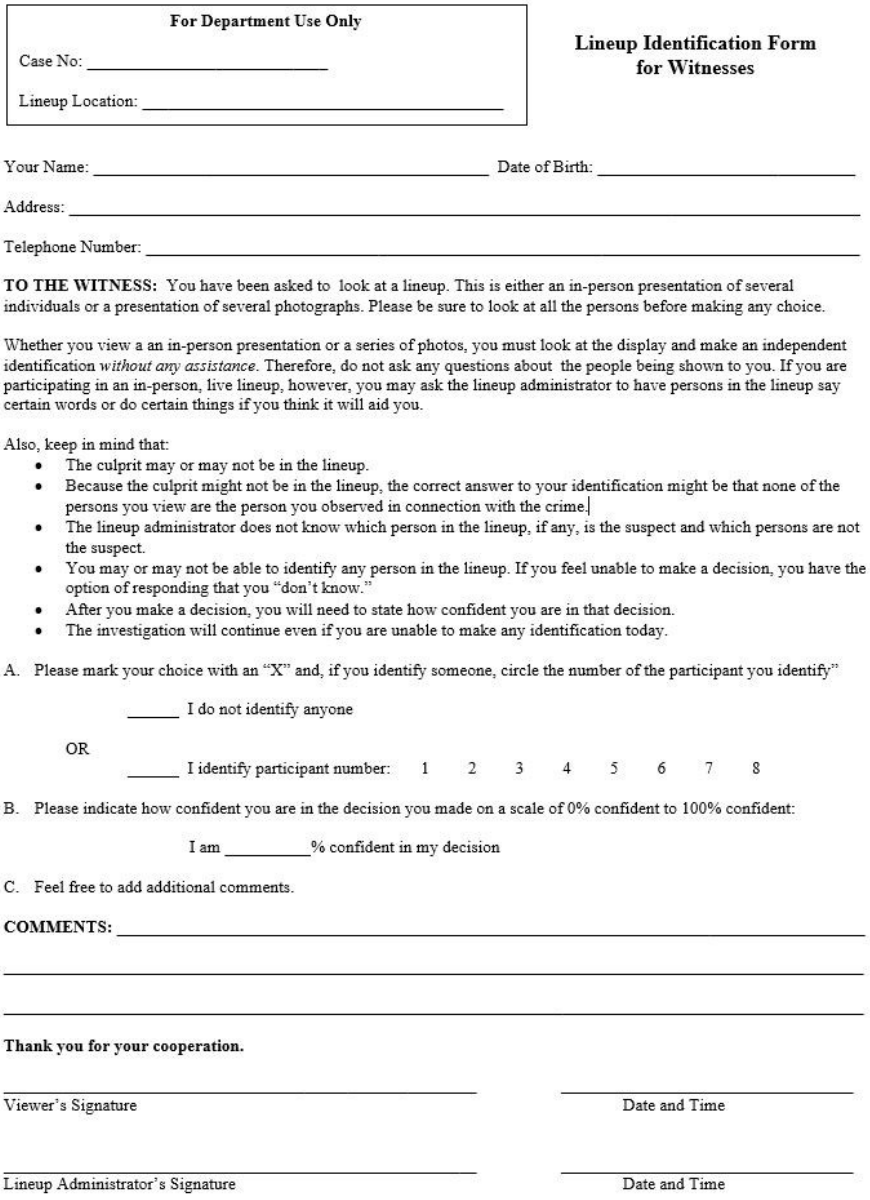
synthesize the evidence-based best practices summarized throughout Part V. It may be freely used by any interested party.

530. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 21.

531. Yates Eyewitness Memo, *supra* note 438, § 9.4, at 6.

532. I recommend this process because it minimizes potential challenges to the process and, as with the disclosure of video recordings of confrontations, might influence attorneys "to offer a plea or encourage a client to accept one." Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 24.

Figure 3: Sample Lineup Identification Form for Witnesses



For Department Use Only

Case No: _____

Lineup Location: _____

Lineup Identification Form for Witnesses

Your Name: _____ Date of Birth: _____

Address: _____

Telephone Number: _____

TO THE WITNESS: You have been asked to look at a lineup. This is either an in-person presentation of several individuals or a presentation of several photographs. Please be sure to look at all the persons before making any choice.

Whether you view a an in-person presentation or a series of photos, you must look at the display and make an independent identification *without any assistance*. Therefore, do not ask any questions about the people being shown to you. If you are participating in an in-person, live lineup, however, you may ask the lineup administrator to have persons in the lineup say certain words or do certain things if you think it will aid you.

Also, keep in mind that:

- The culprit may or may not be in the lineup.
- Because the culprit might not be in the lineup, the correct answer to your identification might be that none of the persons you view are the person you observed in connection with the crime.
- The lineup administrator does not know which person in the lineup, if any, is the suspect and which persons are not the suspect.
- You may or may not be able to identify any person in the lineup. If you feel unable to make a decision, you have the option of responding that you "don't know."
- After you make a decision, you will need to state how confident you are in that decision.
- The investigation will continue even if you are unable to make any identification today.

A. Please mark your choice with an "X" and, if you identify someone, circle the number of the participant you identify"

_____ I do not identify anyone

OR

_____ I identify participant number: 1 2 3 4 5 6 7 8

B. Please indicate how confident you are in the decision you made on a scale of 0% confident to 100% confident:

I am _____% confident in my decision

C. Feel free to add additional comments.

COMMENTS: _____

_____

_____

Thank you for your cooperation.

_____ _____

Viewer's Signature Date and Time

_____ _____

Lineup Administrator's Signature Date and Time

As previously mentioned, it is no longer recommended that witnesses be given any instructions about the possibility of changes in appearance concerning a suspect's malleable characteristics, such as hair color,

hairstyle, or facial hair.[533] Such instructions can increase false identifications without increasing correct identifications.[534]

The sample form in Figure 3 asks the witness for an immediate confidence statement to avoid confidence malleability as a function of any post-identification statements or conduct.[535] When the recommended double-blind administration procedure is followed, and if the form a department or agency uses does not contain a specific question about the witness's confidence in the decision, then the lineup administrator needs to obtain an immediate confidence statement from the witness with only the administrator and the witness in the room; in other words, this statement must be obtained *before* the case detective or any other "nonblind" individuals are allowed into the room to avoid their ability to intentionally or inadvertently impact the witness's confidence statement.[536]

6. Recording Procedures

Before video recording became easy and inexpensive, law enforcement officials needed to photograph each lineup and make a detailed report describing with specificity how the entire procedure (from start to finish) was administered, noting the appearance of the foils, the suspect, and the identities of all persons present.[537] Some courts held that a failure to properly photograph or record an identification procedure resulted in a presumption that the procedure was unduly suggestive.[538]

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533. Yates Eyewitness Memo, *supra* note 438, § 9.4, at 21.

534. *Id.*; *see also* Steve D. Charman & Gary L. Wells, *Eyewitness Lineups: Is the Appearance-Change Instruction a Good Idea?*, 31 LAW & HUM. BEHAV. 3, 17–18 (2007) (https://doi.org/10.1007/s10979-006-9006-3) ("Results of various analyses clearly show the lack of beneficial effects of the appearance-change instruction. In fact, the appearance-change instruction was actually detrimental to the identification process. The instruction significantly increased identifications from target-absent lineups from 31% without instructions to 51% with instructions."); Molinaro, Arndorfer & Charman, *supra* note 212, at 438 (reporting that an appearance-change instruction "failed to increase correct identifications from target-present lineups . . . , but did increase false identifications from target-absent lineups"); Porter, Moss & Reisberg, *supra* note 212, at 158 (reporting that an appearance-change instruction increased "witnesses' likelihood to identify someone from the line-up but does not improve witness accuracy. In fact, in many [experimental] conditions . . . this instruction diminished identification accuracy").

535. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 21 (citing, *inter alia*, Deah S. Quinlivan, Jeffrey S. Neuschatz, Brian L. Cutler, Gary L. Wells, Joy McLung & Devin L. Harker, *Do Pre-Admonition Suggestions Moderate the Effect of Unbiased Lineup Instructions?*, 17 LEGAL & CRIMINOLOGICAL PSYCH. 165 (2012) (https://doi.org/10.1348/135532510X533554); Wixted & Wells, *supra* note 220, *passim*).

536. *Id.* at 21.

537. *See, e.g.*, ABA EYEWITNESS BEST PRACTICES, *supra* note 426, § C.2., at 3.

538. *See, e.g.*, Smith v. Campbell, 781 F. Supp. 521, 527–28 (M.D. Tenn. 1991) ("[W]hen a photo array is not preserved, it is presumed to be unduly suggestive. . . . By failing to show the

Today, there is simply no excuse for not recording all confrontations.[539] Thus, current recommendations are for law enforcement to video record the entirety of identification procedures, including the prelineup instructions, any and all statements law enforcement personnel or their staff members make to the witness, the confrontation itself, and the witness's confidence statements thereafter.[540] Such recordings can verify people's versions of what transpired at a lineup. Moreover, if the confrontation is subsequently challenged in court, "the judge could review the video and evaluate the suggestiveness of the procedure herself rather than relying on attorneys' characterizations of the procedure based on their readings of police reports and witness testimony."[541] That being said, care should be taken regarding how such recordings are made. Camera distance, focus, and angle can all influence observers' evaluations of witnesses' statements and nonverbal behaviors during lineups such that they can make eyewitnesses "appear more reliable in certain respects, regardless of whether or not the eyewitness[es] actually [are] more reliable."[542]

7. Immediate Postlineup Procedures

As previously stated, double-blind administration significantly reduces, if not eliminates, the opportunity for police or prosecutors to give witnesses any feedback on whether they selected the "right" or "wrong" person, at least as far as law enforcement personnel might believe to be the culprit.[543] This not only helps to reduce confidence malleability but also helps to avoid both confabulation and the postevent misinformation effect.[544] If, for some extenuating reason, a double-blind process is not used, the "nonblind" persons must not say or do anything that signals their agreement or disagreement with the witnesses' decision. And even when double-blind procedures are used, care must be taken to ensure that

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defendant or the court the photos, the state virtually assures that the defendant will be unable to argue the suggestiveness of the photographs." (internal citations omitted)).

539. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 23 (noting that today, "the cost of video-recording interactions has decreased considerably and most adults have cellular phones capable of rendering high-quality video-records").

540. *Id.*

541. *Id.* at 24.

542. *See, e.g.*, Bailey A. Barnes, Kimberly S. Dellapaolera, Brian H. Bornstein & Amy Bradfield Douglass, *Witnessing the Witness: Video-recorded Procedures Enhance Credibility*, 57 CRIM. L. BULL. 319, 334 (2021) (summarizing the literature and adding empirical results of experiments).

543. *See supra* notes 459–469 and accompanying text.

544. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 14. *See generally* Wells & Bradfield, *supra* note 226; Daniel B. Wright & Elin M. Skagerberg, *Postidentification Feedback Affects Real Eyewitnesses*, 18 PSYCH. SCI. 172 (2007) (https://doi.org/10.1111/j.1467-9280.2007.01868.x).

"nonblind" persons who may be on the premises (e.g., people watching behind one-way glass or on closed-circuit television in another room) do not interact with witnesses after identification procedures to prevent any postlineup contamination effects.

The lineup administrator should take complete notes of everything that takes place at the lineup and prepare an official report of all the proceedings that includes "how the fillers were selected for the lineup."[545] The report supplements the video recording of the lineup. The report should include the time, location, identity of persons present, and the lineup identification form (see Figure 3) for each witness viewing the lineup.[546] If the process is not recorded (and again, there is no reason it should not be), then the report should include all statements that people make during the lineup "as close to verbatim as possible."[547] A copy of the report, along with a copy of the recording, should be sent to the prosecuting attorney and made available to the suspect's attorney.[548]

8. Avoid Multiple Identification Procedures with the Same Witnesses, Suspects, and Foils

Multiple lineups involving the same suspect and witness are inherently suggestive and must be avoided.[549] "This recommendation holds no matter how compelling the argument in favor of a second identification might seem . . . ."[550] That is because the first identification procedure can contaminate any subsequent identification involving the same people via a range of psychological processes.[551] Moreover, in

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545. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 18; *see also* Wells, Small, Penrod, Malpass, Fulero, Brimacombe, *supra* note 219, at 610 ("A lineup report should be prepared and also given to the defense.").

546. This process mirrors the one that the U.S. Department of Justice requires for photo array identifications. *See* Yates Eyewitness Memo, *supra* note 438, §§ 9.1–9.4, at 5–6.

547. *See* Yates Eyewitness Memo, *supra* note 438, § 9.1.2, at 5.

548. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 25.

549. *Id. See generally* John T. Wixted, Gary L. Wells, Elizabeth F. Loftus & Brandon L. Garrett, *Test a Witness's Memory of a Suspect Only Once*, 22 PSYCH. SCI. PUB. INT. 1S (2021) (https://doi.org/10.1177/15291006211026259).

550. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 25.

551. *Id.* (citing, *inter alia*, Deffenbacher, Bornstein, McGorty & Penrod, *supra* note 163, *passim*; Victoria Z. Lawson & Jennifer E. Dysart, *The Showup Identification Procedure: An Exploration of Systematic Biases*, 19 LEGAL & CRIMINOLOGICAL PSYCH. 54 (2014) (https://doi.org/10.1111/j.2044-8333.2012.02057.x); Nancy K. Mehrkens Steblay & Jennifer E. Dysart, *Repeated Eyewitness Identification Procedures with the Same Suspect*, 5 J. APPLIED RSCH. MEMORY & COGNITION 284 (2016) (https://doi.org/10.1016/j.jarmac.2016.06.010); Nancy K. Mehrkens Steblay, Robert W. Tix & Samantha L. Benson, *Double Exposure: The Effects of Repeated Identification Lineups on Eyewitness Accuracy*, 27 APPLIED COGNITIVE PSYCH. 644 (2013) (https://doi.org/10.1002/acp.2944); Wixted, Wells, Loftus & Garrett, *supra* note 549, at 1S (noting that memory signals generated by suspects' faces will be stronger on any subsequent viewing of that same face, meaning that "testing memory contaminates memory")).

addition to increasing mistaken identifications, repeated identification processes also artificially increase how confident eyewitnesses are in their decisions.[552] As a result, the APLS urged that repeated identification processes not occur:

> This recommendation holds no matter how compelling the argument in favor of a second identification might seem (e.g., the original photo of the suspect was not as good as it could have been; the witness was nervous during the first identification test and is calmer now; the initial identification was made from a social media profile, but it would be more desirable to have an identification made using proper police procedures). The importance of focusing on the first identification test cannot be emphasized strongly enough.[553]

Repeated identification processes are so suggestive that they violate due process. In *Foster v. California*, an eyewitness was unable to make a positive identification at a lineup in which the defendant, Foster, had been placed with considerably shorter men.[554] After meeting Foster one-on-one, the witness made a tentative, uncertain identification.[555] At a second lineup, the eyewitness was finally convinced that Foster committed the crime and positively identified him.[556] Foster was the only person who appeared in both lineups.[557] The U.S. Supreme Court reversed the conviction:

> The suggestive elements in this identification procedure made it all but inevitable that [the witness] would identify petitioner whether or not he was in fact "the man." In effect, the police repeatedly said to the witness, "This is the man." This procedure so undermined the reliability of the eyewitness identification as to violate due process.[558]

When showing a new suspect to a witness in a second or subsequent lineup, law enforcement personnel must avoid reusing the same people as foils. Put differently, "[f]illers should not be reused in arrays for different suspects shown to the same witness."[559] This helps to minimize the

552. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 26 (citing John S. Shaw III & Kimberley A. McClure, *Repeated Post-Event Questioning Can Lead to Elevated Levels of Eyewitness Confidence*, 20 LAW & HUM. BEHAV. 629 (1996) (https://doi.org/10.1007/BF01499235)).

553. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 25.

554. Foster v. California, 394 U.S. 440, 441 (1969) ("[Petitioner] is a tall man—close to six feet in height. The other two men were short—five feet, five or six inches.").

555. *Id.*

556. *Id.* at 442.

557. *Id.* at 441–42.

558. *Id.* at 443 (internal citation omitted).

559. Yates Eyewitness Memo, *supra* note 438, § 3.7, at 2.

possibility that a witness may have seen any of the people previously used in any subsequent confrontations.[560]

Finally, when multiple lineups need to be administered because there are multiple witnesses, participants (i.e., all foils and the suspect, if any) should be placed in different positions each time a lineup is administered to different witnesses in the same case.[561] In theory, witnesses should have no contact with each other.[562] Nonetheless, in case one witness manages to communicate to another the position of the person whom they believe to be the suspect, varying the positions of the suspect and the foils will help to eliminate the possibility of contaminating the identification procedures.

VI. POLICY RECOMMENDATION FOR IMPROVING EYEWITNESS EVIDENCE IN COURT

As this Article should clarify, both human perception and memory are complicated, highly selective, unconscious processes that can be negatively affected by many factors that relevant U.S. Supreme Court precedent fails to take into account. As a result, courts applying those precedents "habitually make mistakes" in handling suggestive confrontation.[563] Professor Raban opined that these repeated errors were due, in large part, to the "doctrinal mess"[564] that *Stovall*, *Simmons*, *Biggers*, and *Brathwaite* caused.[565] Raban is undoubtedly correct, especially since *Biggers* and *Brathwaite* upheld the admissibility of highly suggestive identification procedures by stripping from any due process analysis the important question of "whether a police-arranged suggestive identification procedure was necessary or not."[566] Thus, "whether necessitated by circumstances or completely gratuitous," any due process challenge to an eyewitness identification focuses on its alleged reliability without regard to how that reliability may have been affected by the prior procedure's level of suggestiveness.[567]

To be fair to the U.S. Supreme Court, nearly all of its key eyewitness identification cases were decided before researchers had firmly established the unreliability of many of the practices that were at issue in those cases.[568] Today, however, we know better. It is high time for the judiciary

560. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 25.
561. Yates Eyewitness Memo, *supra* note 438, § 7.4, at 5.
562. *See supra* notes 470–473 and accompanying text.
563. Raban, *supra* note 272, at 62–63.
564. *Id.* at 62.
565. *See supra* Parts III and IV.
566. Raban, *supra* note 272, at 61.
567. *Id.*
568. *See supra* Parts II and V.

to revisit its case law in light of the overwhelming scientific consensus that undercuts fatally outdated yet governing precedents like *Biggers–Brathwaite*. Accordingly, throughout this Article, I inserted commentary urging adopting reforms that have been recommended by scientific researchers and legal scholars alike. In this final part, I reiterate those recommendations and offer additional ideas for further reforms.

A. Reduce the Incidence of Unreliable Identifications by Mandating Best Practices for Eyewitness Confrontations

One of the best ways to reduce wrongful convictions based on misidentifications would be to require compliance with evidence-based best practices for confrontations. This includes minimizing using showups and following the best practices for administering lineups and photo arrays.

1. Showups

Single-photo showup should never be used unless the witness was previously well-acquainted with the suspect. Otherwise, there ought to be a *per se* rule that single-photo presentations are so unnecessarily suggestive that they are unreliable as a matter of law and, therefore, inadmissible as evidence.

Because in-person showups are also highly suggestive, formal policies should bar their use unless extenuating circumstances prevent a lineup or photo array from being administered.[569] When exigent circumstances exist, such as the impending death or blindness of a witness, or when showups occur spontaneously, then law enforcement personnel need to take precautions to minimize the suggestive nature of the encounter, including giving the standard confrontation instructions that the perpetrator may or may not be the person at the showup; that the witness need not make an identification (thus, "not present," "I don't know" or "I am not sure," are all acceptable answers); and that regardless of whether an identification is made, the investigation will continue.[570]

If a showup is unnecessarily suggestive, then all states should follow the lead of New York, Massachusetts, and Wisconsin by adopting a *per se* rule that any such tainted identifications are inadmissible.[571]

569. *See supra* notes 274–279 and accompanying text.
570. *See supra* notes 274–306 and accompanying text.
571. *See supra* notes 411–416 and accompanying text.

2. Lineups and Photo Arrays

All states should require compliance with the evidence-based best practices summarized in Part V of this Article. To recap, those include the following ten practices:

- administering double-blind lineups or their equivalents;[572]
- sequestering witnesses during lineups and providing postlineup instructions to witnesses not to discuss their accounts with or in the presence of any other witnesses, and telling witnesses to avoid media and social media accounts of the events;[573]
- giving witnesses key, standardized instructions both orally and in writing *before* any confrontation begins, including that "(a) the lineup administrator does not know which person is the suspect and which persons are fillers; (b) the culprit might not be in the lineup at all, so the correct answer might be 'not present' or 'none of these'; (c) if they feel unable to make a decision they have the option of responding 'don't know'; (d) after making a decision they will be asked to state how confident they are in that decision; and (e) the investigation will continue even if no identification is made";[574]
- abstaining from giving instructions that can undermine the accuracy of identifications, such as the appearance change instruction;[575]
- constructing lineups or arrays that have no more than one suspect and have *at least* five fillers (with seven to eleven being even better) who resemble the description of a suspect sufficiently such that no participant stands out from the others;[576]
- obtaining *immediate* statements from witnesses about their confidence in the decisions they made;[577]
- video recording the entirety of identification procedures, including the prelineup instructions, any and all statements law enforcement personnel or their staff members make to the witness, the confrontation itself, and the witness's confidence statement thereafter;[578]

572. *See supra* notes 460–469 and accompanying text.

573. *See supra* notes 470–473 and accompanying text.

574. Wells, Kovera, Douglass, Brewer, Meissner & Wixted, *supra* note 29, at 20; *see also supra* notes 525–536 and accompanying text.

575. *See supra* notes 211–212 and accompanying text.

576. *See supra* notes 474–524 and accompanying text.

577. *See supra* notes 215–229 and accompanying text.

578. *See supra* notes 537–542 and accompanying text.

- ensuring that any "nonblind" persons do not say or do anything that signals their agreement or disagreement with the witnesses' decision;[579]
- refraining from conducting multiple identification procedures involving the same witnesses, foils, and suspects;[580] and
- varying the positions of participants when multiple lineups are administered to different witnesses.[581]

According to the Innocence Project, twenty-five states have implemented some of these reforms.[582] Conversely, at least half of U.S. states have not even adopted double-blind administration of lineups, let alone the full list of best practices.[583] There is no excuse for this sorry state of affairs. Legislators should enact statutory reforms with all deliberate speed. Until they do, courts should follow the lead of their peers on the high courts of several states that have mandated such practices either using their supervisory authorities over rules of evidence or as a matter of due process under their state constitutions.[584] Moreover, police executives need not wait for legislative or judicial action. They can implement best practices through the adoption and systematic enforcement of formal policies.[585]

B. Reject Perry by Acknowledging All Suggestion Taints Reliability

We must abandon *Perry v. New Hampshire*.[586] That case mandates that lower courts ignore highly suggestive actions from nonstate actors even though the impact of suggestion on memory is not dependent on law

579. *See supra* note 544 and accompanying text.

580. *See supra* notes 549–559 and accompanying text.

581. *See supra* notes 516–517 and accompanying text.

582. *Eyewitness Identification Reform in Arkansas*, INNOC. PROJECT, https://innocenceproject.org/eyewitness-identification-reform/ [https://perma.cc/HBP5-ZTSD]; *see also* PERF, *ID Procedures*, *supra* note 24, at ix–xii.

583. *See* Margaret Bull Kovera & Andrew J. Evelo, *Improving Eyewitness-Identification Evidence Through Double-Blind Lineup Administration*, 29 CURRENT DIRECTIONS PSYCH. SCI. 563, 564 (2020) (https://doi.org/10.1177/0963721420969366). According to a blue-ribbon task force on eyewitness identification reforms, the states that statutorily mandate the use of double-blind identification procedures (or some form of blinding) include California, Colorado, Connecticut, Florida, Georgia, Illinois, Kansas, Louisiana, Maryland, New York, North Carolina, Ohio, Vermont, Virginia, and West Virginia. THIRD CIR. TASK FORCE REP., *supra* note 30, at 31–32.

584. For a summary and evaluation of the ways in which legislatures and courts have implemented various reforms, see generally Keith A. Findley, *Implementing the Lessons from Wrongful Convictions: An Empirical Analysis of Eyewitness Identification Reform Strategies*, 81 MO. L. REV. 377 (2016).

585. *See* WALKER & ARCHBOLD, *supra* note 447, at 13–23.

586. Perry v. New Hampshire, 565 U.S. 228, 248 (2012).

enforcement behaviors.[587] Science establishes that suggestive procedures that occur by happenstance (like what occurred in *Perry*)—as well as exposure to postevent misinformation from co-witnesses, social media, and the press—can all negatively impact the reliability of memories.[588] As Justice Sotomayor stressed in her *Perry* dissent, it is the reliability of identifications that is central to due process:

> Our due process concern . . . arises not from the act of suggestion, but rather from the corrosive effects of suggestion on the reliability of the resulting identification. By rendering protection contingent on improper police arrangement of the suggestive circumstances, the Court effectively grafts a *mens rea* inquiry onto our rule. The Court's holding enshrines a murky distinction—between suggestive confrontations intentionally orchestrated by the police and . . . those inadvertently caused by police actions—that will sow confusion. It ignores our precedents' acute sensitivity to the hazards of intentional and unintentional suggestion alike and unmoors our rule from the very interest it protects, inviting arbitrary results.[589]

Accordingly, as either a matter of state constitutional or evidence law, courts should refuse to adopt *Perry*'s reasoning and examine the suggestive nature of any out-of-court identification.

C. Jettison Biggers–Brathwaite

We are long past the time of needing to abandon the misnamed "reliability" factors of *Biggers–Brathwaite*. They are flawed for numerous reasons, the most important of which are summarized below.

First, the "unnecessarily suggestive" prong of *Biggers–Brathwaite* fails to consider current scientific knowledge about how both event factors and witness factors impact eyewitness perception and memory.[590] Attorney Alexis Agathocleous of the Innocence Project explained why the failure to consider estimator and reflective variables in the context of suggestive procedures is so dangerous:

> This is a critical oversight because when an eyewitness's original memory is weak, it is especially susceptible to suggestion. Biased

587. *Id.* ("[W]e hold that the Due Process Clause does not require a preliminary judicial inquiry into the reliability of an eyewitness identification when the identification was not procured under unnecessarily suggestive circumstances arranged by law enforcement.").

588. Alexis Agathocleous, *Confronting the Problems of* Manson v. Brathwaite*: Scientifically Sound Approaches to Suppression in Eyewitness Identification Cases*, THE CHAMPION, Nov. 2019, at 18, 19.

589. *Perry*, 565 U.S. at 250 (Sotomayor, J., dissenting).

590. *See supra* Part II; *see also* NAT'L RSCH. COUNCIL, *supra* note 28, at 18 (criticizing *Biggers–Brathwaite* for evaluating reliability "using factors derived from prior rulings and not from empirically validated sources").

> procedures can influence and change what eyewitnesses believe they have seen and may lead them to "recall" things never experienced, but eyewitnesses whose initial memory is poor are particularly vulnerable. [*Brathwaite*]'s "one-size-fits-all" approach encourages courts to assess suggestiveness in the vacuum of legal precedent rather than by examining a particular witness's vulnerability to suggestion.[591]

Second, the factors specified in *Biggers–Brathwaite* fail to consider a significant body of research establishing that several of these factors are "poorly correlated with accuracy."[592] Additionally, the *Biggers–Brathwaite* factors "are distorted by suggestion, making witnesses who have participated in suggestive identification procedures seem more reliable than they actually are."[593] Equally importantly, because the reliability factors come into play only after courts find that unnecessarily suggestive procedures were used, the entirety of the reliability analysis ignores that suggestion can "manufacture 'reliable' witnesses."[594] As the Supreme Court of New Jersey stated,

> Rather than act as a deterrent, the [*Brathwaite*] test may unintentionally reward suggestive police practices. The irony of the current test is that the more suggestive the procedure, the greater the chance eyewitnesses will seem confident and report better viewing conditions. Courts in turn are encouraged to admit identifications based on criteria that have been tainted by the very suggestive practices the test aims to deter.[595]

Thus, the *Biggers–Brathwaite* approach to the admissibility of eyewitness identifications needs to be abandoned, just as the high courts of several states have concluded.[596] The following subsections present three options for alternatives to *Biggers–Brathwaite*: a ban on the use of any identifications resulting from impermissibly suggestive confrontations that a handful of states currently use; procedures for defendants to establish the unreliability of identifications using estimator, reflector, and system variables that New Jersey pioneered and several other states now

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591. Agathocleous, *supra* note 588, at 19.

592. *Id.*; *see also supra* Part II.

593. Agathocleous, *supra* note 588, at 19.

594. *Id.*

595. *Id.* (quoting State v. Henderson, 27 A.3d 872, 918 (N.J. 2011)).

596. *Henderson*, 27 A.3d at 918 (holding that the approach taken in *Biggers–Brathwaite* and its counterparts in state case law "does not adequately meet its stated goals: it does not provide a sufficient measure for reliability, it does not deter, and it overstates the jury's innate ability to evaluate eyewitness testimony"); *see also* Young v. State, 374 P.3d 395, 427 (Alaska 2016); Commonwealth v. Gomes, 22 N.E.3d 897, 905–07, 910–16 (Mass. 2015); State v. Lawson, 291 P.3d 673, 689–90 (Or. 2012).

use; and a new proposal for modifying New Jersey's approach to place the burden on the prosecution to prove the reliability of identifications that occurred if law enforcement failed to follow all relevant evidence-based best practices.

1. The *Per Se* Approach: Unnecessarily Suggestive Confrontations Violate Due Process

The strongest approach states could adopt to reduce wrongful convictions based on mistaken identifications would be to follow the lead of New York and Massachusetts (and, to a lesser degree, Wisconsin) by excluding from evidence any identifications that were the result of impermissibly suggestive confrontations.[597] This framework would almost certainly deter law enforcement from orchestrating unnecessary showups and conducting suggestive lineups, subject to one caveat. For the *per se* approach to have true deterrent effects, subsequent in-court identifications must be similarly prohibited rather than admissible through the loophole created by the farcical independent source doctrine.[598]

Despite the strength of this approach for preventing eyewitness misidentifications from being concerned in court, it still depends on a judicial pronouncement that something was unnecessarily suggestive. This term, however, is nebulous, providing far too much leeway for courts to determine whether law enforcement conduct was suggestive and, if it were, whether it was unnecessarily so.[599] This should be remedied by establishing a rule that if law enforcement personnel failed to comply with *all* of the best practices applicable in a case, then an identification was unnecessarily suggestive and, therefore, inadmissible. Conversely, if law enforcement complied with all of the evidence-based best practices concerning system variables under their control, then the parties can litigate the reliability of identifications using all relevant events and witness factors.

2. The *Henderson* Approach to Reforming Judicial Reliability Determinations

In *State v. Henderson*, the New Jersey Supreme Court established a framework incorporating scientific knowledge into the process of deciding

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597. *See supra* notes 411–416 and accompanying text.

598. Matthew Gordon, *Is New York Achieving More Reliable and Just Convictions When the Admissibility of a Suggestive Pretrial Identification Is at Issue?*, 29 TOURO L. REV. 1305, 1326 (2013) ("[T]he per se rule of exclusion adopted by the New York Court of Appeals does not serve the purpose of limiting wrongful convictions when in-court identifications are permissible under the lenient independent source rule.").

599. *See supra* notes 281–292, 295–306, 329–348 and accompanying text.

the admissibility of any confrontation.[600] One commentator summarized the *Henderson* process as follows:

> [T]o secure a pretrial hearing, the defendant must carry the initial burden of showing some evidence of suggestiveness which would result in a misidentification, generally tied to a system variable. Next, the burden shifts to the State to offer proof of reliability, whether in the form of system or estimator variables. The court may at any time end the hearing on grounds that the threshold claim of suggestiveness is baseless. The defendant, who carries the ultimate burden of proving a "very substantial likelihood of irreparable misidentification," can cross-examine eyewitnesses and police officers and present evidence linked to system or estimator variables. Then, based on the totality of the circumstances from the evidence presented, if the court finds a very substantial likelihood of irreparable misidentification, it should suppress the eyewitness identification. If not, upon admitting the identification to the trier of fact, the court should give tailored jury instructions to appropriately guide juries through the system and estimator variables that may have influenced the reliability of a given identification. The instruction may include a list of variables that may disrupt an accurate identification and language to warn jurors of potential flaws in otherwise seemingly correct identifications. For example, a model jury instruction reads: "Although nothing may appear more convincing than a witness's categorical identification of a perpetrator, you must critically analyze such testimony. Such identifications, even if made in good faith, may be mistaken."[601]

In *State v. Young*, the Supreme Court of Alaska largely adopted the *Henderson* framework, making some modifications that serve as a model for evaluating the admissibility of eyewitness identifications.[602] The process boils down to the following:

- To suppress an identification, a defendant must first present evidence that an out-of-court confrontation carries an impermissible risk of misidentification on account of suggestive procedures tied to some system variable.[603]

- The prosecution must then introduce evidence that the identification procedure was nonetheless reliable. But the ultimate burden of persuasion still lies with the defendant to prove a "very substantial likelihood of irreparable misidentification" under the

600. *Henderson*, 27 A.3d at 917–24.

601. Savannah Hansen Best, Note, *Fresh Eyes:* Young v. State*'s New Eyewitness Identification Test and Prospects for Alaska and Beyond*, 35 ALASKA L. REV. 41, 54–55 (2018).

602. Young v. State, 374 P.3d 395, 427 (Alaska 2016).

603. *Id.*

totality of the circumstances, including consideration of "all relevant system and estimator variables."[604]

3. A Proposal for Further Reforming Judicial Reliability Determinations

To be sure, the approach of *Henderson* and its progeny is far superior to that of *Biggers–Brathwaite.* But we can do even better. The *per se* approach that unnecessarily suggestive identifications violates due process would undoubtedly be the most effective way of reducing wrongful convictions based on misidentifications. But if jurisdictions were unwilling to adopt that approach, they could (and should) abandon *Biggers–Brathwaite* and adopt a variation of the *Henderson* model that would serve two important policy goals. First, it would provide a strong incentive for police to adopt and follow the best practices for confrontations. Second, it would change the current, common practice of admitting tainted identifications into evidence and, thereby, potentially reduce the incidence of wrongful convictions based on misidentifications.

The modified *Henderson* approach I propose would work like this:

- To suppress an identification, a defendant must first present some evidence to establish a *prima facie* case that an out-of-court confrontation carries an impermissible risk of misidentification.
    - In the relatively uncommon situations in which identifications occurred under highly suggestive circumstances due to no fault of law enforcement personnel, such as what occurred in *Perry v. New Hampshire*,[605] then defendants should be able to seek pretrial suppression of such identifications by using all relevant estimator, reflector, and system variables to prove, by a preponderance of the evidence, that suggestion tainted the identifications at issue in ways that create a substantial risk of misidentification. Expert testimony, from a qualified expert, would always be admissible to assist the judge in understanding the science underlying the unreliability of identifications made under certain conditions that may be applicable in any given case.
    - In the far more common situation, in which law enforcement is alleged to have conducted a suggestive confrontation, then defendants would be required to establish their *prima facie* cases using system variables.[606]
        - If law enforcement failed to comply with *all* of the applicable best practices, there would be a rebuttable

604. *Id.*
605. Perry v. New Hampshire, 565 U.S. 228, 233–34 (2012).
606. *Young*, 374 P.3d at 427.

> presumption that an identification was impermissibly suggestive. Such an identification would be excluded from evidence unless the prosecution could show, by clear and convincing evidence, that the confrontation was sufficiently reliable considering "*all* relevant system[, reflector,] and estimator variables under the totality of the circumstances."[607]
>
> - If, however, law enforcement personnel complied with all of the applicable best practices presented in Part V and summarized in the first subsection of Part VI of this Article, and assuming the identification at issue was not otherwise tainted by suggestion not under the control of law enforcement (like what occurred in *Perry*), then the identification would be admissible at trial because defendants would not be able to meet their burden of production showing that some system variable created a substantial risk of misidentification.

- Whenever identifications are admitted into evidence, then during their trials, defendants would be able to challenge the reliability of identifications using all applicable estimator, reflector, and system variables.[608] Expert testimony, from a qualified expert, would always be admissible to assist the trier-of-fact in understanding the science underlying the unreliability of identifications made under certain conditions that may be applicable in any given case.

Consistent with *Henderson* and *Young*, a defendant would bear the initial burden of production by making a *prima facie* case that an identification was impermissibly suggestive. Unless a situation analogous to *Perry* occurred, defendants would need to meet their burden using system variables, not estimator variables. But in a departure from *Henderson* and *Young*, this proposal would change the burden of persuasion if defendants meet their initial burden of production by showing that law enforcement did not conduct confrontations per the evidence-based best practices. By shifting the burden to the prosecution to show the reliability of the identification using system, reflector, and estimator variables, the process would place external pressure on law enforcement personnel to comply with best practices. If they do not, there is a real risk that the identification will be suppressed.

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607. *Id.* (italics added).

608. The systems variables would be relevant in cases in which law enforcement did not follow all of the applicable best practices, but the identifications were nonetheless admitted under the clear and convincing evidence standard. But just because a judge admitted such an identification into evidence does not mean that defendants should be deprived of the opportunity to challenge the reliability such identifications before the trier of fact at trial.

Like *Henderson* and *Young*, the proposed approach jettisons the scientifically specious *Biggers–Brathwaite* factors. But it goes further. By creating a rebuttable presumption that identifications stemming from suggestive confrontations are unreliable and inadmissible and then placing the burden of persuasion on the prosecution to rebut that presumption by proving the reliability of such an identification, I envision a substantial departure from the far-too-frequent outcomes in cases in which identifications that carry a substantial likelihood of error due to suggestive confrontation procedures are nonetheless routinely admitted into evidence, thereby contributing to wrongful convictions.[609]

D. Abandon the Independent Source Doctrine

The independent source doctrine is a legal fiction wholly unsupported by science. Unless there was some prior relationship between the witness and suspect that predates the observation at issue, an in-court identification of a suspect by a witness involved in any prior impermissibly suggestive, out-of-court identifications should be inadmissible.[610]

E. Treat First-Time, In-Court Identifications as Showups

Identifications that occur for the first time while the relevant persons are in court should be treated as showups. Indeed, these are even more suggestive than out-of-court showups.[611] Given the highly suggestive nature of such encounters, at minimum, there should be a rebuttable presumption against the admissibility of such in-court identifications. Under such an approach, the prosecution should bear the burden of persuasion to overcome that presumption if there is good reason for the admission of such a confrontation.[612] Although such an approach would be an improvement over the current approach used in nearly all states, it would be even more effective to disallow such in-court identifications in their entirety since it is hard to imagine a more suggestive procedure than asking someone on the witness stand to identify a person who is on trial and seated at the defense table with counsel.[613]

609. *See, e.g.*, *supra* notes 329–348 and accompanying text.

610. *See supra* notes 384–396 and accompanying text.

611. *See supra* notes 274–279 and accompanying text.

612. *See supra* notes 419–420 and accompanying text.

613. It should also be noted that an important protective factor—witness instructions—is almost always missing when in-court identifications occur. Thus, when combined with the fact that the defendant is on-trial, the highly suggestive nature of an in-court showup is magnified even further.

F. Individual Jurists Can Act in the Absence of Broader, Systemic Reforms

If state legislatures and appellate courts fail to act on the recommendations I outline, that does not stop trial court judges from doing their part to prevent wrongful convictions based on eyewitness misidentifications. Similarly, even federal judges bound by U.S. Supreme Court precedents that run contrary to the scientific knowledge on eyewitness identifications can nonetheless be meaningful gatekeepers in this regard.[614]

Rule 403 of the Federal Rules of Evidence provides that judges "may exclude relevant evidence if its probative value is substantially outweighed by a danger of one or more of the following: unfair prejudice, confusing the issues, misleading the jury, undue delay, wasting time, or needlessly presenting cumulative evidence."[615] State rules of evidence contain similar or identical provisions.[616]

Relying, in part, on the Oregon equivalent of Rule 403, the Supreme Court of Oregon held in *State v. Lawson* that the courts of that state may not admit unreliable eyewitness identification into evidence because "[a]s a discrete evidentiary class, eyewitness identifications subjected to suggestive police procedures are particularly susceptible to concerns of unfair prejudice."[617] When examining the reliability of such identifications, the court specifically stated that courts needed to consider the applicable science:

> The persuasive force of eyewitness identification testimony is directly linked to its reliability. The more reliable a witness's testimony, the more persuasively it will establish a particular fact at issue. Conversely, the less reliable a witness's testimony, the less persuasive it will be. Thus, in applying [Rule] 403 to eyewitness identification issues, trial courts must examine the relative reliability of evidence produced by the parties to determine the probative value of the identification. The more factors—the presence of system variables alone or in combination with estimator variables—that weigh against reliability of the identification, the less persuasive the

614. For a thoughtful examination of judicial responsibilities in this regard with respect to how Federal Rules of Evidence 702 and 703 could be used to exclude unreliable eyewitness identifications under Daubert and its progeny, see Sandra Guerra Thompson, Daubert *Gatekeeping for Eyewitness Identifications*, 65 SMU L. REV. 593, 594 (2012).

615. FED. R. EVID. 403.

616. *E.g.*, N.C. GEN. STAT. § 8C-403, Rule 403. *See generally* Kenneth W. Graham, Jr., *State Adaptation of the Federal Rules: Pros and Cons*, 43 OKLA. L. REV. 293, 293 (1990) (explaining that within fifteen years of the enactment of the federal rules of evidence, at least thirty-four states had adopted state rules modeled after the federal ones).

617. State v. Lawson, 291 P.3d 673, 695 (Or. 2012) (applying OR. REV. STAT. § 40.160, Rule 403).

> identification evidence will be to prove the fact of identification, and correspondingly, the less probative value that identification will have.[618]

The *Lawson* court wisely did not follow *Perry*; its mandate applies regardless of whether or not a state actor tainted the reliability of an identification.[619] Building on Oregon's lead in *Lawson*, federal and state courts alike may—and should—exclude unreliable eyewitness identifications under Rule 403.[620] As law professor Keith Findley explained,

> Rule 403 provides courts with the discretion to exclude even relevant and helpful evidence if its probative value is substantially outweighed by the risk of unfair prejudice. The *Lawson* court reasoned here: . . . "Consequently, in cases in which an eyewitness has been exposed to suggestive police procedures, trial courts have a heightened role as an evidentiary gatekeeper because 'traditional' methods of testing reliability-like cross-examination-can be ineffective at discrediting unreliable or inaccurate eyewitness identification evidence." Other courts and commentators are similarly recognizing the potential for Rule 403 to be used to exclude unreliable eyewitness testimony, even if the unreliability was not caused by police misconduct.[621]

Findley noted that for the rules of evidence to increase the reliability of eyewitness identifications in criminal trials, courts need to "heed the lessons" from the relevant scientific research.[622] One of my primary

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618. *Id.* at 694.

619. *Id.* at 688–89.

620. *See, e.g.*, State v. Hibl, 714 N.W.2d 194, 205–06 (Wis. 2006) (recognizing that the state version of Rule 403 "has a role to play in the context of the reliability of eyewitness identification evidence"). A group of well-respected wrongful convictions scholars made a similar argument concerning Rule 403 with respect to unreliable confession evidence. Richard A. Leo, Peter J. Neufeld, Steven A. Drizin & Andrew E. Taslitz, *Promoting Accuracy in the Use of Confession Evidence: An Argument for Pretrial Reliability Assessments to Prevent Wrongful Convictions*, 85 TEMP. L. REV. 759, 793–97 (2013).

Whether *Lawson* created a mandatory rule or vested judges with some discretion is murky. But as Richard Leo and colleagues noted, "at a minimum, the language suggests that admitting unreliable eyewitness identifications will frequently constitute an 'abuse of discretion'—a near per se rule, functionally indistinguishable from a rule recognizing no discretion at all." *Id.* at 797.

621. Keith A. Findley, *Judicial Gatekeeping of Suspect Evidence: Due Process and Evidentiary Rules in the Age of Innocence*, 47 GA. L. REV. 723, 765–66 (2013) (citing *Lawson*, 291 P.3d at 748).

622. *Id.* at 766; *see also* Brittany M. Brown, *Ethics, Evidence, and Eyewitnesses: The Role of the Trial System in Evaluating Unreliable Evidence*, 27 GEO. J. LEGAL ETHICS 407, 411 (2014).

> [A] Rule 403 ruling will likely depend on how much the judge knows about the social science of eyewitness identifications. A judge who knows about the variables and spots them in the eyewitness identification testimony offered as evidence may find the testimony less probative. Moreover, a judge who knows juries often fail to adequately evaluate

reasons for writing this Article was to ensure that judges and their law clerks have those lessons accessible. As I endeavored to make clear throughout this Article, there are substantial risks of misidentifications under a range of conditions across numerous estimator and system variables. Thus, I urge the judiciary to take *Lawson* (which is more than a decade old as of this writing) further: in light of eyewitness science, whenever unnecessarily suggestive confrontations occur (i.e. when law enforcement personnel do not comply with all relevant best practices explained in Part V of this Article), a trial court should take judicial notice of the science concerning the unreliability of eyewitness identifications that stem from suggestive confrontation practices and rule that the substantial risks of misidentifications outweigh the limited probative value of tainted identifications. Indeed, because suggestive confrontations lead to unreliable identifications as evidenced by their high error rates, they have so little probative value that *courts should presume* that eyewitness identifications are inadmissible under Rule 403 whenever one or more of the applicable best practices for confrontations were violated. Put differently, the proposal in Section VI.C.3 need not be adopted by appellate courts or legislatures to be put into practice in individual courtrooms across the United States.

G. Jury Instructions and Expert Testimony

In *Perry*, the U.S. Supreme Court recommended that jury instructions be updated to educate jurors about the risks of mistaken identification.[623] Certainly, the committees or other bodies that oversee model jury instructions in each jurisdiction should review their pattern instructions and revise them in accordance with the current scientific knowledge base. Some members of the Third Circuit's Task Force on Eyewitness Identifications made such a recommendation in 2019 to that circuit's Committee on Model Criminal Jury Instructions.[624] The Committee reviewed the Task Force's report and "declined to adopt most of these recommendations, concluding that the issues should be raised by counsel as they arise at trial."[625] This was lazy and misguided, as it placed the responsibility to prevent wrongful convictions in the hands of overworked defense attorneys. The judiciary is responsible for the fair

> eyewitness testimony may find the evidence has a high risk of unfair prejudice to the defendant because juries will likely give undue weight to this evidence.

Brown, *supra*, at 411.

623. Perry v. New Hampshire, 565 U.S. 228, 233 (2012).

624. THIRD CIR. TASK FORCE REP., *supra* note 30, at 9.

625. COMM. ON MODEL CRIM. JURY INSTRUCTIONS THIRD CIRCUIT, MODEL CRIMINAL JURY INSTRUCTIONS § 4.15 (2021), https://www.ca3.uscourts.gov/sites/ca3/files/2021%20Chapter%204%20revisions%20final.pdf [https://perma.cc/93W8-TWSJ].

administration of justice that should not be passed on to others who, despite their best efforts, might still not convince a trial judge to give scientifically accurate instructions to jurors.

The highest courts in New Jersey and Massachusetts have been leaders regarding this.[626] Both states adopted model jury instructions that incorporated scientific research on the specific factors affecting eyewitness identifications.[627] Researchers subsequently indicated these instructions needed improvement and offered suggestions for doing so.[628] Dr. Elizabeth F. Loftus, one of the leading experts on eyewitness identifications, even helped to craft new pattern jury instructions that states can adopt.[629]

Although improved jury instructions are important, they are not a substitution for expert testimony that can help jurors understand the complexities of perception and memory as they apply to the facts and circumstances of a particular case.[630]

> Numerous studies have found that cross-examination and jury instructions are inadequate alternatives to eyewitness identification expert testimony. Cross-examination does not effectively increase juror awareness of the reliability problems intrinsic in eyewitness testimony. Similarly, jury instructions do not sufficiently increase juror sensitivity to the memory and perception issues of eyewitness testimony, and in fact, have a tendency to confuse the jury and make them less receptive to potential reliability issues. Eyewitness expert

626. *See* Commonwealth v. Gomes, 22 N.E.3d 897, 909 (Mass. 2015); State v. Henderson, 27 A.3d 872, 910 (N.J. 2011).

627. *See* MODEL JURY INSTRUCTIONS ON EYEWITNESS IDENTIFICATION *passim* (MASS. SUP. JUD. CT. 2015), https://www.mass.gov/doc/model-jury-instructions-on-eyewitness-identification-november-16-2015/download [https://perma.cc/LBT7-AEAD]; IDENTIFICATION: IN-COURT AND OUT-OF-COURT IDENTIFICATIONS *passim* (N.J. COURTS 2020), https://www.njcourts.gov/sites/default/files/2022-09/idinout.pdf [https://perma.cc/5L8Y-JGW4].

628. *See, e.g.*, Kind Dillon, Jones, Bergold, Hui & Penrod, *supra* note 405, at 17.

629. *See* Jeannine Turgeon, Elizabeth Francis & Elizabeth F. Loftus, *Crafting Model Jury Instructions for Evaluating Eyewitness Testimony*, PA. LAW., Sept.–Oct. 2014, at 49, 52. Regretfully, the final version of the eight-page, plain language jury instructions that team created are not publicly available, but rather are located in an area of the Pennsylvania Bar Association's website that is available only to members. But an earlier draft is available online. *See* Elizabeth F. Loftus, Elizabeth Francis & Jeannine Turgeon, *Eyewitness Identification Instructions*, DAUPHIN CNTY. (Jun. 19, 2012), https://cms3.revize.com/revize/dauphincounty/document_center/courtdepartments/judges/Model-Eyewitness-Identification-Jury-Instructions.pdf [https://perma.cc/D4G4-Q3TQ].

630. *See, e.g.*, State v. Clopten, 223 P.3d 1103, 1110, 1118 (Utah 2009) (finding jury instructions are insufficient to help jurors evaluate the reliability of identifications and, therefore, calling for the routine admission of expert testimony to assist juries with reliability determinations).

> testimony should be routinely admitted whenever an eyewitness takes the stand.[631]

These thoughtful points have become even more salient since they were made in 2011. Subsequent research reports that even the *Henderson* instructions (i.e., those that the New Jersey Supreme Court promulgated to inform jurors about relevant variables that affect the accuracy of eyewitness identifications) do not improve jury deliberations in cases involving eyewitness evidence.[632] Thus, I submit that the title of a 2015 case note got it wrong when it rhetorically asked whether jurors should be educated about eyewitness identifications "through [e]xpert [t]estimony or [j]ury [i]nstructions?"[633] The answer is not either one or the other, it's both![634]

H. Harmless Error Analysis

Even when criminal defendants prevail on appeal with arguments that their due process rights were violated by the admission of an unreliable identification, courts do not automatically reverse convictions on those grounds. Rather, such mistakes are subject to the harmless error rule.[635]

Black's Law Dictionary defines the harmless error rule as "[t]he doctrine that an unimportant mistake by a trial judge, or some minor

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631. Lauren Tallent, Note, *Through the Lens of Federal Evidence Rule 403: An Examination of Eyewitness Identification Expert Testimony Admissibility in the Federal Circuit Courts*, 68 WASH. & LEE L. REV. 765, 801 (2011) (internal citations omitted).

632. Bergold, Jones, Kind Dillon & Penrod, *supra* note 405, 451 ("[J]urors and juries were not adept in evaluating the impact of estimator variables.").

> Overall, we did not find support . . . that, following deliberations, the juries who heard the *Henderson* instructions would be more sensitive to the strength of evidence than those who did not hear the *Henderson* instructions. In fact, the *Henderson* instructions did not interact with the quality of estimator or system variables to impact jury verdicts . . . , individual juror post-deliberation verdicts . . . , or the extent to which jurors discussed eyewitness factors during deliberations . . . .

Id. at 447.

633. Tracy L. Denholtz & Emily A. McDonough, State v. Guilbert*: Should Jurors in Connecticut Be Educated About Eyewitness Reliability Through Expert Testimony or Jury Instructions?*, 32 QUINNIPIAC L. REV. 865, 865 (2015).

634. *See supra* notes 401–407 and accompanying text; *see also, e.g.*, Chelsea Moore, *Is Perception Reality?: An Argument Against the Use of Rule 403 for the Exclusion of Eyewitness Identification Expert Testimony*, 6 FIU L. REV. 163, 189 (2010) (arguing in favor of the admissibility of expert testimony on the unreliability of eyewitness); Maureen Stoneman, Note, United States v. Smith*: An Example to Other Courts for How They Should Approach Eyewitness Experts*, 60 CATH. U. L. REV. 533, 557–61 (2011) (same); Tallent, *supra* note 631, at 801 (same).

635. *See generally* Jeffrey O. Cooper, *Searching for Harmlessness: Method and Madness in the Supreme Court's Harmless Constitutional Error Doctrine*, 50 U. KAN. L. REV. 309 (2002) (tracing the history of the harmless error rule and analyzing the problems with its application).

irregularity at trial, will not result in a reversal on appeal."[636] But given the weight jurors accord eyewitness testimony,[637] any use of an unreliable identification cannot be deemed either an "unimportant mistake" or "minor irregularity." Such errors undoubtedly "contribute[] to the conviction" at issue.[638] As the late Justice Scalia wrote on behalf of a unanimous Court in *Sullivan v. Louisiana*,

> [c]onsistent with the jury-trial guarantee, the question . . . the reviewing court to consider is not what effect the constitutional error might generally be expected to have upon a reasonable jury, but rather what effect it had upon the guilty verdict in the case at hand. Harmless-error review looks, we have said, to the basis on which "the jury actually rested its verdict." The inquiry, in other words, is not whether, in a trial that occurred without the error, a guilty verdict would surely have been rendered, but whether the guilty verdict actually rendered in this trial was surely unattributable to the error. That must be so, because to hypothesize a guilty verdict that was never in fact rendered—no matter how inescapable the findings to support that verdict might be—would violate the jury-trial guarantee.[639]

The admission at trial of an unreliable identification tainted by suggestion should be considered an error that is never harmless because such evidence is so potent that juries undoubtedly rest their verdicts on such evidence.[640]

That said, it is unlikely that the U.S. Supreme Court would endorse the notion that the due process deprivations associated with trial use of unreliable eyewitness identifications are so prejudicial that they should be exempt from harmless error review. In *Sullivan*, the Court ruled that a faulty reasonable doubt instruction amounted to a "structural defect[] in the constitution of the trial mechanism, which def[ied] analysis by harmless error standards."[641] By contrast, lesser "errors which occur during the presentation of the case to the jury" are subject to harmless error analysis.[642] The distinction between structural and trial errors is likely a false dichotomy—so much so that some Supreme Court Justices have

636. *Harmless Error Rule*, BLACK'S LAW DICTIONARY (11th ed. 2019); *see also* Chapman v. California, 386 U.S. 18, 22 (1967) (holding that "that there may be some constitutional errors which in the setting of a particular case are so unimportant and insignificant that they may, consistent with the Federal Constitution, be deemed harmless, not requiring the automatic reversal of the conviction").

637. *See supra* note 23 and accompanying text.

638. *Chapman*, 386 U.S. at 23 (quoting Fahy v. Connecticut, 375 U.S. 85, 86–87 (1963)).

639. Sullivan v. Louisiana, 508 U.S. 275, 279 (1993).

640. *See supra* notes 23 & 69 and accompanying text.

641. *Sullivan*, 508 U.S. at 281 (internal quotation marks and citation omitted).

642. *Id.* (internal quotation marks and citation omitted).

criticized the distinction as "meaningless."[643] Nonetheless, within the existing harmless error framework, the admission of unreliable eyewitness evidence would likely fall into the latter realm of being a trial error in light of the U.S. Supreme Court's decision in *Arizona v. Fulminante* that the use of evidence obtained from a coerced confession was subject to harmless error review even though coerced confessions violate due process.[644] Four dissenting Justices in *Fulminante*, however, opined as follows:

> The search for truth is indeed central to our system of justice, but "certain constitutional rights are not, and should not be, subject to harmless-error analysis because those rights protect important values that are unrelated to the truth-seeking function of the trial. The right of a defendant not to have his coerced confession used against him is among those rights, for using a coerced confession "aborts the basic trial process" and "renders a trial fundamentally unfair."[645]

Still, just because certain due process violations may not be automatically exempt from harmless error analysis does not mean that they are not harmful errors. Put differently, even if the harmless-error test continues to be applied to due process violations attendant to involuntary confessions and unreliable eyewitness identifications, in light of the undoubtedly "dramatic effects" that such errors have on jurors compared to other trial errors, reviewing courts should view any harmless-error arguments with great skepticism.[646] And in cases in which tainted eyewitness testimony constitutes an important part of the prosecution's case, there can be no reasonable doubt that such evidence contributed to a conviction, and, therefore, reversal will almost always be warranted.[647]

CONCLUSION

The U.S. Supreme Court should acknowledge that its approach to eyewitness identification is not scientifically supported and, therefore, should be abandoned. It is unlikely, however, that the Court will do so, as evidenced by its refusal in *Perry v. New Hampshire* to reconsider the underpinnings of the Court's line of cases dealing with eyewitness

643. Arizona v. Fulminante, 499 U.S. 279, 290 (1991) (White, J., dissenting, joined by Marshall, Blackmun, Stevens, JJ.).

644. *Id.* at 310 (1991) (majority decision).

645. *Id.* at 295 (White, J., dissenting) (internal citations and alterations omitted).

646. Sullivan v. Louisiana, 508 U.S. 275, 312 (1993).

647. *Cf.* United States v. Downing, 753 F.2d 1224, 1226 (3d Cir. 1985) (holding that the trial court's refusal to allow expert testimony constituted harmful, reversible error because eyewitness testimony had been central to the case against the defendant).

identification, despite Justice Sotomayor urging her colleagues to do so.[648] But states can correct this monumental error in federal constitutional jurisprudence.[649] State legislatures can adopt laws addressing the deficiencies in how police conduct eyewitness confrontations and how state courts scrutinize such evidence. Courts can also do their part to curb the use of tainted identifications during criminal trials. Indeed, trial court judges in both federal and state systems can use Rule 403 or its analogs to exclude unreliable eyewitness identifications from evidence as unduly prejudicial in light of their questionable probative value.

As wrongful conviction data establishes, the exclusion of unreliable eyewitness evidence ought to be a paramount concern to the judiciary—even more so than the exclusion of evidence for Fourth and Fifth Amendment violations for the reasons the New York Court of Appeals explained when it barred the admissibility of identifications following unnecessarily suggestive confrontations:

> The rule excluding improper showups and evidence derived therefrom is different in both purpose and effect from the exclusionary rule applicable to confessions and the fruits of searches and seizures. In the latter cases generally reliable evidence of guilt is suppressed because it was obtained illegally. Although this serves to deter future violations, it is collateral and essentially at variance with the truth-finding process. . . . But the rule excluding improper pretrial identifications bears directly on guilt or innocence. It is designed to reduce the risk that the wrong person will be convicted as a result of suggestive identification procedures employed by the police.
>
> A reliable determination of guilt or innocence is the essence of a criminal trial. A defendant's right to due process would be only theoretical if it did not encompass the need to establish rules to accomplish that end. Permitting the prosecutor to introduce evidence of a suggestive pretrial identification can only increase the risks of

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648. Perry v. New Hampshire, 565 U.S. 228, 252 (2012) (Sotomayor, J., dissenting) (stressing that "[e]yewitness evidence derived from suggestive circumstances . . . is uniquely resistant to the ordinary tests of the adversary process").

649. For explorations of the ways in which states have rejected U.S. Supreme Court decisions in ways that provide their citizens more protections than the Supreme Court was willing to establish, see generally Shirley S. Abrahamson, *Criminal Law and State Constitutions: The Emergence of State Constitutional Law*, 63 TEX. L. REV. 1141 (1985); Thomas B. Bennett, *State Rejection of Federal Law*, 97 NOTRE DAME L. REV. 761 (2022); Marc L. Miller & Ronald F. Wright, *Leaky Floors: State Law Below Federal Constitutional Limits*, 50 ARIZ. L. REV. 227, 230 (2008); Nina Morrison, Note, *Curing "Constitutional Amnesia": Criminal Procedure Under State Constitutions*, 73 N.Y.U. L. REV. 880 (1998); Thomas G. Saylor, *Fourth Amendment Departures and Sustainability in State Constitutionalism*, 22 WIDENER L.J. 1, 8 (2012).

> convicting the innocent in cases where it has the desired effect of contributing to a conviction.[650]

Professor Raban put it even more succinctly when he wrote that the use of tainted identifications "undermines truth-seeking, offends the Due Process principle of fundamental fairness, and adds to the risk that 'society [has been left] unprotected from the depredations of an active criminal.'"[651]

Of course, there are trade-offs to enacting meaningful eyewitness reforms. Perhaps the most significant "cost" is that true (i.e., accurate) identifications may be lost. At the risk of being trite, however, a foundational principle of Anglo-American law posits that "it is better that ten guilty persons go free than that one innocent person be convicted."[652] Indeed, that adage continues to speak "to a deep-seated sense of what is just."[653] In line with this bedrock belief, minimizing wrongful convictions ought to be the paramount concern.[654]

In sum, the constitutional framework for the admissibility of eyewitness identifications is built on a house of cards demolished by science. Yet, the flawed precedents on which this house was constructed continue to operate in the federal court system and those of a majority of states. This sorry state of affairs serves as an embarrassment to the law by fundamentally betraying the constitutional guarantee of due process. In doing so, the law itself contributes to wrongful convictions. We are long past due in remedying the underlying problems.

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650. People v. Adams, 423 N.E.2d 379, 383–84 (1981) (internal citation omitted).

651. Raban, *supra* note 272, at 67 (internal citation omitted).

652. This principle can be traced back to Aristotle, who wrote that "every one of us would rather acquit a guilty man as innocent than condemn an innocent man as guilty . . . [f]or when there is any doubt one should choose the lesser of two errors." Joel S. Johnson, Note, *Benefits of Error in Criminal Justice*, 102 VA. L. REV. 237, 241–42 (2016) (quoting ARISTOTLE, PROBLEMS bk. XXIX, at 145 (W.S. Hett trans., Harvard Univ. Press rev. ed. 1957)); *see also* 4 WILLIAM BLACKSTONE, COMMENTARIES *352 (stating it was "better that ten guilty persons escape, than that one innocent suffer").

653. SONIA SOTOMAYOR, MY BELOVED WORLD 208 (2013).

654. *See generally* Vidar Halvorsen, *Is It Better That Ten Guilty Persons Go Free Than That One Innocent Person Be Convicted?*, CRIM. JUST. ETHICS, Summer/Fall 2004 at 3 (https://doi.org/10.1080/0731129X.2004.9992168).