

APPLYING THE STAMP SAFETY MODEL TO PREVENT FALSE
CONVICTIONS BASED ON EYEWITNESS
MISIDENTIFICATIONS

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ABSTRACT

In many criminal law systems, eyewitness identification of a suspect is sufficient to establish that they are the perpetrator of the crime in question, without any need for additional corroborating evidence. But this lofty legal status stands in contrast to the undisputed assertion in the professional literature that an erroneous eyewitness identification is far from rare, with many scholars holding it to be the most common cause of false convictions. On this background, this Article offers ways of reducing the rate of false convictions based on eyewitness misidentifications. The Article argues for the creation and application of a safety theory in the criminal justice system, specifically regarding eyewitness identifications. Therefore, after the Article connects between the modern theory of safety, which is well developed in other areas of our life, and the new theory of safety from false convictions; and after a deep discussion of one of the most serious hazards in criminal law—the hazard of false convictions based on eyewitness misidentifications—a specific safety model shall be developed, based on these discussions and on the innovative STAMP safety model. The substance of the suggested rules is based on both the psychological research and the legal literature. The high rate of false convictions is not an inevitable fate.

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INTRODUCTION

In many criminal law systems, eyewitness identification of a suspect is sufficient to establish that they are the perpetrator of the crime in question, without any need for additional corroborating evidence.¹ But this lofty legal status stands in contrast to the undisputed assertion in the professional literature that an erroneous eyewitness identification is far from rare, with many scholars holding it to be the most common cause of false convictions.² Thus, in the framework of the Innocence Project, eyewitness misidentification is the greatest contributing factor to convictions proven wrong by DNA testing, playing a role in more than 70 percent of convictions overturned through DNA testing nationwide.³ Indeed, the English Criminal Law Revision Committee declared in its report on the matter, “We regard mistaken identification as by far the greatest cause of actual or possible wrong convictions.”⁴

¹ See *infra* note 46.

² See Thomas D. Albright, *Why Witnesses Fail*, 114 PNAS 7758, 7758 (2017), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5544328/pdf/pnas.201706891.pdf> [<https://perma.cc/F3JW-RJU2>]; *Eyewitness Identification Reform*, INNOCENCE PROJECT, <https://www.innocenceproject.org/eyewitness-identification-reform> [<https://perma.cc/6VDS-CP5Y>].

³ See *Eyewitness Identification Reform*, *supra* note 2.

⁴ Adam Wilson, *Outside Normality: The Admission of Expert Psychological Testimony*, 41 CAMBRIAN L. REV. 7, 9 (2010).

Research has demonstrated that, contrary to what is commonly believed—by judges and jurors as well—the accuracy of an eyewitness identification and the quality of the description of the perpetrator given by an eyewitness to the police do not correlate.⁵ Furthermore, the degree of a witness's certainty in the identification—which reflects social and environmental factors and variables as well as the witness's personality and traits—bears no relation to the accuracy of that identification.⁶ Cognitive psychology studies have shown that human memory is prone to errors and bias and thus cannot be trusted, particularly with remembering faces.⁷ There are incomplete memories, and there are false memories, and research shows that it is hard to distinguish these from true memories.⁸ Moreover, the identification procedure can also have a significant impact on the likelihood of error.⁹

When an eyewitness identification is the evidence on which factfinders must decide whether or not to convict, it is vital that they weigh the very reasonable likelihood of error as well as of false testimony.¹⁰ Yet whereas the courts tend to accord a very strong weight to eyewitness identification of the suspect as the perpetrator of the crime, they tend not to give much evidentiary weight to a failure to do so,¹¹ that is to say, a witness's failure to identify the suspect or their identification of a filler in the lineup as the perpetrator. But there is no way to logically reconcile according incriminating weight to an eyewitness identification with the rejection of exculpatory weight to a failure to identify.¹²

Against this background, the present Article offers ways of reducing the rate of false convictions based on eyewitness misidentifications. The view advanced here is that the criminal justice system can be categorized as what is termed in safety

⁵ See Albright, *supra* note 2, at 7758, 7762–63; *Increasing Eyewitness Accuracy in Police Lineups*, AM. PSYCHOL. ASS'N, <https://www.apa.org/action/resources/research-in-action/eyewitness> [<https://perma.cc/MDE7-VMSZ>].

⁶ See Albright, *supra* note 2, at 7759; Thomas Albright & Jed Rakoff, *Eyewitnesses Aren't as Reliable as You Might Think*, WASH. POST (Jan. 30, 2015), https://www.washingtonpost.com/opinions/eyewitnesses-arent-as-reliable-as-you-might-think/2015/01/30/fe1bc26c-7a74-11e4-9a27-6fdb612bff8_story.html [<https://perma.cc/3WSV-4TYU>].

⁷ The text accompanying footnotes 7–12 is reprinted from BOAZ SANGERO, SAFETY FROM FALSE CONVICTIONS 183–85 (2016).

⁸ *Id.*

⁹ *Id.* at 184.

¹⁰ *Id.* at 185.

¹¹ *Id.*

¹² *Id.*

engineering a “safety-critical system.”¹³ Because such systems deal with matters of life and death, any error is liable to cause severe harm to individuals and society alike.¹⁴ Convicting an innocent person is a system error and accident, similar to a plane crash.¹⁵ This is true not only metaphorically, but also as far as the economic cost is concerned.¹⁶ The Article proposes the creation and application of a safety mechanism in the criminal justice system, specifically regarding eyewitness identification.

Therefore, after a deep discussion of one of the most serious hazards in criminal law—the hazard of false convictions based on eyewitness misidentifications—a specific safety model shall be developed, based on these discussions and on the innovative STAMP (System-Theoretic Accident Model and Processes) safety model.¹⁷ The substance of the suggested rules is based both on the psychological research and the legal literature. The high rate of false convictions is not an inevitable fate.

The Article proceeds as follows: Part I connects between the modern theory of safety, which is well developed in other areas of our life, and the new theory of safety from false convictions. It starts from the phenomenon of false convictions, moves to risk assessment, establishes the moral duty to adopt safety measures, explores the new area of safety from false convictions, suggests adopting modern safety, and ends with showing the unsafety in the criminal justice system. Part II describes the psychological and the legal literature regarding the hazard of false convictions based on eyewitness misidentifications. Part III offers some safety measures: negation of a conviction based only on an eyewitness identification; development of proper protocols for police lineup identifications; and other safety measures as well as the National Academy of Sciences recommendations. Part IV, which is probably the most important part, develops a method of Identify-Analyze-Control in the criminal justice system, applying the innovative STAMP safety model to eyewitness misidentifications. A short conclusion follows.

¹³ Mordechai Halpert & Boaz Sangero, *From a Plane Crash to the Conviction of an Innocent Person: Why Forensic Science Evidence Should Be Inadmissible Unless It Has Been Developed as a Safety-Critical System*, 32 *HAMLIN L. REV.* 65, 67–68, 70 (2009).

¹⁴ Boaz Sangero & Mordechai Halpert, *A Safety Doctrine for the Criminal Justice System*, 2011 *MICH. ST. L. REV.* 1293, 1294.

¹⁵ *See id.* at 1304.

¹⁶ *See id.*

¹⁷ *See SANGERO, supra* note 7, at 50–52.

I. MODERN SAFETY FROM FALSE CONVICTIONS

Formerly, it may have been possible to call into question whether false convictions indeed occur, but in view of the following evidence, made available by the Innocence Project and the DNA revolution, such doubts are no longer justified.¹⁸ Recent studies have provided ample evidence of false convictions,¹⁹ making it necessary to reconsider the issue.

Empiric studies have shown that the rate of false-conviction is quite high.²⁰ Michael Risinger found that in the case of the most serious crime, which is rape followed by murder, 5 percent of convictions are false.²¹ In their study, Samuel R. Gross and Michael Shaffer cited 873 cases in which individuals were exonerated, about a third based on DNA tests, with another 1,100 people being cleared in “group exonerations.”²² All in all, 1,973 innocent defendants, who had been wrongfully convicted, were officially exonerated. Moreover, as of March 2020, there were 2,566 registered exonerations in the National Registry of Exonerations.²³ In *Rates of*

¹⁸ See BRANDON L. GARRETT, CONVICTING THE INNOCENT: WHERE CRIMINAL PROSECUTIONS GO WRONG 213–15 (2011); BARRY SCHECK ET AL., ACTUAL INNOCENCE: FIVE DAYS TO EXECUTION AND OTHER DISPATCHES FROM THE WRONGLY CONVICTED 111–13 (2000); *Exonerate the Innocent*, INNOCENCE PROJECT, <https://www.innocenceproject.org/exonerate/> [<https://perma.cc/3KEJ-C5RL>]. Genetic comparisons are conducted between samples taken from inmates and samples that have been preserved from crime scenes. See *Access to Post-Conviction DNA Testing*, INNOCENCE PROJECT, <https://www.innocenceproject.org/causes/access-post-conviction-dna-testing/> [<https://perma.cc/Z8E8-KSRM>]. On the basis of the testing initiated by the original Innocence Project (there are many similar additional projects, both in the United States and elsewhere), almost four hundred false convictions have been exposed, regarding the serious offenses of rape and murder, with life imprisonment or capital punishment. (On March 13, 2020, the exact number was 367.) *DNA Exonerations in the United States*, INNOCENCE PROJECT, <https://www.innocenceproject.org/dna-exonerations-in-the-united-states/> [<https://perma.cc/4D8M-4S4K>]. Moreover, in almost half of the cases (On March 13, 2020, the exact number was 162), genetic testing led to the identification of the true perpetrators of the crimes, who had roamed free due to the false convictions. *Id.* Some of them even continued to commit serious crimes. *Id.*

¹⁹ For a survey of the literature in this field, see Richard A. Leo, *The Criminology of Wrongful Conviction: A Decade Later* 33 J. CONTEMP. CRIM. JUST. 82 (2017).

²⁰ See, e.g., D. Michael Risinger, *Innocents Convicted: An Empirically Justified Factual Wrongful Conviction Rate*, 97 J. CRIM. L. & CRIMINOLOGY 761, 780 (2007); SAMUEL R. GROSS & MICHAEL SHAFFER, NAT'L REGISTRY OF EXONERATIONS, EXONERATIONS IN THE UNITED STATES 1989–2012, at 1 (2012), http://www.law.umich.edu/special/exoneration/Documents/exonerations_us_1989_2012_full_report.pdf [<https://perma.cc/L57Z-BHWJ>].

²¹ Risinger, *supra* note 20, at 780.

²² GROSS & SHAFFER, *supra* note 20, at 1, 3, 84, 92. These group exonerations were in the framework of twelve different instances of police corruption, where, in each case, police officers had deliberately and systematically incriminated innocent citizens with false claims and fabricated evidence in order to gain promotions. *Id.* at 3, 84, 87–89.

²³ Currently there are 2,566 exonerations—more than 23,004 years lost. See *Exonerations by State*, NAT'L REGISTRY EXONERATIONS, <https://www.law.umich.edu/special/exoneration/Pages/Exonerations-in-the-United-States-Map.aspx> [<https://perma.cc/SM3E-UL9R>].

False Conviction of Criminal Defendants Who Are Sentenced to Death, Gross and his colleagues estimated that 4.1 percent of all defendants sentenced to death would be exonerated if their sentences were delayed indefinitely.²⁴ The authors considered this to be “a conservative estimate” of the rate of false convictions in capital cases in the United States.²⁵ According to an empirical study commissioned by the State of Virginia,²⁶ the rate of false conviction is much higher, and it stands at approximately 15 percent.²⁷

It is therefore possible to estimate the false-conviction rate to be 5 to 10 percent for the most severe offenses, and quite likely higher for less serious offenses, where the courts are likely to exercise less caution. The question arises: What can we do to reduce the rate of false convictions?

The harm caused by false convictions reaches far beyond the wronged defendants and their families, and it affects society as a whole. There is extensive scholarship on the deleterious effects of imprisonment in general, but only in recent years has research started to pay attention to the particular harms, often irreversible, of *wrongful* imprisonment.²⁸

Even disregarding due process,²⁹ if we want to preserve public faith in the criminal justice system so that it can continue to perform its function of crime control, it is vital that safety standards be implemented to decrease the rate of false convictions.

According to social contract theory, the state has a moral duty to ensure that the criminal justice system contains safety elements. The purpose of the state is to safeguard the rights of members of

²⁴ Samuel R. Gross et al., *Rate of False Conviction of Criminal Defendants Who Are Sentenced to Death*, 111 PNAS 7230, 7230, 7234 (2014).

²⁵ *Id.* at 7230, 7234.

²⁶ See JOHN ROMAN ET AL., POST-CONVICTION DNA TESTING AND WRONGFUL CONVICTION, at ii (2012) (research report submitted to the U.S. Department of Justice).

²⁷ See *id.* at 5–6.

²⁸ See JAMES R. ACKER & ALLISON D. REDLICH, WRONGFUL CONVICTION: LAW, SCIENCE, AND POLICY 590–91, 606 (2011); Leslie Scott, “*It Never, Ever Ends*”: *The Psychological Impact of Wrongful Conviction*, AM. U. L. BRIEF, Spring 2010; Heather Weigand, *Rebuilding a Life: The Wrongfully Convicted and Exonerated*, 18 B.U. PUB. INT. L.J. 427 (2009); Saundra D. Westervelt & Kimberly J. Cook, *Framing Innocents: The Wrongly Convicted as Victims of State Harm*, 53 CRIME L. & SOC. CHANGE 259 (2010); Mary C. Delaney et al., *Exonerees’ Hardships After Freedom*, WIS. LAW., <https://www.wisbar.org/NewsPublications/WisconsinLawyer/Pages/Article.aspx?Volume=83&Issue=2&ArticleID=1925> [https://perma.cc/26L3-VH6P].

²⁹ See generally HERBERT L. PACKER, THE LIMITS OF THE CRIMINAL SANCTION 149–73 (1968) (discussing the Due Process Model and the Crime Control Model).

society, not to make them suffer.³⁰ Because the state, through the criminal justice system, is the source of the risk of false convictions, it has the moral obligation to institute safety measures to minimize this risk.³¹ In practice, the only attempt the state makes to reduce the risk of falsely convicting an innocent person is the general declaration that it is necessary to prove guilt beyond a reasonable doubt.³² Criminal law fails to implement principles of modern system safety and risk management for the reduction of false convictions even at the most basic level.³³

Modern safety practices date back to the period following World War II.³⁴ Before then, safety management was based on the reactive “fly-fix-fly” system, in which planes would fly until an accident occurred, when their causes would be investigated and eliminated, after which flying resumed.³⁵ The obvious flaw in this model is that it protects only against flaws that had occurred in the past, not against future accidents caused by previously undetected defects.³⁶ Modern safety is the result of the realization that the approach based on learning from experience is too expensive given the rising cost of accidents.³⁷ In the approach of modern safety, the primary objective is to prevent accidents before they occur.³⁸ This resulted in replacing the fly-fix-fly method with the “identify-

³⁰ Rinat Kitai, *Protecting the Guilty*, 6 BUFF. CRIM. L. REV. 1163, 1172–79, 1186–87 (2003); Sangero & Halpert, *supra* note 14, at 1303.

³¹ Sangero & Halpert, *supra* note 14, at 1303.

³² *Id.*

³³ *Id.* For articles in this direction, see James M. Doyle, *An Etiology of Wrongful Convictions: Error, Safety, and Forward-Looking Accountability in Criminal Justice*, in WRONGFUL CONVICTION AND CRIMINAL JUSTICE REFORM: MAKING JUSTICE 56 (Marvin Zalman & Julia Carrano eds., 2014); James M. Doyle, *Learning from Error in the Criminal Justice System: Sentinel Event Reviews*, in NAT'L INST. OF JUSTICE, MENDING JUSTICE: SENTINEL EVENT REVIEWS 3 (2014), <https://www.ncjrs.gov/pdffiles1/nij/247141.pdf> [<https://perma.cc/J65X-SMKM>]; James M. Doyle, *Learning from Error in American Criminal Justice*, 100 J. CRIM. L. & CRIMINOLOGY 109 (2010); James M. Doyle, *A “Safety Model” Perspective Can Aid Diagnosis, Prevention, and Restoration After Criminal Justice Harms*, 59 SANTA CLARA L. REV. 107 (2019); Halpert & Sangero, *supra* note 13; Sangero & Halpert, *supra* note 14; Rinat Kitai-Sangero, *Changing the Paradigm of Models to Safety and Hazards*, 55 CRIM. L. BULL. 50 (2019); Boaz Sangero, *Safety from False Confessions*, 54 CRIM. L. BULL. 25 (2018) [hereinafter Sangero, *Safety from False Confessions*]; Boaz Sangero, *Safety from Flawed Forensic Sciences Evidence*, 34 GA. ST. U. L. REV. 1129 (2018) [hereinafter Sangero, *Forensic Sciences Evidence*]; Boaz Sangero, *Safety in Post-Conviction Proceedings*, 51 J. MARSHALL L. REV. 773 (2018) [hereinafter Sangero, *Safety in Post-Conviction Proceedings*]; Boaz Sangero, *Safety from Plea-Bargains' Hazards*, 38 PACE L. REV. 301 (2018) [hereinafter Sangero, *Safety from Plea-Bargains' Hazards*].

³⁴ Sangero & Halpert, *supra* note 14, at 1296.

³⁵ *See id.*

³⁶ *See id.* at 1296–97.

³⁷ *See id.* at 1297.

³⁸ *See id.*

analyze-control” method, based on the principle of “first time safe.”³⁹ Under the new approach, future hazards are systematically identified, the likelihood of these hazards occurring is analyzed, and the risk of their occurrence is eliminated or at least reduced to an acceptable level.⁴⁰

Modern safety approaches of this type have been adopted in a variety of areas, including engineering, transportation, medicine, labor, and more.⁴¹ Implementation of these approaches is based on education and training for safety, the creation of an environment and culture of safety, an obligation to report both accidents and incidents (near-accidents), conducting professional risk assessments, and engaging in a process of continued improvement.⁴²

The present Article suggests adopting the first-time-safe approach in the criminal justice system. The most predictive risk assessment method implementing the principles of “first time safe” is the “System-Theoretic Accident Model and Processes” or “STAMP.”⁴³ This Article proposes a method for applying STAMP in eyewitness identifications.

According to the Hidden Accidents Principle in criminal law, an effective feedback for the criminal justice system is implausible, even in theory.⁴⁴ Consequently, the best strategy for injecting safety into the criminal law system is to import it from domains that have experience in detecting mishaps.⁴⁵ The Hidden Accidents Principle demonstrates the inadequacy of safety methods such as fly-fix-fly for criminal law, because it is impossible to learn from past experience in a system in which accidents are by definition hidden. Following an in-depth review of the hazards of false convictions resulting from eyewitness misidentifications, the Article presents the proposed safety model for criminal law based on STAMP.

³⁹ *See id.*

⁴⁰ *See id.*

⁴¹ *See id.* at 1297–99.

⁴² *Id.* at 1299.

⁴³ Nancy Leveson et al., *Moving Beyond Normal Accidents and High Reliability Organizations: A Systems Approach to Safety in Complex Systems*, 30 *ORG. STUD.* 227, 241 (2009).

⁴⁴ Sangero & Halpert, *supra* note 14, at 1315.

⁴⁵ *Id.* at 1315. In other fields, an accident is both detected and detectable. *See id.* at 1314. A defect in a car can cause its observable crash, just as a defect in a bridge can cause its observable collapse. *See id.* The general inability to detect false convictions is a prominent characteristic of criminal law, and these “accidents” typically not detected. *See id.* at 1315. “There is no ‘gold standard’ for determining whether a conviction was incorrect. Indeed, if one were to exist, it would already be applied at trial.” *Id.*

II. THE HAZARD OF FALSE CONVICTIONS BASED ON EYEWITNESS MISIDENTIFICATIONS

In many criminal law systems, eyewitness identification of a suspect is sufficient to establish that they are the perpetrator of the crime in question, without any need for additional corroborating evidence.⁴⁶ As described by Rakoff and Loftus,

Unlike accomplice witnesses, the typical eyewitness to a crime is a passerby who has no motive to lie. Unlike circumstantial evidence, eyewitness testimony is directly probative of guilt and frequently expressed with a high degree of certainty. Unlike expert testimony, eyewitness testimony is immediately understood by even the most confused, inattentive, or ignorant juror. And unlike many other kinds of evidence, eyewitness testimony is rarely the subject of any special cautionary instructions from the judge.⁴⁷

But this lofty legal status stands in contrast to the undisputed assertion in professional literature that an erroneous eyewitness identification is far from rare,⁴⁸ with many scholars holding this to be the most common cause of false convictions.⁴⁹ In 1932, Edwin M. Borchard found mistaken eyewitness identification to be the chief cause of false convictions of innocent people in twenty-nine of the sixty-five cases he had examined.⁵⁰ Similar findings have continued

⁴⁶ SANGERO, *supra* note 7, at 181; 1 MCCORMICK ON EVIDENCE 722 (JOHN W. STRONG ed., 5th ed. 1999). The leading English case is *R v Turnbull* [1977] QB 224 at 224–25 (Eng.) (holding that it is sufficient for a judge to warn the jury about the danger of relying on eyewitness testimony as the sole evidence of guilt). For more information, see COLIN TAPPER, CROSS & TAPPER ON EVIDENCE 234–35, 670–87 (9th ed. 1999), and IAN H. DENNIS, THE LAW OF EVIDENCE 203 (1999). The leading Israeli case is *CrimA 347/88 Demjanjuk v. State of Israel*, 47(4) PD 221, 392, 429 (Isr.). For more information, see DENNIS, *supra*, at 196–228; Boaz Sangero & Mordechai Halpert, *Why a Conviction Should Not Be Based on a Single Piece of Evidence: A Proposal for Reform*, 48 JURIMETRICS J. 43, 90–94 (2007).

⁴⁷ Jed S. Rakoff & Elizabeth F. Loftus, *The Intractability of Inaccurate Eyewitness Identification*, DAEDALUS, Fall 2018, at 90, 91. See generally ELIZABETH F. LOFTUS ET AL., EYEWITNESS TESTIMONY: CIVIL AND CRIMINAL (6th ed. 2019).

⁴⁸ See BRIAN L. CUTLER & STEVEN D. PENROD, MISTAKEN IDENTIFICATION: THE EYEWITNESS, PSYCHOLOGY AND THE LAW 6 (1995); Gabriel W. Gorenstein & Phoebe C. Ellsworth, *Effect of Choosing an Incorrect Photograph on a Later Identification by an Eyewitness*, 65 J. APPLIED PSYCHOL. 616, 616 (1980); Margery Malkin Koosed, *The Proposed Innocence Protection Act Won't—Unless It Also Curbs Mistaken Identifications*, 63 OHIO ST. L.J. 263, 263 (2002); Sangero & Halpert, *supra* note 46, at 90.

⁴⁹ See, e.g., LOFTUS ET AL., *supra* note 47, at 3; Koosed, *supra* note 48, at 263.

⁵⁰ See EDWIN M. BORCHARD, CONVICTING THE INNOCENT: SIXTY-FIVE ACTUAL ERRORS OF CRIMINAL JUSTICE 367 (1932).

to emerge in the research in the decades that followed his trailblazing research. In a study of wrongful convictions conducted by Arye Rattner, mistaken eyewitness identification was found to be the main cause, appearing in 52 percent of the cases he examined.⁵¹ Hugo Adam Bedau and Michael L. Radelet arrived at a similar finding in their study,⁵² while an even higher rate emerged in the framework of Innocence Project exonerations—in 70 percent of the exonerations.⁵³ The findings in Samuel L. Gross and Michael Shaffer’s study of 873 exonerations of innocently convicted inmates echoed the Innocence Project findings: in 76 percent of the cases, the false conviction was found to have been based also (and, at times, only) on a mistaken eyewitness identification.⁵⁴ In approximately half of these cases, the eyewitnesses had actually erred in identifying the defendant, while in the other half of the cases, they had in fact lied either with regard to the perpetrator’s identity or regarding the very occurrence of the crime.⁵⁵ Finally—as of March 2020—of the 2,500 exonerations recorded in the National Registry of Exonerations (which includes not only individual exonerations, but also “group exonerations” following the exposure of police corruption),⁵⁶ 742 involved mistaken witness identification (29 percent).⁵⁷ Indeed, the English Criminal Law Revision Committee declared in its report on the matter, “We regard mistaken identification as by far the greatest cause of actual or possible wrong convictions.”⁵⁸

⁵¹ Arye Rattner, *Convicted but Innocent: Wrongful Conviction and the Criminal Justice System*, 12 LAW & HUM. BEHAV. 283, 291 tbl.6, 292 (1988); Arye Rattner, *Convicting the Innocent, When Justice Goes Wrong* 164 (1983) (unpublished Ph.D. dissertation, Ohio State University), https://etd.ohiolink.edu/etd.send_file?accession=osu1263045052&disposition=inline [<https://perma.cc/76FA-QWUX>].

⁵² See Hugo Adam Bedau & Michael L. Radelet, *Miscarriages of Justice in Potentially Capital Cases*, 40 STAN. L. REV. 21, 60 (1987) (finding that out of the 350 miscarriages of justice uncovered by the study, 193 (35 percent) were caused by the mistakes of witnesses).

⁵³ See *Eyewitness Identification Reform*, *supra* note 2; see also GARRETT, *supra* note 18, at 279 fig.A5 (finding eyewitness misidentifications in 190 of the first 250 exonerations achieved by the Innocence Project, amounting to 76 percent).

⁵⁴ See GROSS & SHAFFER, *supra* note 20, at 1, 52 tbl.14.

⁵⁵ See *id.* at 52 tbl.14.

⁵⁶ See *id.* at 3.

⁵⁷ *Exonerations by Contributing Factor*, NAT’L REGISTRY EXONERATIONS, <https://www.law.umich.edu/special/exoneration/Pages/ExonerationsContribFactorsByCrime.aspx> [<https://perma.cc/425T-GQ3X>].

⁵⁸ See PATRICK DEVLIN, REPORT TO THE SECRETARY OF STATE FOR THE HOME DEPARTMENT OF THE DEPARTMENTAL COMMITTEE ON EVIDENCE OF IDENTIFICATION IN CRIMINAL CASES ¶ 4.21, at 75 (1976); accord DENNIS, *supra* note 46, AT 197; Sangero & Halpert, *supra* note 46, at 91.

Two facts are informative as to the extent of false eyewitness identifications. The first is that the data suggests that, on average, eyewitnesses pick known innocent fillers in police lineups 30 percent of the time.⁵⁹ Second, more than 75,000 suspects are identified annually by eyewitnesses in the United States.⁶⁰ Indeed, eyewitness identification has been shown to be inaccurate.⁶¹ “Overall, data from real-life cases show that just under 45 percent of witnesses pick the suspect, about 35 percent decline to make a choice, and about 20 percent pick innocent fillers.”⁶² The experimental data pertain to lineups in which the suspect is present.⁶³ In target-absent lineups, 48 percent of witnesses pick an innocent filler.⁶⁴

Research has demonstrated that, contrary to what is commonly believed—by judges and jurors as well—the accuracy of an eyewitness identification and the quality of the description of the perpetrator given by an eyewitness to the police do not correlate.⁶⁵ Furthermore, the degree of a witness’s certainty in the identification, which reflects social and environmental factors and variables as well as the witness’s personality and traits,⁶⁶ bears no relation to the accuracy of that identification.⁶⁷ Cognitive psychology studies have shown that human memory is prone to errors and bias and thus cannot be trusted, particularly with remembering faces.⁶⁸ There are incomplete memories, and there

⁵⁹ GARRETT, *supra* note 18, at 50.

⁶⁰ *Id.*

⁶¹ See Michael Ollove, *Police Are Changing Lineups to Avoid False IDs*, PEW (July 13, 2018), <https://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2018/07/13/police-are-changing-lineups-to-avoid-false-ids> [<https://perma.cc/RF9Y-ESZT>].

⁶² DAN SIMON, *IN DOUBT: THE PSYCHOLOGY OF THE CRIMINAL JUSTICE PROCESS* 53 (2012). For a list of relevant studies, see *id.* at 262 n.5.

⁶³ *Id.*

⁶⁴ *Id.*

⁶⁵ Melissa Pigott et al., *A Field Study of the Relationship Between Quality of Eyewitnesses’ Description and Identification Accuracy*, 17 J. POLICE SCI. & ADMIN. 84, 84–85 (1990); Doron Menashe & Rabeea Assy, *Mistaken Facial Identification of Suspects: Invitation to Research and Reform*, 35 MISHPATIM 205 (2005) (Isr.); Sangero & Halpert, *supra* note 46, at 91.

⁶⁶ See Evan Brown et al., *Memory for Faces and the Circumstances of Encounter*, 62 J. APPLIED PSYCHOL. 311 (1977).

⁶⁷ See LOFTUS ET AL., *supra* note 47, AT 100–01; Keith A. Findley, *Guilt v. Guiltiness: Innocents at Risk: Adversary Imbalance, Forensic Science, and the Search for Truth*, 38 SETON HALL L. REV. 893, 917 (2008); Menashe & Assy, *supra* note 65; Gary L. Wells et al., *Eyewitness Identification Procedures: Recommendations for Lineups and Photospreads*, 22 LAW & HUM. BEHAV. 603, 622–27 (1998).

⁶⁸ Robert Buckhout, *Eyewitness Testimony*, SCI. AM., Dec. 1974, at 23; Sangero & Halpert, *supra* note 46, at 91.

are false memories, and research shows that it is hard to distinguish them from true memories.⁶⁹

The process of remembering faces is commonly divided into three stages,⁷⁰ and any of these stages can account for an eyewitness's mistaken identification. The first stage of the process is the "acquisition," or "encoding," stage, when the witness first perceives the incident and acquires information: their eyes and ears are exposed to a profusion of visual details and auditory effects, but they can focus on only some of this information.⁷¹ With terrifying or traumatic circumstances or brief occurrences, which usually characterizes a criminal incident, a witness can absorb only a small proportion of what is transpiring.⁷² Thus, an imperfect, and perhaps even distorted, picture of what happened forms in their mind.⁷³ This is reinforced by what psychological research has shown to be people's difficulty with recognizing the faces of people who are from a different race.⁷⁴ In the framework of the Innocence Project cases, for example, the majority of the mistaken identifications had been cross-racial, where a white victim misidentified a black suspect.⁷⁵

The second stage in remembering faces is the "retention" stage.⁷⁶ This refers to what happens between the occurrence of the event being remembered and the point at which a witness reconstructs what they saw and heard.⁷⁷ In the final stage of the process, the "retrieval" stage, the witness retrieves the information they acquired and retained in their memory and conveys it to others.⁷⁸ Their reconstruction of events is impacted by the actual information they absorbed during the original event as well as what they experienced during the retention stage and the circumstances surrounding the request that they recall what they saw and heard.⁷⁹

⁶⁹ SIMON, *supra* note 62, at 97–106.

⁷⁰ See ELIZABETH F. LOFTUS, *EYEWITNESS TESTIMONY* 21 (1979).

⁷¹ See *id.*

⁷² See Steven I. Friedland, *On Common Sense and the Evaluation of Witness Credibility*, 40 CASE W. RES. 165, 181 (1990).

⁷³ See LOFTUS, *supra* note 70, at 21; Friedland, *supra* note 72, at 181; Sangero & Halpert, *supra* note 46, at 91.

⁷⁴ See LOFTUS, *supra* note 70, at 138; SIMON, *supra* note 62, at 63; Gary L. Wells & Elizabeth F. Loftus, *Eyewitness Memory for People and Events*, in 11 HANDBOOK OF PSYCHOLOGY 149, 156 (Alan M. Goldstein & Irving B. Weiner eds., 2003).

⁷⁵ See GARRETT, *supra* note 18, at 72–74.

⁷⁶ See LOFTUS, *supra* note 70, at 21.

⁷⁷ See *id.* at 52–87; Sangero & Halpert, *supra* note 46, at 91.

⁷⁸ See LOFTUS, *supra* note 70, at 21, 88–109; Sangero & Halpert, *supra* note 46, at 91–92.

⁷⁹ See LOFTUS, *supra* note 70, at 88–109; Sangero & Halpert, *supra* note 46, at 92. Witnesses also have an over-inclination to pick someone from the lineup. SIMON, *supra* note

In any one of these stages, distortion that leads to error is a reasonable possibility.⁸⁰ This could be due to individual variables or circumstances, including a witness's individual abilities and capacities, the duration of their exposure to the event in question, and whether they were experiencing any trauma or distress when witnessing the event (for example, because they were the actual victim or simply had a strong reaction to the event).⁸¹ Cultural and social variables can also account for distortions, as can systemic factors, such as how the police investigation and the identification lineup are conducted, including the number of fillers, and how the suspect is identified.⁸² Studies have shown that police behavior during the procedure can be critical in mistaken identifications, such as suggestive remarks and hints and the directions that they give to the eyewitness.⁸³ Details regarding other evidence might also bias the eyewitness, such as information that the suspect has confessed⁸⁴ or that there is scientific evidence against him.⁸⁵

62, at 56. In experimental studies that gave witnesses a second chance to choose after being informed that they were wrong in their first attempt, 60 percent then picked someone else. *Id.*

⁸⁰ Sangero & Halpert, *supra* note 46, at 92; see Friedland, *supra* note 72, at 178–80.

⁸¹ See Sangero & Halpert, *supra* note 46, at 92.

⁸² See SIMON, *supra* note 62, at 58–76; GARY L. WELLS, EYEWITNESS IDENTIFICATION: A SYSTEM HANDBOOK 13–23 (1988); Sangero & Halpert, *supra* note 46, at 92. See Wells & Loftus, *supra* note 74, at 157 tbl.9.1, which maps “eyewitness identification variables and their categories:” sex of witness, intelligence, age, face recognition skills, personality, alcohol, prior exposure/source confusion/bystander, view, disguise of perpetrator, exposure time, same versus other-race identification, stress, weapon, retention interval, interpolated mugshots, overheard descriptions, pre-lineup instructions, structure of lineup/fillers, simultaneous/sequential procedure, suggestive behaviors during lineup, post-identification feedback. The three categories noted are: chronological, system versus estimator, general impairment versus suspect-bias. *Id.* at 156.

⁸³ See GARRETT, *supra* note 18, at 48–50. According to the Innocence Project findings, “in 78% of these trials (125 of 161 cases), there was evidence that police contaminated the eyewitness identifications.” *Id.* at 49. Also see *id.* at 281 fig.A.9, “Eyewitness misidentification”:

Discrepancy in description:	63%
Initial non-ID:	40%
Suggestive lineup:	34%
Showup:	34%
Suggestive remarks:	28%
Initially uncertain:	21%
Did not see face:	9%
Hypnotized:	3%

⁸⁴ See Lisa E. Hasel & Saul M. Kassin, *On the Presumption of Evidentiary Independence: Can Confessions Corrupt Eyewitness Identifications?*, 20 PSYCHOL. SCI. 122 (2009).

⁸⁵ See, e.g., William C. Thompson, *Beyond Bad Apples: Analyzing the Role of Forensic Science in Wrongful Convictions*, 37 SW. U. L. REV. 1027, 1033–34 (2008). In *Sutton v. State*, the defendant was convicted based on eyewitness testimony and DNA testing. *Sutton v. State*, No. 14-99-00951-CR, 2001 Tex. App. LEXIS 337, at *1 (Crim. App. Jan. 18, 2001). Yet, what were seen as two independent pieces of evidence were revealed to in fact be contingent on one another. Thompson, *supra*, at 1034. The error began with an improper police lineup

Moreover, the identification procedure can also have a significant impact on the likelihood of error, with studies showing the preferability of a sequential live lineup procedure over a simultaneous procedure⁸⁶ and that the error rate for a photo lineup is considerably greater than for a live lineup.⁸⁷ The unsafety of this situation has been succinctly described by Elizabeth F. Loftus and Gary Wells, the leading researchers in this field, as follows: “Eyewitness evidence . . . is typically collected by nonspecialists who have little or no training in human memory. Police protocols for collecting, preserving, and interpreting eyewitness evidence have not integrated the results of research conducted by memory experts.”⁸⁸ Simon further notes the inherently problematic nature of eyewitness identifications and police lineups:

Absent national standards of best practices, the nation’s almost 20,000 law enforcement departments are largely free to conduct lineups as they see fit. Many departments appear to have no standing policies or procedures, and the training of the officers who conduct the procedures is haphazard and nonuniform, at best. A recent survey of more than 500 police officers reveals an inadequate and inconsistent knowledge of the factors that influence the accuracy of identifications⁸⁹

Thus, when an eyewitness identification is the evidence on which factfinders must decide whether to convict, it is vital that they weigh the very reasonable likelihood of error as well as of false

in which suggestive tactics were used. *Id.* at 1034–35. This was compounded by the fact that the lab technician who conducted the DNA testing knew that the suspect had been identified by an eyewitness, which led her and the prosecutor to ignore doubts regarding the DNA match. *Id.* at 1034. Finally, the eyewitness testified in court that she knew that the laboratory had confirmed her identification of the suspect, and therefore, when she testified, she was confident in the identification. *Id.*; see Michael Naughton & Gabe Tan, *The Need for Caution in the Use of DNA Evidence to Avoid Convicting the Innocent*, 15 INT. J. EVIDENCE & PROOF 245, 256–57 (2011); Josiah Sutton, INNOCENCE PROJECT, <https://www.innocenceproject.org/cases/josiah-sutton/> [<https://perma.cc/2L53-ERZ4>].

⁸⁶ R.C.L. Lindsay & Gary L. Wells, *Improving Eyewitness Identifications from Lineups: Simultaneous Versus Sequential Lineup Presentation*, 70 J. APPLIED PSYCHOL. 556, 562–63 (1985).

⁸⁷ Sangero & Halpert, *supra* note 46, at 92; *cf.* Gary L. Wells & R.C.L. Lindsay, *Methodological Notes on the Accuracy-Confidence Relation in Eyewitness Identification*, 70 J. APPLIED PSYCHOL. 413, 414 (1985) (arguing that no evidentiary weight should be given to the identification of a suspect from a photo array in an album when there is no suspect to begin with).

⁸⁸ Wells & Loftus, *supra* note 74, at 149.

⁸⁹ SIMON, *supra* note 62, at 76.

testimony.⁹⁰ Yet whereas the courts tend to accord very strong weight to eyewitness identification of the suspect as the perpetrator of the crime, they tend not to give much evidentiary weight to a failure to do so, that is to say, a witness's failure to identify the suspect or their identification of a filler in the lineup as the perpetrator.⁹¹ The tendency, rather, is to attribute the failure to identify the suspect to the witness's short memory span or fear, for example.⁹² Thus, courts do not regard a witness's failure to identify the suspect as indicative of the suspect's innocence. In fact, a very plausible explanation for this tendency is the impact of the common misperception of the suspect's guilt ("tunnel vision").⁹³ Yet, the very same factors believed to account for a failure to identify (such as short memory span) are, of course, likely to also lead to a misidentification of an innocent suspect.⁹⁴ Thus, there is no way to logically reconcile according incriminating weight to an eyewitness identification with the rejection of exculpatory weight to a failure to identify.

III. SAFETY MEASURES

A. *Negation of a Conviction Based Only on Eyewitness Testimony*

Up to this point, I have sought to show that eyewitness identification should always be treated with suspicion as evidence and its reliability as questionable. Moreover, even those who consider eyewitness identifications to be reliable evidence must be wary of convicting solely based on a such evidence, without any other significant corroborative evidence,⁹⁵ for this cannot be reconciled with a concept of safety. Indeed, from a probabilistic perspective, the concern with wrongfully convicting an innocent person arises not only when the eyewitness identification is the sole piece of evidence, but also given the fact that even strong corroborative evidence might not suffice to ensure a safe conviction

⁹⁰ Sangero & Halpert, *supra* note 46, at 92.

⁹¹ See Menashe & Assy, *supra* note 65; Gary L. Wells & Rod C.L. Lindsey, *On Estimating the Diagnosticity of Eyewitness Nonidentifications*, 88 PSYCHOL. BULL. 776, 776–77 (1980).

⁹² Wells & Lindsey, *supra* note 91, at 776, 779.

⁹³ See, e.g., Keith A. Findley & Michael S. Scott, *The Multiple Dimensions of Tunnel Vision in Criminal Cases*, 2006 WIS. L. REV. 291, 292.

⁹⁴ See Sangero & Halpert, *supra* note 46, at 91–92.

⁹⁵ See *id.* at 93.

given the weak weight that should be attributed to eyewitness identifications in general.⁹⁶

The general principle proposed to implement in the criminal justice system is that a conviction must not be based on a sole piece of evidence.⁹⁷ Elsewhere, I have shown—using Bayes' theorem⁹⁸—this proposal's relevance in the context of a confession,⁹⁹ and it seems no less relevant in the context of eyewitness identification when it is the only evidence of a defendant's guilt.¹⁰⁰ Indeed, a similar question arises: Had the witness been able to see, say, ten thousand, rather than ten, people in the police lineup, how many would have resembled the person they saw committing the crime? What if, moreover, every resident of the relevant state was to participate in the lineup?¹⁰¹

⁹⁶ See, e.g., Thompson, *supra* note 85, at 1027, 1033–34.

⁹⁷ See Sangero & Halpert, *supra* note 46, at 45–46.

⁹⁸ *Id.* at 48–50. Bayes' theorem, presented in an odds form, dictates that

$$\text{Likelihood Ratio} \times \text{Prior Odds} = \text{Posterior Odds}.$$

The *likelihood ratio* is the probability P of a suspect identified by eyewitness E (the evidence) if they are guilty G , divided by the probability of misidentification if they are innocent I .

$$\text{Likelihood Ratio} \equiv \frac{P(E|G)}{P(E|I)}$$

This expresses mathematically the strength of the evidence, that is, the eyewitness identification. *Prior odds*, in contrast, equal the probability of guilt divided by the probability of innocence *without* taking the eyewitness identification into account and, instead, based on other admissible evidence:

$$\text{Prior Odds} \equiv \frac{P(G)}{P(I)}$$

These odds are “prior” because they are what we believe to obtain prior to observing the evidence of guilt. Through Bayes' theorem, we “refine” our prior estimates by incorporating the evidence observed, which, in the given example, is the eyewitness identification. If we multiply the *likelihood ratio* by the *prior odds*, we arrive at the *posterior odds*, which is what we are seeking in a criminal trial. The *posterior odds* represent the weight of an eyewitness identification combined with other evidence:

$$\text{Posterior Odds} \equiv \frac{P(G|E)}{P(I|E)}$$

The greater the *posterior odds*, the stronger the likelihood of guilt. When *posterior odds* < 1, the probability of the suspect's innocence given (and despite) the eyewitness identification is greater than the probability of their guilt. The lower the *posterior odds*, the greater the probability of innocence. From a Bayesian perspective, in order to reach a verdict in a criminal trial, the *posterior odds* of guilt must be calculated. Bayes' theorem demonstrates the huge significance of *prior odds*, which are determined by evidence other than the eyewitness identification.

⁹⁹ See Sangero, *Safety from False Confessions*, *supra* note 33, at 51–56.

¹⁰⁰ See Sangero & Halpert, *supra* note 46, at 92–93.

¹⁰¹ *Id.*

As discussed above, studies show the erroneous identification of an innocent suspect to be a prevalent phenomenon.¹⁰² It is quite possible that an eyewitness will even give a detailed description of an innocent suspect prior to making the identification and have great confidence in the (nonetheless) wrong identification. Yet significant evidentiary weight is given to eyewitness confidence and the ability to give a detailed description of the offender.¹⁰³ The Hidden Accidents Principle makes it likely, moreover, that there are many more instances of mistaken eyewitness identification than have been exposed.¹⁰⁴ We can assume, based on the available data and research, three out of ten cases of eyewitness identification to be mistaken,¹⁰⁵ but the courts—and police investigators and prosecutors—seem incapable or unequipped to detect these errors.¹⁰⁶ Most people, including judges, intuitively assume a connection between the extent of a witness's confidence in their identification of the suspect and the accuracy of that identification,¹⁰⁷ as well as between the quality of the eyewitness description of the suspect and the accuracy of the subsequent identification.¹⁰⁸ Yet studies show that no such correlation exists,¹⁰⁹ and thus investigators, prosecutors, judges, and juries cannot use these factors—eyewitness confidence and descriptions—as the basis for determining the accuracy of an eyewitness identification.

Consider a simple numeric hypothetical example: a crime was committed, and an eyewitness saw it. Assume that in that city there are a million adults, and that ten thousand of them resemble the perpetrator enough for the witness to positively identify them. This assumption is reasonable (and even conservative) given the research showing that on average, eyewitnesses pick known innocent fillers in police lineups 30 percent of the time.¹¹⁰ Without any other evidence, save for the eyewitness identification that links the suspect to the crime, the odds for any one of them who is unfortunate enough to stand trial to be guilty, is only 1:10,000. Of course, we must not convict based on the identification as a sole piece of evidence.

¹⁰² See *id.* at 90.

¹⁰³ See *Manson v. Brathwaite*, 432 U.S. 98, 114 (1977); Brandon L. Garrett, *Judging Innocence*, 108 COLUM. L. REV. 55, 78–81 (2008).

¹⁰⁴ See Sangero & Halpert, *supra* note 14, at 1314–15, 1319.

¹⁰⁵ See *supra* note 59 and accompanying text.

¹⁰⁶ See Sangero & Halpert, *supra* note 46, at 93.

¹⁰⁷ See *id.* at 91.

¹⁰⁸ See *id.*

¹⁰⁹ See *id.*

¹¹⁰ See *supra* note 59 and accompanying text.

Another more specific illustration: Imagine one of the visitors in a crowded mall had lost a hundred-dollar bill. Assume a thousand visitors were found with a hundred-dollar bill in their pocket and that ten of them resemble the image of the thief that the witness saw and remembered, and they are expected to point out each one of them if put in a lineup with fillers. One of them is brought to trial based on such identification alone. How can we tell that this one and not one of the other ten is the thief? Eyewitness identification alone, when not accompanied by any other significant evidence, cannot create a high probability of guilt.¹¹¹

Furthermore, in a majority of cases¹¹² where a person's conviction is based on eyewitness testimony alone and there is no other piece of evidence connecting the defendant to the crime, it would probably be a false conviction.¹¹³ This is not to say that most eyewitness testimony is erroneous. Rather, the focus here is specifically on cases in which the eyewitness testimony stands on its own. Indeed, studies have shown that in a significant number of cases of wrongful conviction based on eyewitness testimony, there was no other significant evidence that tied the defendant to the crime.¹¹⁴ This possibility of error in eyewitness identification and the wrongful conviction can lead to mandates not only close scrutiny of any additional evidence—incriminating and exculpatory—by the court but also *a legal rule prohibiting conviction based solely on eyewitness testimony*—that is, when there is no additional significant evidence of guilt. Similar to the case of confessions, there must be a requirement for “*strong corroboration*”—independent, significant evidence that the defendant committed the offense they are accused of.¹¹⁵ In addition, conducting a police lineup should be permitted only when there is reasonable suspicion that the suspect committed the crime in question.

B. *Proper Protocols for Police Lineup Identifications*

In both the research and the Innocence Project cases, mistaken eyewitness testimony has emerged as the primary cause of wrongful

¹¹¹ See Sangero & Halpert, *supra* note 46, at 93.

¹¹² And not just 30 percent (assuming this is the general error rate of lineup identifications)—as can be shown using Bayes' theorem.

¹¹³ Sangero & Halpert, *supra* note 46, at 93.

¹¹⁴ See *id.*

¹¹⁵ See *id.* at 93–94. For such a recommendation regarding confessions, see Boaz Sangero, *Miranda Is Not Enough: A New Justification for Demanding “Strong Corroboration” to a Confession*, 28 CARDOZO L. REV. 2791 (2007).

conviction.¹¹⁶ Although this was a revelation in the legal field, it is well known in the psychological literature, which has documented and examined the problematic nature of eyewitness testimony since the 1970s.¹¹⁷ For example, researchers found that informing an eyewitness that the suspect might not be in the lineup reduces the rate of false identification significantly, but the rate at which actual perpetrators are identified only slightly,¹¹⁸ thereby neutralizing “relative judgment conceptualization.”¹¹⁹ However, even when eyewitnesses are thus advised, the rate of mistaken lineup identification remains high,¹²⁰ not only in the laboratory, but also in reality.¹²¹

Several protocols have been proposed for police lineup procedures, based on psychological studies on the subject.¹²² These protocols are aimed at decreasing the risk of erroneous identification but without impacting, to as great an extent as possible, the likelihood of identifying the actual perpetrator in the lineup.¹²³ One of these proposals, formulated by Wells, includes seven recommendations in conducting lineups:¹²⁴ First, no more than one suspect should be included in a lineup.¹²⁵ Second, a suspect should not “stand out” and be conspicuous relative to the other lineup participants.¹²⁶ Third, eyewitnesses should be told that the suspect might not be in the lineup.¹²⁷ Fourth, instead of the customary simultaneous lineup procedure, which is known to lead to mistaken identification by elimination,¹²⁸ a sequential procedure should be used, with only one lineup participant paraded before the eyewitness at a time.¹²⁹ Fifth, a “double blind test” should be implemented in lineups, so that not only the eyewitness but also whoever is administering the lineup does not know who the actual suspect is and which participants are

¹¹⁶ See Sangero & Halpert, *supra* note 46, at 90–91; *Eyewitness Identification Reform*, *supra* note 2.

¹¹⁷ See Gary Wells, *Eyewitness Identification: Systemic Reforms*, 2006 WIS. L. REV. 615, 615–16.

¹¹⁸ *Id.* at 625.

¹¹⁹ Wells & Loftus, *supra* note 74, at 157–58.

¹²⁰ *See id.* at 158.

¹²¹ See Gary L. Wells et al., *Eyewitness Evidence Improving Its Probative Value*, 7 PSYCHOL. SCI. PUB. INT. 45, 50–51 (2006).

¹²² *See* Wells, *supra* note 117, at 622–632.

¹²³ *Id.* at 631.

¹²⁴ *Id.* at 622–31.

¹²⁵ *Id.* at 623.

¹²⁶ *Id.* at 624.

¹²⁷ *Id.* at 625.

¹²⁸ *See* SIMON, *supra* note 62, at 71; Wells & Loftus, *supra* note 74, at 158.

¹²⁹ Wells, *supra* note 117, at 625.

just fillers.¹³⁰ Sixth, the lineup administrator should take the eyewitness's confidence statement without giving any feedback regarding the accuracy of the identification.¹³¹ And finally, seventh, a lineup should be allowed only when there is a reasonable suspicion that the suspect committed the crime.¹³²

C. Other Safety Measures

Others have also recommended that lineups be recorded on video,¹³³ and preferably, all police investigative work should be video documented, so that there will be direct, full documentation for the court of what transpires.¹³⁴ Accordingly, some commentators have also recommended that a police officer who is not involved in the investigation should record eyewitness descriptions of suspects before conducting any identification procedure.¹³⁵ Simon has offered a more-detailed protocol, with eighteen instructions for the police, aimed at “maximizing the accuracy of identifications and the transparency of the procedures used to elicit them.”¹³⁶ He has also formulated recommendations for trial proceedings reform in this context: “Eyewitness identifications arising from flawed lineup procedures should be ruled inadmissible” and “[i]n-court

¹³⁰ *Id.* at 629–30.

¹³¹ *Id.* at 631.

¹³² See Wells & Loftus, *supra* note 74. In a recent article, Professor Garrett has shown that during the last years, many police agencies in Virginia adopted the state model policy for best practice in eyewitness identification's procedure. See Brandon L. Garrett, *Self-Policing: Eyewitness Identification Policies in Virginia*, 105 VA. L. REV. ONLINE 97, 105 (2019).

Specifically, the vast majority of agencies have adopted blinded policies, clear instructions to eyewitnesses, guidelines for selecting fillers for lineups, recording of confidence statements, and many agencies require videotaping of lineup procedures. Those improved eyewitness identification practices have been adopted by the vast majority of agencies over the past five years.

Id. at 100.

¹³³ VA. ST. CRIME COMM'N, MISTAKEN EYEWITNESS IDENTIFICATION, H.R. DOC. 40, apps. 2, 3 (2005), <https://rga.lis.virginia.gov/Published/2005/HD40/PDF> [<https://perma.cc/6QCE-VYLM>].

¹³⁴ See GEORGE C. THOMAS III, THE SUPREME COURT ON TRIAL: HOW THE AMERICAN JUSTICE SYSTEM SACRIFICES INNOCENT DEFENDANTS 194–95 (2008).

¹³⁵ See *id.* at 196.

¹³⁶ SIMON, *supra* note 62, at 82–84. Alongside these recommendations for improving the lineup identification procedure, Simon recommended adopting the *Cognitive Interview* protocol, developed by Ron Fisher and Edward Geiselman, for police interviews of witnesses. *Id.* at 118 & 309–10 n.204. The United Kingdom has adopted this protocol. *Id.* at 118.

identifications¹³⁷ should not be allowed as a first identification [or] . . . following any suggestive identification procedure.”¹³⁸

Instituting computerized lineups could be the most substantial measure for increasing accuracy in lineup identifications.¹³⁹ This would entail compiling a large database with video clips of fillers.¹⁴⁰ A suspect would be filmed, and the computer program would then choose video clips of fillers who resemble them and resemble the eyewitness’s description of the suspect.¹⁴¹ “The procedure would be conducted without direct involvement of law enforcement personnel,” which would neutralize most biases.¹⁴² It would also be easier to find many suitable fillers, and the lineup would be conducted as a sequential procedure and recorded.¹⁴³

All of these recommended measures to prevent mistaken identifications would entail low costs relative to the potential harm involved.¹⁴⁴ In 2001, New Jersey became the first state to initiate reforms of police lineups, later followed by several other states.¹⁴⁵ One notable and important step forward was the 1998 publication of the Scientific Review Paper of the American Psychology-Law Association,¹⁴⁶ which led to the drafting of the *Guide for Law Enforcement* by the National Institute of Justice.¹⁴⁷ This Guide provides detailed instructions on a number of procedures relating to witness interviews and identifications: Obtaining information from the witness;¹⁴⁸ instructing the witness prior to viewing the lineup;¹⁴⁹ conducting the identification procedure;¹⁵⁰ recording identification results;¹⁵¹ establishing mug books and composites procedures;¹⁵²

¹³⁷ For in-court identifications, see *infra* notes 161–162 and accompanying text.

¹³⁸ SIMON, *supra* note 62, at 178–79.

¹³⁹ *See id.* at 86–89.

¹⁴⁰ *See id.* at 87.

¹⁴¹ *See id.*

¹⁴² *Id.*

¹⁴³ *See id.* at 87–88.

¹⁴⁴ *See* Wells, *supra* note 117, at 631–32.

¹⁴⁵ *See* Garrett, *supra* note 103, at 123–24; Wells, *supra* note 117, at 616 & n.9, 641–42.

¹⁴⁶ Wells et al., *supra* note 67; Marvin Zalman, *An Integrated Justice Model of Wrongful Convictions*, 74 ALB. L. REV. 1465, 1489–90 (2011).

¹⁴⁷ *See* U.S. DEP’T OF JUSTICE, EYEWITNESS EVIDENCE: A GUIDE FOR LAW ENFORCEMENT (1999), <https://www.ncjrs.gov/pdffiles1/nij/178240.pdf> [https://perma.cc/H7Q6-MG8E]; *Technical Working Group for Eyewitness Evidence: Training Teams*, NAT’L INST. JUST., https://www.ncjrs.gov/nij/eyewitness/tech_working_group.html [https://perma.cc/CG2E-5B7H].

¹⁴⁸ U.S. DEP’T OF JUSTICE, *supra* note 147, at 15–16.

¹⁴⁹ *Id.* at 31–32.

¹⁵⁰ *Id.* at 33–38.

¹⁵¹ *Id.* at 38.

¹⁵² *Id.* at 17–19.

setting up procedures for interviewing the witness by the follow-up investigator;¹⁵³ and establishing field identification procedure (a showup).¹⁵⁴

The issue of eyewitness identification illustrates prominently how the criminal justice system can learn from the psychological field and adopt simple safety measures that have been developed and long recognized in the psychology literature. However, for some reason, despite these insights and the high price many people pay, the criminal justice system has remained disturbingly safety “unaware” in this context, and not every state or police department has engaged in the necessary reforms to make lineup procedures safe.¹⁵⁵ In practice, police fail to follow or even to have proper lineup protocols,¹⁵⁶ and they, at times, resort to stacked lineups¹⁵⁷ and suggestive remarks.¹⁵⁸ Even worse, instead of live lineups, they sometimes use extremely unreliable and suggestive methods of identification, such as “showups” (where the witness is shown a single suspect or photo to identify)¹⁵⁹ or an array of photos.¹⁶⁰ In addition, courts allow “in-court identifications” even though this procedure is known to be highly suggestive; the witness need only point to the person seated at the defense table, next to the defense attorney.¹⁶¹ Despite the fact that research has shown the weak probative weight of such poor diagnostic and misleading identifications, they have a strong impact on fact-finders on the premise that “seeing is believing.”¹⁶²

Another area in which improvement is vital is ensuring the presence of the suspect’s lawyer during the police lineup procedure. In *Wade*,¹⁶³ the Supreme Court recognized that this is a critical stage during which the suspect is entitled to have the aid of counsel,

¹⁵³ *Id.* at 21.

¹⁵⁴ *Id.* at 27.

¹⁵⁵ Wells, *supra* note 117, at 641–43.

¹⁵⁶ GARRETT, *supra* note 18, at 60.

¹⁵⁷ *See id.* at 57–59.

¹⁵⁸ *See id.* at 59–62.

¹⁵⁹ SIMON, *supra* note 62, at 69 (“[S]howup procedures are the wild card of identification procedures: they are the most widely used, the least studied, and probably the most error prone.”).

¹⁶⁰ GARRETT, *supra* note 18, at 54–55.

¹⁶¹ *See* Marella Gayla, *When a Witness Confronts the Accused: Is a Courtroom I.D. Fair?*, MARSHALL PROJECT (July 13, 2017), <https://www.themarshallproject.org/2017/07/13/when-a-witness-confronts-the-accused-is-a-courtroom-i-d-fair> [<https://perma.cc/QS5U-VD7X>].

¹⁶² SIMON, *supra* note 62, at 154–57. A few defense attorneys have challenged this practice of in-court identification, by seating someone other than the defendant next to them. The witnesses have at times picked out the innocent substitutes. Unfortunately, judges tend to respond angrily to this tactic and cite the defense attorneys for contempt. *Id.* at 157.

¹⁶³ *United States v. Wade*, 388 U.S. 218 (1967).

which can prevent unfairness in the composition of the lineup and reduce the chances of suggestiveness.¹⁶⁴ In later decisions, however, the Court held that the right to counsel is applicable only after adversary judicial criminal proceedings have begun, that is, only after the suspect has been indicted.¹⁶⁵ Thus, in many cases, police do not ensure that the suspect's counsel is present during the lineup.¹⁶⁶ This must be changed, for the very reasons pointed to in *Wade*.¹⁶⁷

It is important to stress that improving the accuracy of police lineups is crucial not only to ensure more accurate verdicts, but also—and perhaps even more so—to ensure more accurate eyewitness identifications in cases that never go to court and end up in conviction in the framework of a plea bargain.¹⁶⁸ In these cases, the eyewitness identification cannot be challenged in cross-examination and cannot be revealed as false.¹⁶⁹

As Wells and Loftus have noted, there “remains a large gap between what psychological science advises for collecting eyewitness evidence and actual practices of criminal investigators. Future research needs to address this gap.”¹⁷⁰ Loftus has suggested that judges be more liberal in allowing the defense to present expert psychological testimony to the jury about factors that affect an eyewitness's reliability.¹⁷¹ Such testimony could help safeguard against mistaken identifications.¹⁷² Moreover, more detailed safety recommendations could and should be formulated by the proposed Safety in the Criminal Justice System Institute (SCJSI)¹⁷³ and implemented on a trial basis. These safety recommendations would be subjected to ongoing assessment and refinement over time.

¹⁶⁴ See *id.* at 236–38; LOFTUS, *supra* note 70, at 181–82 (1979).

¹⁶⁵ See *Kirby v. Illinois*, 406 U.S. 682, 688 (1972); LOFTUS, *supra* note 70, at 184–85.

¹⁶⁶ LOFTUS, *supra* note 70, at 184–85; see also *Kirby*, 406 U.S. at 688 (1972); GARRETT, *supra* note 18, at 54; Craig M. Bradley, *United States, in CRIMINAL PROCEDURE: A WORLDWIDE STUDY* 395, 408 (Craig M. Bradley ed., 1999).

¹⁶⁷ See Barry C. Feld, *Criminalizing Juvenile Justice: Rules of Procedure for the Juvenile Court*, 69 MINN. L. REV. 141, 209–14 (1984); Richard S. Frase, *Comparative Criminal Justice as a Guide to American Law Reform: How Do the French Do It, How Can We Find Out, and Why Should We Care?*, 78 CAL. L. REV. 542, 585–86 (1990); John B. Wefing, *Wishful Thinking by Ronald J. Tabak: Why DNA Evidence Will Not Lead to the Abolition of the Death Penalty*, 33 CONN. L. REV. 861, 880–81, 884 (2001); see also Lawrence Rosenthal, *Eyewitness Identification and the Problematics of Blackstonian Reform of the Criminal Law*, 110 J. CRIM. L. & CRIMINOLOGY 181, 189–90 (2020) (discussing the *Wade* rule).

¹⁶⁸ See LOFTUS, *supra* note 70, at 180.

¹⁶⁹ *Id.*

¹⁷⁰ Wells & Loftus, *supra* note 74, at 158.

¹⁷¹ See LOFTUS, *supra* note 70, at 191–203.

¹⁷² See *id.*; THOMAS, *supra* note 134, at 196–97.

¹⁷³ See *infra* note 201.

D. *The National Academy of Sciences Recommendations*

The National Academy of Sciences (NAS) released a very important report, entitled *Identify the Culprit: Assessing Eyewitness Identification*.¹⁷⁴ The NAS's title for the subcommittee that prepared the report is no less interesting from the perspective of safety: Committee on Scientific Approaches to Understanding and Maximizing the Validity and Reliability of Eyewitness Identification in Law Enforcement and the Courts.¹⁷⁵ This shows that it is possible—and necessary—to scientifically assess not only forensic evidence, as the NAS did in its important 2009 report,¹⁷⁶ but all evidence that serves as the basis for criminal convictions.¹⁷⁷ A proper safety approach should lead the NAS to issue, first, a similar report that takes a scientific approach to confessions, which are a central cause of false convictions,¹⁷⁸ and then additional reports that deal with each type of evidence used in criminal law, starting with the most central types.

The 2014 report began with the following important observation:

Eyewitnesses play an important role in criminal cases when they can identify culprits. Yet it is well known that eyewitnesses make mistakes and that their memories can be affected by various factors including the very law enforcement procedures designed to test their memories. For several decades, scientists have conducted research on the factors that affect the accuracy of eyewitness identification procedures. Basic research on the processes that underlie human visual perception and memory have given us an increasingly clear picture of how eyewitness identifications are made and, more important, an improved understanding

¹⁷⁴ COMM. ON SCI. APPROACHES TO UNDERSTANDING & MAXIMIZING THE VALIDITY & RELIABILITY OF EYEWITNESS IDENTIFICATION IN LAW ENF'T & IN COURTS ET AL., NAT'L ACAD. OF SCIS., *IDENTIFYING THE CULPRIT: ASSESSING EYEWITNESSES IDENTIFICATION* (2014) [hereinafter *ASSESSING EYEWITNESSES IDENTIFICATION*], <https://www.innocenceproject.org/wp-content/uploads/2016/02/NAS-Report-ID.pdf> [https://perma.cc/7JKD-YV2M].

¹⁷⁵ *Id.*

¹⁷⁶ See COMM. ON IDENTIFYING THE NEEDS OF THE FORENSIC SCI. CMTY., NAT'L ACAD. OF SCIS., *STRENGTHENING FORENSIC SCIENCE IN THE UNITED STATES: A PATH FORWARD* (2009), <https://www.ncjrs.gov/pdffiles1/nij/grants/228091.pdf> [https://perma.cc/ZJ3R-LG5L].

¹⁷⁷ See, e.g., *ASSESSING EYEWITNESSES IDENTIFICATION*, *supra* note 174, at xiii–xiv.

¹⁷⁸ See Sangero, *Safety from False Confessions*, *supra* note 33.

of the principled limits on vision and memory that may lead to failures of identification.¹⁷⁹

Among its other functions, the committee was charged with drafting a “*consensus* report with appropriate findings and recommendations.”¹⁸⁰ Due to the conservative approach taken by the committee, it made recommendations on which there is broad consensus among researchers in the field, which, in my view, justifies the immediate and unequivocal adoption of each one. I will first present the eleven crucial recommendations made in the report, some of which may be familiar from the studies and recommendations discussed in this Article. I will then note what I view to still be lacking in this important report from a safety perspective.

In the first group of recommendations, five call for the establishment of best practices for the law enforcement community:

1. Train all law enforcement officers in eyewitness identification.
2. Implement double-blind lineup and photo array procedures.
3. Develop and use standardized witness instructions.
4. Document witness confidence judgments.
5. Videotape the witness identification process.¹⁸¹

The second group of recommendations includes four recommendations for “strengthen[ing] the value of eyewitness identification evidence in court.”¹⁸² In the preface to these recommendations, the following insightful comment illustrates the tremendous gap between the commonly applied legal rules and between scientific method in particular and safety in general:

The *Manson v. Brathwaite* test under the Due Process Clause of the U.S. Constitution for assessing eyewitness identification evidence was established in 1977, before much applied research on eyewitness identification had been conducted. That test evaluates the “reliability” of eyewitness identifications using factors derived from prior rulings and not from empirically validated sources. As critics have

¹⁷⁹ ASSESSING EYEWITNESSES IDENTIFICATION, *supra* note 174, at 1.

¹⁸⁰ *Id.* at 2 (emphasis added).

¹⁸¹ *Id.* at 4–5.

¹⁸² *Id.* at 109.

pointed out, the *Manson v. Brathwaite* test includes factors that are not diagnostic of reliability. Moreover, the test treats factors such as the confidence of a witness as independent markers of reliability when, in fact, it is now well established that confidence judgments may vary over time and can be powerfully swayed by many factors.¹⁸³

The relevant recommendations are as follows:

6. Conduct pretrial judicial inquiry. (“[T]he committee recommends . . . that a judge make basic inquiries when eyewitness identification evidence is offered.”)
7. Make juries aware of prior identifications.
8. Use scientific framework expert testimony.
9. Use jury instructions as an alternative means to convey information.¹⁸⁴

In the third and final group, the tenth and eleventh recommendations are made for improving the scientific foundation underpinning eyewitness identification research:

10. Establish a national research initiative on eyewitness identification.
11. Conduct additional research on system and estimator variables.¹⁸⁵

There is no doubt that these are very important recommendations from a safety perspective, especially as they are issued by the leading authority in the scientific field. But what is nonetheless missing here? First of all, the report sufficed with recommending establishing standardized protocols for lineup identifications but without providing a detailed “model” protocol. Thus, for example, it lacks even the most basic recommendation, on which all researchers in the field concur, that before eyewitnesses make a lineup identification, they should be informed that the criminal they saw at the scene of the crime might not be among the lineup participants.

¹⁸³ *Id.*; see also Rosenthal, *supra* note 167, at 188–204 (discussing the *Manson* rule in-depth throughout Part D). The rule is described as follows: “[E]ven when investigators utilize unnecessarily suggestive procedures, an ensuing identification should not be excluded from evidence absent a finding that it is unreliable in light of ‘the totality of the circumstances,’ rejecting ‘a strict exclusionary rule or new standard of due process.’” *Id.* at 185 (quoting *Manson v. Brathwaite*, 432 U.S. 98, 113 (1977)).

¹⁸⁴ ASSESSING EYEWITNESSES IDENTIFICATION, *supra* note 174, at 109–112.

¹⁸⁵ *Id.* at 113, 117.

Second, as the NAS committee sufficed with making recommendations that fall within the bounds of the consensus in the field, it refrained¹⁸⁶ from important near-consensus recommendations. Exemplifying this is the failure to recommend shifting from simultaneous lineups to sequential lineups, even though it is broadly recognized that simultaneous lineups lead witnesses to identify the suspect through a process of elimination, by comparing them to the rest of the lineup participants.¹⁸⁷ The common denominator (in this context, among researchers in the field) is, by nature, low. It is a mistake to suffice with recommendations that meet only this high threshold. Identification lineups continue to be conducted, and if a method is not adopted that is almost consensus or even supported by the majority of researchers in the field (such as sequential lineups), then we will be stuck with a method that the majority of researchers caution against (such as simultaneous lineups).

Third and finally, the NAS report lacks what I consider to be the central safety rule, namely, that a defendant cannot be convicted solely on the basis of an eyewitness identification, and that additional evidence connecting him to the commission of the crime is required.¹⁸⁸ The generalized version of this rule is that a conviction cannot be based on a sole piece of evidence of any type. In the area of eyewitness testimony, the NAS report makes no such recommendation, despite the fact that the research and insights presented in the report strongly support adopting this important rule.

IV. APPLYING THE STAMP SAFETY MODEL TO EYEWITNESS IDENTIFICATION

A. *The System-Theoretic Accident Model and Process*

Nancy Leveson, developer of the STAMP safety model, argued that traditional safety methods cannot accommodate complex systems.¹⁸⁹ STAMP is based on a new systems theory that shifts the emphasis from the *reliability* of the components of a system to system *control*.¹⁹⁰ The process begins with an assessment of the

¹⁸⁶ See *id.* at 2.

¹⁸⁷ See SIMON, *supra* note 62, at 71; Wells & Loftus, *supra* note 74, at 158.

¹⁸⁸ Sangero & Halpert, *supra* note 46, at 93.

¹⁸⁹ See NANCY G. LEVESON, ENGINEERING A SAFER WORLD: SYSTEMS THINKING APPLIED TO SAFETY 73, 76 (2011).

¹⁹⁰ See *id.* at 7–14; see also Leveson et al., *supra* note 43, at 234–36.

safety *constraints* essential for mishap-free operation.¹⁹¹ At the next stage, STAMP determines the hierarchical *control* structures needed to enforce the required safety constraints.¹⁹² According to Leveson, safety is an attribute of the system as a whole, not of any given component of it. Leveson summarizes STAMP in *Engineering a Safer World*:

STAMP focuses particular attention on the role of constraints in safety management. Accidents are seen as resulting from inadequate control or enforcement of constraints on safety-related behavior at each level of the system development and system operations control structures. Accidents can be understood in terms of why the controls that were in place did not prevent or detect maladaptive changes.

.....
In this conception of safety, there is no “root cause.” Instead, the accident “cause” consists of an inadequate safety control structure that under some circumstances leads to the violation of a behavioral safety constraint. Preventing future accidents requires reengineering or designing the safety control structure to be more effective.¹⁹³

Elsewhere, Leveson has formulated the STAMP “recipe” for safety more succinctly as “identifying the constraints required to maintain safety and then designing the system and operating conditions to ensure that the constraints are enforced.”¹⁹⁴

Leveson and others have tested STAMP on various types of operational systems in the real world. The model was found to be well suited for the efficient and economic investigation of accidents as well as for safety engineering designed to prevent accidents in advance. Leveson explains,

The more one knows about an accident process, the more difficult it is to find one person or part of the system responsible, but the easier it is to find effective ways to prevent similar occurrences in the future.

¹⁹¹ See LEVESON, *supra* note 189, at 76, 191–92.

¹⁹² See *id.* at 80–81.

¹⁹³ See *id.* at 100.

¹⁹⁴ Nancy Leveson, *A New Accident Model for Engineering Safer Systems*, 42 SAFETY SCI. 237 (2004).

STAMP is useful not only in analyzing accidents that have occurred but in developing new and potentially more effective system engineering methodologies to prevent accidents. Hazard analysis can be thought of as investigating an accident before it occurs. Traditional hazard analysis techniques, such as fault tree analysis and various types of failure analysis techniques, do not work well for very complex systems, for software errors, human errors, and system design errors. Nor do they usually include organizational and management flaws.¹⁹⁵

This last observation is particularly germane to the criminal justice system, where most of the failures are not technological but generally the result of human error and of flaws in organization and management. Leveson clarifies that STAMP is as applicable to social systems as it is to the engineering systems for which it was originally developed: “All systems are engineered in the sense that they are designed to achieve specific goals, namely to satisfy requirements and constraints. So ensuring hospital safety or pharmaceutical safety . . . falls within the broad definition of engineering.”¹⁹⁶

In sum, to prevent false convictions based on eyewitness misidentifications, the Article proposes adopting the STAMP model and adapting it to the criminal justice system.

B. Eyewitness Identification × STAMP = Safety

The STAMP model should be applied at each stage in the criminal process, with respect to every decision that advances the case toward possible conviction. To eliminate the hazards that lead to wrongful convictions, the safety constraints of each stage must be defined separately, and the appropriate safety controls and barriers put in place to enforce these constraints. To this end, each central evidence (for example, confessions¹⁹⁷ and forensic science evidence¹⁹⁸) and each central procedure (for example, plea bargains¹⁹⁹ and post-conviction proceedings²⁰⁰) must undergo a thorough safety examination by expert teams, under the auspices of

¹⁹⁵ LEVESON, *supra* note 189, at 101.

¹⁹⁶ *Id.* at 176; *see also id.* at 198–209 (“Safety Control Structures in Social Systems”).

¹⁹⁷ *See* Sangero, *Safety from False Confessions*, *supra* note 33.

¹⁹⁸ *See* Sangero, *Safety from Flawed Forensic Sciences Evidence*, *supra* note 33.

¹⁹⁹ *See* Sangero, *Safety from Plea-Bargains’ Hazards*, *supra* note 33.

²⁰⁰ *See* Sangero, *Safety in Post-Conviction Proceedings*, *supra* note 33.

my proposed Safety in the Criminal Justice System Institute (SCJSI).²⁰¹ For the purpose of the present Article, I now focus on eyewitness identifications.

In the case of an eyewitness identification, eyewitness testimony, and its use as evidence in a criminal trial, several hazards are present and certain safety constraints must be taken into account to prevent each hazard. Similarly, certain controls and barriers are necessary in order to enforce these constraints, as shown in table 1 below. The table does not provide an exhaustive list of all the safety constraints for eyewitness identification needed to make the system safe, or of all the controls and barriers required to enforce these constraints. Such a list would require extensive groundwork by the Safety in the Criminal Justice System Institute, which would need to be updated from time to time based on new research. Indeed, a fundamental component of modern safety is the never-ending process of continual improvement. The main goal of the present Article is to demonstrate the general direction that systematic safety thinking should follow in order to reduce the risk that innocent defendants will be wrongfully convicted based on eyewitness identifications.

²⁰¹ See Boaz Sangero, *Safe Convictions*, 30 CRIM. L.F. 375, 386–92 (2019).

Table 1. Analyzing Eyewitness Identifications According to the STAMP Safety Model

Hazards	Safety Constraints and Controls
A. Police investigation (usually a line-up) leads to a witness false identification.	Safety Constraints
	<ol style="list-style-type: none"> 1. An eyewitness identification must be valid and reliable. 2. Stacked lineups of any type and suggestive methods of identification or remarks must not be used by the police.
	Controls (and Barriers)
	<ol style="list-style-type: none"> 3. Proper protocols for police lineup identifications (including standardized witness instructions) must be developed (by SCJSI), published, and enforced on all police units, both Federal and States units. 4. Proper protocols for police lineup identifications (including standardized witness instructions) must be developed (by SCJSI), published, and enforced on all police units, both Federal and States units. 5. Proper protocols for police lineup identifications (including standardized witness instructions) must be developed (by SCJSI), published, and enforced on all police units, both Federal and States units. 6. Conducting a police lineup should be permitted only when there is a reasonable suspicion that the suspect committed the crime in question. 7. The eyewitness must be informed that the suspect might not be in the lineup. 8. No more than one suspect should be included in a lineup. 9. A suspect must not “stand out” and be conspicuous relatively to the other lineup participants. 10. A sequential (not simultaneous) procedure must be used, with only one lineup participant paraded before the eyewitness at a time. 11. A “double blind test” must be implemented in lineups, so that not only the eyewitness but also whoever is administering the lineup does not know who the actual suspect is, and which participants are just fillers. 12. The lineup administer must document the eyewitness’s confidence statement without giving any feedback regarding the accuracy of the identification. 13. The entire duration of the line-up procedure must be video documented, so that there will be direct, full documentation of what transpires for the court. 14. Eyewitness descriptions of suspects should be recorded by a police officer not involved in the investigation, before any identification procedure is conducted. 15. A defense attorney must be allowed to be present as an observer during the entire line-up procedure (even before the suspect is charged). 16. An array of photos (instead of a live line-up) should be used only when a live line-up is impossible. All the above constraints and controls regarding line-ups must exist regarding photo-arrays as well.

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17. All law enforcement officers involved in eyewitness identifications must be professionally trained.
 18. Police investigators and prosecutors must be instructed on the danger of violating guidelines 1–14.
 19. If a prosecutor supervises the police investigation, they must ensure that the police investigators act in accordance with guidelines 1–14.
 20. A prosecutor must not submit to the court an eyewitness identification evidence that was obtained in violation of guidelines 1–14.
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B. A false eyewitness identification is admitted as evidence at trial.

Safety Constraints

1. An eyewitness identification must not be admitted as evidence if not proven by the prosecution to have been given according to the Protocol.
 2. An eyewitness identification must not be admitted as evidence if there are significant signs that it is false.
 3. Eyewitness identifications emanating from flawed lineup procedures should be ruled inadmissible.
 4. In-court identifications should not be allowed as a first identification or following any suggestive identification procedure.
 5. “Showup” (field identification procedure where the witness is shown a single suspect or photo) should be ruled inadmissible.
 6. An array of photos (instead of a live line-up) should be given only a low evidentiary weight.
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Controls (and Barriers)

7. An eyewitness identification must not be admitted as evidence if obtained in significant violation of any of the above guidelines directed at the police (A 1–14) or at the prosecution.
 8. Judges must be instructed in training programs (and jury members by expert witnesses) on the dangers of violating guidelines B 1–6.
 9. A judge should conduct pretrial judicial inquiry when eyewitness identification evidence is offered before referring the evidence to the jury.
 10. In an appeal of a conviction, there must be close scrutiny of whether all the guidelines relating to above hazards A and B were followed.
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C. A defendant is convicted based on a false eyewitness identification.

Safety Constraints

1. A conviction must not be based on an eyewitness identification as the sole piece of evidence.
 2. A conviction based on an eyewitness identification must have a strong corroboration: independent, significant evidence that the defendant committed the offense they are accused of.
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Controls (and Barriers)

3. Judges must be instructed in training workshops (and jury members by expert witnesses) on the dangers of violating safety constraints C 1–2.
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4. Judges must be instructed in training workshops (and jury members by expert witnesses) on the possibility of eyewitness misidentification and on the factors that affect the reliability of eyewitness accounts.
 5. In an appeal of a conviction, there must be close scrutiny of whether all the guidelines relating to all three above hazards A, B, and C were followed.
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CONCLUSION

Following the findings of the Innocence Project in the United States, and those of other studies worldwide, we can no longer bury our heads in the sand. It is already clear today that there is a significant phenomenon of wrongful convictions based on eyewitness misidentifications. Nevertheless, the high rate of wrongful convictions is not an unavoidable attribute of the system, but the consequence of human negligence or indifference.

The criminal justice systems have failed to develop a safety theory and to devise safety measures. Therefore, it is necessary to learn these from other areas of activity, such as engineering. The present Article developed a model of safety from false convictions caused by eyewitness misidentifications based on the STAMP safety model, which first identifies the hazards and safety constraints, and then suggests controls and barriers. The substance of the suggested rules is based on both the psychological research and the legal literature.