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In Eyes, We Trust: The Changing Landscape of Eyewitness Testimony

MANVEEN SINGH*

Since the very advent of law enforcement, eyewitness testimony has played a pivotal role in identifying, arresting, and convicting suspects. Reliant heavily on the accuracy of human memory, nothing seems to carry more weight with the judiciary than the testimony of an actual witness. The acceptance of eyewitness testimony as a substantive piece of evidence lies embedded in the assumption that the human mind is adept at recording and storing events. Research though, has proven otherwise. Having carried out extensive study in the field of eyewitness testimony for the past 40 years, psychologists have concluded that human memory is fragile and needs to be treated carefully. The question that arises then, is how reliable is eyewitness testimony?

The credibility of eyewitness testimony, simply put, depends on several factors leaving it reliable at times while not so much at others. This is further substantiated by the fact that as per scientific research, over 75 percent of all eyewitness testimonies may stand in error; quite a few of these cases resulting in life sentences. Although the advancement of scientific techniques, especially DNA testing, helped overturn many of these eyewitness testimony-based convictions, eyewitness identifications continue to form the backbone of most police investigations and courtroom decisions to date. What then is the solution to this long-standing concern regarding the accuracy of eyewitness accounts? This Article shall analyze the linkage between human memory and eyewitness identification as well as look at the various factors governing the credibility of eyewitness testimonies. Furthermore, this Article will elaborate upon some best practices developed over the years to help reduce mistaken identifications, thus, in the process, trace out the changing landscape of eyewitness testimony amidst the evolution of DNA and trace evidence.

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Witness testimony is always flawed. It's better than circumstantial evidence, sure, but people aren't camcorders; they don't record every action and reaction, and the very act of remembering involves choosing words and phrases and images. In other words, every witness who's supposed to be giving a court facts is really just giving them a version of fiction.¹

— Jodi Picoult

I. INTRODUCTION

Since the very advent of law enforcement, eyewitness testimony has played a pivotal role in identifying, arresting, and convicting suspects.² Reliant heavily on the accuracy of human memory, nothing seems to carry more weight with the judiciary than the testimony of an actual witness.³ The acceptance of eyewitness testimony as a substantive piece of evidence lies embedded in the assumption that the human mind is adept at recording and storing events. Eyewitness accounts play a significant role in the development and promulgation of both religious and paranormal beliefs.⁴ Research, though, has proven otherwise. Having carried out extensive study in the field of eyewitness testimony for the past forty years, psychologists have concluded that human memory is fragile and needs to be treated carefully, and despite there being a popular perception of eyewitness testimony being the most reliable of the evidence around, it is considered as being the most fragile and unreliable of the lot.⁵

It all started back in the 1980s and 1990s, with some of the most prominent cases sparking off lengthy debates on the reliability and fallibility of

1. JODI PICOULT, *HANDLE WITH CARE: A NOVEL* 345 (2009).

2. J.R. Burton, *Eyewitness Testimony: Improvements to a Basic Law Enforcement Process That Will Help Prevent Wrongful Convictions* 1, <https://www.fdle.state.fl.us/cms/FCJEL/Programs1/SLP/Documents/Full-Text/Burton-JR-Final-paper.aspx> (last visited May 5, 2017).

3. See ELIZABETH LOFTUS & KATHERINE KETCHAM, *WITNESS FOR THE DEFENSE: THE ACCUSED, THE EYEWITNESS, AND THE EXPERT WHO PUTS MEMORY ON TRIAL* (Reprt. ed. 1992).

4. Austin Cline, *Eyewitness Testimony, Memory and Psychology: Human Memory is Unreliable and So is Eyewitness Testimony*, THOUGHTCO., <http://atheism.about.com/od/parapsychology/a/eyewitness.htm> (last updated Apr. 12, 2017).

5. *Id.*

memory, forcing the reassessment of the weightage to be assigned to eyewitness testimony, for eyewitness accounts were heavily reliant on memory.⁶ Prosecutors recognized that eyewitness testimony, given in all honesty and sincerity, wasn't necessarily credible. Merely claiming to have witnessed something doesn't always imply that what the claimant remembers witnessing actually happened; one of the reasons why it is so, is that competency cannot be equated with credibility. There is, without a doubt, truth to the statement that mistaken eyewitness testimonies do lead to wrongful convictions.⁷ And this can be substantiated by the fact that several case studies and DNA testing in the United States have shown more wrongful convictions to have been caused by mistaken eyewitness testimonies than all the other causes put together.⁸ If the official figures are to be believed, over 75 percent of all eyewitness testimonies may stand in error, with quite a few of these cases resulting in life sentences.⁹ Part of the problem concerning eyewitness accounts emanates from the mismatch between the eyewitness's confidence in their memories and the actual accuracy of those memories. This can be directly attributed to people overestimating their ability to remember things, thus, leading the courts to believe in the truth of their statements.¹⁰ Human beings have long stuck to the belief that our memories stay intact and our thoughts are everlasting, in furtherance of the belief that Sigmund Freud once held; he viewed long-term memories as lying too deep in the unconscious mind to be disturbed by external events and experiences.¹¹ It would be safe to assume that Freud's view of memory holds true even today.

Eyewitness testimonies have the power to sway both the police as well as the judiciary, so much so that even the strongest of alibis supported by other evidence run the risk of being outweighed by eyewitness identification.¹² What is interesting is that eyewitness identifications themselves are quite susceptible to the procedures of crime investigation. A classic example being that of the sequential lineup or the "test-identification parade" (as it is

6. Mark L. Howe & Lauren M. Knott, *The Fallibility of Memory in Judicial Processes: Lessons from the Past and Their Modern Consequences*, 23 *MEMORY* 633 (2015).

7. *The History of Eyewitness Testimony Criminology Essay*, UNI ASSIGNMENT CTR., <http://www.uniassignment.com/essay-samples/criminology/the-history-of-eyewitness-testimony-criminology-essay.php?cref=1> (last visited May 5, 2017).

8. *Id.*

9. Gary L. Wells, *Eyewitness Identification: Probative Value, Criterion Shifts, and Policy Regarding the Sequential Lineup*, 23 *CURRENT DIRECTIONS PSYCHOL. SCI.* 11 (2014).

10. Stephanie Pappas, *Eyewitness Testimony Can Be Tragically Mistaken*, *LIVE SCI.*, (Sept. 22, 2011, 6:39 PM), <http://www.livescience.com/16194-crime-eyewitnesses-mistakes.html>.

11. LOFTUS & KETCHAM, *supra* note 3.

12. Marc Green, *Eyewitness Memory is Unreliable*, *VISUAL EXPERT*, <http://www.visualexpert.com/Resources/eyewitnessmemory.html> (last visited May 5, 2017).

commonly known in certain jurisdictions) wherein a witness is asked to identify the perpetrator from amongst a lineup of similar-looking people. The investigating officers or the police conducting the “test-identification parade” already have a suspect, resulting in their being invested in the selection made by the eyewitness. They often drop hints on the prime suspect being chosen, and the eyewitnesses pick up on them. Elizabeth Loftus, a prominent psychologist at the University of California, had termed it as unconscious driving of people by the police into having false memories.¹³ The credibility of eyewitness testimony, simply put, hinges on several factors, leaving it reliable at times while not so much at others. Although the advancement of scientific techniques, especially DNA testing, helped overturn many of these eyewitness testimony-based convictions, eyewitness identifications continue to form the backbone of most police investigations and courtroom decisions to date.¹⁴

The present Article shall trace out the changing landscape of eyewitness testimony amidst constantly evolving technology, while focusing on the interplay between memory and eyewitness testimony. It shall further evaluate the impairments to testimonial credibility, leading to several wrongful convictions, while highlighting the role of the Innocence Project in getting some of these convictions overturned. The Article shall conclude by describing ways in which the legal system can reduce and protect against mistaken identifications so as to prevent wrongful convictions.

II. THE INTERPLAY BETWEEN MEMORY AND EYEWITNESS TESTIMONY

Memory forms the very foundation of eyewitness testimony, for whatever account is being put forward is directly linked to a person’s memory.¹⁵ Memory though, is imperfect. This is due to the fact that quite often we do not see things accurately in the first place, and even if we do take in a fairly accurate picture of an occurrence, it doesn’t stay perfectly intact in the memory. Memory traces are quite susceptible to distortions, and with the right kind of motivation and interference by facts, traces of memory undergo changes or transformations.¹⁶ These distortions can prove to be quite fatal as they can, at times, cause eyewitnesses to generate memories of things and

13. John Bohannon, *How Reliable is Eyewitness Testimony? Scientists Weigh In*, SCI. (Oct. 3, 2014, 5:00 PM), <http://www.sciencemag.org/news/2014/10/how-reliable-eyewitness-testimony-scientists-weigh>.

14. See generally Neil Brewer & Gary L. Wells, *Eyewitness Identification*, 20 CURRENT DIRECTIONS PSYCHOL. SCI. 24 (2011).

15. Cline, *supra* note 4.

16. ELIZABETH LOFTUS, *MEMORY: SURPRISING NEW INSIGHTS INTO HOW WE REMEMBER AND WHY WE FORGET* 37 (First Prtg. ed. 1981).

experiences that never happened.¹⁷ One could argue that this uncritical acceptance of eyewitness accounts lies rooted in the misconception surrounding the working of memory. Human memory, as per popular belief, works like a video recorder, with the mind recording events, cuing them, and finally playing their exact replica, whereas on the contrary, psychology has found otherwise. Memories have been found to be reconstructed instead of being played back each time they've been recalled. According to eminent memory researcher and psychologist Elizabeth Loftus, "[t]he act of remembering . . . is 'more akin to putting puzzle pieces together than retrieving a video recording.'"¹⁸ That is the reason why eyewitness testimonies should be looked at critically and skeptically, for even in the most intelligent of us, memory is extremely malleable.¹⁹

Memory errors can be categorized into two categories: complete failure to recall an event or producing an inaccurate recollection.²⁰ While total memory failures are commonly understood by people, the level of optimism amongst people concerning the accuracy of their retrieved memories is quite high.²¹ It is in consideration of this confidence, that despite experts treating eyewitness testimony as the least reliable of all the evidence available,²² tremendous amount of faith is reposed in the accuracy of eyewitnesses.²³ Several researchers have been successful in planting false memories in normal individuals, with most of these individuals being certain about the memories being real,²⁴ thus leading to the creation of memory illusions.²⁵ These memory illusions could range from misremembering as small a thing as having seen a stop sign or a yield sign at an intersection to misremembering an entire experience. This view of memory has evolved over the past few decades through consistent research on memory processes. Many of the beliefs about memory harbored by the police, judges, jurors, and others involved in the legal system have been found to be naïve and in stark contrast to scientific research.²⁶ For example, the belief that the accuracy of the memory is directly proportional to the specificity of the details remembered by the complainant is countered by the scientific study of memory, which regards such details as

17. *Id.*

18. Hal Arkowitz & Scott O. Lillienfeld, *Why Science Tells Us Not to Rely on Eyewitness Accounts*, SCI. AM. (Jan. 1, 2010), <http://www.scientificamerican.com/article/do-the-eyes-have-it/>.

19. Cline, *supra* note 4.

20. Burton, *supra* note 2, at 8-9.

21. Burton, *supra* note 2, at 8-9.

22. Burton, *supra* note 2, at 8-9.

23. Green, *supra* note 12.

24. Arkowitz & Lillienfeld, *supra* note 18.

25. Howe & Knott, *supra* note 6, at 634.

26. Howe & Knott, *supra* note 6, at 634.

a harbinger for skepticism.²⁷ This disconnect between memory science and the beliefs held by those involved in judicial processes has often resulted in the miscarriages of justice,²⁸ many of which have been brought to light by the Innocence Project, which shall be dealt with further on in this Article.

With the susceptibility of memory seemingly established, what is worth digging into a little deeper is the cause of memory failure. According to Maria Zaragoza, a psychologist at Kent State University in Ohio:

Some of this failure of reliability happens at the scene of the crime . . . Things happen quickly; the emotional charge of witnessing a crime may keep people from cuing into important details. If there's a weapon . . . people tend to become hyper-focused on it. They pay more attention to a gun than to the face of the person holding it.²⁹

Another source of memory uncertainty lies in the investigation stage. Often there is suggestive questioning or lineup identification by the police. Reliving a crime, be it out loud to the police or in one's own head, strengthens that distorted memory. One of the most prominent examples of mistaken identification is the famous Jennifer Thompson Case.³⁰ In 1985, Jennifer Thompson, a college student, deposed in a North Carolina court that a black restaurant worker had raped her at knifepoint, and she identified the man as Ronald Cotton in the court. Relying on the confident testimony put forward by Thompson, Cotton was sentenced to life plus fifty years. Cotton subsequently landed in prison with a similar looking man named Bobby Poole, with the two often mistaken for one another. It was only after Poole happened to confess to another inmate about his being Jennifer Thompson's true attacker that Cotton managed to get his conviction overturned with the aid of DNA evidence, but not before he had spent more than a decade in prison.³¹ According to Zaragoza, it's likely that Thompson's memory of her rapist's face was altered while working on the police sketch and when she had picked him out of a lineup later, she became even more confident.³² Cotton's face haunted her flashbacks to the extent that when she came face to face with her rapist in the court, she failed to recognize him.³³ The Thompson case serves as a

27. Howe & Knott, *supra* note 6, at 634.

28. Howe & Knott, *supra* note 6, at 634.

29. Pappas, *supra* note 10.

30. Pappas, *supra* note 10.

31. Benjamin Ryan, *Eyewitness Testimony is Unreliable... Or is it?*, MARSHALL PROJECT (Oct. 30, 2015, 7:15 AM), <https://www.themarshallproject.org/2015/10/30/eyewitness-testimony-is-unreliable-or-is-it#.up2i0fCWA>.

32. Pappas, *supra* note 10.

33. Pappas, *supra* note 10.

prime example of how things can go tragically wrong when human recollection forms the sole basis of conviction in judicial decisions.³⁴ The truth, as it stands, is that anyone's memory can become twisted with time and that we are often wrong.³⁵

III. OTHER IMPAIRMENTS TO ACCURACY OF EYEWITNESS TESTIMONY

Eyewitness testimony is heavily reliant on the ability of the individual to recall events, especially in cases where little material evidence is available.³⁶ This ability to recall though, is influenced by a variety of factors, some of which we lack any control over.³⁷ Several studies have been carried out on human memory and the propensity of individuals to conjure up memories of events that did not happen.³⁸ Gary L. Wells, a well-known psychologist and an expert on eyewitness testimony at Iowa State University, categorized these factors into estimator and system variables,³⁹ with the former usually occurring at the crime scene and not controlled by the criminal justice system.⁴⁰ According to a study by Reynolds and Pezdek,⁴¹ the accuracy of identification is directly proportional to the exposure time and the longer a criminal is viewed by an eyewitness, the higher is likely to be the accuracy of the eyewitness account.⁴² Another factor having an influence on eyewitness testimony is the extreme witness stress induced by a crime or during the identification process. The performance of individuals during identification is impaired by high level of anxiety, and their acquisition process is negatively affected.⁴³ Apart from stress, the presence of environmental factors at a crime scene, such as a weapon, may not only end up inducing more stress but also become the focus of a witness's attention, resulting in a reduced ability to

34. Ryan, *supra* note 31.

35. Pappas, *supra* note 10.

36. *Factors that Affect the Accuracy of Eyewitness Testimonies*, UK ESSAYS (Mar. 23, 2015), <https://www.ukessays.com/essays/psychology/factors-that-affect-the-accuracy-of-eyewitness-testimonies-psychology-essay.php>.

37. Sheena M. Lorenza, *Factors Affecting the Accuracy of Eyewitness Identification*, 6 REV.: J. UNDERGRADUATE STUDENT RES. 45 (2003), <http://fisherpub.sjfc.edu/ur/vol6/iss1/9>.

38. George Fisher & Barbara Tversky, *The Problem with Eyewitness Testimony*, 1 STAN. J. LEGAL STUD. 25-26 (1999).

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

40. Joe Vitriol & Jason Mandelbaum, *Research on Eyewitness Testimony*, 3 ASS'N FOR PSYCHOL. SCI. (2009), http://www.psychologicalscience.org/apssc/uu/fall_2009/vitriol.cfm.

41. Lorenza, *supra* note 37.

42. Lorenza, *supra* note 37.

43. *Factors that Affect the Accuracy of Eyewitness Testimonies*, *supra* note 36.

capture relevant information, such as the perpetrator's facial features.⁴⁴ Witnesses in such cases end up describing the weapon with much more precision in contrast to the person holding it.⁴⁵

The second class of factors, as categorized by Wells, are the system variables, having the power to affect the recalling ability of eyewitnesses and often under the control of the criminal justice system.⁴⁶ These may be in the form of lineup bias or suggestive questioning, with both possessing the ability to affect the accuracy of identification. The police may choose either of sequential lineup or simultaneous lineup for conducting a lineup identification. While in a simultaneous lineup, the suspect is identified from amongst a lineup of similar looking people, a sequential lineup involves viewing one person at a time and having to decide whether the person bears a resemblance to the suspect, before moving on to the next face.⁴⁷ Witnesses often hold the belief that the guilty suspect has been arrested by the police and may feel the compulsion of having to pick the lineup member most closely resembling the perpetrator, whereas in reality the actual perpetrator might not actually be present. According to a research conducted by Malpass and Devine, by appraising the witness of the possibilities of the perpetrator being or not being in the lineup, the possibilities of guessing can be reduced.⁴⁸ It is not just the witnesses who stand to make an error but in cases where the administrator of the lineup is aware of the real suspect in the lineup, he or she may give subtle hints and influence the selection of the eyewitness.⁴⁹ When compared with simultaneous lineup, sequential lineup has yielded a lesser number of misidentifications, for the latter involves a comparison between each member of the lineup and the witness's memory of the perpetrator.⁵⁰ This, according to Gary Wells, tends to make sequential lineups highly successful.⁵¹ Just like exposure time, the time gap between an occurrence and the eventual recording of the testimony or the conduct of the identification exercise has a direct effect on the memory of an individual and the greater the time gap between the two, the more likely it is for external elements to creep into the individual's memory of the event, rendering the accounts inaccurate. Furthermore, the study conducted by Elizabeth Loftus and J.C. Palmer⁵² made it evident that if an individual was exposed to new or misleading information during

44. Vitriol & Mandelbaum, *supra* note 40.

45. Saul A. McLeod, *Eyewitness Testimony*, SIMPLE PSYCHOL. (2009), <http://www.simplypsychology.org/eyewitness-testimony.html>.

46. Vitriol & Mandelbaum, *supra* note 40.

47. Lorenza, *supra* note 37, at 45-46.

48. Vitriol & Mandelbaum, *supra* note 40.

49. Vitriol & Mandelbaum, *supra* note 40.

50. Lorenza, *supra* note 37, at 48.

51. Lorenza, *supra* note 37, at 48.

52. McLeod, *supra* note 45.

the interval between the occurrence of an event and its recall, there might be marked effects on the recalling ability of the individual to the extent that the original memory may undergo modification or change.⁵³ Although substantial research has gone into the study of eyewitness testimony, one can only estimate the extent to which these factors influence the accuracy of eyewitness accounts.⁵⁴

IV. WRONGFUL CONVICTIONS AND THE INNOCENCE PROJECT

Eyewitness misidentification is the single biggest contributing factor to wrongful convictions, accounting for almost 75 percent of the convictions that have been overturned by DNA testing.⁵⁵ Innocent people are having to serve jail time for offences they didn't commit, and it is difficult to establish the exact number of wrongful convictions caused due to mistaken identifications since quite a few of those identified mistakenly never get a chance to prove their innocence.⁵⁶ Of the 1,700 exonerations documented in the United States since 1989, mistaken eyewitness testimony was a contributing factor to 545 of them.⁵⁷ In fact, 30 percent of all exonerations on record have an element of mistaken eyewitness testimony in them.⁵⁸ All these figures are testament to the fact that eyewitness testimony can no longer be relied upon as a primary piece of evidence to hold out convictions, for the degree of its susceptibility has only risen over the years.

The Innocence Project in the United States is a litigation and public policy organization, with the objective of exonerating wrongfully convicted individuals through the medium of DNA testing and bringing reforms to the criminal justice system in order to prevent future injustice.⁵⁹ It was founded back in 1992 by Barry Scheck and Peter Neufeld, in the wake of a groundbreaking study by the United States Department of Justice and the United States Senate, in collaboration with the Benjamin N. Cardozo School of Law.⁶⁰ The Innocence Network today has grown into a group of 63 independ-

53. McLeod, *supra* note 45.

54. Vitriol & Mandelbaum, *supra* note 40.

55. W. Sainvil, *Eyewitness Misidentification: The Most Unreliable Form of Evidence*, PLAIN ERROR, INNOCENCE PROJECT OF FLA. (Nov. 28, 2012, 11:06 AM), <http://floridainnocence.org/content/?p=7544>.

56. *Eyewitness Identification*, INNOCENCE PROJECT OF MINN., <http://ipmn.org/causes-and-remedies-of-wrongful-convictions/eyewitness-misidentification/> (last visited May 18, 2016).

57. *Id.*

58. *Id.*

59. *About*, INNOCENCE PROJECT, <http://www.innocenceproject.org/about/> (last visited May 5, 2017).

60. *Id.*

ent organizations around the world (with 52 in the U.S. and 11 in other countries such as Australia, Canada, France, Ireland, Italy, New Zealand, South Africa, Netherlands, and the U.K.) providing pro bono legal aid to the innocent and conducting investigations for the purpose of re-examination of their cases.⁶¹ Many other similar initiatives also sprung up in parts of Latin America, Eastern Europe, Africa, and Asia and have reported similar flaws in the criminal justice system that have resulted in the conviction of the innocent.⁶² The question that comes up then is—what drove the creation of the likes of the Innocence Project and others? The answer to this question lies in cases like that of *Gerry Conlon*,⁶³ *Jonathan Fleming*,⁶⁴ *Govinda Mainali*,⁶⁵ *Victor Nealon*,⁶⁶ and countless others. The Innocence Project's efforts have reaped rich rewards in the form of 342 wrongful convictions having been overturned, including 20 wrongfully convicted persons on death row and over 71 percent of the convictions involving eyewitness misidentification; the most recent exoneration being that of Andre Hatchett.⁶⁷ Andre was exonerated in 2016 after having served 25 years in prison on charges of a second-degree murder he had not committed.⁶⁸ His conviction was based on the eyewitness account of a career criminal, Gerard Williams.⁶⁹

61. Michael Naughton, *Gerry Conlon's Life is a Reminder that Wrongful Convictions Happen Everywhere*, CONVERSATION (June 23, 2014, 11:50 AM), <http://theconversation.com/gerry-conlons-life-is-a-reminder-that-wrongful-convictions-happen-everywhere-28176>.

62. *Id.*

63. *Id.* (Gerry Conlon was wrongly convicted in connection with the Guildford pub bombings in 1975, only to be exonerated in 1989 after having served fourteen years of jail time).

64. *Id.* (Jonathan Fleming spent almost twenty-five years in prison for a crime he had not committed. He was incarcerated in 1989 by the prosecutors on the basis of a false identification by a key prosecution witness, only to be exonerated in 2014. Fleming successfully sued the city of New York for a \$6.25 million for his ordeal).

65. *Id.* (Govinda Mainali managed to overturn his conviction for rape and murder after fifteen long years of wrongful confinement in Japan. DNA evidence came to his rescue after he had been sentenced on the basis of a false testimony by a former flat-mate of his, who had claimed that he had been forced into recording a statement by the police in implicating Govinda).

66. Naughton, *supra* note 61 (In the year 2013, Victor Nealon had his conviction overturned after spending seventeen years in prison for an attempted rape outside a nightclub in Worcestershire in the UK. He too was a victim of wrongful identification and was set free only after DNA evidence pointed to another man as the perpetrator).

67. Noah Remnick, *Brooklyn Man is Exonerated After 25 Years in Prison for Murder*, N.Y. TIMES (Mar. 10, 2016), http://www.nytimes.com/2016/03/11/nyregion/brooklyn-man-is-exonerated-after-25-years-in-prison-for-murder.html?_r=1.

68. *Id.*

69. *Id.*

With eyewitness misidentifications and wrongful convictions, it is more than what meets the eye. The collateral damage caused by wrongful convictions is not just limited to the victims of wrongful convictions and their families, but the victims of the additional crimes committed by the real perpetrators as well. Wrongful convictions have become commonplace and occur in almost all jurisdictions around the world, having stemmed from the same causes. Yet, in the broader scheme of things, they are very much the tip of the global iceberg of wrongful convictions and are evident of the shoddy investigation, over-zealous prosecutors, who prioritize winning over fair trials for the accused, unreliable forensic evidence, and most importantly, witnesses who give false or wrongful testimony. As has been enunciated by the aforementioned cases involving eyewitness misidentification, proving the same is often seen as a matter of hard graft and tenacious re-investigation of the facts.⁷⁰ That is why organizations like the Innocence Network have a major role to play.⁷¹

V. CHILD EYEWITNESS TESTIMONY

Can a five-year-old child serve as a competent witness? Will the child's evidence be admitted by the court of law? The question of the status of children's testimony has been the subject matter of intense debate over the years.⁷² Up until the 1970s, the answer to this question was a straightforward "no," for young children were considered incapable of remembering past events and testifying about them in court cases.⁷³ The 1980s and 1990s witnessed a change with children frequently testifying in criminal cases,⁷⁴ especially in cases of child sexual abuse. This was due to a major shift in the societal recognition and increased sensitivity towards instances of child abuse.⁷⁵ This brought about major changes not only in the U.S. legal system but several nations across the Western world, allowing children to provide the court with uncorroborated testimony of violence and abuse suffered by

70. Naughton, *supra* note 61.

71. Naughton, *supra* note 61.

72. Don Thompson, *Reliability and Credibility of Children as Witnesses*, MONASH UNIV. VICT. 43-44, http://www.aic.gov.au/media_library/publications/proceedings/08/thompson.pdf (last visited May 5, 2017).

73. *Fact Sheet: Child Witnesses*, EAPL STUDENT, <https://www.eaplstudent.com/component/content/article/126-child-eyewitnesses> (last visited May 5, 2017) [hereinafter *Fact Sheet: Child Witnesses*].

74. *Id.*

75. Howe & Knott, *supra* note 6, at 635.

them.⁷⁶ This can be accounted for by the fact that, at times, the only eyewitness the police have is a child.⁷⁷ Sexual offenses, for instance, because of the very nature of the offense, typically occur in private with no eyewitnesses except the victim and the perpetrator. There might be signs of physical abuse at times but often in cases of sexual abuse, they are not present. Owing to the absence of physical evidence, courts have to rely on children's testimony in such cases.⁷⁸ The bigger issue, though, concerns the credibility to be assigned to such testimony. The general perception is that children are prone to fantasy and the observation powers and memory of a child are less reliable as compared to an adult.⁷⁹ Science, though, proves otherwise. Scientists have found humans to exhibit two kinds of memory: one being the "verbatim trace" and the other being the "gist trace."⁸⁰ In the former case, events are recorded precisely and factually, whereas in the latter, they end up recalling the meaning of the event and the emotions attached to it, rather than the precise facts.⁸¹ Children have more of a verbatim trace where adults have gist trace, which is the most common cause of false memory.⁸² Therefore, children are at a lesser risk of producing false memories and their recollections might end up being more reliable.⁸³

According to Dr. Steven Ceci, a child development expert at Cornell University, "children and adults imprint memory very differently based on their past knowledge of things. But that does not mean children cannot be as credible as adults."⁸⁴ He further holds,

that the ability to relay detail varies by age. The worst accuracy is very young kids, 2- and 3-year-olds They omit a lot of stuff that happens and they add stuff that didn't happen but if you look at accuracy, it starts going up, so that 6-year-olds are better than 3. . . . People actually max out their ability to be eyewitnesses at about age 12, and it stays

76. Howe & Knott, *supra* note 6, at 635.

77. *Just How Credible is a Child Eyewitness?*, ABC NEWS (July 21, 2005), <http://abcnews.go.com/Primetime/Health/story?id=965740&page=1>.

78. Howe & Knott, *supra* note 6, at 635.

79. *Children's Evidence: Children As Reliable Witnesses*, AUSTRALIAN LAW REFORM COMMISSION, <http://www.alrc.gov.au/publications/14-childrens-evidence/children-reliable-witnesses> (last visited May 5, 2017).

80. Nat'l Sci. Found., *Children's Memory May Be More Reliable Than Adults' in Court Cases*, SCI. DAILY (Mar. 17, 2008), <https://www.sciencedaily.com/releases/2008/03/080313124445.htm>.

81. *Id.*

82. *Id.*

83. *Id.*

84. ABC NEWS, *supra* note 77.

constant until old age, when it starts dropping off again⁸⁵

One could substantiate Dr. Ceci's argument with the case of *Samantha Runnion*.⁸⁶ Samantha, a five-year-old child was kidnapped from outside her home in Stanton, California in 2002 with the only eyewitness being her six-year-old friend, Sarah Ann.⁸⁷ Sarah described the suspect as well as his car with pin-point accuracy, leading to his arrest a few days later.⁸⁸ However, while relying on the eyewitness testimony of children, attention must be paid to how the information is elicited, for it may create false memories in children.⁸⁹ One of the most notorious cases highlighting the dubious nature of child eyewitness testimony has been that of the *McMartin Preschool* trial,⁹⁰ involving allegations of sexual abuse of over a hundred children against seven teachers, including the owner of the pre-school, Peggy McMartin and her son over a 10-year period at a day-care facility in California. The solitary piece of evidence available in the case were the interviews of children allegedly abused.⁹¹ The trial, having commenced in 1983 saw all the charges dropped at the end of it in the early 1990s, in the process, becoming one of the most expensive and longest running trials in the history of California.⁹² If psychologists are to be believed, investigators had successfully managed to implant memories of abuse in the minds of children, causing the jurors to be swayed into dropping the charges.⁹³ Another sensational case of child testimony was that of *State v. Michaels*,⁹⁴ popularly known as the *Wee Care* case. Margaret Kelly Michaels, an aspiring actress, used to work as a teacher's aide at the Wee Day Care Nursery in New Jersey⁹⁵ and a passing comment made by one of her former students landed her in the middle of criminal investigation into charges of child sexual abuse and molestation. Children aged three and four were regularly interviewed by the investigators through their sensitive questions, resulting in the children finally admitting

85. ABC NEWS, *supra* note 77.

86. ABC NEWS, *supra* note 77.

87. ABC NEWS, *supra* note 77.

88. ABC NEWS, *supra* note 77.

89. ABC NEWS, *supra* note 77.

90. Dan Vergano, *Brain Science: Early Childhood Testimony Unreliable*, NAT'L GEOGRAPHIC (Oct. 31, 2013), <http://news.nationalgeographic.com/news/2013/10/131030-child-memory-testimony-neuroscience/>.

91. Howe & Knott, *supra* note 6.

92. Howe & Knott, *supra* note 6.

93. Vergano, *supra* note 90.

94. *New Jersey v. Michaels*, 642 A.2d 1372 (N.J. 1994).

95. Maurice Possley, *Margaret Kelly Michaels*, NAT'L REGISTRY OF EXONERATIONS, <https://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=3867> (last visited May 5, 2017).

that they had been sexually abused, despite being in denial earlier.⁹⁶ Based on the children's testimony, the jury convicted Michaels on several counts, and she spent the next seven years of her life in prison⁹⁷ before being freed by the New Jersey Supreme Court in 1994, which held the interrogations that took place in the case to be improper and the evidence unreliable.⁹⁸ The truth was that Michaels was 100 percent innocent. In the aftermath of the *Michaels* case, the entire focus was directed towards the interview techniques employed by the state agents that led to the initial conviction.⁹⁹

The *MC Martin* and *Wee Care* cases serve as glaring examples of how repeated interviewing, suggestive and coercive nature of questioning, and questioning at length can lead to false allegations. One could use the transcripts of the interviews conducted in these cases to highlight the ways in which the dynamics of an interview or a conversation can lead children into producing graphic and believable statements of events that didn't happen in the first place. As was evident from the findings of the Supreme Court of New Jersey in the *Michaels* case, faulty interviewing techniques have the power to influence the reliability of children's testimony.¹⁰⁰ While obtaining a testimony from a child, it is important to note that children are susceptible to suggestive questioning.¹⁰¹ However, this does not lead to the conclusion that children are incapable of furnishing reliable information, rather the level of accuracy of a child's testimony is dependent upon the style of questioning and the interviewing techniques.¹⁰² Even young children can turn out to be reliable witnesses if the right kind of interviewing techniques are followed.

VI. EYEWITNESS TESTIMONY AMIDST EVOLVING TECHNOLOGY

Criminal trials are often embodied with talk of reasonable doubt. But over the past couple of decades, the rise of DNA technology, trace evidence, and advancement in other forensic techniques have led to an increased sense of confidence that the guilty are being locked up and the innocent are being freed.¹⁰³ Unverified eyewitness accounts had proved to be a major stumbling block in the path of justice and fair trial. However, the likes of DNA fingerprinting and trace evidence have eased the fears of wrongful convictions and

96. *The Kelly Michaels Case*, <http://law2.umkc.edu/faculty/projects/ftrials/mcmartin/michaelsevil.html> (last visited May 5, 2017).

97. *Id.*

98. Possley, *supra* note 95.

99. Clifton M. Dugas II, *State of New Jersey v. Michaels: The Due Process Implications Raised in Interviewing Child Witnesses*, 55 LA. L. REV. 1205, 1221-31(1995).

100. Howe & Knott, *supra* note 6, at 636-39.

101. Dugas II, *supra* note 99, at 1216-17.

102. *Fact Sheet: Child Witnesses*, *supra* note 73.

103. Keith O'Brien, *The Case Against Evidence*, Bos. (Nov. 7, 2010), http://archive.boston.com/bostonglobe/ideas/articles/2010/11/07/the_case_against_evidence/.

led to many exonerations and continue to do so to this date. Kirk Noble Bloodsworth was the first person on death row to be exonerated in 1993 with the utilization of DNA technology post-conviction, but not before he had served nine years in prison as an innocent man.¹⁰⁴ His conviction was based on the eyewitness testimony of five people who claimed to have seen him with the victim.¹⁰⁵ Over the course of the next decade, in the U.S. alone, 340 more people were exonerated based on DNA technology and advanced forensic techniques,¹⁰⁶ of which a large percent were originally convicted based on eyewitness testimony. It is due to the use of technologies such as DNA and trace evidence that eyewitness testimony has been found wanting.

According to a Gallup Poll conducted in 2005, 58 percent of the people found DNA evidence to be extremely reliable and lawyers and jurors believe likewise.¹⁰⁷ But while it is true that with the advent of DNA technology and advancements in other forensic techniques, the courts have been handed a tool to counter-check the validity of eyewitness testimony. It also has to be kept in mind that DNA evidence is much less reliable than most people think and believing it blindly could actually end up putting the wrong people in jail.¹⁰⁸ For DNA evidence to thrive, conditions ought to be ideal i.e., presence of the suspect's well-preserved genes in sufficient quantity, clarity as to the arrival of DNA at the crime scene, and no mistakes on the part of the lab sequencing the sample. These conditions are met very rarely, which leaves most of the DNA evidence presented in the courtrooms with a certain degree of ambiguity.¹⁰⁹ Similar to DNA and trace evidence, the evidence provided by other forensic techniques such as narco-analysis, lie-detection, ballistics, fingerprinting, and arson analysis all act as more viable and reliable alternatives to eyewitness testimony.¹¹⁰ DNA evidence has indeed played a crucial role in making all those exonerations possible, but with the adoption of certain basic procedural safeguards, the number of misidentifications can be cut down and wrongful convictions can be better prevented,¹¹¹ for the honesty of

104. Timothy S. Eckley, *Law Versus Science and the Problem of Eyewitness Identification*, 89 JUDICATURE 230 (2006).

105. *Id.*

106. *Id.*

107. Alexandra Ossola, *DNA Evidence is Not Foolproof*, POPULAR SCI. (June 25, 2015), <http://www.popsoci.com/dna-evidence-not-foolproof>.

108. *Id.*

109. *Id.*

110. Katie Worth, *Forensic DNA Testing Not As Reliable As Most People Believe*, GENETIC LITERACY PROJECT (June 29, 2015), <https://www.geneticliteracyproject.org/2015/06/29/forensic-dna-testing-not-as-reliable-as-most-people-believe/>.

111. *Eyewitness Misidentification*, INNOCENCE PROJECT, <http://www.innocenceproject.org/causes/eyewitness-misidentification/> (last visited May 5, 2017) [hereinafter *Eyewitness Misidentification*].

witnesses in trial continues to form the bedrock of the judicial processes in almost all jurisdictions around the world.¹¹²

VII. CONCLUSION

Over the past few decades, the evolution of DNA technology has paved the way for an increasingly strong case to be made out against eyewitness misidentification as the single biggest cause of wrongful convictions around the world. The strongest piece of evidence in support of the above proposition is the vast collection of DNA exonerations that have taken place since 1993, with majority of them involving eyewitness misidentifications.¹¹³ Several scientific studies have held eyewitness identification to be often inaccurate¹¹⁴ and, like trace evidence, it too has a tendency to get contaminated or made to yield results to suit the prosecution's case.¹¹⁵ Human memory is highly susceptible to errors and some of these errors, once made, can prove to be extremely hard to unmake. They may cause people to forget about events that took place and concoct versions of events that never happened.¹¹⁶ Prominent scholars in the field of eyewitness testimony like Gary L. Wells, Elizabeth F. Loftus, and many others have, while examining the limits of human memory and the factors responsible for distorted memories, long since recognized the fallible nature of eyewitness testimony. Yet eyewitness testimony continues to be treated as the most persuasive piece of evidence in the courtroom, which raises the question as to whether eyewitness testimony can form the sole basis for conclusion of guilt beyond reasonable doubt.¹¹⁷

Given the danger posed by mistaken identifications and wrongful testimony, several identification reforms have been proposed by scholars, psychologists, and the Innocence Network in order to improve the accuracy of eyewitnesses.¹¹⁸ Such reforms include: the adoption of a "double-blind" lineup procedure involving administrators who are unaware of the identity of the actual suspects, videotaping the suspect selection proceedings, recording the confidence levels of eyewitnesses during the selection process, supplying fillers in the lineup bearing resemblance to the eyewitness's description of

112. Fisher & Tversky, *supra* note 38, at 26-28.

113. See generally Laura Smalarz & Gary L. Wells, *Eyewitness Identification Evidence: Scientific Advances and the New Burden on Trial Judges*, 48 AM. JUDGES ASS'N CT. REV. 14 (2012).

114. *Eyewitness Misidentification*, *supra* note 111.

115. Zak Stambor, *How Reliable is Eyewitness Testimony?*, 37 MONITOR ON PSYCHOL. (2006), <http://www.apa.org/monitor/apr06/eyewitness.aspx>.

116. Cara Laney & Elizabeth F. Loftus, *Eyewitness Testimony and Memory Biases*, NOBA, <http://nobaproject.com/modules/eyewitness-testimony-and-memory-biases> (last visited May 5, 2017).

117. Howe & Knott, *supra* note 6, at 649-53.

118. *Eyewitness Misidentification*, *supra* note 111.

the perpetrators, and informing the eyewitness about the likelihood of the perpetrator being absent from the lineup.¹¹⁹ In addition to the above measures, allowing the testimony of witness identification experts in the court of law could lead to educating the jurors and result in the adoption of a more balanced approach towards eyewitness testimony.¹²⁰ The use of such experts at the pre-trial hearing can prove to be quite useful since the judge is afforded an opportunity to question the expert in an unconstrained setting.¹²¹ Over the last few years, many of these reforms have shown to significantly lower the number of misidentifications. There is no denying the fact that eyewitness testimony, despite being questioned as to its reliability, is extremely powerful and of great value to the legal system, but there is still a long way to go for the courts to ensure that eyewitness testimony does not result in innocent people being convicted,¹²² on account of flaws in this questionable yet powerful piece of evidence. To sum it up, in the words of Gary Wells, “the system [of interpreting eyewitness accounts] will never be perfect, but psychological research can help make it a lot better.”¹²³

119. *Eyewitness Misidentification*, *supra* note 111.

120. Arkowitz & Lilliefeld, *supra* note 18.

121. Smalarz & Wells, *supra* note 113, at 21.

122. Arkowitz & Lilliefeld, *supra* note 18.

123. Stambor, *supra* note 115.