Implications of False Memory on the Legal System: How Far from the Truth Is Reality?

By Jessica Hoffman Brylo, Esq.

Many studies have proven the inaccuracy and malleability of memory. Aside from problems in accurately encoding information, the presentation of misinformation, acts of rehearsal and suggestion after encoding can alter original memories. Despite these issues, the legal system continues to rely heavily on accuracy of eyewitness memory from post-crime interviews to police lineups to trial testimony. This paper explores research on false memory as applied to the legal context as well as proposed solutions.

As I drop my car off at Toyota for service, a debate ensues beside me. A customer claims he handed a certain service agent his keys earlier that morning. The agent denies having written up his order or having talked to him earlier, explaining that it was impossible for him to have done so since he never works the front desk. The customer continues to recount the details of the encounter, insisting with 100% certainty that the man he is speaking with is the same man he had dealt with earlier that day. Only when he begins to describe how the agent had taken off his glasses, does the agent I am speaking with realize to whom the customer is referring. A completely different agent had taken the man’s order—one who looked nothing like the one the customer is so adamantly claiming he had spoken with. As the customer walks away, the agent jokingly exclaims, “good thing I wasn’t in a police lineup!” I do not find it so funny. How did this customer come to so vividly and confidently remember something that never happened? Despite the logistical near-impossibility of the customer being right, I had leaned toward believing him simply because of the surety with which the customer spoke. Surely, someone cannot be wrong about something with which he is so confident. Or can he?

False Memory

The phenomenon of remembering something that never happened has been termed “false memory.” It happens more often in everyday life than many people realize and has great implications for the legal system, which relies so heavily on eyewitness memory of events. This paper explores how false memories form, the problems they cause in the legal system and how to mitigate these problems.

Misinformation Effect

False memories can arise from presentation of misleading information after the original event. This misleading information then impairs the original memory by displacing it. Loftus has demonstrated this effect in her traffic signal experiments. Subjects viewed a videotape of an automobile accident at an intersection where there was a stop sign. Half of the participants later received a suggestion that the traffic sign was a yield sign. When questioned about what traffic signal they remember seeing in the video, the yield sign group reported they remembered the yield sign instead of the stop sign, suggesting that the post-event suggestion altered their memory of the original event. The ability to implant such misleading post-event information as false memory depends partly on how perfect the original memory
is. A participant, who had focused on the stop sign because it played a significant role in the footage, would be more resistant to altering that memory than would a participant who encoded the sign as an extraneous variable. If memory incorporates the misinformation, it is difficult to undo the effects. Studies have shown that participants continue to remember and to base judgments on the misleading information even after learning it was wrong.

A similar, yet conflicting theory called source misattribution may also explain the false memory phenomenon. According to this theory, there is confusion over the origin of the source of the remembered item or event. Using Loftus’ experiment as an example once again, the presentation of the yield sign under this theory did not replace the original memory of the stop sign. Instead, the subject may retain the memory of the stop sign but report having seen the yield sign, mistaking the source of the memory: The subject remembers the yield sign as having originated in the photograph instead of in the post-event questioning. Studies have shown that a combination of the misinformation and source misattribution effects account for false memories.

Implanting a false memory through misinformation is not as simple as merely suggesting misleading information; there are limits on what types of events can be implanted into memory. For a suggested event to create a false memory, the witness must perceive the event as plausible. Initially implausible events, such as witnessing possession, can be more plausible if the witness receives information designed to increase the perceived plausibility of the event. For example, having people read articles on the topic that suggest the event may be more common than generally believed causes an increase in perceived plausibility of an event. However, belief that an event is plausible on its own does not lead to implantation of a false memory; there must also be an autobiographical belief that the event happened to that person in order for them to then interpret the event into personal memory. If the information presented to increase plausibility of an event is culturally relevant to the individual, then the ratings of likelihood that the event happened to them will increase with an increase in plausibility of the event. However, if the information refers to the chances of the event happening in another culture, the perceived plausibility of the event in general may increase without a corresponding increase in likelihood that the event happened to a certain individual and no false memory will be implanted.

Aside from suggestion, mere imagination exercises can implant false memories. Studies have shown that people who imagine events that never happened to them, such as being lost in a shopping mall or breaking a window with their hand - as well as the details of such events - later report an increase in confidence that the event happened to them. It is possible that this occurs because the brain is unable to separate fact from fiction when presented repeatedly in vivid imagery. When people imagine an event, they picture it visually - as if they had actually seen the event. This may encode the information in the same manner as if they had experienced the event, thus creating a false memory. Further, corroboration of an event by another person can instill a false memory. As discussed later, these findings can have important implications for the effects of police interrogations or feedback on lineup choices.

Note that false memories can arise without presentation of misinformation. Roediger conducted early studies on false memory and demonstrated that people can create false memories of their own without external influences. By presenting subjects with a list of associated words, such as bed, rest, awake, etc., and leaving out a critical associative word, sleep, subjects would later remember seeing the missing critical word in the list. This suggests that memory can be internally altered without any external suggestions or interference.

Problems in Encoding

The misinformation effect can result from problems in the encoding process. Any event or object breaks down into distinct pieces of information. A scene of a car accident has various components such as the car, injured people, traffic signals, etc. Further, each object has separate characterizations such as the color, make and size of the car. Memory must encode every piece of information properly as it is viewed to create an accurate memory of the event as a whole. However, memory processes each event or object differently, causing some to be remembered more accurately than others.

When an event is unambiguous, people have little problems correctly encoding the information. However, when it is not entirely clear what an object is or what is happening during an event, the brain must nonetheless find a way to encode the ambiguous information. Schemas guide the encoding of such ambiguous events.

Everyone has a personal view of the world that is colored by their personal beliefs, biases and experiences create and influence. Interpretation of new experiences and information is colored by these previous thoughts and dealings, which combine to form a schema, or map, used to make sense of the world. People process information about an ambiguous event they have viewed as consistent with their personal views, using their
own schema to guide the encoding of the event.\textsuperscript{15} For example, when participants in a study watched footage of a robbery in which it was intentionally unclear whether the robber had a gun in his hand or not, most participants interpreted the ambiguous item as a gun because it was consistent with their schema or belief that robbers generally carry guns.\textsuperscript{16} Thus, people tend to remember more plausible interpretations of events even if they viewed the less plausible alternative.

While part of schema-consistent encoding may be due to simple familiarity with a certain view of the world, there is evidence that events are processed more or less easily depending on how schema-consistent, schema-inconsistent, or schema-irrelevant they are.\textsuperscript{17} This ease of processing then influences how resistant the memories are to decay or alteration over time. Information that requires more processing is more likely to create strong links in memory, while information that does not require much processing effort creates very weak links in memory. Research by Tuckey has shown that schema-consistent information requires the highest level of processing because it is so distinctive and so contrary to beliefs about the world. This information, once fully processed, is less susceptible to decay over time because of the multitude of mental connections it took to encode it into memory. Schema-consistent information receives a moderate amount of processing because it takes effort to confirm its presence. I would argue alternatively that schema-consistent information forms strong links in memory not because of the effort involved in processing, but because it so easily fits with previous memories that there is no need for extra processing to form such strong links. Whatever the rationale, schema-consistent and schema-inconsistent information withstand decay better than schema-irrelevant information, which receives very little processing and thus is not strongly encoded into memory.\textsuperscript{18}

Note that proper encoding is only half the battle. Even if a memory is properly encoded, the mind can – nonetheless - alter it between processing and retrieval.

**Problems in Retrieval**

Even when information is encoded correctly, false memory may nonetheless result from problems in retrieval. One source of the retrieval problem stems from the use of inefficient methods of recall. Most people attempt to recall events in chronological order, but when asked to recall events in backward order, recollection improves.\textsuperscript{19} While this process may explain why a witness does not recall some details of an event at questioning, it does not explain the retrieval of a false memory.

False memory errors in retrieval result from introduction of misinformation or external pressures that cause confusion over the original memory. The memory impairment hypothesis suggests that one may retrieve a post-event item in place of the original memory if it is the more accessible memory.\textsuperscript{20} Thus, misinformation effects are greater when the misinformation is more accessible.\textsuperscript{21} Alternatively, according to the source misattribution hypothesis, one retrieves the misinformation when there is confusion as to whether one received the misinformation in the original event or in the post-event information.\textsuperscript{22} In such a case, the mind retrieves the misinformation not because it is necessarily more accessible, but because it is confused as being the original information. A third possibility, the deliberation hypothesis, states that subjects retrieve the post-event information because they assume the experimenter must have known what was in the original event slides or videos.\textsuperscript{23} Thus when asked a question suggesting the post-event item was in the original event, subjects reason that the post-event item must be the correct choice because the experimenter cannot be wrong about their own experiment. This hypothesis fails to explain why subjects continue to report the post-event item even when researchers tell them to ignore post-event information if it conflicts with the original event and to base all answers on memory of the original event.

An example of compromise retrievals demonstrates the difference between the various retrieval theories. In an experiment, Loftus,\textsuperscript{24} showed subjects slides of a green car, provided them with post-event information that the car was blue and then gave them a multiple-choice question asking about the color of the car.\textsuperscript{25} Many subjects reported seeing a blue-green car. According to the memory impairment hypothesis, subjects integrated the information from both sources and any memory of the original event (green) became inaccessible. The compromise memory (blue-green) became the more accessible memory, and they retrieved it as a memory of the original event. According to the source misattribution hypothesis, they remembered both colors, but became confused as to which color was in the slides and which color the experimenter presented in the post-event information.\textsuperscript{26} They incorrectly believed the post-event information appeared in the original event and retrieved it in answer to the questions. According to the deliberation hypothesis, subjects remembered both event and post-event information, reasoned that the experimenter suggested at least a partially true color, and settled on a compromise between the two sources.
EVIDENCE | Hoffman Brylo

Of information.

To determine whether misinformation in a particular instance occurs due to a problem in encoding as opposed to a problem in retrieval, research focused on differences between knowing and remembering. If the mind generates misinformation about an item at encoding, the subject should remember seeing the item and should have a more detailed, vivid memory of it and its context. This would be the case, for example, where an ambiguous item is encoded as being schema-consistent. Since the item, whether the subject identified it correctly or not, encodes into memory at the time of the event, circumstances surrounding the item or details of other items in view should also encode to provide a detailed memory of the whole event. However, if the mind generates misinformation at retrieval (for example, the item simply seems familiar for some unknown reason) the subject should have less detailed memory of the item in context. As discussed later, this difference in vividness of memory may be of help in determining whether memories of eyewitnesses were generated at the scene or result from post-event questioning, interviewing or suggestion.

Legal Context

Eyewitness memory plays a large role in the justice system. From reporting details of an event or perpetrator to an officer, to choosing a suspect out of a lineup, to testifying in court, we rely upon eyewitnesses to aid in discerning truth from fiction. This reliance on eyewitness memory poses problems considering the malleability and suggestibility of human memory discussed above. We must address these problems, or at the very least recognize them, for the system to protect innocent people from being wrongfully convicted as criminals.

Interviews

The first opportunity for error occurs at the initial interview with an eyewitness to an event. Shortly after a crime, police officers generally interview witnesses in an attempt to gain an overall understanding of the event and people involved, but they do so in a manner that is ineffective in stimulating accurate and complete memory. When witnesses state that they do not recall an answer to a direct question regarding details of the perpetrator, officers rarely provide assistance in retrieving such memories that may simply be less readily accessible to the witness. Further, officers often interrupt witnesses while they narrate their recollection of an event and ask questions out of chronological order. While this may aid officers in eliciting specific details they are looking for, it interrupts a witness’ train of thought and results in an overall less complete and integrated description of the event. Considering that most people recall events in chronological order, and that asking people to recall events in backward order tends to improve recollection further, officers should alter their interviewing strategy accordingly.

The information recalled in an interview can impact memory for later questioning. People often have trouble discriminating between information sources (see source misattribution theory described above). Therefore, a witness who is led to certain answers in the first interview will later have trouble discerning original memory of the event from what he or she had said in the interview. Leading questions such as “was the criminal wearing a blue hat?” cause witnesses to incorporate this information as memory even if the hat they viewed was a different color. This confusion in memory is more likely to happen for peripheral details than for central details and is more common when the witness perceives the interviewer to be credible and authoritative.

These effects can be somewhat reduced if officers use more open-ended questions, such as “what color was the hat?” and if witnesses are cautioned to think about what they actually observed rather than what may have been suggested by other sources. If police need more information about a specific detail, they should ask closed-ended questions after allowing the witness to narrate their recollection of the event and after using open-ended questions. To aid in effective recall techniques, officers should encourage witnesses to think about the event in reverse-chronological order or to view the event from the perspective of the perpetrator or a victim to attempt to access other mental pathways to a stored memory of the event. Further, some researchers propose that interviewers should ask witnesses to place themselves mentally in the original context of the crime, either by returning to the scene of the crime or recreating the emotions they felt at the time to increase their recall abilities.

However, there may be a thin line between asking a participant to recreate the context of the crime or to imagine the event and inadvertently asking them instead to imagine suggested details of the event which would be prone to produce false memories through imagination exercises. For example, asking a witness to picture the scene of the crime may be helpful, but asking them to picture the tall buildings and the man with a mustache may implant false memories of details that never existed. Therefore, use this tactic with caution.

Another problem with police inter-
views is the tendency to ask the same question repeatedly. Studies have shown that repeated questioning leads to more errors in recollection. If a witness does not answer a question the first time, chances are that he/she does not remember well enough to answer the question. Repeated questioning may signal to the witness that an unsure answer is better than no answer, thus encouraging an incorrect or unreliable answer. Any suggestions memory incorporates at this stage either through source confusion or suggestion cause problems at later stages such as lineup identification and trial testimony as memory cements the inaccurate details.

Lineups

Relative vs. Absolute Judgments

Lineup problems stem from procedures that encourage relative judgment processes and allow misleading suggestions and cues to impact a witness’ identification and confidence level. Gary Wells has done extensive research on the effects of different lineup procedures on the rate of accurate identifications. Lineups are generally conducted in a simultaneous setup where the witness views the suspect and any fillers (lineup members who are known to be innocent) all at once. This procedure allows the witness to make relative judgments, comparing each person in the lineup to the others. When memory of an event is clear and the witness was able to get a good, long look at the perpetrator, this lineup method may not pose problems because the witness has no need to compare the suspect to anyone else to make an accurate identification. However, when memory has had time to decay, when the memory never fully encoded the features of the perpetrator into memory, or when suggestions from interviews have altered the memory, the simultaneous lineup provides the witness an opportunity to choose the person who best resembles the perpetrator rather than only choosing a person if they match the memory of the perpetrator. If an innocent lineup member resembles the perpetrator more than the other members do, the witness can mistakenly identify that person.

This problem can be mitigated in part by providing an instruction that the perpetrator may or may not be in the lineup and that choosing not to select any member of the lineup is an acceptable response if none of the members match the witness’ memory of the perpetrator. Most people approach a lineup with the assumption that the perpetrator is present and that it is their job to make an identification. A simple instruction as mentioned above helps to negate this assumption. It is possible to improve the process further by screening out witnesses who are prone to make relative judgments by using blank lineups. In a blank lineup, there is no suspect, so a witness who makes an identification may not be able to resist selecting someone in any lineup. When such a witness makes an identification in a blank lineup, the authority should not allow them to view the actual lineup, or, at the very least, a jury or experts evaluating the witness’s accuracy should consider his or her tendency to make identifications. Further, when selecting fillers for a lineup (lineup members who are known to be innocent), care should be taken to select people who match the eyewitness’ description of the perpetrator. Mistaken identifications are more likely to result from a lineup where fillers do not match the perpetrator’s description but the suspect does. If an eyewitness is using a relative judgment process to eliminate lineup members, the suspect will stand out from the other members, and the witness will have a better chance of identifying the perpetrator. It is important, however, that the fillers match the eyewitness’ description of the perpetrator and not the suspect. If all fillers look similar to the suspect, the lineup becomes so homogenous that it becomes difficult to tell one member from the others.

An effective reform measure is to use sequential lineups instead of simultaneous lineups to eliminate relative judgments all together. In a sequential lineup (or photo array), the eyewitness views each lineup member in sequence, one at a time, and makes a judgment on each member as they are viewed. This prevents comparisons between members, forcing the witness instead to use an absolute judgment process.

Administrator Cues

A second problem with lineups results from misleading suggestions or cues from the lineup administrator. Often, the administrator knows which lineup member is the suspect and will advertently or inadvertently ask questions or respond with non-verbal cues that direct the witness to identify the suspect. For example, a reluctant witness may pick the suspect out of the lineup if the administrator says, “I noticed you paused on number three." Due either to an inference that the administrator would not have made such a comment unless number three were the suspect (in line with the deliberation hypothesis), or simply as a result of continued suggestion, the witness is more likely to follow the cues and pick the suspect. Even signals as non-discrete as a smile can cause the witness to pick the suspect out of the lineup. While studies have shown that witnesses often remember what a lineup administrator suggested, they deny the suggestion had any effect on their decision despite evidence to the contrary. From this point on, due to
source misattribution, the witness may be unable to distinguish his/her own memory from the officer’s suggestion.\footnote{35}

Eliminate this problem can be eliminated by ensuring the person conducting the lineup is unaware of which member is the suspect.\footnote{36} In such a case, no verbal or non-verbal cues could lead a witness to select a certain lineup member. Further, as many problems in lineups go undetected, I would advocate for a policy of allowing video or audio recordings of the lineup procedure so that counsel may present any biases or misleading suggestions in court. A more radical proposal is to eliminate lineup administrators and leave the witness alone to view a photo array.\footnote{47} In such cases, inform the witness prior to viewing that the perpetrator may or may not be in the array. Lindsay left participants alone to view separate photos either displayed across a table or arranged in a photo album.\footnote{48} The album setup forced participants to use absolute judgments rather than relative judgments in their identifications. Reported use of relative judgment processes was highest for those who viewed the photos on a table and all false identifications came from those who reported using relative judgments. Most participants viewing the photo album reported using absolute judgment processes, though when left alone, some participants cheated and flipped back and forth between photos to compare. The findings suggest that if there is a self-administered lineup, someone should monitor to prevent witnesses from comparing photographs. This could be accomplished by using computer lineups and leaving the witness alone to view the photographs one at a time on the screen.\footnote{49} Forcing the witness to make a positive or negative identification for each photo and preventing re-examination of photos already viewed, could eliminate administrator cues while maintaining a procedure that forces absolute judgment processes.

**Other-Race Effect**

Errors in eyewitness memory are more prominent when the witness is of a different race than the perpetrator. Due to problems in encoding, witnesses are more likely to misidentify someone of another race than they are someone of their own race.\footnote{50} When a witness encounters someone of a different race, the facial features encode by features, but not configuration. The in-group/out-group model explains this difference in encoding by breaking the processing of facial features into steps. When a witness encounters someone of a different race with whom they may be less familiar, they initially process the out-group categorization by identifying the person as being from a particular race.\footnote{51} Concentration on racial categorization takes up resources normally devoted to distinguishing specific facial features. In contrast, when the witness encounters an group member, the group-categorization step is not involved and the witness immediately begins to encode the facial configurations that distinguish this person from others, thus resulting in more detailed processing of the face.\footnote{52} When a witness then views an other-race lineup, he or she will have more difficulty distinguishing among the lineup members and matching one of them to the weakly encoded memory of the perpetrator.

It reduces the chance of making a false identification in an other-race lineup to add more fillers to the lineup. Further, the person selecting members for the lineup should be of the same race as the lineup members. Otherwise, the person selecting members will have the same difficulty in determining which fillers closely resemble the suspect as the witness has in making an identification.\footnote{53} The blank lineup procedure would also be of help in selecting out those witnesses who are prone to selecting a lineup member whether or not the perpetrator is present.

**Confidence-Accuracy Correlations**

It is intuitive to expect that someone who is highly confident in their answer is more likely to be accurate than someone who is less confident. Jurors often base their evaluation of eyewitness evidence on such assumptions about confidence-accuracy correlations. However, the correlation has proven to be weak and uninformative. Witnesses who are extremely confident in their identifications are often wrong and individual estimates of accuracy often exceed actual accuracy rates.\footnote{54}

The problem in relying on confidence to predict accuracy is that confidence is malleable. Repeated questioning and briefing a witness prior to testify increases witness confidence. Even instruction to a witness to rehearse their account and be ready for the cross-examiner who is looking for inconsistencies in the testimony is enough to inflate witness confidence.\footnote{55}

Witnesses base their confidence in their identifications partly on how other witnesses’ identifications corroborate their own. Confidence inflate most when the witness is told a co-witness identified the same suspect and even made the same identification but later changed it to another individual. Lowest confidence ratings come from witnesses who are extremely confident in their answer, in which case witness confidence increases. Any such changes in witness confidence due to comparison with a co-witness’ identification tend
to be resistant to change. Witnesses who learn two minutes later that the information about the co-witness’ identification was wrong, persevered in their changed confidence levels.56 This suggests that once external factors have influenced witness confidence levels, their confidence ratings from that point on are unreliable measurements of accuracy.

These problems in confidence-accuracy correlations would not be so detrimental if the legal system safeguarded against them. However, juries tend to base their evaluations on the confidence of the witness above all else. Jurors ignore eyewitness reports of poor viewing conditions and a short length of time to view the perpetrator when the witness is highly confident.57

Courts have attempted to inform jurors of the factors that cause inaccuracy in eyewitness memory (such as weapon focus or poor viewing conditions) through Telfaire instructions, but research shows that the instructions have no effect on juror skepticism of eyewitness testimony.58 This may be in part due to the general problems with courtroom instructions.

Debate has ensued over whether to allow experts to testify about the accuracy of eyewitness memory and identifications in an effort to inform the jury of factors that influence eyewitness accuracy. Experts can inform the jury to pay attention to reports of how good the witness’ view was, how much attention they paid at the time of the crime, and how well they could see the perpetrator’s face to evaluate accuracy.59 Such testimony has had the effect of making jurors more skeptical of eyewitness confidence ratings.60 However, while these criteria may be more reliable measures of accuracy than reports of confidence, studies have shown that a witness’ confidence on these factors are also malleable, and thus may not give an accurate representation of how likely a witness is to have formed an accurate memory.61 Witnesses who received corroborating co-witness identifications, were repeatedly questioned, or who otherwise had their confidence level increased were more likely to report having had a better view of the perpetrator and having paid more attention during the crime.62

Witnesses who lose confidence are more likely to report that the face seemed to “pop out” at them during the lineup. This suggests they had encoded the face of the perpetrator in detail and used an absolute judgment strategy at the lineup when in fact they had taken a long time to identify the suspect and had used relative judgment processes.63

An increasingly common and more effective solution to the confidence-accuracy dilemma is to ask witnesses for a confidence rating at the identification.64 Any discrepancies between this original confidence rating and a later confidence rating (for example, at trial) can then be attributed to external factors such as rehearsal, co-witness corroboration, or suggestion. Additionally, as research has correlated decision-making strategy with accuracy, investigators should ask witnesses (or evaluate them) on whether they used a relative or absolute judgment process in making an identification. As previously discussed, use of sequential lineups would automatically help to increase the chances that a witness use absolute judgments.

Studies have attempted to find cognitive indications of accurate identifications and have produced findings that may be of help in evaluating a witness’ accuracy regardless of their confidence level. Accurate witnesses can make decisions with little deliberative strategy as compared to witnesses who make false positive identifications.65 They take less time to make an identification than inaccurate witnesses do, and when questioned, accurate witnesses described the identification process as effortless, indicating that the face “popped out” at them. In photo array experiments, these accurate witnesses reported that the other photographs had little effect on their decision as they relied more on memory to make an identification. These descriptions are consistent with using absolute judgment processes. Conversely, inaccurate witnesses reported using more deliberation strategy and processes of elimination, consistent with using relative judgments.66 They were more likely to report confusion from the other photographs. These findings are replicated in Loftus’ traffic sign experiment where subjects who actually saw the yield sign were able to give detailed recollections from memory of the sign than those who relied on a false memory and had only imagined the yield sign after it was suggested. When jurors learn the relationship between decision processes and accuracy, they are better able to assess a witness’ credibility.67 Allowing experts to testify as to the differences in decision processes rather than the above mentioned factors impacting the quality of a witness’ memory of the event may prove more effective in arming jurors to evaluate inaccuracies of eyewitnesses.

Providing witnesses with strong lineup cues also increases the confidence-accuracy correlation.68 Lineup cues would include voice samples, showing lineup members from different angles and allowing the witness to watch lineup members walk in and out of the observation room.69 Such cues may help the witness trigger a memory of the event by putting characteristics and features of the perpetrator into context.
Flawed Solutions

Due to the problems in eyewitness accuracy and the strong reliance on eyewitness testimony by jurors, some proposals may help the problem at hand, but only by causing others. One extreme proposal is to eliminate the use of eyewitness testimony altogether. While this would certainly solve the problem of inaccurate identifications, it would also leave many cases unsolvable and while eyewitness accounts have their problems, there are often accurate witnesses who can aid in a case.

Less extreme measures have called for a requirement that there be multiple eyewitnesses for there to be eyewitness testimony in a case and to require corroboration of eyewitnesses. While having multiple eyewitnesses is ideal, there are cases where there only exists one eyewitness to the event. This witness may have had a perfect view of the crime and of the perpetrator. To exclude such evidence simply because no one else was around would seem counterproductive in many cases. Requiring mandatory corroboration of witnesses would eliminate the problem of having multiple eyewitnesses all of whom claim to have seen something or someone different. However, many cases do have witnesses who have different accounts of the event and the jury may need their interpretations to discern what actually happened.

Eyewitness identification has problems, but eliminating or limiting it in certain cases based on the number of witnesses or how their testimony corroborates would do injustice in many cases. The solution instead lies in understanding why witnesses are inaccurate and what indications there are of such inaccuracies.

There will always be problems in eyewitness memory because not everything gets encoded correctly and anything that is accurately encoded can later be altered. This is not to say that the legal system should forego any reliance on human memory, but because of the high stakes involved with the possibility of wrongful convictions, the malleability of memory should be taken seriously. Procedures that tend to cause formation of false memories need to be re-examined and changed so as to minimize the chances of memory alteration and triers of fact need to be armed with information about memory so they do not take witness accounts at face value.

Jessica Hoffman Brylo is a mediation and trial strategist, as well as a board certified attorney. She is the owner of Hoffman Brylo Consulting, LLC. She was trained by nationally renown trial consultant David Ball, Ph.D. for three years. She specializes in running focus groups and mock trials as well as doing case analyses to help attorneys leverage their cases for mediation or trial. She also edits opening statements and closing arguments and aids in witness preparation and jury selection. You can reach her at trialstrategy@gmail.com or 303-653-2233.

Endnotes

2 Elizabeth F. Loftus, Creating False Memories, Scientific American, September 1997, at 70-75.
3 Loftus & Hoffman, supra n. 1.
6 As the focus of this paper is on false memory in general, it will not be important to distinguish between misinformation effect and misattribution effect. Further, since both effects have been shown to account for implantation of false memories, any reference to the misinformation effect from this point further in the paper should be interpreted as a reference to either theory.
8 Id.
9 Id.
10 Id.
11 Loftus, supra n. 2.
12 Id.
14 Id.
16 Id.
17 Id.
18 Id.
20 Belli, supra, n. 5.
22 Belli, supra, n. 5.
23 Id.
24 Loftus, supra n. 2.
25 Belli, supra, n. 5.
It?  

<table>
<thead>
<tr>
<th>Page</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>55</td>
<td>Id.</td>
</tr>
<tr>
<td>56</td>
<td>Id.</td>
</tr>
<tr>
<td>57</td>
<td>Id.</td>
</tr>
<tr>
<td>58</td>
<td>Id.</td>
</tr>
<tr>
<td>59</td>
<td>Wells &amp; Bradfield, supra n. 44.</td>
</tr>
<tr>
<td>60</td>
<td>Penrod &amp; Cutler, supra n. 59.</td>
</tr>
<tr>
<td>61</td>
<td>Wells &amp; Bradfield, supra n. 44.</td>
</tr>
<tr>
<td>62</td>
<td>Id.</td>
</tr>
<tr>
<td>63</td>
<td>Id.</td>
</tr>
<tr>
<td>64</td>
<td>Wells &amp; Seelau, supra n. 36.</td>
</tr>
<tr>
<td>66</td>
<td>Id.</td>
</tr>
<tr>
<td>67</td>
<td>Id.</td>
</tr>
<tr>
<td>69</td>
<td>Id.</td>
</tr>
<tr>
<td>70</td>
<td>Wells &amp; Seelau, supra n. 36.</td>
</tr>
<tr>
<td>71</td>
<td>Id.</td>
</tr>
</tbody>
</table>