

**The MacLin Institute
For Psychological Science
Department of Psychology**



My name is Otto H MacLin, I am a tenured professor and Distinguished Scholar at the University of Northern Iowa in the Department of Psychology where I am the Director of the MacLin Institute for Psychological Science. I teach courses involving sensation, perception, memory, cognitive processing, learning, statistics, and the history of psychology. Additionally, I am the founder of the UNI Eyewitness Laboratory where we conduct research examining issues related to eyewitness identification. I have published many articles in scientific journals and have presented my research at numerous scientific conferences. I am a co-author of an authoritative book on cognitive psychology which examines brain processes such as perception, memory, forgetting, and decision making. Our book is internationally recognized and has been translated into half a dozen foreign languages. In the past ten years I have reviewed and consulted on over 200 cases. I have been qualified as an expert in eyewitness identification in the states of Alaska, Colorado, South Dakota, Minnesota, Iowa, Wisconsin, Illinois, Indiana, Massachusetts, and Tennessee. I have consulted with the US Military and I have testified in Federal Court.

Evaluation Process: Psychology adheres to the scientific process whereas we do not try to prove our hypotheses are correct, rather we try to prove that they are incorrect with the assumption being if we cannot find instances where our theories are incorrect or falsifiable, then we are likely to be correct in our assumptions. In science this is referred to as *disconfirming the null hypothesis*. A similar approach is taken when we evaluate a case. We do not try to prove innocence or guilt, rather we start off asking, "if the suspect is innocent, how was it that he was identified?" To answer this question, we examine the witness variables and the procedural variables (these are also referred to as estimator and procedural variables, respectively). Witness variables are factors that the police have no control of such as opportunity to view, levels of stress, presence of a weapon etc. Witness variables commonly affect the witnesses' ability to record a complete and accurate memory of the event. Procedural variables involve the processes and control once the police take over the eyewitness memory evidence. These factors include securing the scene, separating and interviewing the witness, constructing and administering a lineup, etc.

Memory: Just as a latent finger print is an imperfect replication of the original biological finger print, memory is an imperfect replication of the original event. As we evaluate a case involving eyewitness evidence we examine witness variables that might interfere with the witnesses' ability to form complete and accurate memories of the event. Keep in mind that it is possible that the witness has an accurate memory; for example the witness might accurately remember 2 digits of a license plate, but if the memory is incomplete it remains vulnerable to filling in the gaps and missing pieces with any available information. The problem is that memory processes occur at an unconscious level; memories are processed automatically. Furthermore it is the brain's job to present a complete and stable recollection of the world. To accomplish this task, the brain effortlessly fills in gaps using any and all available information regardless of the sources of information. Given the automatic nature of these processes, the sources of information are often not recorded and often misattributed to the original event as the source. The brain's propensity to do this is strongly supported by the scientific research literature.

Memory as Trace Evidence: Police investigators have procedures to collect, handle, store, and evaluate trace evidence. Effectively, eyewitness identification evidence is trace evidence which resides in the witnesses' memory. It is difficult for investigators to preserve eyewitness evidence. Eyewitness evidence can be collected via verbal descriptions, interviews, viewing mug shots, creating composites, presenting lineups, etc. The irony is that memory is highly malleable and any attempt to collect memory creates the risk of contaminating the memory itself. This problem was acknowledged by then Attorney General Janet Reno who formed a group of experts in the

fields of law, criminal justice, and social science to produce federal guidelines for the accurate collection and preservation of eyewitness identification evidence. As we evaluate eyewitness evidence, we evaluate the process used by law enforcement and its investigations to determine if and where during the process contamination could occur. We then evaluate changes in the known evidence as a result of that aspect or juncture of the process to evaluate if those changes in the evidence are organic to the memory process or if they were a result of contamination from the process itself.

Science of Memory: Although psychology has a short history as a science, it has a long history of studying memory. Scientists have been examining memory and forgetting since the late 1800's when psychology was born in Germany and first became established as a science. As psychology took hold in America, Professor Hugo Munsterburg was hired at Harvard to oversee the psychology laboratories. A victim of a home invasion, Munsterbrug realized that his initial report of events was erroneous. Intrigued that such a well honed mind such as his could have reported the facts incorrectly he was the first to study memory from a forensic perspective. This body of research was eventually used to produce Munsterburg's influential book a century ago 'On The Witness Stand.' Since then social psychologists have continued to examine eyewitnesses' ability to accurately recall information. Recently, in the last 30 years, cognitive psychologists have continued to examine memory, and face recognition. The two areas combined are used when evaluating eyewitness memory and eyewitness identifications.

While our science has known about the problems associated with memory as well as the problems associated with witness related memory, it wasn't until the late 1990's with the advent of enhanced DNA technology and the corresponding exonerations resulting from examining the DNA evidence that the legal system took firm interest into our science of memory and eyewitness identifications. As the number of DNA-related exonerations increased researchers were able to analyze the factors and evidence involved in proven cases of false conviction. The single most common evidence in over 75% of the exonerated cases was faulty eyewitness evidence with many cases involving multiple eyewitnesses. As a result, the Governor of Illinois put a moratorium on the death row executions. At about the same time Attorney General Janet Reno began her own investigations on the problems associated with the collection of eyewitness evidence which ultimately led to the production of the U.S. Department of Justice's research report, "Eyewitness Evidence: A Guide for Law Enforcement." Subsequent to the publication of the Federal guidelines, the group of social science researchers who were reporting to Janet Reno at the time published an influential paper laying out the science behind the Federal guidelines. Essentially, most if not all of the recommendations in the guidelines have been examined scientifically and have withstood the empirical scrutiny of the scientific process. What followed next were State-wide policy changes in the collection and preservation of eyewitness evidence in states such as New Jersey, Wisconsin, North Carolina adhering to the scientifically based recommendations outlined in the Federal guide.

Rodney Lincoln Case. In February 2010 Ms. Tiffany Murphy contacted me to evaluate the Rodney Lincoln case. She sent the following materials:

- Line up photo
- Composite photo
- Police reports
- Transcript
- Burgoon deposition w/ transcript of [REDACTED] interview
- Rodney's booking photo
- Photo of Rodney from his photo line-up
- Photo of Dennis Smith

Witness variables: Two very young children are involved in needless to say a stressful event resulting in the death of their mother and abusive acts directed on them as well.

Scientific issues: Children are highly suggestible and they have a tendency to confabulate when reporting back details of their memory. Younger children are more prone to making false identifications. High amounts of stress have been demonstrated to increase the number of false identifications.

Procedural variables: During the course of the investigation the children were not separated and provided details collectively. The children were only shown photos of suspects. At some point in the investigation the children were involved in a composite construction accompanied by the social worker who had spent a great deal of time working with the children after the loss of their mother. Subsequent to the construction of the composite where the children were told it was of the assailant, relatives of the children reported that the composite resembled Rodney Lincoln an old boyfriend of the victim. When shown a picture of Rodney Lincoln the oldest child identified Lincoln as the assailant.

Procedural and Scientific Issues:

Federal guidelines state that witnesses be separated to prevent cross contamination. Because the brain's job is to fill in gaps of memory, witnesses should be separated so as not share details (correct or incorrect). In this case, understandably due to the situation involving young children, this was not done. Nonetheless the potential for cross contamination exists.

Federal guidelines state that only one suspect be included in each lineup. Guidelines recommend lineups with one suspect and at least 5 members that are known to be innocent (aka foils). This is done to increase the effectiveness of the lineup as a test of memory by introducing an aspect of falsifiability. Additionally, the addition of the foils protect the suspect from witnesses who are simply guessing or are otherwise not relying on an accurate or complete memory.

In this case, all photos were of potential suspects. Given what little information the police had to identify the attacker, [REDACTED] could have pointed to any photo and a case could be made based on her ID.

In this case, every photo lineup consisted of 10-13 photos except for the last lineup containing Lincoln which had 2. This last lineup was even more potentially suggestive because it consisted of only two photographs signaling to the witness that this lineup was different.

In this case, the last photo lineup was conducted without Wayne Munkel, the children's social worker who was present at all the other line-ups. This is combined with the problem of the last lineup being significantly different from the other lineups.

In this case, the last photo lineup consisted of a booking photo of Rodney Lincoln and a Polaroid of Gary Parris (a cousin of [REDACTED]; see: Burgoon deposition). [REDACTED] had a choice between a man in an arrest photo and a family member. There is an increased likelihood that [REDACTED] would choose the photo of Rodney, because there were only two pictures this time, and one was a family member and it was clear that the assailant was not a family member but a boyfriend or acquaintance. Another problem exists because the children had at one time known Rodney Lincoln. This could have generated a sense of familiarity to an individual presumed to be a stranger. This sense of familiarity is sufficient to induce an identification. This is important because the cognitive processes involved with face recognition proceeded through a series of stages or processes. These stages are, recognizing an object as a face, determining if the face is

familiar, recalling facts or information about a face, and then recalling a name. At each step there needs to be a sufficient amount of activation to progress to the subsequent stage. It can be the case where the witness experiences a sense of familiarity not sufficient to progress to the facts and information stage. However this sense of familiarity in absence of additional information may erroneously lead the person to misattribute the familiarity as a recognition of the culprit.

The Federal guidelines state the investigation using eyewitnesses should be properly documented to ensure a thorough investigation.

In this case the composite interview was not documented in sufficient detail to ensure a thorough investigation.

The Federal guidelines state that the composite technique must be employed in a manner that the witness description is reasonably depicted. What we do know is that the witness description was incredibly vague. It was not sufficient to use verbal information to create a complete composite. While other techniques employ a facial feature catalogue (such as that used by the FBI) this was not done in this case.

The Federal guidelines state that unless part of the procedure (e.g., facial feature catalogue) the witnesses shouldn't see photos prior to the development of the composite. This is to avoid potential memory contamination.

In this case, the police sketch was created by a sketch artist copying a photo of Dennis Smith and making changes to it based on [REDACTED] comments. This is essentially showing the witness a photo (likeness) of a suspect and can only bias the composite to look like the photo. Composite sketches are created from a feature-up basis with each feature added one at a time, not holistically from a complete sketch making small changes to the features.

While the sketch resembles Rodney Lincoln, the sketch looks almost identical to the photo of Dennis Smith including facial asymmetries (nose), thin lips, and hair. Using specialized computer software for faces that enables the user to define key facial points, I was able to demonstrate that the key points of the composite are considerable closer to those of the Smith photo rather than the Lincoln photo.

In this case, Daniel Clenney and Abigail Wallace went to the police station to tell them they thought the sketch looked familiar. Detective Burgoon read them a list of names and when he said "Rod" they remembered his name as being a past boyfriend of the victim, thus implicating Rodney Lincoln as a suspect. Reading a list of suspects to the two individuals carries some bias.

Composites carry the problem of contaminating witness memory whereas the composite basically morphs with the original memory to overwrite it and create a new memory indistinguishable from the original memory, but based mostly on the composite.

In this case, 1.5 to 2 hours after identifying Rodney's photograph, [REDACTED] identifies him in a two-member lineup. With the image of the composite still fresh in her mind and believing that the composite is a picture of the assailant, this potentially induces the witness to pick Lincoln from out of the lineup. If only one of the photos resembles the composite, the witness is biased to choose that photo and therefore contaminates the witness's memory.

Conducting a physical lineup after seeing a photo lineup is biasing and a potential source of memory contamination.

The Federal guidelines state that the lineup should be constructed so the suspect does not unduly stand out.

In this case, in a four man lineup, Rodney has the shortest hair and is the oldest person by 16 years. Rodney is markedly different from the other men so as to draw attention to the suspect. This attention can inadvertently be misconstrued as familiarity, the basis for an identification.

The Federal guidelines state that lineups should consist of at least 6 members including the suspect. Having only 4 men in a lineup can increase the chance of mistaken identification by reducing the number of choices in the event that a witness was simply guessing.

Given that the witness has already picked a photo of the suspect under highly biasing circumstances as mentioned above, conducting a second live lineup does nothing to increase accuracy of identification. What actually happens is that the witness only becomes more certain of his or her decision. The problem is that a high degree of certainty is not a good measure for a high degree of accuracy. It only makes the witness more confident, thus more convincing to a jury, when in fact the witness memory under these circumstances stands a good chance of being contaminated and wrong.

The Federal guidelines state that an admonishment be read prior to administering a lineup. Admonishments instruct the witness that the suspect may or may not be in the lineup and that it is as important to exculpate the innocent as well as identify the actual perpetrator. The science behind the admonishments is that they decrease the number of false identifications by reducing guessing.

In this case, Detective Burgoon told [REDACTED] they have a "magic door" that you can look through to find the bad man, and "if you get the wrong man, we let the bad man go" (Trial Tr. 432). Characterizing the physical lineup as a "magic door" and that the bad man might go free encourages guessing and is frankly unheard of. This bias is compounded when the lineup is an all suspect lineup where an increased likelihood of guessing directly (one to one) increases the likelihood of misidentification.

Research has demonstrated that blind administration where the person administering the lineup does not know who the suspect is reduces the likelihood of false identifications.

In this case, Burgoon appears to be the only one present with [REDACTED] at the lineup and was lead detective on this case. Burgoon's presence creates a bias during the identification at the lineup. He knows which person is Rodney. He is also holding [REDACTED] up in his arms to help her see the men.

Opinion: Based on my expertise as a Psychologist, Educator, Researcher and Expert in the area of Eyewitness Memory and Eyewitness Identification there are sufficient witness variables to indicate a poor initial memory trace with the witnesses (poor memory). The witness variables are troubling enough, however combined with problems associated with the procedural variables which include gross deviations from Federal guidelines to preserve eyewitness evidence, a high likelihood exists for permanent and persistent contamination of the witnesses' memory in the Rodney Lincoln case which creates a high likelihood that a misidentification occurred in this case.

Please feel free to contact me if you have additional questions about my case evaluation.

Respectfully,

A handwritten signature in black ink, appearing to read 'O.H. MacLin', with a long horizontal flourish extending to the right.

Dr. Otto H. MacLin, Distinguished Scholar
Eyewitness Identification Laboratory
MacLin Institute for Psychological Science
Department of Psychology
University of Northern Iowa
Cedar Falls, Iowa 50614