

*Editor's Note: This article represents the first in a recurring series of articles written by graduate student members of ASTC who are interested in various aspects of litigation advocacy. We call them QA&A's because common questions (Q) are posed, answers (A) provided based on the research; and application (A) of the research to practice is discussed. We appreciate these contributions from those closest to the research and look forward to additional contributors.*



## What We Know Now: An Overview of Recent Eye Witness Research

by Kristin Finklea

The true level of eyewitness accuracy in the legal system has been debated by researchers and laypersons alike. Specifically, the role of eyewitness identifications in false convictions has come under examination (e.g. Conners et al., 1996; Innocence Project, 2001). While we do not know the relative conviction rate of guilty defendants compared to innocent defendants, expert opinion has proposed that the primary cause of false convictions may be faulty

eyewitness memory; other causes of wrongful conviction include coerced false confessions, prosecutorial malfeasance, and inadequate representation (Innocence Project, 2001).

Researchers have suggested that false convictions may be reduced by decreasing the rate of false positive identification via one or both of two scientifically-based interventions (e.g. Wells et al., 1998). Firstly, during trial, jurors can be presented with expert testimony regarding factors presumed to decrease eyewitness accuracy. Secondly, the diagnosticity of identifications can be improved by collecting eyewitness identification evidence with valid procedures known to reduce the rate of false positive identifications. For this first installment in *The Jury Expert*, I will focus on some of the most fundamental questions surrounding expert testimony about eyewitness identifications.

### **Question: What is the difference between a system variable and an estimator variable?**

**Answer:** When talking about variables that may affect the accuracy of eyewitness identification, *system variables* are those variables that may be under the control of the criminal justice system (Wells, 1978). Examples of system variables include the lineup type, the method of selecting foils/fillers for a lineup, and the instructions given to a witness before the administration of a lineup. The most common lineup types are simultaneous lineups (live or photo), sequential lineups (also live or photo), and showups (essentially a one-man lineup). Foils are typically selected for a lineup in one of two ways: 1) they are matched to a picture of the suspect or 2) they are matched to a witness's physical description of the suspect. When the issue of pre-lineup instructions arises, one of the primary variables is the presence or absence of witness admonishment; was the witness instructed that the actual culprit may or may not be present in the lineup?

System variables differ from estimator variables in that *estimator variables* are those variables that are not under the control of the criminal justice system (Wells, 1978). Examples of estimator variables include the presence or absence of a weapon during the commission of a crime, whether or not the witness and the perpetrator are of the same race, and the level of stress experienced by a witness at the time of the crime. The weapon focus effect refers to

whether or not the presence of a weapon impairs a witness’s ability to later identify the perpetrator (e.g. Steblay, 1992). The own-race bias (or cross-race effect) is a robust finding that people are often better at recognizing faces of their own race than faces of another race (e.g. Meissner & Brigham, 2001). Another robust finding is that extremely high levels of stress/arousal and extremely low levels of stress/arousal both inhibit an individual’s ability to perform a task (and that task, in this case, is to correctly identify a face) (Deffenbacher et al., 2004).

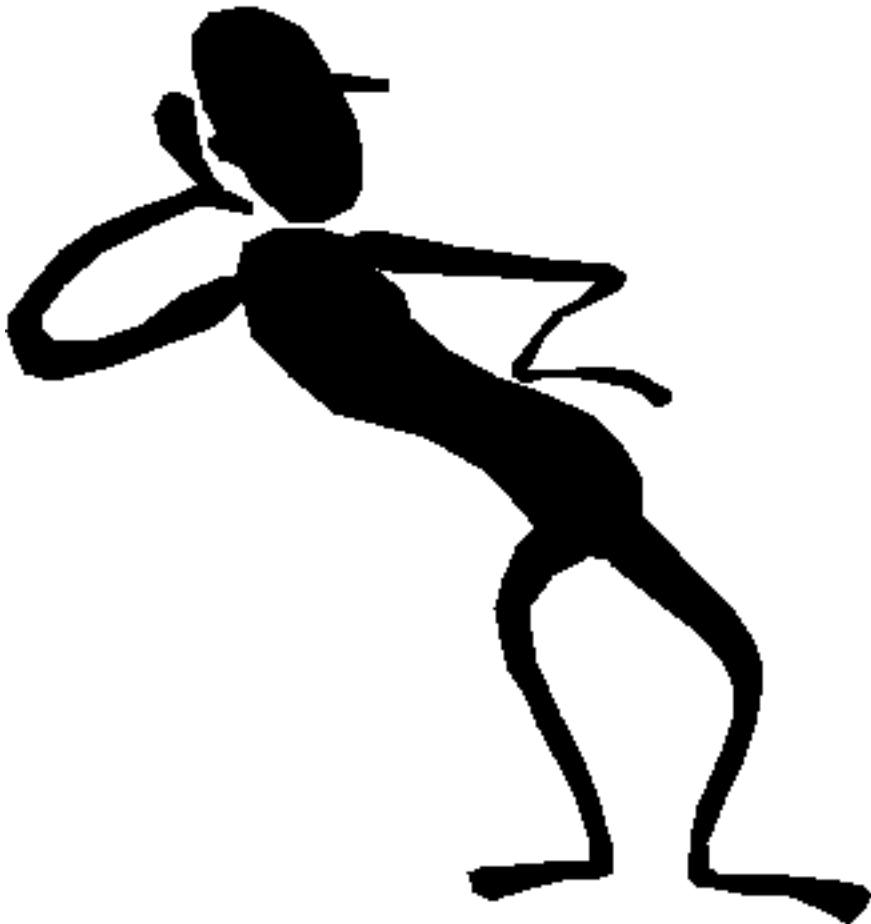
There are a multitude of system and estimator variables, which I did not mention, but are equally influential in determining whether or not a witness accurately identifies the culprit from a lineup. It is important, however, to understand the distinction between these two types of variables.

**Application:**

**Why do we care about the difference between system and estimator variables when both categories of variables appear to ultimately affect the accuracy of eyewitness identifications?**

When an eyewitness expert is asked to testify in court, he or she will review the case to determine those variables present in the case at hand. If an expert testifies about a system variable, should s/he be careful if this testimony appears to attack the credibility of an eyewitness?

The question is, do jurors interpret testimony about system variables as testimony that is attacking the credibility of an eyewitness or do they interpret this testimony as evaluating the credibility of the justice system in charge of obtaining identification evidence from this witness? This is an empirical question yet to be answered. On the other hand, if an expert testifies about an estimator variable, the question of whether jurors interpret this testimony evaluating the credibility of an eyewitness or evaluating the criminal justice system does not seem nearly as significant.



**Question:**

**Which phenomena in eyewitness identification research have received the greatest consensus from eyewitness experts, and which have received the lowest?**

**Answer:**

The most recent survey of the experts was conducted by Kassin et al. (2001). In this survey, experts were questioned about the research findings from 30 topic areas in eyewitness research and asked to rate the reliability of those findings. Research findings from ten topics were rated as 90% reliable or more. Those issues, followed by their generally accepted take-home messages (taken from Kassin et al.), are:

- 1) Wording of questions – An eyewitness’s testimony about an event can be affected by how the questions put to that witness are worded.

- 2) Lineup instructions – Police instructions can affect an eyewitness’s willingness to make an identification.
- 3) Confidence malleability – An eyewitness’s confidence can be influenced by factors that are unrelated to identification accuracy.
- 4) Mug-shot-induced bias – Exposure to mug-shots of a suspect increases the likelihood that the witness will later choose that suspect in a lineup.
- 5) Post event information – Eyewitness testimony about an event often reflects not only what they actually saw but information they obtained later on.
- 6) Child suggestibility – Young children are more vulnerable than adults to interviewer suggestion, peer pressures, and other social influences.
- 7) Attitudes and expectations – An eyewitness’s perception and memory for an event may be affected by his or her attitudes and expectations.
- 8) Hypnotic suggestibility – Hypnosis increases suggestibility to leading and misleading questions.
- 9) Alcoholic intoxication – Alcoholic intoxication impairs an eyewitness’s later ability to recall persons and events.
- 10) Cross-race bias – Eyewitness’s are more accurate when identifying members of their own race than members of other races.

Research findings from seven topics were rated as 50% reliable or less. Those areas (also taken from Kassin et al.) are:

- 1) Older witnesses – Elderly witnesses are less accurate than younger adults.
- 2) Hypnotic accuracy – Hypnosis increases the accuracy of an eyewitness’s reported memory.
- 3) Identification speed – The more quickly a witness makes an identification upon seeing the lineup, the more accurate he or she is likely to be.
- 4) Trained observers – Police officers and other trained observers are no more accurate as eyewitnesses than is the average person.
- 5) Event violence – Eyewitnesses have more difficulty remembering violent than non-violent events.
- 6) Discriminability – It is possible to reliably differentiate between true and false memories.
- 7) Long-term repression – Traumatic experiences can be repressed for many years and then recovered.

### **Application:**

We must be cautious when evaluating our own experts as well as others’ experts. If an expert testifies with confidence about an eyewitness memory phenomena with low general consensus among experts (i.e. older witnesses), it is imperative that we question this expert’s testimony. If older witnesses, for example, are only less accurate under certain condition X, it is imperative that condition X exists in the given case. If an expert testifies about the decreased reliability of older eyewitnesses and condition X is not present, we must increase our skepticism regarding the expert.

This principle of scrutiny should hold true not only when experts testify about phenomena receiving low general consensus among the experts (the obvious grounds for suspicion), but also when experts testify about those research findings receiving high expert consensus. Take the mug-shot-induced bias, a trend that most experts deem to be reliable. This bias is dangerous only when the suspect in a lineup is an innocent suspect and not the actual culprit. We must first determine the likelihood that the suspect in the lineup is the guilty suspect. If the suspect’s guilt is corroborated by physical (i.e. DNA or fingerprint) or other evidence, then the mug-shot-induced bias may not be as

malignant as thought. In essence, it is imperative that we examine both the level of consensus among experts for each phenomena on which an expert testifies, as well as those specific conditions under which the phenomena truly affect eyewitness identification accuracy.

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Thanks for looking at the July 2008 issue of TJE. This month we are pleased to bring you not only diverse but international perspectives. This issue of The Jury Expert has authors from England, Canada, and all across the United States.

This time we're all about witness preparation, the eye witness research literature, a new 'secret weapon' for ensuring your witnesses remember facts as accurately as possible, religion in the jury box, case themes, a new form of forensic animation, and understanding RSS without any real work on your part. Plus our July 2008 "favorite thing" is hidden away inside.

We appreciate the feedback you've given us and are eager for more! Tell us what you think or what you'd like to see in The Jury Expert by simply sending an email to the [Editor](#).

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