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# Eyewitness-Identification Evidence:

## Scientific Advances and the New Burden on Trial Judges

**Laura Smalarz & Gary L. Wells**

An increasingly strong case can be made for the argument that mistaken-eyewitness identification is the primary cause of the conviction of the innocent in the United States. The strongest single body of evidence in support of this proposition is the collection of cases in which forensic DNA testing was used to exonerate people who had been convicted by juries and were serving hard time (some on death row). These cases are well documented and tracked at the Innocence Project website and, as of this writing, there were 267 fully exonerated cases, of which 203 (76%) were cases involving mistaken-eyewitness identification.[1]

This set of DNA exoneration cases is extremely interesting because simple math and logic indicate that the number of undiscovered cases has to be much larger than 203. Consider just two simple multiplying factors. First, these 203 exonerees were the lucky ones for whom the DNA-rich biological evidence was preserved post-conviction. Most cases that were tried prior to the advent of forensic DNA testing can never be tested because the biological evidence was never properly collected or because it was destroyed, was lost, or has deteriorated to a non-testable state. But perhaps the biggest factor of all is that only a small fraction of cases can ever be solved with forensic DNA testing to begin with. Virtually every DNA exoneration case among the 203 was a case of sexual assault.[2] This is not because sexual assault witnesses are poor eyewitnesses; in fact, they are perhaps the best single category of eyewitnesses because they get a closer and longer look at the perpetrator than do victims of most other types of crimes. Instead, the reason most DNA exonerations are almost exclusively cases of sexual assault is because sexual-assault cases are the ones that leave behind biological evidence (principally semen) that can be tested for claims of innocence and exclusion. And yet, sexual-assault cases account for fewer than 5% of all eyewitness-identification cases. This fact alone means that the 203 exonerations figure needs to be multiplied by a factor of 20 (yielding 4,060 cases) to account for cases of eyewitness misidentification for crimes in which there was likely no biological evidence. And even this number is a conservative estimate because it assumes that the 203 discovered wrongful convictions represent the full number of wrongful convictions for sexual-assault cases, which cannot be true because of the sexual-assault cases for which the evidence was not properly collected or was lost, was destroyed, or has deteriorated. Hence, the 203 cases (which continue to grow) can only represent the tip of a much larger problem. In addition, because forensic DNA testing can only solve a small subset of criminal cases, it means that we are still heavily dependent on eyewitness-identification evidence for solving crimes.

Although members of the public and much of the legal system generally think of the eyewitness-identification problem as having been "discovered" via the forensic DNA exonerations, psychological scientists were "blowing the whistle" on eyewitness-identification evidence long before the advent of forensic DNA testing, which only began in the 1990s. Starting in the 1970s, cognitive and social psychologists began conducting controlled experiments in which unsuspecting people witness a staged crime and later have to try to identify the "perpetrator" (actually an accomplice of the researchers) from a lineup.[3] Throughout the last half of the 1970s and continuing to this day, psychological scientists have published these experiments in peer-reviewed social science journals and have derived a large number of conclusions and recommendations based on a better understanding of how mistaken identifications happen.

In the development of this social science literature on eyewitness identification, psychological scientists have placed a premium on a particular type of variable called a "system variable."[4] System variables are those that affect the chances of mistaken identification, but over which the criminal justice system has control. For instance, a lineup in which the suspect is the only one who fits the witness's description of the perpetrator increases the chances of a mistaken identification, and this is under the control of the criminal justice system. In contrast, there are variables that affect the chances of mistaken identification over which the criminal justice system has no control but instead can only estimate their impact; these are called "estimator variables." An example of an estimator variable is whether the race of the perpetrator matches the race of the witness. Research consistently shows that cross-race identifications are less reliable than are within-race identifications, but the justice system cannot control whether the race of the witness is the same versus different from the race of the perpetrator.

The system-variable versus estimator-variable distinction is important because only system variables can inform the justice system about ways to improve the accuracy of eyewitness iden-

**Footnotes**

1. The Innocence Project, *available at* http://www.innocenceproject.org (last visited May 9, 2012).
2. Often, these are cases of sexual assault plus robbery, or sexual assault plus murder, but sexual assault is the common element because that is where the DNA evidence is found.
3. A special issue of Law & Human Behavior (volume 4, issue 4) in 1980 devoted to eyewitness behavior illustrates this early work.
4. The system-variable concept in eyewitness identification was first introduced in 1978 as a way of focusing the research experiments on methods to improve the accuracy of eyewitness identifications rather than simply showing that eyewitness identifications are often unreliable. Gary L. Wells, *Applied Eyewitness Testimony Research: System Variables and Estimator Variables*, 36 J. Personality & Soc. Psychol. 1546 (1978).

tifications. Numerous jurisdictions have adopted a particular "package" of lineup-procedure reforms based on psychological scientists' system-variable research—states such as New Jersey, North Carolina, Ohio, and Wisconsin as well as places like Dallas, Denver, Minneapolis, Boston, and Tampa, among others. This package of reforms includes better ways to select lineup fillers, better instructions to witnesses prior to their viewing a lineup, the use of a sequential lineup procedure,[5] the use of double-blind lineup procedures,[6] and the securing of a certainty statement at the time of identification (prior to the opportunity for extraneous factors to affect the witness's certainty). All of these reforms are meant to increase the reliability of the identification and are based on empirical evidence that these system factors are critical to the chances that the identification is mistaken.

For the most part, these system-variable findings and recommendations have been directed at law-enforcement agencies because they are the ones in control of the procedures that are used to collect eyewitness-identification evidence. But, as we argue in this article, trial judges also play a very important role. There is no guarantee that a given eyewitness identification came from a lineup that followed procedural recommendations, but once that identification evidence is presented at trial, it makes a strong and compelling case against the defendant. Research has found that jurors are likely to accept eyewitness testimony as accurate as long as the eyewitness is confident and consistent.[7] Thus, it is critical that identification evidence is evaluated with scrutiny to ensure that only reliable identifications make it into the courtroom to be heard by a jury.

Trial judges are the ultimate arbiters of whether to accept identification evidence as reliable. Commonly, this is played out in a suppression hearing in which the defense might argue that the identification was obtained in a way that was so suggestive or otherwise problematic that it should be suppressed. Accordingly, our goal in this article is to report some key scientific findings regarding eyewitness identification that are relevant to the trial court's function of assessing eyewitness-identification reliability. In doing this, it is useful to remember that reliance on the suppression hearing and the ruling of the trial court regarding admissibility was fully in play for the 203 mistaken identifications that resulted in convictions and the unknown number of others that (due to the absence of DNA evidence) will never be detected. Just as in those cases, about the only thing standing between a mistaken identification and wrongful conviction is the ability of the trial court to make effective rulings on the reliability of eyewitness identifications in pretrial hearings.

**"For the most part... system-variable findings and recommendations have been directed at law enforcement agencies[, but...] trial judges also play a very important role."**

## SOME CRITICAL SCIENTIFIC FINDINGS

The scientific literature on eyewitness identification is too large and vast to fully summarize here. There are a number of extensive published treatments that are useful for a more complete understanding of these issues.[8] Here, we extract some of the more useful general principles that help us understand how mistaken identifications and false certainty (being certain but mistaken) occur. Then, in the next section (the *Manson* Test) we relate some of these general observations to the task of the trial judge.

### RELATIVE JUDGMENTS

One of the staple conceptualizations of eyewitness-identification errors is called the relative-judgment process. This conceptualization holds that witnesses tend to make identifications from a lineup based on their judgments about who looks the *most* similar to their memory of the perpetrator relative to the other lineup members. Although this process often leads witnesses to make accurate identifications when the culprit is present in the lineup, it creates a dangerous situation when the lineup does not contain the actual culprit because there is always someone who looks more like the culprit than do the remaining lineup members.[9] The absence of the culprit in a lineup simply means that the police have focused their investigation on the wrong person. It is an extremely difficult task for a witness to detect the absence of the perpetrator in a lineup, in part because the relative-judgment process does not provide a mechanism by which witnesses may decide to "reject" the lineup. To the extent that witnesses assume that the police are showing them a lineup that contains the perpetrator, witnesses relying on a relative-judgment process will tend to make positive identifications in instances in which they should be saying, "It's none of them." There is no way to know how often the suspect in the lineup is actually the culprit, but because there is no reasonable-cause criterion to place

5. A sequential lineup is one in which the witness does not view all members of the lineup at the same time (a simultaneous lineup) but instead views one photo at a time and makes a decision on that one before viewing the next. Research generally supports the finding that the sequential procedure produces fewer mistaken identifications. Nancy Steblay, Jennifer Dysart, & Gary L. Wells, *Seventy-Two Tests of the Sequential Lineup Superiority Effect: A Meta-Analysis and Policy Discussion*, 17 PSYCHOL. PUB. POL'Y. & L. 99 (2011).
6. A double-blind lineup procedure is one in which the person administering the lineup is unaware of which lineup member is the person of interest and which are merely fillers so as to prevent the types of influence on the witness that are mentioned later in this article. *See* GARY L. WELLS, EYEWITNESS IDENTIFICATION: A SYSTEM HANDBOOK (1988).
7. Gary L. Wells, Amina Memon, & Steven Penrod, *Eyewitness Evidence: Improving Its Probative Value*, 7 PSYCHOL. SCI. PUB. INT. 45 (2006).
8. For a broad, general treatment of eyewitness-identification research, *see* HANDBOOK OF EYEWITNESS PSYCHOLOGY (VOL 2): MEMORY FOR PEOPLE (Roderick C. L. Lindsay et al. eds., 2007).
9. Gary L. Wells, *The Psychology of Lineup Identifications*, 14 J. APPLIED SOC. PSYCHOL. 89 (1984).

**"Given what we know about the relative-judgment process, a biased lineup drastically increases the chances that an innocent suspect will be mistakenly identified."**

someone in a lineup (police can conduct a lineup based on a mere hunch), the number of culprit-absent lineups being shown to witnesses could potentially be quite high. Indeed, in all of the DNA exoneration cases involving eyewitness identifications, the actual culprit was not in the lineup and the witnesses made identifications nevertheless.

Perhaps the best evidence of the operation of the relative-judgment process is from experiments that use the "removal without replacement" procedure.[10] This procedure involves showing witnesses to a staged crime one of two lineups. Some witnesses view a lineup that contains a picture of the culprit among a set of filler photos, and other witnesses view the exact same lineup except that the photo of the culprit is removed and is not replaced with another photo. If positive identifications of the culprit in the culprit-present lineup are a result of true recognition rather than a relative-judgment process, then all of the positive culprit identifications should shift to "not there" responses when the culprit is excluded from the lineup. In an experiment testing this idea, 200 eyewitnesses to a staged crime were shown either a culprit-present lineup or a lineup in which the culprit was removed without replacement. As Table 1 shows, the majority of the witnesses who identified the culprit in a culprit-present lineup would simply have identified someone else (primarily #2, whose rate of identification went from 13% when the culprit was present to 38% when the culprit was removed) if the culprit had not been present. Hence, it seems that rather than choosing the culprit because they genuinely recognized him, witnesses simply chose whichever person best fit their memory of the perpetrator.

The degree to which the suspect seems to fit the witness's memory of the perpetrator is highly dependent on the properties of the lineup itself. For example, if a lineup is somehow biased against the suspect (*i.e.*, the suspect stands out in some way or the fillers in the lineup do not fit the witness's description of the culprit), then the suspect will be the one who, relative to the other lineup members, is the most similar to the witness's memory of the culprit. Given what we know about the relative-judgment process, a biased lineup drastically increases the chances that an innocent suspect will be mistakenly identified. Accordingly, researchers have made a sharp distinction between the nominal size of a lineup, which refers to the number of photographs that are in the set, and the functional size of the lineup.[11] The functional size refers to the number of fillers who make viable alternatives to the suspect, and is calculated by taking the reciprocal of the proportion of "mock witnesses"[12] who choose the suspect from the lineup. For example, if 50 of 100 mock witnesses choose the suspect from a six-person lineup, the reciprocal is 100/50 = 2.0, thus the lineup has a functional size of only 2; if 20 picked the suspect, functional size would be 100/20 = 5.0, and so on. When a lineup includes members who do not fulfill their role as acceptable alternates to the suspect, the lineup is effectively smaller than its actual size, and the risk of mistaken identification is increased. For example, a six-person lineup in which only three members fit the witness's description of the perpetrator increases the risk of mistaken identification from one in six to one in three. In a biased lineup, a relative-judgment process will be even more likely to result in a positive identification of the suspect, regardless of whether the suspect is the perpetrator of the crime.

One way to help witnesses avoid relying solely on a relative-judgment process during the identification task is to make them aware that the actual culprit may not be present in the lineup. Researchers have demonstrated that instructing witnesses that the culprit "might or might not be present" (sometimes called a warning or a pre-lineup admonition) can greatly decrease the rate at which mistaken identifications occur. In the original study of instruction effects, 78% of witnesses who were not explicitly warned that the culprit might or might not be present made mistaken identifications from a culprit-absent lineup; in contrast, the mistaken-identification rate dropped to 33% when

**TABLE 1. RATES OF CHOOSING LINEUP MEMBERS WHEN A CULPRIT IS PRESENT VERSUS REMOVED**

| | LINEUP MEMBER | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | NO CHOICE |
| **CULPRIT PRESENT** | 3% | 13% | 54% | 3% | 3% | 3% | 21% |
| **CULPRIT REMOVED (WITHOUT REPLACEMENT)** | 6% | 38% | — | 12% | 7% | 5% | 32% |

*Culprit is in position 3 for culprit-present lineup and removed (without replacement) for culprit-absent lineup.
*Source:* Gary L. Wells, *What Do we Know About Eyewitness Identification?*, 48 AM. PSYCHOLOGIST, 553, 561(1993).

10. Gary L. Wells, *What Do We Know About Eyewitness Identification?*, 48 AM. PSYCHOLOGIST 553 (1993).
11. This test, and the functional-size versus nominal-size distinction, has been in use since 1979 among eyewitness researchers. Gary L. Wells, Michael R. Leippe, & Thomas M. Ostrom, *Guidelines for Empirically Assessing the Fairness of a Lineup*, 3 LAW & HUM. BEHAV. 285 (1979).
12. "Mock witnesses" are actually not witnesses at all. They are simply people who are given the verbal description of the culprit that was provided by the actual eyewitness, and their task is to guess which person is the suspect in the case.

the eyewitnesses were given this warning.[13] And it is not the case that witnesses were simply choosing less in general; 87% of the eyewitnesses accurately identified the culprit from the culprit-present lineup after receiving the warning. Rather, the instruction serves to alert witnesses to the possibility that the culprit is not in the lineup. Thus, in cases in which the lineup does not contain the culprit, witnesses who receive this instruction may be less likely to rely on a relative-judgment process to make an identification. It should be noted that research using the removal-without-replacement procedure described above always included the "may or may not be present" instruction, and witnesses still sometimes failed to detect the absence of the perpetrator in culprit-absent lineups, thereby making inaccurate identifications. However, the rate at which these mistaken identifications occur is much lower when witnesses are given this pre-lineup admonition, leading researchers to recommend that all lineups include this instruction.

The underlying theme that has emerged through the scientific study of eyewitness identifications is that witnesses' identification behavior is a reflection of multiple other factors besides the strength of their memory. The makeup of the photo lineup and witnesses' expectations regarding the presence of the culprit greatly influence identification choices, and although the "may or may not be present" instruction cuts down on mistaken identifications, witnesses still have a tendency to rely on relative judgments. In an attempt to reduce this tendency, researchers developed an innovative lineup procedure called the sequential lineup, which involves presenting the lineup photos in a sequential fashion rather than simultaneously.[14] Hence, the eyewitness views only one lineup member at a time and makes a decision regarding each person before viewing another lineup member. The theoretical basis of this method is that it reduces the natural propensity for eyewitnesses to make relative judgments. Compared to the traditional simultaneous procedure, the sequential procedure produces a lower rate of mistaken identifications with little loss in the rate of accurate identifications.

**CERTAINTY (AND VIEW AND ATTENTION) MALLEABILITY**

Mistaken identification per se does not put an innocent person at risk for wrongful conviction. Instead, it is a mistaken identification from an eyewitness who is *highly certain* that runs the high risk of wrongfully convicting the identified person. The certainty that an eyewitness expresses in his or her identification during testimony is the most powerful single determinant of whether or not observers will believe the eyewitness made an accurate identification.[15] Accordingly, psychological scientists have devoted a great deal of work in recent years to figuring out how mistaken eyewitnesses end up being sure that they have made a correct identification. Indeed, every DNA exoneration case is exactly like that; the witness was mistaken but certain.

**"The certainty that an eyewitness expresses... during testimony is the most powerful single determinant of whether or not observers will believe the eyewitness made an accurate identification."**

When an eyewitness says, "I am positive that the man sitting in court is the man who robbed me," people naturally presume that the witness is saying, "That person sitting there so closely matches my very good memory for the perpetrator that I can only conclude it is one and the same person." In fact, however, witnesses often express this high certainty not only when the witnesses are mistaken but also when they have identified someone who does not look very much like the actual perpetrator at all. The key to understanding this problem is to recognize that eyewitnesses' expressions of certainty in an identification are actually beliefs or feelings that they are right or wrong about the identification they made. As such, these beliefs or feelings can be influenced by a large number of factors that have little or nothing to do with the accuracy of the identifications or how good a witness's memory is. And as we will describe below, these factors often come into play after witnesses have already made an identification for which they were actually quite uncertain.

Given that witnesses' certainty reports reflect a belief in the likely accuracy of their identification, it is not difficult to imagine that witnesses would feel more certain if they were told by the lineup administrator that they "correctly" picked out the suspect. Indeed, confirming feedback of this sort has pervasive effects on eyewitnesses' memory; not only does it inflate witnesses' current certainty, but it also distorts witnesses' retrospective reports of how certain they recall having been at the time of the identification as well as distorting their recollections about the witnessing experience. This "post-identification feedback effect" was first demonstrated in an experiment in 1998, in which 352 witnesses viewed a crime video and made mistaken identifications from a culprit-absent lineup. Following their identification, some witnesses were told "Good, you identified the suspect," whereas others were not told anything.[16] All witnesses then answered a number of testimony-relevant questions about view ("How good was the view you had of the culprit?" "How well could you make out details of the culprit's face?"), attention ("How much attention did you pay to the culprit's face?"), and certainty ("At the time of your identification,

13. Roy S. Malpass & Patricia G. Devine, *Eyewitness Identification: Lineup Instructions and the Absence of the Offender*, 66 J. Applied Psychol. 482 (1981).
14. See the most recent meta-analysis (quantitative review) of the sequential versus simultaneous difference. Steblay et al., *supra* note 5, at 99-139.
15. Gary L. Wells, Mark Small, Roy S. Malpass, Steven Penrod, Solomon Fulero, & C. A. Elizabeth Brimacombe, *Eyewitness Identification Procedures: Recommendations for Lineups and Photospreads*, 23 Law & Hum. Behav. 603 (1998).
16. Gary L. Wells & Amy L. Bradfield, *"Good, You Identified the Suspect": Feedback to Eyewitnesses Distorts Their Reports of the Witnessing Experience*, 83 J. Applied Psychol. 360 (1998).

**"[E]yewitness researchers have made two key recommendations in an effort to preserve witness confidence as an indicator of identification accuracy."**

how certain were you that you identified the actual culprit?"). Results of that first study and dozens of subsequent studies have shown that confirming feedback strongly inflates witnesses' estimates of how good their view was, how well they could make out details of the culprit's face, how closely they attended to the culprit during the crime, and how certain they recall having been at the time of the identification. It is important to note that these inflated reports are distortions; after all, the feedback did not occur until after the identification was made.

There are many other factors that can occur post-identification that compromise the integrity of an eyewitness's testimony. For example, repeatedly questioning the witness, briefing the witness about what questions might be encountered in a cross-examination, and informing a witness that a co-witness supposedly made the same identification decision have all been found to inflate witness confidence, independent of identification accuracy.[17] Furthermore, once a witness is exposed to post-identification information of this nature, his or her ability to revert to pre-feedback judgments regarding certainty, attention, view, etc., is, in effect, lost. And there is often no record of whether this type of post-identification suggestion took place, making it impossible to judge whether the witness's retrospective certainty report has been contaminated by new information. For this reason, eyewitness researchers have made two key recommendations in an effort to preserve witness confidence as an indicator of identification accuracy. First, the lineup should always be administered by someone who is kept "blind" to the identity of the suspect in the lineup. It is well established in the psychological literature that a person's expectations can affect the behavior of others, whether it be through inadvertent nonverbal communications or overt suggestion. In the case of an identification task, the lineup administrator's knowledge or expectations about the suspect could influence the manner in which the witness behaves. A simple way to avoid this issue is to ensure that the person administering the lineup is not aware of which lineup member is the suspect (*i.e.*, "double-blind" administration). Under these conditions, the lineup administrator could not be a source of external influence on the witness. Second, a certainty statement should always be recorded immediately following the identification decision. A confidence measure taken under double-blind conditions would provide a pure measure of the eyewitness's memory-based confidence. If the witness's certainty becomes inflated later on, then the initial measure of certainty can provide a reference point for the witness's true confidence at the time of the identification.

**THE ROLE OF MEMORY STRENGTH**

As a general rule, all problems with eyewitness-identification evidence are compounded when memory strength is weaker. So, for example, the tendency to rely on relative judgments is stronger when the witness has a weaker memory. Hence, the removal-without-replacement effect, the influence of poorly chosen lineup fillers, and the failure to properly instruct the witness prior to the lineup are all more robust when the eyewitness's memory is weaker. Likewise, the post-identification feedback effect is stronger when the witness has a weaker memory. Therefore, it is critical that trial judges appreciate the myriad factors that contribute to weak memories. For instance, we know that normal human vision does not permit a clear recognition of faces from distances of more than about 200 feet (and that assumes excellent lighting).[18] The use of a weapon by a perpetrator tends to impair memory for the perpetrator's face because it draws attention to the weapon and, hence, less time is spent looking at the face.[19] We know that cross-racial identification is less reliable than within-race identification because of the ineffective strategies for processing faces of people from another race than our own.[20]

Some variables that make eyewitness memory weaker might seem at first glance to be common sense. But, as cognitive psychologists have long documented, common sense has certain illusory properties that permit it to "go both ways."[21] For example, one might argue that if someone threatened or frightened you, you would never forget that face and the person's image would become permanently ingrained in your memory. It makes a certain common sense to accept that argument. But, in fact, the opposite is true. Events that evoke fear and stress actually impair memory for the details of the event, including

17. Gary. L. Wells, Tamara. J. Ferguson, & Roderick. C. L. Lindsay, *The Tractability of Eyewitness Confidence and Its Implications for Triers of Fact*, 66 J. Applied Psychol. 688 (1981); Elizabeth Loftus & Gary L. Wells, *The Malleability of Eyewitness Confidence: Co-Witness and Perseverance Effects*, 79 J. Applied Psychol. 714 (1994); John. S. Shaw III, & Kevin. A. McClure, *Repeated Postevent Questioning Can Lead to Elevated Levels of Eyewitness Confidence*, 20 Law & Hum. Behav. 629 (1996).
18. Geoffrey R. Loftus & Erin M. Harley, *Why Is It Easier to Identify Someone Close Than Far Away?*, 12 Psychonomic Bull. & Rev., 43-65 (2005).
19. Nancy M. Steblay, *A Meta-Analytic Review of the Weapon Focus Effect*, 16 Law & Hum. Behav., 413-24 (1992).
20. Christian A. Meissner & John C. Brigham, *Thirty Years of Investigating the Own Race Bias in Memory for Faces: A Meta Analytic Review*, 7 Psychol. Pub. Pol'y. & L. 3 (2001). One of the best interpretations for the cross-race identification problem is that when people see a face from their own race, they notice ways in which it is different from other members of their own race, whereas when they see a face from another race, they notice how it differs from faces of people from other races. Daniel T. Levin, *Race as a Visual Feature: Using Visual Search and Perceptual Discrimination Tasks to Understand Face Categories and the Cross-Race Recognition Deficit*, 129 J. Experimental Psychol.: Gen. 559 (2000). The latter strategy is, of course, totally ineffective for picking the person from a lineup in which all members are the same race as the perpetrator.
21. Baruch Fischhoff, *Hindsight ≠ Foresight: The Effect of Outcome Knowledge on Judgment Under Uncertainty*, 1 J. Experimental Psychol.: Hum. Perception & Performance 288 (1975).

the face of the person who evoked the reaction.[22] This too makes common sense if one realizes that the primary response to fear is "fight or flight," which is an automatic self-preservation mechanism that absorbs the cognitive capacity of the person and leaves little brain capacity for forming long-term memories. Part of the reason that people generally buy the idea that stress and fear produce better memory (when in fact they produce poorer memory) is because of a confusion about the level of memory that is operating. It is true that if someone threatens you or points a gun at you, you will never forget that the event happened. But that is not the same as having formed a reliable memory for the details of the event, such as the precise facial characteristics of the perpetrator.

The general principle that suggestion (*e.g.*, from a biased lineup or from post-identification feedback) has its greatest effects when the witness's memory is weaker needs to be kept in perspective. Suggestion effects are likely to be moderated only when the memory is extremely good. So, for instance, a victim who is abducted by an unmasked person and held captive for hours or days in which the abductor's face is in full view is not likely to be easily influenced by suggestion regarding the identity of the abductor. Generally speaking, however, eyewitnesses see the perpetrator for only minutes, sometimes even seconds, often under poor viewing conditions, while frightened or confused, under cross-racial conditions, and so on. Hence, the failure to properly instruct a witness prior to a lineup, the use of fillers who do not fit the description of the perpetrator, the failure to use double-blind procedures, and the failure to secure a certainty statement at the time of the identification are serious problems in almost any eyewitness-identification case.

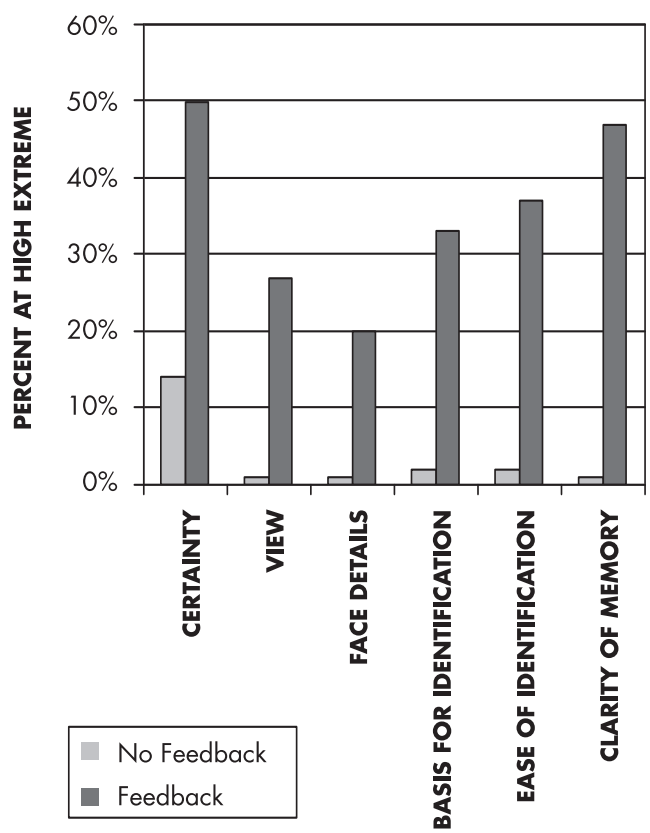
## ASSESSING RELIABILITY AT THE TRIAL-COURT LEVEL

Trial courts across the United States tend to rely on one or another version of the U.S. Supreme Court's 1977 test as spelled out in *Manson v. Braithwaite*[23] (hereafter called *Manson*) to make rulings in suppression hearings. Although many individual states have their own version of *Manson*, the guidelines all revolve around the same general proposition: a two-pronged test that inevitably rests on the "totality of the circumstances." But within the language and process of the *Manson* test rests a huge problem that has been identified by eyewitness scientists.[24] This problem helps explain why trial courts are not likely to be able to weed out unreliable identifications using the *Manson*-type approach.

The *Manson* test functions as a two-pronged assessment designed to evaluate the likely reliability of an eyewitness's identification. The first prong involves determining whether the identification procedure was unnecessarily suggestive to begin with. Suggestive procedures include using a show-up procedure when the police could have conducted a lineup, conducting a lineup in which the suspect stood out, failing to tell the eyewitness that the culprit might not be in the lineup, showing the witness a photo of the suspect before conducting a lineup, telling a witness that his or her choice was correct, or conducting a second lineup procedure in which the only person in common was the suspect. If the procedure is not believed to have involved suggestion, then the identification evidence is admitted. If the procedure is found to have contained unnecessary suggestion, then the second stage of the test pits the distorting influence of the suggestive procedure against five criteria intended to assess reliability. These criteria include the witness's opportunity to

**"[W]ithin the language and process of the *Manson* test rests a huge problem that has been identified by eyewitness scientists."**

**FIGURE 1. THE POST-IDENTIFICATION FEEDBACK EFFECT: PERCENTAGES OF EYEWITNESSES WHO SCORED AT THE EXTREME (*E.G.*, RECALLING THAT THEY WERE TOTALLY CERTAIN) WITH AND WITHOUT CONFIRMING FEEDBACK**




22. Charles A. Morgan et al., *Accuracy of Eyewitness Memory for Persons Encountered During Exposure to Highly Intense Stress*, 27 Int'l J.L. & Psychiatry 265 (2004).
23. Manson v. Braithwaite, 432 U.S. 98 (1977).
24. *See* Gary L. Wells & Deah S. Quinlivan, *The Eyewitness Post-Identification Feedback Effect: What Is the Function of Flexible Confidence Estimates for Autobiographical Events?*, 23 Applied Cognitive Psychol. 751 (2009), for a much more detailed analysis of the problem with reconciling Manson with the science on eyewitness identification.

**"Suggestive procedures almost guarantee that witnesses will pass the *Manson* test (because it will inflate their certainty, attention, and view 'scores')."**

view the offender, the witness's degree of attention during the crime, the level of certainty demonstrated at the time of identification, the accuracy of the witness's description of the offender, and the time elapsed between the crime and the pretrial identification. The *Manson* test is intended to determine whether the identification, despite having involved suggestive procedures, is nevertheless reliable.

There is nothing inherently wrong with the idea that determinations regarding the reliability of an identification should be made by weighing a set of reliability factors against the suggestion itself. However, when *Manson* was decided by the U.S. Supreme Court in 1977, there was no scientific literature on eyewitness identification. The factors spelled out to assess reliability were based on the commonsense notions of the court at the time and have since been found to perform quite poorly in predicting reliability, especially for cases in which the identification involved suggestive procedures.

The first thing to note about these criteria is that three of the five criteria are self-reports from the witness (view, attention, and certainty). Although there are occasions in which a witness's statement about view might be contrasted with objective measures (such as when a witness claims to have been 30 feet away whereas reconstruction of the crime scene shows the distance to have been 100 feet), view is generally assessed simply by asking witnesses if they had a good view and could make out details of the face. Similarly, attention and certainty are subjective judgments and cannot be gauged against objective measures. There are a number of problems with people's estimates of their view, attention, and certainty. But our primary concern about these three self-report variables is that they are inflated by the suggestive procedures themselves. The use of suggestive procedures can lead the eyewitness to enhance (distort) his or her retrospective self-reports in ways that help ensure the witness's high standing on these *Manson* criteria, thereby leading to a dismissal of the suggestiveness concern. The consequence of this is that the presence of suggestion is likely to always result in admission of the eyewitness-identification evidence. *Manson* is flawed in such a way that the very presence of suggestive procedures at the time of the identification will make it almost certain the witness will pass the admissibility test.

The other two *Manson* criteria (description and time elapsed) are not much better predictors of reliability. Studies examining the relations between descriptions and identification accuracy have found no meaningful correlation between the two.[25] What is perhaps most puzzling about using the match of the witness's description to the identified person as a measure of reliability is that one would expect the identified person to match the description; after all, it was probably because he or she fit the description that a person was placed in the lineup in the first place. But sometimes, the witness manages to identify from a lineup a suspect who does not fit the initial description of the culprit (*e.g.*, the identified person has an apparent scar or a tattoo that was not included in the witness's prior description). After the identification is made, however, the witness's description may begin to change, now incorporating this aspect of the person's appearance into descriptions that are given later on. It is for this reason that the judge and the court must be very careful when assessing the match between the identified person and the witness's description, ensuring that the description being examined is the description that was given prior to the occurrence of an identification procedure. Otherwise, there is no way to distinguish between parts of the description that were actually recollected from the witnessed event and ones that were gleaned from the identification.

As for the criteria concerning the time elapsed between the crime and the pretrial identification, this factor in and of itself should not be a primary component upon which reliability evaluations are made. It is possible for a witness to positively identify the perpetrator from a lineup two years after the crime occurred, just as it is possible for the witness to fail to identify the perpetrator only minutes after the crime occurred. The important thing to know about memory as it relates to the passage of time is that the greatest drop in memory occurs very soon after the witnessed event—even within minutes. Thus, there may be little difference between a 1- and 2-day delay or even a 30- and 60-day delay. Although the time elapsed between the crime and identification can provide a reference point to assess likely memory strength, it should not be treated as a sole determinant of reliability.

It is important to highlight that the 203 DNA exonerations of individuals who were mistakenly identified and wrongfully convicted had the benefit of *Manson* when they were tried. The framework of *Manson* makes it absurdly difficult to pinpoint and exclude identifications resulting from even the most egregious forms of suggestion, and it fails to provide an incentive for law enforcement to reduce suggestiveness. In fact, we argue that it may actually create an incentive favoring suggestive procedures. Suggestive procedures almost guarantee that witnesses will pass the *Manson* test (because it will inflate their certainty, attention, and view "scores"). If the use of suggestive procedures rarely results in suppression of the identification, then there is no reason for law enforcement to avoid using these procedures, especially since suggestive identification procedures lead the witness to be more credible to the judge and jury at the time of trial. Hence, what incentive is there for law enforcement to avoid suggestive procedures and, conversely, what are the incentives to continue to use suggestive procedures?

25. *See* Melissa A. Piggot & John C. Brigham, *Relationship Between Accuracy of Prior Description and Facial Recognition*, 70 J. APPLIED PSYCHOL. 547 (1985). *See also* Gary L. Wells, *Verbal Descriptions of Faces from Memory: Are They Diagnostic of Identification Accuracy?*, 70 J. APPLIED PSYCHOL. 619 (1985).

When considering the predicament that has resulted from the reliance on a *Manson*-type test for determinations about identification evidence, it is useful to remember that full suppression is not the only option for dealing with the presence of suggestion. There are many other case-tailored alternatives that can limit the testimony to those elements of the identification that were likely uncontaminated by the suggestion. For example, defense attorneys have the option of crafting motions in limine to limit rather than totally exclude the identification (*e.g.*, not permitting the witness to testify about his or her certainty when post-identification feedback has contaminated certainty). Other remedies that defense attorneys can ask for include judicial instructions or expert testimony. Full admission without factoring in a cost for the suggestion not only puts the accused individual at a risk of wrongful conviction but also imposes no repercussions for the use of suggestive procedures, thereby perpetuating the failure to deter law enforcement from using these procedures.

## SUMMARY AND CONCLUSIONS

Mistaken-eyewitness identification is the primary cause of convictions of the innocent, and trial judges are one of the safeguards that can prevent these miscarriages of justice. But an effective trial judge needs more than a conventional legal understanding of the problems associated with eyewitness-identification evidence. A mature social science literature has emerged that shows a tendency for conventional legal understandings (a) to fail to appreciate the power of suggestive procedures, (b) to rely too much on eyewitness-identification certainty, (c) to have faulty views of factors that impair memory, and (d) to generally fail to create disincentives for suggestive procedures.

Trial judges are the gatekeepers to the eyewitness-identification evidence that is permitted in court. How are judges to learn about the social science that can increase the sophistication of their admission decisions? Continuing judicial education programs would be one way to learn more. The National Center for State Courts, the American Judges Association, and the American Judicature Society might also develop programs that incorporate the social science literature on eyewitness identification and disseminate that information through workshops, presentations, and written materials. For some eyewitness cases, the use of eyewitness experts in court can be yet another mechanism for judges to learn more about some of the issues associated with eyewitness identification. But, the eyewitness-identification literature is a highly specialized area in scientific psychology, so simply drawing on the testimony of a psychologist from a local community college would not necessarily be a good idea. Generally speaking, a good eyewitness-identification expert is one who has published research on eyewitness issues in peer-reviewed journals and regularly reviewed the published research of other eyewitness experts. The use of an eyewitness expert at a pretrial hearing (rather than or in addition to trial) can be particularly useful because it affords the judge a relatively unconstrained setting (in the absence of jurors) in which to question the expert. In difficult cases, the judge could then consider permitting the expert to also testify at trial.

There is a high cost to mistaken-eyewitness identifications. Any time an innocent person is convicted, the guilty party goes free, which is a fact that has played out visibly in the DNA exoneration cases. Moreover, trust in the legal system hinges very critically on its ability to avoid convicting the innocent, a trust that has suffered some significant blows in the news stories that have surrounded the 203 (and counting) DNA exoneration mistaken-eyewitness cases.

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