

Contamination of Eyewitness Self-Reports and the Mistaken-Identification Problem

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Abstract

Mistaken identification testimony by highly confident eyewitnesses has been involved in approximately 72% of the cases in which innocent people have been convicted and later exonerated by DNA testing. Lab studies of eyewitness identification, however, show that mistaken eyewitnesses are usually not highly confident and that there is a useful confidence-accuracy relation that can help distinguish accurate from mistaken eyewitnesses. We describe research on important variables that can cause mistaken eyewitnesses to give inflated self-reports about their confidence and other testimony-relevant judgments. These testimony-bolstering variables tend to be controlled in pristine experiments, thereby permitting good confidence-accuracy relations. In the real world, however, methods of obtaining identifications and supporting testimony permit testimony-bolstering variables to contaminate witness self-reports in ways that make it difficult to distinguish between accurate and mistaken eyewitness identification testimony. We describe how the justice system can dramatically reduce the chances of such contamination.

Keywords

eyewitness confidence, eyewitness credibility, lineups, eyewitness identification testimony

In the rape trial of Steven Avery in 1985, the victim-witness said of her identification of Avery, “there is absolutely no question in my mind.” In Dean Cage’s trial in 1995, the eyewitness who identified Cage said she was “a hundred percent sure.” In the trial of Willie Williams in 1985, the eyewitness said she was “one hundred and twenty” percent sure (as quoted in Garrett, 2011, p. 63). Juries convicted all three of these men upon hearing the eyewitness identification testimony. But, like hundreds of others, these men were later proved innocent using DNA testing. The eyewitnesses who accused them were not just mistaken; they were positive about their mistakes (see Garrett, 2011, for more on these cases and a summary of the first 250 DNA exoneration cases).

False confidence is an intriguing phenomenon. In many aspects of life, it has no serious consequences. What harm is done if a husband and wife confidently but falsely remember that a pair of doves landed on their boat at the moment he proposed marriage to her? What does it matter if an adult’s fond memory of a vacation taken as a 2-year old is a false memory created through pictures viewed later in life? In the legal system, however, a confidently held false memory can have devastating

consequences. Indeed, mistaken but highly confident eyewitness identification testimony was used to convict innocent people in approximately 72% of all DNA exoneration cases (Innocence Project, 2015).

Lab experiments by psychological scientists have long shown that mistaken eyewitness identifications occur with surprising frequency (see broad treatments by Cutler & Penrod, 1995; Lindsay, Ross, Read, & Toglia, 2007; Wells & Loftus, 1984). Corroborating this are 10 published field studies of actual police lineups showing that an average of 33% of witnesses who make an identification from a lineup identify a known-innocent filler (see Wells, Steblay, & Dysart, 2015). But how often do mistaken eyewitnesses make identifications with very high confidence? Laboratory research suggests that the answer is “not often.” Indeed, a large body of lab experiments shows that there is a reliable correlation between eyewitness identification accuracy and eyewitness confidence, such

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that eyewitnesses who make mistaken identifications tend to be less confident, on average, than eyewitnesses who make accurate identifications (Sporer, Penrod, Read, & Cutler, 1995). Other work has shown that eyewitnesses' expressions of confidence are fairly well calibrated with their accuracy (Brewer & Wells, 2006).

The foregoing, however, presents something of a puzzle. If controlled lab studies show that eyewitness confidence is a reliable indicator of the accuracy of eyewitnesses' identifications, then how do we account for the hundreds of DNA-exoneration cases in which eyewitnesses were highly confident, yet mistaken? The answer appears to be largely due to the fact that the standard laboratory experiment is pristine in ways that are not characteristic of a large share of actual cases. For example, the standard lab study tends to use fair lineups in which the innocent suspect does not stand out, unbiased instructions (warning that the culprit might not be present), no "steering" of the witness by the lineup administrator, and careful measures of eyewitness confidence. But the real world is not so pristine. Although it has been argued that police *should* conduct lineups using the kinds of methods that are used in laboratory experiments (Wells & Luus, 1990), most U.S. jurisdictions have not made such reforms (Police Executive Research Forum, 2013).

Here, we present a growing body of research that has identified contaminants that cause mistaken eyewitnesses to give inflated self-reports about their confidence and other testimony-relevant judgments. We then describe how these contaminants lead to greater inflation of self-reports among mistaken eyewitnesses than among accurate eyewitnesses, thereby undermining the diagnostic utility of these self-reports. We conclude by describing ways that the legal system can reduce and protect against these contaminants so that mistaken eyewitnesses are not so readily confused with accurate eyewitnesses.

The Contamination of Eyewitness Self-Reports

The most thoroughly researched contaminant of eyewitnesses' self-reports is post-identification feedback. Post-identification feedback is any feedback given to witnesses after they have made an identification that suggests whether they identified the police suspect. In the original post-identification feedback study (Wells & Bradfield, 1998), participant-witnesses viewed a simulated crime and made an identification from a lineup that did not contain the actual culprit (hence, all witnesses who made identifications were mistaken). After they made their mistaken identifications, some witnesses were randomly assigned to receive confirmatory feedback from the lineup administrator suggesting that their identification was correct ("Good, you identified the suspect"), whereas

other witnesses received no feedback. Later, the witnesses were asked to report how confident they had been at the time of their identification, how good their view had been during witnessing, how much attention they had paid during witnessing, and other testimony-relevant judgments.

Confirmatory feedback strongly inflated the mistaken witnesses' self-reports. It is important to note that these self-reports were retrospective in nature. The confidence question asked witnesses to report how confident they were at the time of the identification (retrospective confidence, not current confidence). Likewise, the view and attention questions asked about aspects of the witnessed event that occurred prior to the identification procedure. Because the witnesses were randomly assigned to condition, the feedback and no-feedback eyewitnesses had equivalent views, had paid the same amount of attention during witnessing, and were equally confident at the time of the identification. Therefore, the inflating effects of post-identification feedback on the eyewitnesses' self-reports reflect memory distortion.

The post-identification feedback effect has been extensively studied and is one of the strongest and most robust effects in the eyewitness literature. A recent meta-analysis of 20 published studies involving more than 7,000 participant-witnesses showed that the average inflation in mistaken eyewitnesses' retrospective level of confidence resulting from post-identification feedback is a full standard deviation (Stebly, Wells, & Douglass, 2014). One way to think about the size of this effect is to note that in the control (no-feedback) conditions, only 6% of the mistaken witnesses reported confidence levels of 80% or greater, whereas 29% (nearly five times as many) reported 80% or greater confidence levels in the feedback conditions. Mistaken eyewitnesses' self-reports about the quality of their view, degree of attention paid, basis for having made an identification, and so forth are likewise strongly distorted by confirmatory feedback. In addition, new research has shown that confirmatory feedback following a mistaken identification can even impair witnesses' memories of the perpetrator, making it difficult for them to recognize the perpetrator when they see him or her again (Smalarz & Wells, 2014a).

Confirmatory feedback powerfully distorts mistaken eyewitnesses' retrospective self-reports of their confidence and other testimony-relevant judgments. But what effect does such feedback have on accurate eyewitnesses? This question is a critical one, because if feedback inflates the self-reports of accurate eyewitnesses as much as it does for mistaken eyewitnesses, then feedback does not harm the diagnostic utility of eyewitness self-reports. Importantly, however, confirmatory feedback distorts self-reports more for mistaken eyewitnesses than for accurate eyewitnesses (e.g., Bradfield, Wells, & Olson, 2002; Stebly et al., 2014).

The meta-analysis by Steblay et al. showed that the effect size of confirmatory feedback on confidence distortion among accurate eyewitnesses is less than 50% of what it is for mistaken eyewitnesses.

The importance of this “distortion asymmetry” was illustrated dramatically in a recent experiment (Smalarz & Wells, 2014b). After making either a mistaken or an accurate identification, participant-witnesses were randomly assigned to receive confirmatory feedback or no feedback. Each witness then gave videotaped testimony about his or her identification to an examiner who did not know whether the witness had made an accurate or mistaken identification. These testimony videotapes were later shown to a new set of evaluators (also blind to whether the witnesses were accurate or not) who attempted to judge whether the witnesses had made accurate or mistaken identifications. Evaluators were roughly twice as likely to believe accurate than mistaken eyewitnesses when the witnesses had not been given confirmatory feedback, indicating significant discrimination. When the witnesses had received confirmatory feedback, however, evaluators believed accurate and mistaken eyewitnesses at equal rates. In other words, confirmatory feedback totally eliminated the evaluators’ ability to discriminate between accurate and mistaken eyewitness testimony.

Why are the effects of feedback stronger for mistaken than for accurate eyewitnesses? The dominant interpretation of the post-identification feedback effect is that eyewitnesses have little access to clear memory traces for precise estimates of metacognitive judgments regarding attention paid, quality of view, confidence at the time of the identification, and so on. Consequently, they tend to rely on external cues (e.g., feedback) to infer answers to these questions (e.g., “I must have been confident, had a good view, paid attention, etc., because I managed to identify the right guy”). Accurate eyewitnesses, however, have stronger access than do mistaken eyewitnesses to an additional, internal cue for inferring these judgments—namely, a sense of actual recognition. This internal cue is believed to make accurate eyewitnesses less reliant on external cues such as feedback for inferring testimony-relevant judgments (see Bradfield et al., 2002; Charman & Wells, 2012; Steblay et al., 2014).

Although the majority of the research examining post-identification contamination of eyewitnesses’ self-reports has involved some kind of explicit feedback to the witnesses (e.g., “Good job, you identified the suspect”), other research has shown distortion following more subtle forms of feedback. For example, simply telling witnesses “You’ve been a good witness” following their identification has been shown to distort their reports of how confident they were at the time of the identification and other testimony-relevant judgments (Dysart, Lawson,

& Rainey, 2012). Similarly, informing mistaken eyewitnesses that a co-witness identified the same person leads to confidence inflation (Luus & Wells, 1994). Even when lineup administrators are explicitly instructed not to give any feedback to witnesses, their knowledge about which lineup member is the suspect has been shown to influence eyewitnesses’ expressions of confidence in their mistaken identifications (Garrioch & Brimacombe, 2001).

Moreover, post-identification feedback is not the only contaminant of eyewitness self-reports. Other variables introduced prior to or concurrently with witnesses’ identification decisions have also been shown to cause distortion. For example, failing to warn witnesses that the culprit might not be in the lineup not only increases mistaken identifications (Malpass & Devine, 1981) but also inflates witnesses’ reported confidence in their identifications (Steblay, 1997). In addition, mistaken identifications made from lineups that contain highly dissimilar fillers are made with greater confidence than are mistaken identifications made from lineups that contain plausible fillers (Charman, Wells, & Joy, 2011).

Future Directions: Preservation of Eyewitness Self-Reports

Eyewitness self-reports are critical components of eyewitness identification evidence because they constitute the basis upon which people and courts make judgments about whether to believe that the eyewitness made an accurate identification (Bradfield & Wells, 2000; Wells & Quinlivan, 2009). In fact, eyewitnesses’ self-reports of their confidence, view, and attention have taken center stage in the empirical literature in large part because they were specifically singled out by the U.S. Supreme Court as criteria that lower courts should consider in assessing the reliability of an eyewitness’ identification (*Manson v. Brathwaite*, 1977). The paramount role played by eyewitness self-reports in the assessment and evaluation of eyewitness identification evidence reveals an underlying assumption of the criminal justice system—namely, that eyewitnesses’ self-reports are useful indicators of the likely accuracy of eyewitness identifications.

In theory, this assumption is a defensible one. Lab studies clearly show a reliable relation between eyewitnesses’ self-reports (of their confidence, view, attention, etc.) and identification accuracy (Bradfield et al., 2002; Charman & Wells, 2012). Moreover, people observing identification testimony in the lab naturally use witnesses’ self-reports in a way that permits them to significantly discriminate between accurate and mistaken eyewitnesses (Smalarz & Wells, 2014b). Unfortunately, however, the real world is not closely approximating the pristine conditions that lab studies on eyewitness identification manage to achieve routinely. Consider the three cases

mentioned in the first paragraph of this article (the Avery, Cage, and Williams cases). The extremely high-confidence statements made by the eyewitnesses in those cases were not given at time of the identification but instead were given much later, well after various kinds of feedback had contaminated the witnesses' judgments.

Because of the ease with which eyewitness memory can become contaminated, the argument has been made that it would be fruitful to metaphorically construe eyewitness identification evidence as a form of trace evidence (Wells, 1993). Trace evidence is typically thought of as a physical trace left by the culprit at the crime scene that can establish the culprit's identity (e.g., fingerprints, blood, fibers, hair). Although we cannot (yet) conduct reliable physical analyses of eyewitness memory, eyewitnesses' identification decisions and their accompanying self-reports can be useful in establishing the identity of the culprit. The eyewitness-memory-as-trace-evidence analogy is apt because, like physical trace evidence, eyewitness identification evidence is easily contaminated and, hence, requires clear protocols for collection, preservation, and interpretation.

What changes to police protocol for collecting and preserving eyewitness evidence can make eyewitnesses' self-reports of their confidence and other testimony-relevant judgments more reliable indicators of accuracy? First, during the preparation of a lineup, the fillers need to be carefully selected so that they do not make the suspect stand out. Second, pre-lineup instructions need to emphasize the fact that the culprit might not be present and provide an explicit "not present" response option. Third, because eyewitnesses will always be exposed to some form of post-identification feedback before trial (e.g., learning that the police arrested the identified person, getting called to testify, hearing about a co-witness who identified the same person, interacting/prepping with the prosecutor, participating in pretrial hearings), a clear record of eyewitnesses' self-reports must be made *at the time of the identification* (preferably via videotape or audiotape), before these inevitable contaminants are introduced. Although some records of relevant eyewitness self-reports might already exist (e.g., notes taken by a first responder about the viewing conditions of the witnessed event), the identification procedure presents the last possible opportunity for the legal system to get an uncontaminated record of these judgments from the witness. Finally, the person who administers the lineup and collects witnesses' self-reports of confidence and other judgments should not know which person is the possible suspect and which are merely fillers—a procedure known as the *double-blind lineup* (see Wells et al., 1998). Double-blind lineup procedures not only prevent lineup administrators from influencing the witness with spontaneous comments (e.g., "Good job") or inadvertent

nonverbal reactions (e.g., looking pleased if the witness picks the suspect) but can also ensure an unbiased recording of the eyewitness' identification decision and accompanying self-reports (e.g., Rodriguez & Berry, 2012).

Until these types of procedural improvements are made to the protocol for collecting and preserving eyewitness identification evidence and accompanying self-reports, it is appropriate to be dubious of witnesses' statements about their confidence, view, and attention as well as other such self-reports expressed at hearings and trials. When relevant self-reports are secured and preserved in the same type of pristine manner as they are in the lab, however, everyone—police, prosecutors, judges, and juries—will have access to more reliable information on the basis of which to make judgments about the likely accuracy of eyewitness identifications.

Recommended Reading

- Garrett, B. L. (2011). (See References). A book that describes what went wrong to lead to the convictions of the first 250 individuals who were later exonerated using forensic DNA testing.
- Lindsay, R. C. L., Ross, D. F., Read, J. D., & Tolia, M. P. (2007). (See References). An edited volume that covers all aspects of eyewitness identification.
- Wells, G. L., & Quinlivan, D. S. (2009). (See References). An analysis of shortcomings in current U.S. law in relation to the science on eyewitness identification.

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