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Eyewitness Identification Evidence: Science And Reform

 By *Gary L. Wells*


Kirk Bloodsworth was the first death row inmate to be exonerated by DNA evidence. Bloodsworth, a U.S. Marine veteran, had never been in trouble with the law, but was convicted in 1984 of the rape and murder of a 9-year-old girl and was sentenced to die in Maryland's gas chamber. DNA tests exonerated Bloodsworth in 1993, but it was not until 2004 that the real killer was identified by DNA tests. The evidence driving Bloodsworth's conviction was mistaken eyewitness identification.

There is little doubt today that mistaken eyewitness identification is the primary cause of the conviction of innocent people in the United States. The DNA exoneration cases, carefully tracked by the Innocence Project at the Cardozo School of Law, show that approximately 75 percent of these convictions of innocent persons were cases of mistaken eyewitness identification.¹ Even before the development of forensic DNA tests, mistaken identification was shown to be responsible for the convictions of more innocent persons than all other causes combined.²

I have been working on this problem as a psychological scientist for over 25 years.³ During that time, our understanding of mistaken identification has matured greatly, so that we now have a rather large body of peer-reviewed, scientific literature that forms an increasingly coherent picture of how mistaken identifications occur. Criminal defense lawyers know that eyewitness identification cases are difficult to win. Many have a cursory knowledge of eyewitness research, and they often seek eyewitness researchers who can provide them with expert testimony.

Expert testimony is not, however, the focus of this article. Instead, this article describes the nature of this science, outlines some of the most important findings, promotes an understanding of the psychology behind the problem of mistaken identification, and discusses potential reforms. Regardless of whether the reader is inclined to help promote systemic reform of the ways in which eyewitness identification evidence is collected and used or simply wants to work more effectively with an eyewitness expert, it is important to understand the science.

Nature Of The Science

All science has limits, and eyewitness science is no different from other sciences in this regard. For instance, a plant biologist can identify the variables that cause a tree to lose its leaves in winter, but cannot predict precisely when an individual leaf will fall from a given tree. Similarly, an eyewitness scientist can identify the variables that lead to mistaken identification, but cannot predict precisely which individual witnesses will succumb to the forces of those variables on a given occasion. In both cases, the prediction for the individual is probabilistic, not certain.

The analogy is an apt one because in both cases the utility of the science depends on how one wants to use it. If the purpose is to predict whether a particular leaf will fall at a given moment or

whether a given witness will make a mistaken identification, neither scientist is in a good position to make a definitive statement. If, on the other hand, the purpose is to control the variables so as to prolong the life of the leaf or lower the chances of a mistaken identification, then these respective sciences are well equipped to make recommendations. For this reason, I have long argued that the best use of eyewitness science is to help improve the accuracy of eyewitness evidence overall rather than to attempt to predict whether an eyewitness in a given case was accurate or not.

Any lawyer, judge, or policymaker who wants to understand the nature of the science of eyewitness identification should read at least one original empirical article describing an eyewitness identification experiment. I recommend an article that was published in the *Journal of Applied Psychology* that concerns how law enforcement should select fillers for lineups.⁴ I recently placed this article on my homepage for the reader's convenience (www.psychology.iastate.edu/faculty/gwells/homepage.htm).

This article is typical of the science in the sense that it sets up competing hypotheses, uses staged crimes, repeatedly tests a large number of eyewitnesses, and then subjects the data to rigorous statistical tests to make sure that the results are reliable (*i.e.*, due to the conditions that were created rather than being due to mere chance). In addition, the conclusions are probabilistic. For instance, you can see from this article that mistaken identifications were over four times as prevalent when the fillers in a lineup did not match the witnesses' descriptions of the culprit than when the fillers matched the witnesses' descriptions of the culprit. But any individual identification could be either accurate or inaccurate in any of the conditions of the experiment. Once you have read an original empirical article on eyewitness identification, such as the one recommended here, you can better appreciate how this science is conducted.

The science itself has been criticized by various players in the legal system, mostly prosecutors. It is best to discuss these criticisms openly from the outset. One criticism is that the research relies heavily on college students as eyewitnesses. Can we make conclusions about eyewitnesses in real cases based on college students? It is true that most of the research uses college student samples, mostly because of convenience and cost. However, there are many eyewitness identification experiments that have used other populations. In addition, one thing is very clear; college students are the very best eyewitnesses. College students as a whole consistently outperform younger witnesses and older witnesses in staged crime experiments.⁵ Hence, if the use of college students as eyewitnesses skews the results, the results are skewed toward making witnesses appear more competent than the broader population.

Another criticism is that the eyewitnesses in these experiments do not experience the arousal, stress, fear, or anxiety that often accompany real eyewitness situations. This observation about the science is generally true. Our experiments do not involve such things as pulling guns on people or assaulting them, largely due to ethical constraints. But the question is whether this limitation undermines our ability to make conclusions about eyewitness memory from the experiments. Those who support this criticism apparently assume that eyewitness memory is much better for actual witnesses because somehow the stress or fear improves memory.

There are three general responses to this argument. First, it is well accepted in psychology that the dominant response to fearful stimuli is "fight or flight." This is a survival mechanism that has developed automatically in humans, probably through natural selection processes. Our would-be ancestors who did not have the fight-or-flight response are not our ancestors at all because they likely did not survive to reproduce successfully. This fight-or-flight response is not particularly compatible with standing around and forming a clear memory; the brain has more important functions when confronting a fearful stimulus.

Second, although there are not many eyewitness identification experiments that have directly tested the effects of high stress, those that have tested high stress find that it interferes with good eyewitness identification performance. A recent experiment by Charles Morgan and his colleagues illustrates this phenomenon quite well.⁶ Using 530 active duty military personnel who were enrolled in a military survival training program, the authors examined their ability to identify their interrogators who used either high-stress tactics (including physical confrontation) or low-stress tactics. Interrogations lasted approximately 40 minutes. Participants were deprived of

food for 48 hours and had to sleep in their uniforms. The identifications were attempted 24 hours later from either live lineups or from photo-lineups.

The results were clear. High-stress interrogations produced accurate identification rates that were less than half of the low-stress interrogations and the rate of mistaken identifications were nearly doubled by the high-stress interrogations.

A third response to the contention that stress or fear makes actual eyewitnesses more reliable than experimental witnesses concerns the DNA exoneration cases. Clearly, these eyewitnesses — mostly victims of sexual assault and other extremely violent crimes — were experiencing plenty of stress. Yet this certainly did not make them immune to mistaken identification. Hence, we see again that, if anything, the standard eyewitness identification experiment tends to overestimate the reliability of actual eyewitnesses.

A third criticism somewhat related to the second is that eyewitnesses in experiments commonly assume that their identification decision does not have severe consequences. In other words, even when these experimental witnesses believe that they witnessed a real crime, they know at the time of the lineup that they are actually participating in an experiment. The critic's argument here is that real witnesses are too cautious to make the errors reported in experiments.

This criticism merits three responses. First, some experiments have actually maintained the ruse throughout the lineup phase and have found that it makes no difference to the results.⁷ Second, we can again refer to the DNA exoneration cases. Clearly, the DNA exoneration case witnesses had a full appreciation for the weightiness of their identification decision. Yet this did not prevent them from making mistaken identifications. Third, archival analyses of actual police lineups revealed that eyewitnesses to actual crimes identified a known-innocent filler 24 percent of the time from live lineups.⁸ The 24 percent rate from these actual cases is very similar to rates obtained in experiments. Therefore, there is no evidence at all to suggest that real witnesses differ from staged-crime eyewitnesses in terms of their willingness to attempt an identification.

Finally, none of these criticisms of the eyewitness experiments carry much weight with eyewitness experts because eyewitness experts are concerned with *patterns* of error rather than overall rates of error. In other words, eyewitness experts pay little attention to whether the overall error rate in an experiment is 10 percent or 40 percent, but are instead concerned with the question of what variables drive the error rate up or down. In science, principles are derived from patterns of data, not overall numbers.

Some Important Eyewitness Findings

The eyewitness identification literature is far too extensive to attempt a comprehensive treatment in this article.⁹ However, some key findings are particularly pertinent to our understanding of eyewitness identification. It is no coincidence that these findings relate strongly to the question of potential reforms that could reduce the eyewitness identification problem. One of the most useful of these findings is known as the removal-without-replacement effect, hereafter simply called the removal effect, which tells us a lot about how mistaken identifications occur.

This effect was first demonstrated in 1993 in an experiment in which 200 witnesses to a staged crime were shown one of two lineups.¹⁰ In one lineup, the perpetrator was present. In the other lineup the perpetrator was removed from the lineup and not replaced. All witnesses were warned that the actual perpetrator might not be in the lineup. When the perpetrator was present, 54 percent of the witnesses were able to pick him out and 21 percent made no identification. The remaining witnesses selected someone else from the lineup, the most popular other choice being person number two, who received 13 percent of the choices.

What happened when the perpetrator was removed from the lineup? Even though the witnesses were warned that the perpetrator might not be in the lineup, most of the witnesses simply selected the “next best” person, number two, whose rate of identification rose to 38 percent. In other words, removal of the perpetrator did not result in most witnesses shifting toward the no-choice option. Instead, most witnesses simply shifted to someone else in the lineup.

Relative-Judgment Process And Its Implications

The removal effect illustrates a dominant theory about lineups that is known as the “relative-judgment process.” According to the relative-judgment process, eyewitnesses tend to select the lineup member who best resembles their memory of the perpetrator relative to the other members of the lineup. In other words, witnesses compare one lineup member to the other lineup members, determine who looks most like the perpetrator, and then tend to select that person. This process could be said to operate fairly well as long as the actual perpetrator is in the lineup. If the real perpetrator is not in the lineup, however, there is always someone who looks more like the perpetrator than the remaining members of the lineup, and that person is at great risk of being mistakenly identified.

It is important to note that the relative-judgment process is a probabilistic tendency, not an absolute certainty. Eyewitnesses will sometimes recognize the absence of the actual perpetrator and make no identification. But, as a tendency, the relative-judgment process tells us a lot. For instance, it tells us that eyewitness identification is often not true recognition at all but instead is a process of elimination (e.g., “it is not 1, 2, 4, 5, or 6, so it must be number 3”), or inference (“number 3 looks more like the culprit than do the other lineup members, so I believe it is number 3”).

The relative-judgment process also makes it clear why eyewitness experts recommend so strongly that all eyewitnesses be warned before viewing a lineup that the actual perpetrator might not be in the lineup and that the correct response might be to identify no one. Giving this pre-lineup warning to eyewitnesses does not fully eliminate the relative-judgment process (as evidenced by the removal effect experiments, which gave the warning), but failure to give this warning makes the relative-judgment process even more certain to occur.¹¹

The relative-judgment process also helps us to understand why it is critical that the fillers (non-suspects) that are used in a lineup each fit the description that the eyewitness had given of the perpetrator (at least as well as does the suspect). Suppose, for instance, the witness had described the perpetrator as being a white male with short, dark hair, slight build, and no facial hair. Suppose further that the suspect fit this description. In this case, each lineup member needs to fit the description as well. Otherwise, the suspect, who might or might not be the perpetrator, will tend to resemble the perpetrator more than will the remaining members of the lineup and be at risk if the eyewitness makes a mere relative judgment. Experiments clearly show that an innocent lineup member need not resemble the actual perpetrator very much to be mistakenly identified; he need only look more like the perpetrator than the remaining members of the lineup (see endnote 2).

Clearly, no one is telling eyewitnesses to select the person from the lineup who “best fits” their memory of the perpetrator, but they behave as though that is precisely what they are prone to do even when warned that the actual perpetrator might not be in the lineup. It is for this reason that Roderick Lindsay and I developed the sequential lineup procedure.¹² The sequential lineup procedure is one in which the eyewitness is shown lineup members one at a time and asked to make a decision on each before viewing the next. The sequential lineup procedure contrasts with the standard way lineups are done in which all lineup members are shown to the witness at once (the simultaneous lineup procedure).

The differences between the simultaneous lineup and the sequential lineup are presumed to reside primarily in two factors. First, the sequential procedure never permits the witness to observe more than one lineup member at once, thereby encouraging the witness to compare each lineup member to their memory of the perpetrator rather than compare lineup members to each other. Second, an eyewitness cannot be guided solely by relative judgments because a decision has to be made on a given lineup member before viewing another (as yet unseen) lineup member. Although the eyewitness might think that the current lineup member looks more like the perpetrator than the ones already viewed, the witness cannot be certain what the next lineup member will look like; the next one might look even more like the perpetrator than any of the ones already viewed.

A large number of experiments have been conducted testing whether the sequential lineup produces better results than the traditional simultaneous lineup. It comes as no surprise to scientists that the results show some variation from one experiment to another. This is true of all

scientific studies. In medicine, for instance, there are studies showing no benefit of taking aspirin on the chances of heart attacks. But this does not mean that we can make no conclusions about aspirin and heart attacks. The key is to aggregate the data over a large number of individual studies and examine the long-run averages using a technique called meta-analysis.

A meta-analysis on the simultaneous versus sequential experiments was published recently that collapsed over 30 tests involving 4,145 experimental witnesses.¹³ The results indicate a clear pattern in which mistaken identifications were greatly diminished by the sequential lineup compared to the simultaneous lineup. Specifically, mistaken identifications of designated innocent suspects were reduced by two-thirds, from a rate of 27 percent with the simultaneous to a rate of 9 percent with the sequential. However, there was also a “cost” to accurate identifications, which were reduced by slightly less than one-third, from a rate of 50 percent to a rate of 35 percent.

This two-thirds reduction in mistaken identifications and one-third reduction in accurate identifications from using the sequential lineup rather than the simultaneous lineup deserves some careful discussion. First, it should be noted that the sequential lineup is more diagnostic of guilt when an eyewitness makes an identification of the suspect. In other words, when an eyewitness identifies the suspect from a sequential lineup, it is more trustworthy than when an eyewitness identifies the suspect from a simultaneous lineup. However, an eyewitness is somewhat less likely to attempt an identification from a sequential lineup, resulting in some loss in accurate identifications of perpetrators.

Importantly, however, the meta-analysis also indicates that conditions that more closely approximated real-world conditions in these experiments (*e.g.*, live staged crimes versus slide presentations or obtaining verbal descriptions before the lineup versus skipping this routine) tended to eliminate the difference in accurate identification rates while still favoring the sequential procedure in terms of reducing mistaken identifications.

Eyewitness Certainty And Its Malleability

Most people think about the eyewitness problem as merely one of mistaken identifications *per se*. However, mistaken identifications do not themselves result in the conviction of innocent people; innocent people risk conviction when the mistaken identification is associated with a highly certain eyewitness. The terms “confidence” and “certainty” are used interchangeably in the eyewitness identification literature, and both refer to how sure the witness reports feeling about his or her identification decision. An eyewitness who makes a mistaken identification with low certainty (*e.g.*, “I think it might be number three” or “It could be number three, but I am not sure at all”) is not likely to hold much weight in the eyes of investigators, judges, or juries. But a mistaken eyewitness who is highly certain (*e.g.*, “I’m positive it is number three” or “I have no doubt that this is the guy”) runs a high risk of a tragic outcome. Absent clear evidence to the contrary, such as an iron-clad alibi or DNA evidence, people tend to accept the testimony of a confident eyewitness as clear proof that the identified person is indeed the perpetrator.

The close link between how certain the eyewitness is and whether people believe the identification to be reliable raises the obvious question of what kind of relation exists between the certainty of an eyewitness and the accuracy of an eyewitness. Once again, meta-analyses of eyewitness identification experiments help us to answer that question. Meta-analytic results indicate that the correlation could be as high as about .40.¹⁴ What does a .40 correlation between eyewitness identification accuracy and eyewitness identification certainty mean? This is approximately the same as the correlation between a person’s height and a person’s gender. Hence, if you knew only someone’s height and used that height to decide whether the person was male or female, you would be about as successful as if you used an eyewitness’s certainty to decide whether the eyewitness was accurate or inaccurate. It is far better than just guessing. However, there are, of course, confident inaccurate witnesses and non-confident accurate witnesses in the mix just there are tall females and short males.

Now for the big caveat about the relation between certainty and accuracy: Although the correlation could be as high as .40, this is unlikely to be true in most cases because of the way in which lineups are conducted in almost all jurisdictions. The problem is that there is a routine practice in which the person who administers the lineup is the case detective who knows quite

well which person in the lineup is the suspect and which members of the lineup are merely fillers. When the eyewitness makes a selection, the case detective reacts to that selection. This is particularly likely to happen with photo lineups, which is the dominant mode of obtaining identifications. If the witness selects the suspect, the case detective will often react verbally with statements such as “Good, that is the guy we suspected” or “Yes! Good job.” Even if the detective says nothing, nonverbal reactions of the detective (e.g., a smile, a nod) tell the witness that this was the right decision. Of course, all it really tells the eyewitness is that the person s/he identified was not a filler, but instead was the person the lineup detective thinks committed the offense.

There are now many published experiments that vividly demonstrate that the reaction of the person who administers the lineup is a powerful influence on the confidence that the witness later expresses in the identification decision. In fact, the reaction of the person who administers the lineup not only distorts the confidence of the eyewitness, but also leads the eyewitness to distort their recollections of how much attention they had paid while witnessing the crime, how good their view was of the perpetrator during witnessing, and other matters. It is worth describing one of these experiments to get a good feel for the power and danger of this phenomenon, which has become known as the post-identification feedback effect.

In one experiment, 352 people who had all made mistaken identifications were randomly assigned to receive either confirming feedback or no feedback.¹⁵ Confirming feedback was simply a statement from the lineup administrator “Good, you identified the actual suspect.” Later, all eyewitnesses were asked a series of questions about the crime and about their identification. Particularly relevant for current purposes were the questions “How certain were you at the time of your identification that you identified the actual gunman?” and “How good of a view did you get of the gunman’s face [while witnessing]?” Three things to keep in mind are that (1) all of these witnesses had made mistaken identifications, (2) every witness had the same view, and (3) being randomly assigned to feedback conditions, there should be no differences in their actual certainty at the time of identification.

The results, however, show the powerful distorting effects of feedback. Among those who received no feedback, fewer than 2 percent said they had a good view of the perpetrator’s face and 15 percent said that they were highly certain. Among those who received confirming feedback, however, 26 percent said they had a good view of the perpetrator’s face and a full 50 percent said that they were highly certain at the time of the identification. These are huge distortions resulting from the reaction of the person administering the lineup. Later experiments showed that confirming feedback serves to dramatically lower the certainty-accuracy correlation.

Influences Of The Lineup Administrator And The Need For Double-Blind Lineups

The post-identification feedback experiments illustrate one of the ways in which the person who administers the lineup influences the eyewitness. Other experiments show that the lineup administrator’s beliefs or expectations about which person in the lineup is the suspect can even influence which person the witness selects.¹⁶ The implications of this are very clear: the person who administers the lineup should not be aware of which lineup member is the suspect and which members are merely fillers. I have advocated vigorously for use of a neutral or “double-blind” lineup administrator for more than 15 years. I believe that the double-blind lineup procedure is the most important single reform that can be implemented to enhance the integrity of eyewitness identification evidence.

The simple elegance and value of the double-blind lineup procedure is easily underestimated. It has four important benefits. First, the double-blind procedure, as I have described it elsewhere, calls for the eyewitness to be told before the lineup is shown that the person administering the lineup does not know which person is the suspect and which are fillers. This prevents the eyewitness from looking to the lineup administrator for cues or feedback. As many experienced detectives will admit, eyewitnesses often want to engage the lineup administrator in discussions about the lineup members and, after making a selection, commonly turn to the lineup administrator and say “Did I get the right guy?” With the double-blind procedure, witnesses know from the outset that they are on their own and that the task is to use their memory and only their memory.

Second, not only will witnesses stop looking for cues from the lineup administrator, but the lineup administrator also cannot give any cues, at least none that are systematically related to the suspect. Imagine that you are the lineup administrator and you encourage the witness to make a selection. How do you know if you are not actually encouraging the witness to select a filler? And, if the witness selects someone, you cannot risk giving confirming feedback because you might actually be reinforcing the witness's confidence regarding the selection of a filler. So, the double-blind administrator has to "play it straight."

Third, the double-blind lineup procedure, as I have described it elsewhere, calls for the neutral administrator to secure a confidence statement from the witness if the witness makes an identification. That confidence statement then becomes a matter of record that must be shared with the defense should the case go to trial. Hence, even if the eyewitness gets feedback later (which inevitably happens), there is a clean record of the witness's confidence taken at the time of the identification. If the witness claims at trial to be 100 percent certain, this can be checked against the record that was laid at the time of identification.

Finally, we have found that lineup reports written by detectives commonly fail to provide important information about what the eyewitness actually said or did. This is particularly prevalent in cases where the witness picked a filler from a photo lineup.¹⁷ In such cases, the reports often say something like "witness could not make a positive identification of the suspect." But, in fact, the witness did make a positive identification; the identification just did not fit the detective's theory of the case. Additionally, we have shown in recent research that the picking of a filler suggests strongly that the suspect in the lineup was not actually the perpetrator.¹⁸ In other words, filler picks are forms of exculpatory evidence that need to be preserved. Again, notice the beauty of the double-blind procedure for cleaning up this problem. When the neutral administrator records what the witness said or did, the administrator does not know if the witness picked the suspect or a filler. So the neutral administrator must record exactly what the witness said and did and an objective record is thereby laid.

Flawed Reform Proposals

There is no shortage of ideas about reforming eyewitness identification evidence practices. I will begin with what I consider to be some poor ideas about reform, fully cognizant that many reasonable people might disagree. This analysis is the result of nearly three decades of conducting research experiments, talking with other eyewitness experts, consulting in hundreds of criminal cases, and interacting with countless defense lawyers, prosecutors, police, judges, and legal policy makers.

The Multiple Eyewitness Requirement. One idea is to have a legal rule of some sort that prevents convicting a person based on a single eyewitness; at least two eyewitness identifications are required. It is surprising how often this idea is floated, but it is a poor idea in two ways. First, such a rule would never have saved Kirk Bloodsworth, who was mistakenly identified by five eyewitnesses, and it would not have saved many of the other DNA exonerees.

A problem with this rule is readily apparent from the results of our experiments and is characterized by what I call "correlated error." Correlated error simply means that factors that would lead one eyewitness to mistakenly identify someone will likely lead others to make that same mistake. Mistaken identifications in our experiments tend to not be random, but are instead patterned. If an innocent suspect stands out as the best choice for one eyewitness, that same innocent suspect tends to stand out as the best choice for other eyewitnesses as well. Or, if the lineup administrator is "leaking" information to one eyewitness about who the suspect is, there is no reason to think that this is not also happening with other witnesses as well. So the idea of requiring multiple witnesses in order to convict is not a good solution because it is quite easy for multiple witnesses to make exactly the same mistake.

But there is yet another reason to be concerned about a rule that says multiple witnesses are required for a conviction. Specifically, there are too many cases in which there is only one eyewitness, often a victim. Do we really want a rule that guarantees that a culprit can escape prosecution as long as only one eyewitness survives the crime? What if the lone eyewitness was abducted and held for 72 hours by an unmasked perpetrator and the eyewitness had plenty of time to study the perpetrator's face? For these reasons, I do not favor the multiple-witness

idea as a general rule.

Mandatory Corroboration. A related idea is to require that eyewitness identification evidence be corroborated by something else; eyewitness identification evidence alone should not be sufficient for prosecution. Many prosecutors claim that they already follow this rule and say that they proceed only if there is additional evidence beyond the eyewitness. The problem here is that there is almost always material that passes as additional evidence, even when the suspect is innocent.

The DNA exoneration cases illustrate this point clearly. Of the approximately 150 DNA exoneration cases that I have reviewed, there are perhaps five that appear to have had no additional evidence beyond the eyewitness(es). It is very instructive to study this “additional” evidence in light of our knowledge that these individuals were factually innocent. Among the examples of other evidence in the DNA exoneration cases were self-incriminating statements, possession of articles allegedly linked to the crime, hair samples that were consistent with the suspect, inconsistent alibis, proximity to the crime scene, motive, and similarity of clothing.

The self-incriminating statements are interesting because, although some were perhaps fabricated claims by law enforcement, others appear to be examples of how an ambiguous statement can appear incriminating in the context of a pre-existing belief that the suspect is guilty. Given that investigators are free to search the universe of possible links between the suspect and the crime, it is no surprise that there is almost always some other evidence to add to the eyewitness identification evidence before trial, even if the suspect is innocent. In the now famous DNA exoneration case of Ronald Cotton, a pair of black shoes and a flashlight came into evidence to corroborate Jennifer Thompson’s identification of Cotton. How many adult males in the U.S. do not own a pair of black shoes and a flashlight? My point is that having a rule that requires there to be evidence beyond the eyewitness is not likely to prevent most mistaken identification cases from being prosecuted.

Loosening Expert Testimony Rules. A third idea for reforming the way that eyewitness identification evidence is handled is to loosen the rules for expert testimony. It is here that I differ the most from my eyewitness research colleagues. Although I believe that expert testimony can assist the trier of fact in a subset of eyewitness cases, expert testimony is somewhat ill-suited to the science for reasons I discussed earlier in this article. Boston lawyer James Doyle stated this more succinctly than I when he said that eyewitness experts can tell you what happens 30 percent of the time, but cannot tell you whether this particular eyewitness is one of the 30 or one of the 70.

Furthermore, there are a very limited number of well qualified eyewitness identification scientists — fewer than 50 — but there are well over 77,000 eyewitness identification cases per year in the U.S. Many of these eyewitness scientists will not give expert testimony. Those who do generally will do no more than two or three cases per year. The cost of expert testimony, and the arbitrariness with which cases will receive this benefit, make this solution ineffective given the magnitude of the problem.

Systemic Changes Necessary

Evidence Collection And Preservation. My suggestions for reform require systemic changes to how eyewitness identification evidence is collected, recorded, and used at several levels. First, and nearest to my heart and efforts, is reform in how eyewitness identification evidence is collected and preserved. This requires the development and implementation of strict, research-based protocols for how lineups are constructed, conducted, and documented. This includes improving how fillers are selected for lineups, increasing the number of fillers used in the lineup, mandating better instructions given to eyewitnesses prior to viewing the lineup, using double-blind lineup administrators, using sequential presentation formats, securing of certainty statements from witnesses at the time of identification, and requiring detailed documentation of everything the witness said or did in response to the lineup. There are good reasons to believe that these reforms will prevent a substantial proportion of mistaken identifications.

Law Enforcement And Judicial Reforms. Of course, these reforms to the collection and preservation of eyewitness identification evidence will not make eyewitness identification

evidence perfect. There will remain an error rate that, although lowered by these reforms, will continue to occur with some unknown frequency in the legal system. Accordingly, there needs to be systemic reform in how police investigate and make decisions in eyewitness cases. As discussed earlier, a risky situation occurs when the lineup does not contain the actual perpetrator. This is much more likely to occur when police are conducting lineups with little or no independent evidence that the lineup's suspect was the actual perpetrator.

The inherent risk to an innocent suspect of being placed in a lineup has led to repeated recommendations on my part that there be some sort of "probable cause" criterion before placing the person in lineup jeopardy.¹⁹ At this point, police can place a suspect's picture in a photo lineup on a mere whim.

Second, police investigators should receive training about the problems with eyewitness identification evidence so that they do not close off other possible suspects or cease their search for potentially exonerating evidence when they obtain a positive identification. Many highly experienced detectives seem to have learned that a positive identification could nevertheless be mistaken, probably from their experience in seeing many eyewitnesses confidently identify a known innocent filler from a lineup. However, most police do not have enough experience to have learned this, new detectives are moving into these roles all the time, and most police training academies have no significant training on eyewitness identification issues at all.

Third, systemic reform is needed to make sure that prosecutors have higher standards for deciding whether to prosecute eyewitness identification cases. Prosecutors should consider that multiple witnesses could all be mistaken due to correlated error. They should take an active role in leading their police in reforming how the police construct, conduct, and document lineups. They should consider the idea that the witness's current certainty in the identification was bolstered by post-lineup events. Finally, they should avoid saying things in their pre-trial interviews of the witness that bolster the witness's testimony.

Fourth, judges should be required to include eyewitness identification issues in their continuing education experiences and develop a greater appreciation for the power of suggestive lineup procedures to cause mistaken identifications and the ease in which certain practices instill false certainty in eyewitnesses.

Finally, judges should consider motions for instructions to juries that warn them against placing too much weight on eyewitness identification evidence.

It should be clear from my analysis of the reform issue that no single reform is itself sufficient to deal with the eyewitness identification problem. Improving how lineups are conducted and requiring probable cause before placing a suspect in lineup jeopardy helps reduce the chances of mistaken identification, but police, prosecutors, and judges also need to increase their skepticism. In some ways, I believe that these reforms are not at all independent of each other. The implementation of lineup reforms in the state of New Jersey, with which I was involved, represents a case in point.

In 2001, the New Jersey attorney general issued guidelines for all law enforcement in New Jersey to begin using double-blind sequential lineup procedures.²⁰ Before issuing these guidelines, however, police, prosecutors, and judges had to be educated on the need for these reforms. I participated in this process and I believe that the reforms in New Jersey became much more than just a new way of conducting lineups. Police, prosecutors, and judges appeared to develop a much deeper appreciation for eyewitness identification problems. Does this mean that New Jersey will never convict another innocent person based on mistaken eyewitness identification evidence? No. But New Jersey's chances of convicting an innocent person have been reduced.

What Defense Lawyers Can Do

We know that mistaken eyewitness identification is the primary cause of the conviction of innocent persons in the United States. My approach to the eyewitness identification problem is to use the research findings to promote systemic reform. These reforms are primarily in the area

of how lineups are constructed, conducted, and documented, but also include reforms in how eyewitness identification evidence is evaluated and used by police, prosecutors, and judges.

I have received invaluable assistance from defense lawyers such as James Doyle, Barry Scheck, Peter Neufeld, and countless Innocence Project individuals from across the country. Nevertheless, it is my experience that defense lawyers are naturally handicapped in spearheading these reforms. It took many years for me to figure out that prosecutors hold nearly all the power for changing how lineups are conducted because police will not make these reforms without the blessings and encouragement of their chief prosecutor. When defense lawyers press for a particular reform, prosecutors tend to dig in and recoil. The adversarial criminal justice system has spawned a Pavlovian response; if the defense thinks it is a good idea, the prosecution should oppose it and vice versa. There are exceptions, of course, but few defense lawyers have developed the kind of relationship with the top prosecutor in their jurisdiction that would result in successfully persuading the prosecutor to lead their police department toward lineup reform.

So how can defense lawyers help promote reform in how lineups are constructed, conducted, and documented? Begin by securing a copy of any and all written procedures that your police department has concerning lineups. Do not be shocked if no written procedures exist; many departments still do not have written procedures.

Next, download a copy of the U.S. Department of Justice Guide for Law Enforcement on eyewitness evidence from the DOJ Web site, www.ncjrs.org/pdffiles1/nij/178240.pdf21 Compare your police department's procedures for lineups to those in the DOJ guide. Then, prepare a report noting how your police department's procedures deviate from those in the guide and bring this to the attention of your police department and your local prosecutor's office. Provide both with a copy of the guide and encourage them to adopt these better procedures. In the absence of changes to their procedures — a likely result in most jurisdictions — be prepared to use the guide in court in future eyewitness identification cases for cross-examining the detective(s) who conducted the lineup.²²

Finally, if you are successful in getting lineup reforms placed on the agenda of your local prosecutor and police department, step back and let them take credit for the idea. This is not about credit; it is about justice.

Notes

1. See www.innocenceproject.org.
2. See E. Borchard, *Convicting the Innocent; Errors of Criminal Justice* (New Haven, Conn.: Yale University Press, 1932); R. Brandon & C. Davies, *Wrongful Imprisonment* (London: Allen & Unwin, 1973); J. Frank & B. Frank, *Not Guilty* (London: Gallanez, 1957); R. Huff, A. Rattner, & E. Sagarin, *Guilty Until Proven Innocent*, *Crime and Delinquency*, 32, p. 518-544 (1986).
3. Although my work is said to mark the modern scientific approach to the problem, psychologists were actually writing about the problem of eyewitness reliability in the early 1900s. For those interested in the history of this area, a fascinating new book by Boston defense lawyer James Doyle details the history of this rocky interface between social science and the law on the issue of eyewitness reliability, James Doyle, *True Witness: Cops, Courts, Science, and the Battle Against Misidentification* (New York: Palgrave Macmillan, 2005). This book includes some great lessons for all aspects of the interface between science and the law. I strongly recommend it.
4. G.L. Wells, S.M. Rydell, & E.P. Seelau, *On the Selection of Distractors for Eyewitness Lineups*. 78 *Journal of Applied Psychology* 835-844 (1993).
5. E.g., see T.E. O'Rourke, S.D. Penrod, B.L. Cutler, & T.E. Stuve, *The External Validity of Eyewitness Identification Research: Generalizing Across Subject Populations*. 13 *Law and Human Behavior* 385-395 (1989).
6. C.A. Morgan, G. Hazlett, A. Doran, S. Garrett, G. Hoyt, P. Thomas, M. Baranoski, & S.M. Southwick, *Accuracy of Eyewitness Memory for Persons Encountered During Exposure to*

- Highly Intense Stress*, 27 *International Journal of Psychiatry and the Law* 265-279 (2004).
7. D. Murray, & G.L. Wells, *Does Knowledge that a Crime Was Staged Affect Eyewitness Performance?* 12 *Journal of Applied Social Psychology* 42-53 (1982).
8. B.W. Behrman & S.L. Davey, *Eyewitness Identification in Actual Criminal Cases: An Archival Analysis*, 25 *Law and Human Behavior* 475-491 (2001).
9. Those interested in more comprehensive treatments can consult B.L. Cutler & S.D. Penrod, *Mistaken Identification: the Eyewitness, Psychology, and the Law* (New York: Cambridge University Press, 1995), and G.L. Wells & E. Olson, *Eyewitness Identification*, 54 *Annual Review of Psychology* 277-295 (2003).
10. G.L. Wells, *What Do We Know About Eyewitness Identification?* 48 *American Psychologist* 553-571 (1993).
11. N.M. Steblay, *Social Influence in Eyewitness Recall: A Meta-Analytic Review of Lineup Instruction Effects*, 21 *Law and Human Behavior* 283-298 (1997).
12. R.C.L. Lindsay & G.L. Wells, *Improving Eyewitness Identification from Lineups: Simultaneous Versus Sequential Lineup Presentations*, 70 *Journal of Applied Psychology* 556-564 (1985).
13. N.M. Steblay, J. Dysart, S. Fulero, & R.C.L. Lindsay, *Eyewitness Accuracy Rates in Sequential and Simultaneous Lineup Presentations: A Meta-analytic Comparison*, 25 *Law and Human Behavior* 459-474 (2001).
14. S. Sporer, S. Penrod, D. Read, & B.L. Cutler, *Choosing, Confidence, and Accuracy: A Meta-Analysis of the Confidence-Accuracy Relation in Eyewitness Identification Studies*, 118 *Psychological Bulletin* 315-327 (1995). Most of the estimates from this meta-analysis indicate that the correlation is much lower than .40, but I have chosen this upper estimate so as to be generous to the hypothesis that eyewitness identification certainty is a useful indicator of eyewitness identification accuracy.
15. G.L. Wells & A.L. Bradfield, *'Good, You Identified the Suspect:.' Feedback to Eyewitnesses Distorts their Reports of the Witnessing Experience*, 83 *Journal of Applied Psychology* 360-376 (1998).
16. R.M. Haw & R.P. Fisher, *Effects of Administrator-Witness Contact on Eyewitness Identification Accuracy*, 89 *Journal of Applied Psychology* 1106-1112 (2004); M.R. Phillips, B.D. McAuliff, M.B. Kovera, & B.L. Cutler, *Double-Blind Photoarray Administration as a Safeguard against Investigator Bias*, 84 *Journal of Applied Psychology* 940-951 (1999).
17. B.W. Behrman, & S.L. Davey, *Eyewitness Identification in Actual Criminal Cases: An Archival Analysis*, 25 *Law And Human Behavior* 475-491 (2001).
18. G.L. Wells & E. Olson, *Eyewitness Identification: Information Gain from Incriminating and Exonerating Behavior*, 8 *Journal of Experimental Psychology: Applied* 155-167 (2002).
19. See G.L. Wells, *What Do We Know about Eyewitness Identification?*, 48 *American Psychologist* 553-571 (1993).
20. You can download these guidelines at www.psychology.iastate.edu/faculty/gwells/njguidelines.pdf
21. The DOJ guide is useful, but it does not go far enough in advocating sequential and double-blind lineup procedures. Places such as New Jersey, Boston, Minneapolis, and North Carolina have even better procedures in place than those described in the guide.
22. A great example of how to conduct such a cross-examination can be found in J. Doyle, M. Larson & C. DiTraglia, *The Eyes Have It, or Do They?* *Criminal Justice*, Fall 2001, p. 13. n

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