

***Juror Understanding of Eyewitness Testimony:  
A Survey of 1000 Potential  
Jurors in the District of Columbia***

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Over the past 30 years, researchers have made substantial strides in understanding the workings and limitations of human memory. In the criminal justice system, this knowledge is critical: According to the Innocence Project at Cardozo Law School, over 75,000 people a year become criminal defendants on the basis of eyewitness identifications.<sup>2</sup> In other words, the criminal justice system repeatedly is called upon to assess the accuracy of witness claims that they “remember” having seen the accused committing a criminal offense, or that they “remember” other significant details about the crime.

Recent data have shown that the justice system assumes that eyewitness memory is accurate when it is not. The proof of these failures lies in the rising number of verifiably wrongful convictions. One recent exoneration study shows that since the advent of DNA testing, the rate of exonerations in this country has risen from an average of 12 per year from 1989-1994 to 44 in the year 2003.<sup>3</sup> And given the exceedingly small number of cases in which DNA exonerations are even possible, it is clear that the number of verifiably mistaken convictions are dwarfed by the number that actually occur in the United States each year.<sup>4</sup> Faulty

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<sup>2</sup> Innocence Project Website, [www.innocenceproject.org](http://www.innocenceproject.org), citing, National Institute of Justice, *Postconviction DNA Testing: Recommendations For Handling Requests*, (September 1999).

<sup>3</sup> Gross, Jacoby, Matheson, Montgomery & Patil, *Exonerations in The United States 1989-2003* at 4 (2004).

<sup>4</sup> “[T]he false convictions that come to light are just the tip of the iceberg. Beneath the surface there are other undetected miscarriages of justice in rape cases without testable DNA, and a much larger group of undetected false

eyewitness testimony is the leading cause of these faulty convictions. In 209 out of 328 cases (64%) of wrongful convictions identified by the exoneration study, at least one eyewitness misidentified the defendant.<sup>5</sup> What we do know is that jurors relied on faulty identifications and wrongful convictions resulted.

Despite this stark evidence, many courts around the country, including those in Washington, D.C., often refuse to allow the defense to provide jurors with information that could help them to fully comprehend the limitations of eyewitness identification evidence and to place eyewitness testimony into a more informed context. Those courts generally insist that the research with respect to the limitations of eyewitness testimony adds nothing to what is already within the common knowledge of jurors, and thus permit the exclusion of this academic research from criminal trials.<sup>6</sup> In doing so, courts regularly make unsubstantiated assertions that jurors

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convictions in robberies and other serious crimes of violence for which DNA testing is useless.” *Gross et al., Exonerations in the United States 1989 Through 2003* at 8.

<sup>5</sup> Gross, Jacoby, Matheson, Montgomery & Patil, *Exonerations in The United States 1989-2003* at 18 (2004).

<sup>6</sup> This sort of reasoning infected at least one high-profile case in which the proffered expert testimony would have been used to allow jurors to assess the testimony of an eyewitness whom DNA evidence has now conclusively demonstrated was wrong. *Cotton v. North Carolina*, 394 S.E. 456 (N.C. App. 1990) (affirming exclusion of expert witness on ground that the effects of stress, cross-racial factors, priming of memory and confidence malleability were commonly known to jurors). It has also been followed by a number of other courts. *See, e.g., United States v. Holloway*, 971 F.2d 675, 679 (11th Cir. 1992); *State v. McClendon*, 730 A.2d 1107, 1114-16 (Conn. 1999); *Johnson v. State*, 438 So.2d 774, 777 (Fla. 1983); *State v. Gaines*, 926 P.2d 641, 649 (Kan. 1996); *Commonwealth v. Simmons*, 662 A.2d 621, 631 (Pa. 1995); *State v. Coley*, 32 S.W.3d 831, 835-38 (Tenn. 2000); and *see Green v. United States*, 718 A.2d 1042, 1053 (D.C. 1998); *McClellan v. State*, 714 So.2d 368, 370-72 (Fla. 1998). For the state-by-state breakdown on this issue, *see Admissibility at Criminal Prosecution of Expert Testimony on Reliability of Eyewitness Testimony*, 46 A.L.R.4th 1047 (1986 & 2004 Supp.).

understand, as a matter of common sense, how memory works and what its limitations are in the eyewitness identification context.<sup>7</sup>

In the winter of 2004, lawyers from the Public Defender Service for the District of Columbia (PDS) decided to investigate whether jurors did, in fact, understand as a matter of common sense what makes some eyewitness identifications more or less reliable than others.<sup>8</sup> The motivation behind this project was simple: If jurors really understand as a matter of common sense what makes some eyewitness identifications more reliable than others, it would not make sense for PDS to continue to devote resources toward educating already-informed jurors on this topic. On the other hand, if jurors actually fail to understand memory and its limitations, it would remain imperative to continue to seek to provide jurors with the expert education necessary to ensure that they could intelligently evaluate the evidence presented to them by the government.

PDS accordingly commissioned a Washington, D.C. polling firm (Peter D. Hart Research Associates) to survey approximately 1000 potential D.C. jurors about how jurors assess the reliability of eyewitness identifications and what factors, if any, contribute to making the testimony suspect in the eyes of potential jurors. This study, the results of which will be discussed in detail below, demonstrates that judicial assertions concerning jurors' ability to appraise eyewitness identifications are verifiably wrong: Contrary to speculation, jurors actually suffer from a basic misunderstanding of how memory generally works, and similarly do not understand how particular factors, such as the effects of stress or the use of a weapon, affect the accuracy of eyewitness testimony. Thus, the current resistance of courts to providing jurors with accurate information on these topics has contributed to jurors gauging the reliability of eyewitness testimony on the basis of mistaken assumptions about what makes an

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<sup>7</sup> See, e.g., *State v. McClendon*, 730 A.2d at 1114-16; *State v. Coley*, 32 S.W.2d at 837-38; *Taylor v. United States*, 451 A.2d 859, 866-67 (D.C. 1982); *Brooks v. United States*, 448 A.2d 253, 257-58 (D.C. 1982); *Jackson v. United States*, 420 A.2d 1202, 1203 n.2 (D.C. 1979) (*en banc*); *Smith v. United States*, 389 A.2d 1356, 1358-59 (D.C. 1978)(*per curiam*); *Dyas v. United States*, 376 A.2d 827, 831-32 (D.C. 1977); see also *Commonwealth v. Santoli*, 680 N.E.2d 1116, 1118-20 (Mass. 1997).

<sup>8</sup> This investigation was conducted in the context of several PDS cases involving purported eyewitness identifications.

eyewitness more or less reliable. Wrongful convictions will inevitably continue to result until such a faulty process is reformed.

### *The Mechanics of the Survey*

In the Fall of 2003 and early Winter of 2004, Peter D. Hart Research Associates worked together with attorneys at PDS and Dr. Elizabeth Loftus, the co-author of this article, to prepare a survey that would discern what potential District of Columbia jurors understand about memory in general and the reliability of eyewitness identification evidence in particular. The survey consisted of a series of approximately 20 questions that focused on whether jurors believe that testimony from a witness claiming to have seen the defendant commit a crime is generally reliable, in addition to the specific factors that jurors believe would make an eyewitness identification more or less reliable.<sup>9</sup>

Between February 18, 2004 and February 23, 2004, professional interviewers from Hart Research called several thousand households in Washington, D.C. to seek survey responses. The telephone numbers were chosen using a random-digit-dial sample, meaning that residential phone numbers were chosen at random from only the District of Columbia area code. Under this method, every household in Washington D.C. with a telephone had an equal chance of being called. Potential jurors were identified as U.S. Citizens, who were at least 18 years of age, and not currently on probation or parole. Participants were also asked demographic questions about education, neighborhood, age, employment, party affiliation, prior jury service, language, race, income and exposure to the criminal justice system. Ultimately, 1007 potential jurors were reached and completed the survey. The margin of error for the survey was +/- 3.1 percentage points for results based on the entire sample.

### *Juror Misunderstandings of Memory In General*

It is uniformly accepted among social scientists that human memory does not record events like a video recorder.<sup>10</sup> In the first place, human

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<sup>9</sup> A complete copy of this survey is included in the appendix.

<sup>10</sup> Edward Arnolds *et al.*, *Eyewitness Testimony: Strategies and Tactics* 14-15 (1984); Shofi, David M., *The New York Courts' Lack of Direction and Discretion regarding the Admissibility of Expert Identification Testimony*,

memory is more selective than a video camera; the sensory environment contains a vast amount of information but the memory process perceives and accurately records only a very small percentage of that information. Second, because the act of remembering is reconstructive<sup>11</sup> – more akin to putting puzzle pieces together than retrieving a video recording – human memory can change in dramatic and unexpected ways due to the passage of time, and due to subsequent events such as exposure to “post event” information such as conversations with other witnesses or media reports. Third, memory can also be altered through the reconstruction process; questioning a witness about what he or she actually perceived and requiring the witness to reconstruct the experience can cause the witness’ memory to change by unconsciously blending the actual fragments of memory of the event with information provided during the memory retrieval process.

These characteristics of human memory have profound implications with regard to the accuracy of eyewitness claims that they “remember” the accused as the culprit or other key details about the crime. For this claim to be reliable, the witness must have accurately perceived the event, and the witness’ memory must not have degraded over time or been polluted by post-event information and questioning. But more importantly, for jurors to fairly assess whether this claim is accurate, they must understand memory’s complexity, selectivity and malleability, and jurors must also understand what specific factors affect perception and encoding of memories, what factors can pollute memory, and what factors in the re-creation process can distort a witness’ “memory” of an event.

PDS’ survey of potential jurors in the District of Columbia suggests that juror understanding of these subjects fails at many levels, starting with the most basic. Several survey questions, for example, were designed to test jurors’ general understandings of the workings of human memory. One question asked whether “the act of remembering a traumatic event [was] like a video recording in that one can recall details as if they had been imprinted or burned into one’s brain.” Over half of the respondents to this question (52%) either thought this statement was true or did not know whether it was

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13 Pace L. Rev. 1101, 1104 (1994); Gary L. Wells, *Eyewitness Behavior*, 4 Law & Hum. Behav. 237(1980).

<sup>11</sup> Haberlandt, K. *Human Memory: Exploration and Application* 4 (Boston, 1999) (defining and describing reconstructive memory).

true. In other words, according to the survey data, more than the half the jury begins each trial with a fundamental dearth of knowledge about how human memory works. Indeed, 46% of potential jurors believe that the witness on the stand is effectively narrating a video recording of events that she can see in her “mind’s eye” for jurors.

Other results demonstrated similar deficits of knowledge on the most basic level about how memory works. The survey asked potential jurors to assess the reliability of their own memories. Almost two-thirds of the respondents (66%) thought the statement “I never forget a face” applied “very well” or “fairly well” to them. Likewise, more than three out of four respondents (77%) thought that the phrase “I have an excellent memory” applied “very well or “fairly well” to them. The fact that such large majorities of people tend to believe their memories are above average suggests that potential jurors may begin each trial with unwarranted confidence in memory and the ability to identify faces generally – a confidence which may well be transferred to the testifying witnesses, causing jurors to overestimate the accuracy of witness memories as well.

In short, the survey results suggest that eligible jurors in the District of Columbia have a simplistic and fundamentally flawed understanding of how human memory works. Extensive research shows that human memory is complex, selective and malleable. Jurors, by contrast, believe that the process of remembering and recounting events is simple and easy – much like the act of replaying a video recording. This basic misunderstanding can cause jurors to discount or at the very least seriously underestimate the possibility that a witness who claims to remember having observed a particular person committing the offense can genuinely believe her claim to be true – but still be completely mistaken. One way to avoid the wrongful convictions that are discovered each year with increasing frequency would be to teach jurors about scientific findings related to eyewitness perception and memory so that they could have the tools to make informed decisions about the credibility of eyewitnesses.

### *Juror Understanding of Specific Reliability*

## *Factors Regarding the Incident*

### *Weapon focus*

For more than 25 years, social scientists have posited that the presence of a weapon during a crime attracts the attention of the witness to the weapon, reducing attention to the culprit's facial and physical characteristics. This phenomenon is often referred to as "weapon focus."<sup>12</sup>

A series of controlled studies have now validated the existence of this effect. For example,<sup>13</sup> experiments have been conducted involving videotaped robberies with some of the culprits brandishing a handgun and

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<sup>12</sup> See, e.g., Elizabeth F. Loftus et al., *Some Facts About 'Weapon Focus'*, 11 *Law & Hum. Behav.* 55 (1987); Loftus and Doyle, *Eyewitness Testimony: Civil and Criminal*, § 2.10 (2d Ed. 1992); Anne Maass & Gunther Kohnken, *Eyewitness Identification: Simulating The "Weapon Effect,"* 13 *Law & Hum. Behav.* 397 (1989).

<sup>13</sup> An archival study of actual police cases demonstrated that the presence of a weapon "did not reduce the quantity of descriptive information the witness was subsequently able to provide to police about the culprit, but it did impair witnesses' subsequent ability to recognize the culprit." Donald P. Judges, *Two Cheers for the Department of Justice's Eyewitness Evidence: A Guide for Law Enforcement*, 53 *Ark. L. Rev.* 231, n.37 (2000), citing Patricia A. Tollestrup et al., *Actual Victims and Witnesses to Robbery and Fraud: An Archival Analysis, in Adult Eyewitness Testimony: Current Trends and Developments* 158 (David F. Ross et al., eds., 1994); see also Nancy Mehrkens Steblay, *A Meta-Analytic Review of the Weapon Focus Effect*, 16 *Law & Hum. Behav.* 413 (1992). Experiments in which eye movements are monitored while subjects witness a scene where a weapon is involved also demonstrate the existence of the phenomenon of "weapon focus." Loftus et al., *Some Facts About 'Weapon Focus'*, 11 *Law & Hum. Behav.* 55, 57-61 (1987); Brian L. Cutler et al., *The Reliability of Eyewitness Identification*, 11 *L. & Hum. Behav.* 233, 240, 244 (1987) (weapon visibility significantly lowered identification accuracy); Unsuspecting subject sits in waiting room exposed to either a hostile interaction (involving a bloodied letter opener) or an innocuous conversation. Every subject in the weapon phase identified some sort of weapon, and had reduced ability to identify target from a set of 50 photos. (Johnson and Scott 1976), cited in Elizabeth F. Loftus, *Eyewitness Testimony* 35 (3d ed. 2000).

others concealing the gun. These studies repeatedly demonstrated that the witness accuracy was much better when the gun was concealed than when the gun was brandished. Because these studies involved videotaped robberies, moreover, it is likely that the effect is even stronger in an actual crime situation.

Some courts, including those in the District of Columbia, have speculated that jurors understand “weapon focus” as a matter of common sense.<sup>14</sup> To find out whether this supposition conforms to reality, the PDS survey asked potential jurors whether they thought that the fact that “a weapon is involved in the crime” tends to make “an eyewitness’ memory about the details of the crime more reliable, less reliable or [would have] no effect.” The scientifically-demonstrated answer to this question is that the involvement of a weapon tends to make an eyewitness’ memory for details about an event less reliable. More than two-thirds of the respondents (70%), however, failed to provide this answer: Thirty-seven percent of the respondents actually thought the presence of a weapon would make a witness’ memory for event details *more* reliable, while thirty-three percent of the respondents thought that the presence of a weapon either would have no effect or were not sure of what effect a weapon would have. Only three out of ten potential jurors correctly understood that the presence of a weapon tends to make an eyewitness’ memory for details less reliable.

### *The Presence of Violence And/Or Stress*

Social science studies have also shown that a person’s ability to recall events is significantly worse if a witness has observed a violent event as opposed to a non-violent one. One recent study was carried out on over 500 military personnel who were subjected to mock prisoner of war (POW) interrogations.<sup>15</sup> The subjects experienced both low stress and high stress interrogations by different interrogators.

The high stress interrogation included the threat of physical violence. The interrogations lasted for 40 minutes. Twenty-four hours after the

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<sup>14</sup>*Taylor v. United States*, 451 A.2d 859, 866-67 n.9 (D.C. 1982).

<sup>15</sup> Charles A. Morgan, et. al., *Accuracy of Eyewitness Memory for Persons Encountered During Exposure to Highly Intense Stress*, *Int. Journal of Law & Psychiatry*, 27(3), 265-79 (2004).

grueling sessions, the prisoners were asked to identify “interrogators” and “guards.” In live lineup situations, 30% of the high stress group made correct identifications versus 62% of the low stress group. In a photo lineup situation, 32% of the high stress group members made correct identifications whereas 88% of the low-stress group’s picks were correct. Other empirical research has reached similar conclusions.<sup>16</sup>

To find out whether jurors understood the effect that violence has on witness identifications, the PDS survey asked potential jurors whether they thought that the fact that “a crime is violent” tends to make “an eyewitness’ memory about the details of the crime more reliable, less reliable or [would have] no effect.” The accepted answer within the scientific community is that the fact that a crime is violent can make an eyewitness’ memory for details less reliable, particularly for peripheral details. More than two-thirds of the respondents (70%), however, again failed to provide that answer: Thirty-nine percent of the respondents actually thought that event violence would make a witness’ memory for event details *more* reliable,<sup>17</sup> while thirty-three percent of the respondents thought that event violence either would have no effect or were not sure of what effect event violence would have. Only three out of ten potential jurors correctly understood that event violence tends to make an eyewitness’ memory for details less reliable.

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<sup>16</sup> “Perceptual abilities actually decrease in a highly stressful situation, and the person under stress is less reliable than he or she would be otherwise. Such a witness becomes less capable of remembering details, less accurate in reading dials, and less certain in detecting signals.” Major Thomas J. Feeney, *EXPERT PSYCHOLOGICAL TESTIMONY ON CREDIBILITY ISSUES*, 115 Mil. L. Rev. 121, 146. “One theory indicates that *moderate* levels of stress or arousal increase performance up to a point. Under this theory, known as the Yerkes-Dodson law, perceptual performance follows a U-shaped curve. At very low levels of arousal, the senses are not yet functioning fully. Performance peaks at moderate levels of arousal and then declines as the stress increases further.” *Id.* at 146 n.163, *citing* E. Hilgard, R. C. Atkinson, & R. L. Atkinson, *Introduction to Psychology* 357 (1975).

<sup>17</sup> This is unsurprising. Researchers have postulated that lay people share “a common” but mistaken “belief that stress heightens a witness’ observation powers and ‘burns’ an image of the scene into the mind.” Major Thomas J. Feeney, *EXPERT PSYCHOLOGICAL TESTIMONY ON CREDIBILITY ISSUES*, 115 Mil. L. Rev. at 146 (disproving validity of this common belief).

### *The Duration of the Incident*

For over a century, social scientists have been conducting experiments concerning people's ability to estimate the duration of a stressful incident. Those studies have consistently shown not only that most people have enormous difficulty estimating the length of these events but also that the vast majority of these errors are in the same direction: People have a strong tendency to overestimate the duration of a stressful event. Overestimation can vary substantially depending upon the amount of stress accompanying the event.<sup>18</sup>

Why does this matter in terms of eyewitness accuracy? It matters because the longer an eyewitness has to observe a particular face, the more accurate her identification in fact becomes. Jurors do in fact understand this principle as a matter of common sense, and this is one situation where their common sense could actually help them to assess reliability – if they have accurate information about the duration of the event. The problem, however, is that jurors do not also understand the unreliability of witnesses'

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<sup>18</sup> See, e.g., Elizabeth F. Loftus et al., *Time Went by So Slowly: Overestimation of Event Duration by Males and Females*, 1 Appl. Cogn. Psychol. 1 (1987); Elizabeth F. Loftus & James M. Doyle, *Eyewitness Testimony: Civil and Criminal* 26-27 (1987) (explaining that a witness tends to overestimate the duration of an especially stressful or violent event); James Marshall, *Law and Psychology In Conflict* 41-81 (1966) (On average, viewers estimated that a 42 second film in which man rocks a baby carriage and then flees when a woman approaches lasted a minute and a half).

In a survey of over 100 experimental psychologists, potential jurors, judges, law students, and lawyers conducted by Daniel Yarmey and Hazel P. Tressillian Jones, ninety-five percent of the experts agreed that witnesses generally overestimate the duration of crimes, whereas fewer than half of the potential jurors did so. A. Daniel Yarmey & Hazel P. Tressillian Jones, *Is the Psychology of Eyewitness Identification a Matter of Common Sense?, in Evaluating Witness Evidence: Research and New Perspectives* 33 (Sally M. Lloyd-Bostock & Brian R. Clifford eds., 1983) .

subjective time estimates. Thus, they cannot properly evaluate the reliability of the identification because they, like the witness, will tend to believe that the event lasted longer than it really did.

Often, the only piece of information a juror has about the length of exposure time is the witness' estimate. Since this estimate is generally going to exaggerate the amount of exposure time, it is also going to exaggerate the reliability of the identification. In other words, a juror who relies on witness assessments of how long the incident lasted is likely to rely too heavily on that same witness' identification.

It is accordingly critically important for jurors to understand that witnesses overestimate exposure time. The PDS survey, however, shows that jurors do not understand this phenomenon in any meaningful way. Over 40% percent of the survey respondents either thought that witness time estimates were accurate or were not sure whether such estimates were accurate. While that alone indicates that a significant number of jurors would be likely to overestimate exposure times and thus witness reliability, the beliefs of those who are more skeptical of witness time estimates are even more troubling. Of those who correctly understood that witnesses themselves are not good at evaluating how long an event took to unfold, a sizeable portion (about 25%) believed that witnesses *underestimate* the actual time. In all, 63% of the survey respondents do not understand what scientific research has demonstrated about a witness' ability to gauge the duration of an event – the jurors either believed witness's subjective time estimates or thought that witnesses tended to actually see a face for longer than claimed – while only 37% of the total respondents correctly understood events unfold faster than witnesses think they do.

*Juror Misunderstanding of Specific Reliability  
Factors Regarding the Witness Confidence*

With regularity, a witness in court will state that he or she is 100% confident that she is identifying the person whom they actually saw. But is the identification of a “confident” witness more reliable than the identification of a less certain one? High profile exonerations, in which the eyewitness was “certain but wrong” indicate that witness confidence might

not be a particularly good indicator of reliability.<sup>19</sup> Research has verified this, showing that witnesses who are highly confident in their identifications are only slightly more likely to be correct as compared to witnesses who are less sure of the identifications. In other words, the correlation between confidence and accuracy is weak.<sup>20</sup> Eyewitness accuracy is a complex product of many factors. Among others, factors such as the witness' eyesight and concentration, the amount of lighting, the length of exposure, the quality of the view, whether a weapon or violence was involved, and the procedures used by police to obtain the identification all help to determine whether a particular identification is an accurate one.

By contrast, confidence is a product of personality and social factors of which accuracy is only a minor one: A witness' confidence will also depend on how self-confident the witness is to begin with and what interactions the witness has had with others to boost or undermine that confidence. For example, studies have shown that confidence is highly malleable and can be substantially increased by many post-event factors, including confirming feedback.<sup>21</sup> Witness confidence can accordingly increase after the incident through the use of procedures that do not in any way enhance the accuracy of the original identification and may undermine it. The weak correlation between confidence and accuracy that may have existed immediately after the incident is thus often destroyed after a witness has had their confidence level raised or lowered through "contaminating" exposure to feedback.

Because the research seems completely counterintuitive – that is, without the research discussed above it would seem logical that a more

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<sup>19</sup> Jennifer Thompson, "*I Was Certain, but I Was Wrong*" New York Times, editorial section, June 18, 2000.

<sup>20</sup> In some instances, studies have shown no meaningful correlation between confidence and accuracy. See, e.g. 60 Alb. L. Rev. 389; 418, 79 Ky. L.J. 259, 276, *citing* Cutler, Penrod & Martens, *The Reliability of Eyewitness Identification*, 11 L. & HUM. BEHAV. 233, 234 (1987); Deffenbacher, *Eyewitness Accuracy and Confidence*, 4 L. & HUM. BEHAV. 243, 258 (1980); Wells & Murray, *Eyewitness Confidence* in G. WELLS & E. LOFTUS, *supra* note 3, at 155.

<sup>21</sup> Bradfield, Wells & Olson, *The Damaging Effect Of Confirming Feedback on the Relation Between Eyewitness Certainty And Identification Accuracy*, 87 Journal Of Applied Psychology 112 (2002).

certain witness would be a more accurate one – it would be surprising if jurors understood the relationship between confidence and accuracy as a matter of common sense. And, in fact, the PDS survey results demonstrate that they do not. For example, one survey question asked respondents to compare the reliability of a witness who was “absolutely certain” of an identification with that of a witness who was not. A plurality of respondents, 31%, found the “absolutely certain” witness to be “much more reliable.” Moreover, only 17% of the respondents correctly understood the slight correlation between confidence and accuracy. Thus, 83% of the respondents demonstrate a fundamental misunderstanding about the confidence/accuracy correlation.<sup>22</sup>

Another confidence/accuracy survey question confirmed these findings. Nearly 40% of survey respondents agreed that “an eyewitness’ level of confidence in his or her identification is an excellent indicator of that eyewitness’ reliability.” Thus, 4 out of 10 jurors, absent education on this subject by a qualified expert, would assess witness testimony under the mistaken impression that there is a very strong correlation between witness confidence and witness accuracy. Moreover, even though 55% of polled jurors correctly reject the notion that confidence is an “excellent indicator” of accuracy, the responses to the earlier question demonstrate that these jurors do not understand whether any confidence/accuracy correlation exists and, if so, what that correlation is. Thus, these survey results also make clear that jurors have no meaningful idea of how to evaluate witness statements of confidence and are likely to substantially overestimate the reliability of a confident witness.

### *Police Officers*

It may seem logical to assume that law enforcement officials, because they are trained observers, make better witnesses than lay citizens do. And to some extent, this assumption is true: Studies have shown that police officers are sometimes able to provide more detailed accounts of the event, and that they are sometimes less susceptible to the effects of post-event

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<sup>22</sup> Even if respondents who said that an identification of a confident witness is “equally reliable” as one by a less confident witness are treated as having correctly understood this phenomenon, 59% of the respondents – more than half of the jurors on any given jury – demonstrate a fundamental misunderstanding of the confidence accuracy relationship.

misinformation when compared to laypersons. But research has also shown that police officers perform no better at identifying faces than other citizens,<sup>23</sup> which means that their eyewitness identifications are generally no more reliable than anyone else's.<sup>24</sup>

To test whether jurors understood this principle, the PDS survey asked respondents to compare the reliability of an eyewitness identification by “a police officer” with the reliability of an identification by “an average citizen.” Sixty-percent (60%) of the respondents failed to understand the principle that the two identifications were equally reliable, and many of these respondents (22% of the total) believed police officer testimony to be “much more reliable.” Thus, six out of ten jurors begin each case without any meaningful understanding that police officer identifications are no better or worse than those of any other witness, and one out of every five jurors begins the trial with the mistaken impression that police eyewitness testimony is extraordinarily reliable.

### *Cross-Racial Impairment*

A variety of studies have shown that eyewitnesses experience a “cross-racial impairment” when identifying members of another race. This impairment means that eyewitnesses are superior at identifying members of their own race and have difficulty-identifying members of other races.<sup>25</sup>

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<sup>23</sup> Elizabeth F. Loftus, *Eyewitnesses: Essential But Unreliable*, 18 Psychol. Today 22, 24 (Feb. 1984)

<sup>24</sup> Brian Clifford, *Police as Eyewitnesses*, 36 New Soc'y 176 (1976) (demonstrated that police officers perform more poorly than civilians as witnesses because police officer's often have a biased interpretation of events.).

<sup>25</sup> See generally Elizabeth Loftus, *Eyewitness Testimony*, § 4.9 (3d Ed. 1997 & Supp. 1999); John P. Rutledge, *They All Look Alike: The Inaccuracy of Cross-Racial Identifications*, 28 Am. J. Crim. L. 207 (2001); Gary L. Wells & Elizabeth Loftus, *Psychological Perspectives* 1 (1984); Sheri Lynn Johnson, *Cross-Racial Identification Errors in Criminal Cases*, 69 Cornell L. Rev. 934 (1984); Stephanie J. Platz & Harmon M. Hosch, *Cross-Racial/Ethnic Eyewitness Identification: A Field Study*, 18 J. Applied Soc. Psychol. 972 (1988).

The PDS survey demonstrated that jurors do not understand this phenomenon as a matter of common sense. When asked to compare the reliability of an identification by an eyewitness “of the same race as the person being identified” with the reliability of an identification by an eyewitness “of a different race” from the suspect, almost two thirds of jurors surveyed indicated that they are ill-informed about the inaccuracy of cross-racial identification: A large plurality of the survey respondents (48%) thought cross-race and same-race identifications are of equal reliability and many of the other respondents either did not know or thought a cross-racial identification would be more reliable. Only 36% of the survey respondents would actually treat a cross-racial identification as less reliable. Thus, according to the survey data, most jurors begin a criminal trial without any meaningful understanding of the limitations of cross-racial identifications.

*Juror Misunderstanding of Specific Reliability Factors  
Regarding The Use of Procedures*

*Show-Ups*

A show-up occurs when police display a single suspect to the witness and ask whether that suspect is culprit. Both the Supreme Court and the Attorney General have recognized the inherently suggestive nature of show-up procedures,<sup>26</sup> and the Supreme Court has expressly acknowledged the greater risk of misidentification involved in show-ups as compared to

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<sup>26</sup> See *Simmons v. United States*, 390 U.S. 377, 383 (1968) (“[The danger of misidentification] will be increased if the police display to the witness only the picture of a single individual who generally resembles the person he saw, or if they show him the pictures of several persons among which the photograph of a single such individual recurs or is in some way emphasized.”); *Stovall v. Denno*, 388 U.S. 293, 302 (1967) (“the practice of showing suspects singly to persons for the purpose of identification, not as part of a lineup, has been widely condemned.”); *Moore v. Illinois*, 434 U.S. 220, 229 (1977) (“Indeed, a one-on-one confrontation generally is thought to present greater risks of mistaken identification than a lineup.”); United States Department of Justice, *Eyewitness Evidence: A Trainer’s Manual for Law Enforcement* 30 (Sept. 2003) (discussing how to reduce the inherent suggestiveness of show-up procedures).

lineups.<sup>27</sup> There is strong empirical evidence that show-ups are more likely to yield false identifications than properly constructed lineups. The risk of generating an unreliable identification by using a show-up identification procedure, moreover, grows substantially more pronounced over time (show-up identifications begin to become demonstrably less reliable only two hours after the incident),<sup>28</sup> especially if the suspect is wearing clothing similarly to the culprit's.

The PDS survey indicates substantial confusion among potential jurors about the reliability of show-up procedures. While this was one of the few areas where even a bare majority of potential jurors appear to have a basic grasp of the “inherently suggestive” nature of show-up procedures, a substantial minority of jurors did not understand this concept at all. Specifically, over a quarter of potential jurors believed that a show-up is either *more* reliable than a line-up procedure or that the two procedures are equally reliable. In the absence of empirical evidence on the subject of show-up procedures, these mistaken either jurors might easily lead the other jurors astray, particularly if they happen to be the more vocal or persuasive of the group.

### *Lineup Instructions*

A lineup procedure is one where the witness is shown a group of people and asked to identify the suspect. Research demonstrates that during a lineup procedure eyewitnesses tend to engage in a comparative analysis, that is, they identify the person from the lineup who, in the opinion of the eyewitness, *looks most like* the culprit relative to other members of the lineup.<sup>29</sup> Where the actual culprit is not in the lineup, this relative judgment

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<sup>27</sup> See *supra* note 23.

<sup>28</sup> Yarmey, A. D., Yarmey, M. J., Yarmey, A. L. (1996). *Accuracy of eyewitness identifications in showups and lineups*. *Law and Human Behavior*, 20 (4), 459-477.

<sup>29</sup> For studies supporting the relative judgment phenomenon, see G.L. Wells & E. Seelau, *Eyewitness identification: Psychological research and legal policy on lineups*, *Psy. P. Pol. & L.*, 1, 765-91 (1995); G.L. Wells, *What do we know about eyewitness identification?* *American Psychologist*, 48, 553-

process poses a grave danger of misidentification because there will always be someone who looks more like the culprit than the remaining lineup members.

One way to prevent witnesses from relying on relative judgments is by explicitly warning them that the culprit may or may not be present in the lineup. Research has demonstrated that a witness' willingness to make a relative judgment about the culprit, in a lineup where the culprit is in fact absent, falls significantly when such an instruction is given.<sup>30</sup> Moreover, research demonstrates that this instruction still results in the same number of accurate identifications when the culprit is actually present in the lineup. In other words, this instruction does not dissuade an eyewitness from making an actual identification as opposed to a comparative identification. In short, an instruction that the culprit "may or may not be in the lineup" reduces the willingness of a witness to use the relative judgment process – although it does not end the practice of relative judgments altogether – without decreasing the number of accurate witness identifications.

Potential jurors do not appear to understand the role or importance of such instructions at all. In fact, over half of the respondents in the PDS survey (51%) thought that an identification would be *more* reliable if the eyewitness was *not* instructed about the culprit's potential absence, and an additional 21% either thought it did not matter whether such an instruction was given or were not sure. By contrast, only 28% of the respondents

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571 (1993); G.L. Wells, *The psychology of lineup identifications*, *Journal of Applied Social Psychology*, 14, 89-103 (1984).

<sup>30</sup>Wells & Seelau, Gary L. Wells & Eric P. Seelau, *Eyewitness Identification: Psychological Research and Legal Policy on Lineups*, 1 Psychol., Pub. Pol'y, & L. 765, 765 772-73 (1995). *See also* Brian L. Cutler & Steven D. Penrod, *Mistaken Identification: The Eyewitness, Psychology, and the Law* 101, 115-23 (1995) (concluding that "the research shows that biased instructions substantially increase the likelihood of false identifications"). *See* R.S. Malpass & P.G. Devine, *Eyewitness Identification: Lineup instructions and the absence of the offender*, *Journal of Applied Psychology*, 66, 482-89 (1981) (failure to give explicit instructions to the eyewitness that explain that the perpetrator might not be in the lineup leads subjects to select someone from the lineup regardless of whether the perpetrator is present. But, even when these instructions are given, eyewitnesses tend to make relative judgments.)

thought that a lineup would be more reliable if the eyewitness *was* instructed that the actual culprit “may or may not be in the lineup.” These numbers were virtually the same for photographic arrays: An equal number (51%) thought an identification from a photo array would be *more* reliable if the eyewitness was *not* instructed about the culprit’s potential absence, while an additional 19% either thought it did not matter whether such an instruction was given or were not sure. Similarly, only 30% of the respondents correctly understood that an identification from a photo array is more reliable if the witness is instructed that the actual culprit “may or may not be in the photo array.” The survey thus demonstrates substantial juror confusion on the importance of lineup and photo array instructions; a substantial majority of jurors begins each trial with a fundamental misunderstanding about the manner in which such instructions can affect the accuracy of an identification.

### *The Use Of Sequential Identification Procedures*

Another way to avoid the relative judgment problem is the use of a sequential lineup. Unlike the traditional lineup in which the eyewitness views the members simultaneously, in the sequential lineup the eyewitness views the members one at a time and decides individually whether each person is the culprit or not before viewing the next member. Studies have shown that this procedure eliminates a significant number of mistaken identifications, particularly when the witness does not know how many members will be viewed and thus cannot anticipate when the process will end. The sequential procedure produces fewer mistaken identifications in lineups that do not contain the actual perpetrator, but it does not significantly impair eyewitnesses’ abilities to identify the perpetrator in perpetrator-present lineups.<sup>31</sup>

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<sup>31</sup> See Wells and Loftus’ Chapter 9, p.158, citing R.C.L. Lindsay, A.J. Lea & J.A. Fullord, *Sequential lineup presentation: Technique matters*, Journal of Applied Psychology, 76, 741-45 (1991); B.L. Cutler & S.D. Penrod, *Improving the reliability of eyewitness identification: Lineup construction and presentation*. Journal of Applied Psychology, 73, 281-90 (1988); R.C.L. Lindsay & G.L. Wells, *Improving eyewitness testimony from lineups: Simultaneous verses sequential lineup presentations*. Journal of Applied Psychology, 70, 556-64 (1985); see also Steblay et al’s meta-analysis of 25 studies which showed that a sequential lineup reduced the chances of mistaken identification in culprit-absent lineups by nearly ½, but was also

Potential jurors are unaware of the benefits of sequential identifications procedures, and particularly in-person sequential procedures. When asked to compare the reliability of a procedure in which a “witness views a lineup of potential suspects standing next to one another” with a procedure in which the witness “views potential suspects one at a time,” over three-quarters of the respondents (76%) either thought the reliability of a simultaneous live lineup was better than or equal to that of the sequential lineup, or were not sure which process was better. With respect to photo lineups, the numbers are similar: 61% of the respondents either thought the reliability of a simultaneous photo lineup was better than or equal to that of a sequential photo lineup, or were not sure which process was better. In both cases, therefore, potential jurors seemed not to understand the importance of a sequential lineup in securing an accurate identification.

#### *The use of “double blind” procedures*

Empirical research has shown that the behavior of the person who administers the identification procedure can influence the reliability of eyewitness testimony itself.<sup>32</sup> If the person who administers the live or photographic lineup is the case detective or some other police officer who knows the identity of the suspect, a substantial danger exists that the person conducting the lineup will communicate the suspect’s identity to the witness.<sup>33</sup> This can happen consciously or unconsciously, and through both

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associated with a reduction in accurate identification rates in culprit-present lineups. N.M. Steblay, S. Fulero & R.C.L. Lindsay, *Eyewitness accuracy rates in sequential and simultaneous lineup presentations: a meta-analytic comparison*. 25 *Law, & Hum. Behav.* 459-74.

<sup>32</sup> See, e.g. 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) (providing studies demonstrating confirming feedback given at the time of an initial identification made subjects significantly more confident of their identification of a suspect); Ronald P. Fisher, *Interviewing Victims and Witnesses of Crime*, 1 *Psychol., Pub. Pol'y, & L.* 732, 753-58 (1995) (discussing how interviewers’ expectations affect subjects’ performance).

<sup>33</sup> Gary L. Wells et al., *Eyewitness Identification Procedures: Recommendations for Lineups and Photospreads*, 22 *Law & Hum. Behav.*

verbal and non-verbal means. As noted, moreover, the administrator of the lineup can also cause mistaken eyewitnesses to develop high levels of false certainty by providing post-identification feedback about the supposed accuracy of the identification. All of these problems can be substantially reduced through the use of “double blind” procedures – that is, by having lineups administered by someone who does not know which lineup member is the suspect and which ones are fillers.

The PDS survey indicates substantial confusion among potential jurors about the importance of “double blind” procedures, particularly in connection with photo lineups. With respect to live lineups, a bare majority of potential jurors (55%) appears to have at least some grasp of the importance of conducting “a lineup where the police officer running the lineup is unaware who the suspect is,” although a substantial minority of jurors (45%) do not understand the importance of this concept at all. Specifically, one fifth of the jurors incorrectly believe that a live lineup where police know the identity of the suspect is *more* reliable than a “double blind” procedure, and another 27% of respondents believe either that the two procedures are equally reliable or were unsure of the difference between the two procedures. This means that approximately 5 jurors in a panel of 12 will start a trial with a basic misunderstanding about the importance of “double blind” procedures – a misunderstanding that will obviously continue throughout the trial and into jury deliberations in the absence of accurate information.

This problem is even more pronounced with photographic arrays. A majority of potential jurors (52%) do not understand the importance of conducting “a photo array where the police officer running the photo array is unaware who the suspect is.” Specifically, 30% of the jurors incorrectly believed that a photo array where police know the identity of the suspect is *more* reliable than a “double blind” procedure, and another 22% of respondents believed either that the two procedures are equally reliable or were unsure of the difference. This means that approximately half the jury in any D.C. trial will begin with a basic misunderstanding about the importance of “double blind” photo procedures.

### *Conclusions*

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603, 627-29 (1998) (police officers aware of the perpetrator’s identity can unconsciously bias an eyewitness’ lineup selection).

The PDS survey documents that a substantial number of jurors come to each trial with basic misunderstandings about the way memory works in general, and about specific factors that can affect the reliability of eyewitness identifications. The findings undermine previous judicial speculation about what jurors know as a “matter of common sense.” As an empirical matter, the PDS poll shows that significant numbers of jurors (often substantial majorities) do not understand the concepts of weapon focus, the effects of stress, the tendency of witness’ to overestimate exposure time, and the lack of meaningful correlation between witness confidence at trial and the accuracy of eyewitness identification. Jurors also place unwarranted stock in the eyewitness abilities of police officers, they overestimate the reliability of cross-racial identifications, and they have no meaningful understanding of how police procedures can affect the accuracy of an eyewitness identification.

For now, it will be enough to say that lawyers need to confront courts with these findings as quickly as possible in order to ensure that the introduction of expert testimony to assist jurors in evaluating the reliability of eyewitness identifications is not improperly precluded because of erroneous judicial assumptions about jurors’ common sense understandings of the subject. Future articles may explore how these findings can be used in the litigation of eyewitness identification issues in criminal cases, and how the various juror beliefs about eyewitness identification might become important during jury selection.