Effects of DNA and Eyewitness Evidence on Juror Decisions

The present experiment investigated whether DNA evidence, eyewitness evidence, or a combination of both was more persuasive to mock jurors. The study also explored whether varying the credibility of the testimony affected persuasiveness. The researchers hypothesized that the combination of eyewitness and DNA evidence would be the most persuasive to jurors. Eyewitness evidence would be more persuasive than DNA evidence, and credible testimony would be more persuasive than discredited testimony. One hundred-fifty college students read an excerpt from a court transcript describing a first-degree murder trial. Participants rendered a verdict and answered questions concerning confidence, understanding, reliability, and persuasiveness of testimony. The analyses partly supported the hypotheses. DNA evidence was more persuasive, reliable, influential, and less likely to be viewed as wrong than eyewitness evidence, regardless of whether it was discredited. DNA evidence elicited more guilty verdicts, and jurors were more confident in their verdict. We discuss these results in light of the 2-routes-to-persuasion theory.

Naomi J. Freeman
Diana L. D. Punzo*
Earlham College

The persuasiveness of different types of evidence in criminal cases has been an ongoing issue in the field of forensic psychology. For years, researchers have studied the influence of accuracy, confidence, and reliability of eyewitness testimony on juror decisions (Brigham & Bothwell, 1983; Cutler, Penrod, & Martens, 1987; Loftus, 1980; Wrightsman, 1991). Eyewitness testimony and its effect on jurors are topics of interest not only to the psychological world, but also to the legal community because “the evidence produced by an eyewitness often makes the difference between an unsolved crime and a conviction” (Wrightsman, 1991, p. 157). Often, however, eyewitnesses are inaccurate in their identification of perpetrators (Wrightsman, 1991). Mistakes in identification can occur from the time when the crime is committed up to the time when the witness testifies at the trial. In addition, new experiences, leading questions, or police lineups can alter memories. Despite the unreliability of eyewitness identification, research has found that jurors are heavily persuaded by this form of evidence (Loftus, 1980; Wrightsman, 1991).

Many theories have attempted to explain why eyewitness testimony is such a powerful form of evidence. Elizabeth Loftus (1980) has suggested that people do not have a general understanding of the working of human memory. People tend to believe that memory works similar to a videotape recorder. However, Loftus has suggested that, in a way, people actually construct their memories. Loftus also argues that in everyday life truly precise memories are very rarely demanded of people. The common errors in recollection that occur daily go unnoticed because they are not particularly important. Because people do not understand the exact workings of human memory and tend to trust their own memories, they also tend to trust the memories of others. Therefore, jurors are more likely to trust the memory of an eyewitness, especially a confident eyewitness, than other forms of evidence. Other witnesses, such as experts, can provide only a small piece of information; an eyewitness, however, can describe events that occurred

Author note. Naomi J. Freeman, Earlham College, and Diana L. D. Punzo, PhD, Earlham College Department of Psychology.

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Correspondence concerning this article should be addressed to Naomi J. Freeman at freemna@earlham.edu.
in detail to the jurors, thus providing a great deal of information for the mental construction of events in jurors’ minds. Loftus suggested that it might be easier for jurors to work with a smooth recollection of the events, even if they are inaccurate, than to have to piece together fragments of the event on their own.

To test her theory that people will be more persuaded by eyewitness than other forms of evidence, Loftus (1980) asked participants to read a case in which a bad check had been written to purchase a television. Participants participated in one of four evidence conditions: (a) an eyewitness (the store clerk) who positively identified the defendant as the man who wrote the check, (b) a polygraph expert who testified that a polygraph test stated the defendant was lying when he claimed he did not write the check, (c) a fingerprint expert who examined prints left on the counter of the store by the person who wrote the check and the fingerprints matched the defendant’s prints, and (d) a handwriting expert who examined the check and claimed that it matched the defendant’s handwriting. Results indicated that convictions were highest in the eyewitness condition (78%), followed by fingerprints (70%) and polygraph test (53%), and lowest in the handwriting condition (34%). These results confirm that eyewitness evidence is one of the most persuasive kinds of evidence that can be presented.

Research on whether juries believe discredited eyewitnesses has produced equivocal results. Loftus (1980) has reported that jurors place a great deal of weight on eyewitness testimony, even if that testimony is suspect or discredited. McCloskey and Egeth (1983) conducted a meta-analysis of eyewitness research and determined that “jurors” often disregard eyewitness testimony that has been convincingly discredited. Kennedy and Haygood (1992) have argued that jurors are aware of the unreliability of eyewitnesses. The findings on the persuasiveness of a discredited eyewitness are, thus, inconclusive.

The persuasiveness of other types of evidence, such as deoxyribonucleic acid (DNA) evidence, has been less extensively investigated compared to eyewitness evidence. DNA profiling is a technique that allows an individual to be identified by comparing a sample of DNA material from the crime scene, such as hair, blood, or semen, to the DNA of a suspect (Joyce, 1990). A forensic examiner often uses statistical language to present DNA evidence. For example, a DNA forensic examiner is likely to state that the blood found at a crime scene matches the defendant’s blood and that there is only a 2% chance that a randomly selected person from the population would have that DNA pattern or that 1 out of every 170 million to 1.2 billion people would have that DNA pattern.

Although DNA evidence is extremely reliable, it is often ignored by jurors (Goodman, 1992; Smith, Penrod, Otto, & Park, 1996; Wells, 1992). Goodman (1992) studied the extent to which prospective jurors comprehend and use probabilistic evidence when rendering a verdict. Participants read a court transcript describing a homicide. Goodman varied the frequency with which DNA from blood found at the crime scene matched the defendant. Results indicated that jurors’ estimates of guilt were lowest when the likelihood of a random match between the blood found at the crime scene and the blood type of the defendant was greatest (Goodman, 1992). She also found that the jurors recognized that the scientific evidence was significantly valuable, but they “failed to make fine distinctions between probability evidence that were mildly incriminating, moderately incriminating, and strongly incriminating” (Goodman, 1992, p. 371).

When Goodman (1992) compared the weight mock jurors placed on the statistical evidence to a Bayesian analysis, which predicted how much weight jurors should have given that evidence, she found that mock jurors underused the scientific evidence in reaching a verdict. Additional research by Wright, MacEachern, Stoffer, and MacDonald (1996) supported Goodman’s findings and suggested that people do not understand statistical evidence and, therefore, are reluctant to use it when rendering a verdict.

In order to discover if people are reluctant to make guilty decisions when the evidence is based only on statistical evidence, Wells (1992) conducted a series of five experiments. Wells concluded that even students who have a general understanding of statistical information disregard statistical evidence when it is presented.

In their review of jurors’ use of scientific evidence, Cooper, Bennett, and Sukel (1996) argued that most jurors are not able to understand or comprehend legal concepts or scientific data. People who would likely understand this evidence, such as college students, lawyers, and doctors, are often exempt from serving on juries. Theories of persuasion (Petty & Cacioppo, 1981) suggest that when evidence is complex or difficult to understand, jurors will take the peripheral route to persuasion and base their decision on factors other than the strength of the argument, such as the expert’s credibility. Cooper et al. (1996) tested this hypothesis and discovered that when mock jurors evaluated extremely complex
scientific evidence, they based their verdict on other cues besides the evidence, such as credibility of the witness. The more complex the evidence, the more jurors relied on the credibility of the witness to make a decision in the case. Taken together, these results suggest that when jurors view complex scientific testimony, such as DNA evidence, factors other than the content of the testimony will influence believability.

The purpose of the present experiment was to examine the relative importance of eyewitness evidence and DNA evidence to mock jurors. Participants read an excerpt of a court transcript describing a first-degree murder trial. The transcript contained either eyewitness evidence, DNA evidence, or both types of evidence. We also manipulated the credibility of the testimony (either credible or discredited). After the participants read the transcript, they rendered a verdict in the case and answered several questions concerning understanding of testimony, confidence in verdict, credibility of witness, and persuasiveness of testimony.

Based on the results of previous research (Goodman, 1992; Loftus, 1980; Wells, 1992) and the theory of persuasion espoused by Petty and Cacioppo (1981), we hypothesized that the combination of the eyewitness and DNA evidence would be the most persuasive to jurors. Eyewitness evidence would be more persuasive than DNA evidence, and credible testimony would be more persuasive than discredited testimony.

Method

Participants

One hundred fifty college students (107 women, 43 men) participated in one of six different experimental conditions. Participants, ages 18 to 23, attended either Ohio Wesleyan University or Earlham College. Most participants received course extra credit in return for their participation.

Materials and Procedure

The researcher told participants only that the experiment was about juror’s perception of criminal cases. Participants completed the experiment in groups ranging from 5 to 40 participants. Participants received excerpts from a court transcript and were instructed to read the transcript carefully and to imagine they were real jurors serving on the case. An attorney assisted with the writing of the court transcripts, which were written specially for this study. There were two independent variables: (a) the type of evidence that was being presented, either eyewitness evidence, DNA evidence, or both types of evidence; and (b) the credibility of the testimony, either credible testimony or one that had been discredited through a cross-examination. In the combined condition, in which participants evaluated both types of evidence, the order was counterbalanced; half the participants read the DNA evidence first, whereas the other half read the eyewitness evidence first. Thus, there were six experimental conditions to which participants in each experimental session were randomly assigned. Each experimental condition received a different color court transcript. For example, participants in the eyewitness credible condition received a purple transcript, whereas participants in the combined discredited condition read a blue transcript. Participants read a direct examination as well as a cross-examination in all conditions.

In the eyewitness credible condition, the prosecution presented evidence that an eyewitness saw the defendant running from the scene of the crime holding a knife. In addition, this eyewitness picked the defendant out from a lineup, and during the trial, identified the defendant, David K. Johnson, as the perpetrator. In the cross-examination, little damage was done to the witness’s credibility. The eyewitness testified that he did not need glasses at night, that there was plenty of light in the area, and that he got a good look at the defendant.

In the eyewitness discredited condition, participants read the same prosecution evidence used in the eyewitness credible condition, but in addition, they received a defense attorney’s cross-examination of the eyewitness in which he challenged the credibility of the eyewitness. The defense attorney pointed out that the eyewitness had very poor eyesight and was not wearing his glasses the night of the murder. The defense also presented evidence that stated it was dark the night of the murder and there was poor lighting in the area, which would have made identification of the perpetrator extremely difficult.

In the DNA credible condition, the prosecution presented a DNA forensic examiner who explained what DNA is and the testing process. The DNA expert then stated that he tested two items for this case: blood retrieved from the sidewalk outside the victim’s house and samples from under the fingernails of the victim. The DNA expert testified that the profile from the two DNA items matched that of the defendant, David K. Johnson. The results from the DNA testing were presented in frequencies. Jurors read that these patterns occur in 1 out of every 170 million to 1.2 billion people. In the cross-examination, the forensic examiner testified to the number of hours put into the case and that the lab had no previous errors on the state proficiency tests.

In the DNA discredited condition, participants viewed the direct examination used in the DNA credi-
ible condition, but were then presented with a cross-examination that questioned the reliability of DNA testing. Previous lab errors were presented as well as possibilities that the DNA evidence was contaminated.

In the combined credible condition, participants read a combined court transcript of the eyewitness credible condition and the DNA credible condition. Participants in the discredited combined condition viewed the same materials used in the eyewitness discredited condition combined with the materials used in the DNA discredited condition. After they had read the designated court transcript, participants gave the researcher their transcript before receiving the questionnaire to ensure that they did not refer back to the transcripts while answering questions. After the transcript was collected, participants completed a questionnaire. Participants rendered a verdict, either guilty or not guilty, and then indicated their confidence in that verdict. Other questions concerned understanding of evidence, credibility of witness, accuracy and reliability of the testimony, and persuasiveness, importance, and influence of testimony. Participants answered questions on a Likert-type scale ranging from 1 to 9 in which 1 was less and 9 was more of the quality being asked. The participants in the eyewitness and DNA conditions answered 18 questions, whereas participants in the combined conditions answered 32 questions. Each participant completed the questionnaire individually without knowledge of other participants’ responses. After participants completed all parts of the measures, they were debriefed and thanked for their time.

Results

Preliminary Analyses

In the combined condition, composite scores for each dependent variable were obtained by taking the average of the eyewitness and DNA scores. Each condition’s court transcript was on different color paper; therefore, in order to determine whether the transcript color was a confounding variable, 48 additional participants were administered the eyewitness credible transcript, with 6 participants receiving each of the eight colors. A one-way analysis of variance (ANOVA) compared the effect of color of the court transcript on verdicts, confidence in verdict, and degree of guilt. No significant effects were discovered, indicating that color of transcript had no effect on these dependent variables.

A preliminary analysis also compared the responses of men and women on several of the dependent variables. No significant differences were revealed; therefore, this variable was not examined further.

A two-way ANOVA was conducted as a manipulation check to determine if type of evidence and credibility of testimony affected witness credibility. This analysis ensured that, in fact, there was a significant difference between the credible and discredited conditions. A significant interaction was revealed, \( F(2, 144) = 3.127, p < .05 \), indicating that the credibility of testimony interacted with type of evidence to influence credibility of witness. The manipulation check indicated that the credibility manipulation worked only in the eyewitness condition. Neither the DNA nor the combined condition revealed a significant difference in mean witness credibility between the credible and discredited conditions. Although there was a main effect for credibility of testimony, \( F(1, 144) = 23.515, p < .01 \), this main effect was due entirely to the eyewitness condition. It appears that one cannot discredit a DNA witness. It should also be mentioned that the main effect for type of evidence was significant, \( F(2, 144) = 38.556, p < .01 \). Mock jurors rated the DNA evidence as more credible than the combined or the eyewitness evidence. Participants viewed the DNA evidence as more credible regardless of whether the testimony was discredited or not.

All data were analyzed using two-way ANOVAs to determine if type of evidence and credibility of testimony had an effect on the dependent variables. Post hoc analyses were conducted with least significant difference (LSD) tests.

Guilty Verdicts and Confidence Ratings

Table 1 shows the mean scores and standard deviations for degree of guilt and confidence in verdict for each condition. A significant main effect for type of evidence was found for confidence in verdict and degree of guilt of defendant, \( F(2, 144) = 7.028, p < .01 \), and \( F(2, 138) = 2.83, p < .01 \), respectively. Participants in the eyewitness conditions rated the defendant as less guilty \( (p < .05) \) and were less confident \( (p < .05) \) in their verdict than participants in either the DNA only or combined conditions, which did not significantly differ.

Tables 2 and 3 show the results for the variable of guilty verdicts. We conducted chi-square tests of independence to determine if type of evidence and credibility of testimony had an effect on verdict. A significant effect for type of evidence was discovered, \( \chi^2(5, N = 150) = 29.76, p < .01 \), indicating that the DNA condition produced more guilty verdicts than was expected by chance, whereas the eyewitness condition yielded fewer guilty verdicts than was expected by chance. Results confirmed a significant effect for credibility of testimony, \( \chi^2(1, N = 150) = 3.86, p < .05 \). Participants in the credible conditions were more
TABLE 1

Means and Standard Deviations of Ratings of Guilt and Confidence as a Function of Type of Evidence and Credibility of Testimony

<table>
<thead>
<tr>
<th>Dependent variables</th>
<th>Eyewitness</th>
<th>DNA</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Credible</td>
<td>Discredited</td>
<td>Credible</td>
</tr>
<tr>
<td>Degree of guilt</td>
<td>$5.43 \pm 1.61$</td>
<td>$4.97 \pm 2.12$</td>
<td>$7.09 \pm 1.50$</td>
</tr>
<tr>
<td>Confidence in verdict</td>
<td>$5.08 \pm 2.14$</td>
<td>$5.29 \pm 1.92$</td>
<td>$6.96 \pm 1.31$</td>
</tr>
</tbody>
</table>

Note. Higher scores indicate more of the attribute.

likely to vote guilty than participants in the discredited conditions.

**Persuasiveness and Importance of Evidence**

Table 4 shows the mean scores and standard deviations for persuasiveness of evidence and importance of evidence. Results revealed a significant main effect for credibility of testimony on the variable of persuasiveness, $F(1, 144) = 5.582, p < .05$, suggesting that the more credible the testimony, the more persuasive it was to prospective jurors. A significant main effect for type of evidence was also discovered, $F(2, 144) = 6.137, p < .01$. Post hoc tests showed that eyewitness evidence was less persuasive than the combined and DNA conditions ($p < .05$); however, there was no significant difference between the DNA and the combined conditions.

The two measures, importance of evidence to the verdict and influence of testimony, were combined by adding the two scores to make a composite score for the variable of “importance.” A significant main effect for type of evidence was revealed for the variable “importance,” $F(2, 144) = 10.318, p < .01$. Post hoc analyses showed that the DNA evidence was

TABLE 2

Verdict as a Function of Type of Evidence

<table>
<thead>
<tr>
<th>Type of evidence</th>
<th>Eyewitness</th>
<th>DNA</th>
<th>Combined</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guilty</td>
<td>19</td>
<td>45</td>
<td>36</td>
<td>100</td>
</tr>
<tr>
<td>Not guilty</td>
<td>30</td>
<td>5</td>
<td>15</td>
<td>50</td>
</tr>
<tr>
<td>Total</td>
<td>49</td>
<td>50</td>
<td>51</td>
<td>150</td>
</tr>
</tbody>
</table>

TABLE 3

Verdict as a Function of Credibility of Testimony

<table>
<thead>
<tr>
<th>Credibility of testimony</th>
<th>Verdict</th>
<th>Credible</th>
<th>Discredited</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guilty</td>
<td>57</td>
<td>43</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Not guilty</td>
<td>20</td>
<td>30</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>77</td>
<td>73</td>
<td>150</td>
<td></td>
</tr>
</tbody>
</table>

TABLE 4

Means and Standard Deviations of Ratings of Persuasiveness and Importance of Evidence as a Function of Type of Evidence and Credibility of Testimony

<table>
<thead>
<tr>
<th>Dependent variables</th>
<th>Eyewitness</th>
<th>DNA</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Credible</td>
<td>Discredited</td>
<td>Credible</td>
</tr>
<tr>
<td>Persuasive</td>
<td>$5.88 \pm 2.03$</td>
<td>$5.46 \pm 2.13$</td>
<td>$6.73 \pm 1.28$</td>
</tr>
<tr>
<td>Importance</td>
<td>$13.04 \pm 4.23$</td>
<td>$12.50 \pm 4.93$</td>
<td>$15.62 \pm 2.74$</td>
</tr>
</tbody>
</table>

Note. Higher scores indicate more of the attribute.
significantly more important ($p < .05$) to the verdict than the eyewitness evidence or the combined evidence. No significant difference was found between the eyewitness and combined conditions.

**Understanding of Evidence**

Table 5 shows mean scores and standard deviations for the variables understanding of evidence, technicality of evidence, and difficulty of evidence. A significant main effect for type of evidence was found for the variables understanding of evidence, $F(2, 144) = 11.321$, $p < .01$, technicality of evidence, $F(2, 144) = 15.277$, $p < .01$, and difficulty of evidence, $F(2, 144)$, $p < .01$. Post hoc LSD tests revealed that eyewitness testimony yielded significantly ($p < .05$) more understanding of evidence than both the combined and DNA evidence; however, DNA evidence did not differ from the combined condition. In addition, the DNA evidence was viewed as significantly ($p < .05$) more technical than both the eyewitness evidence and the combined evidence. The fact that no significant difference was found between the eyewitness and combined evidence implies that mock jurors did not believe the combined evidence to be any more technical than the eyewitness evidence. Consistent with the previous findings, participants found the DNA evidence more difficult to understand than the combined evidence ($p < .05$), and eyewitness evidence, which was the least difficult to understand.

**Accuracy of Testimony and Witness**

Table 6 shows the means and standard deviations for the variables likelihood of errors and reliability of evidence. A significant main effect for type of evidence on likelihood of errors was found, $F(1, 144) = 13.421$, $p < .01$. Participants believed that there was a greater chance that the eyewitness was wrong in his identification than that the lab had made errors during the DNA testing.

We created the variable, reliability of evidence, by adding together the scores for the ratings of reliability of testimony and believability of witness. ANOVAs yielded significant main effects for credibility of testimony, $F(1, 144) = 14.383$, $p < .01$, and type of evidence, $F(2, 144) = 25.837$, $p < .01$, on the variable of reliability of evidence. Participants viewed the....

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**TABLE 5**

Means and Standard Deviations of Ratings of Understanding of Evidence as a Function of Type of Evidence and Credibility of Testimony

| Dependent variables | Eyewitness | | | | DNA | | | | Combined | | |
|---------------------|------------|----------------|----------------|----------------|------------|----------------|----------------|----------------|----------------|----------------|
|                     | Credible   | Discredited   | Credible   | Discredited   | Credible   | Discredited   |
| understood          | M          | SD            | M          | SD            | M          | SD            |
| Understanding        | 8.08       | 1.68          | 7.83       | 1.79          | 6.73       | 1.25          | 6.38       | 1.66          | 6.98       | 1.24          | 7.20       | 1.17          |
| Technicality        | 5.48       | 2.53          | 5.25       | 2.12          | 7.42       | 1.24          | 6.75       | 1.59          | 5.28       | 1.25          | 5.13       | 1.47          |
| Difficulty          | 2.04       | 1.01          | 1.88       | .78           | 4.99       | 2.23          | 4.59       | 1.96          | 3.70       | 1.46          | 3.22       | 1.43          |

Note. Higher scores indicate more of the attribute.

**TABLE 6**

Means and Standard Deviations of Ratings of Accuracy of Testimony and Witness as a Function of Type of Evidence and Credibility of Testimony

| Dependent variables | Eyewitness | | | | DNA | | | | Combined | | |
|---------------------|------------|----------------|----------------|----------------|------------|----------------|----------------|----------------|----------------|
|                     | Credible   | Discredited   | Credible   | Discredited   | Credible   | Discredited   |
| understood          | M          | SD            | M          | SD            | M          | SD            |
| Errors              | 5.44       | 2.16          | 5.58       | 2.13          | 3.62       | 1.81          | 3.63       | 1.64          | 4.48       | 1.98          | 4.30       | 1.56          |
| Reliability of evidence | 11.52 | 3.89 | 9.10 | 3.56 | 15.58 | 1.92 | 13.75 | 2.95 | 13.19 | 2.48 | 11.84 | 2.91 |

Note. Higher scores indicate more of the attribute.
credible testimony as more reliable than the discredited testimony. Participants thought the DNA evidence was more reliable than the combined evidence and the eyewitness evidence. The eyewitness was the least reliable form of evidence \((p < .05)\). It appears that adding the eyewitness evidence to the DNA evidence to produce the combined condition reduces the judgments of reliability of the DNA evidence.

**Aspects of the Witness**

Table 7 shows the means and standard deviations for the variables witness intelligence and confidence. The dependent variable intelligence of witness revealed a significant main effect for type of evidence, \(F(2, 138) = 8.444, p < .01\). Post hoc analyses showed that the witness was seen as significantly \((p < .05)\) more intelligent in the DNA conditions than in the combined or eyewitness conditions. Jurors viewed the witness in the combined conditions as significantly \((p < .05)\) more intelligent than the witness in the eyewitness conditions.

The variable confidence of the witness yielded a significant main effect for credibility of testimony, \(F(1, 138) = 10.262, p < .01\). This main effect means that mock jurors believed the witness was more confident in the credible testimony condition than in the discredited testimony condition.

**Discussion**

The purpose of the present experiment was to investigate whether certain types of evidence—DNA, eyewitness, or a combination of both—are more persuasive to mock jurors. The experiment also explored whether varying the credibility of the testimony affected persuasiveness. Results indicated that DNA evidence was more persuasive to mock jurors regardless of whether or not it was discredited. DNA evidence received the most guilty verdicts and participants were more confident in their verdict in the DNA conditions than in the combined or eyewitness conditions. The DNA evidence alone was more convincing to jurors than when it was added to the eyewitness evidence. Overall, it appeared that adding the eyewitness evidence onto the DNA evidence to create the combined conditions actually reduced the persuasiveness of the DNA evidence.

The results supported previous research (Kennedy & Haygood, 1992; McCloskey & Egeth, 1983), which indicated that discrediting a witness weakens the influence of that witness in the juror’s mind. The results, however, contradicted the findings of Loftus (1980), who suggested that jurors overestimate the accuracy of eyewitness evidence, even when it has been discredited. The results also contradicted previous DNA evidence research, which suggested that jurors ignore DNA and scientific evidence because it is too complex (Goodman, 1992; Smith et al., 1996; Wells, 1992).

The results of the present research seem to suggest that either jurors are aware of the inconsistencies and unreliability that surround eyewitness evidence and, therefore, do not place a great deal of weight on it when rendering a verdict or that jurors have more faith in DNA evidence than eyewitness evidence. Mock jurors believed the DNA expert witness more than they believed the eyewitness. In addition, participants viewed the eyewitness as less reliable, less accurate, less confident, less intelligent, and less credible than the DNA expert witness. Jurors also perceived the eyewitness evidence to be less influential and important to their decision and to be less persuasive than the DNA evidence or the combined evidence. The findings also suggest that the eyewitness was more likely to be wrong in his/her identification than the lab was to have errors in the DNA testing process. Mock jurors thought to a greater degree that the defendant was guilty in both the credible and discredited DNA conditions followed by
both the credible and discredited combined conditions, than both eyewitness conditions.

The results of this study could have profound implications not only for the psychological world, but for the legal community as well. It may be that jurors will believe an expert DNA witness regardless of whether the testimony is suspect. If this is the case, then a lawyer only needs to present the DNA evidence and it would be believed regardless of its validity. Furthermore, the more credible and intelligent the witness appears to the jurors, the more likely the evidence is to be believed.

Contrary to previous findings, eyewitness testimony does not appear to be persuasive to jurors. Jurors seem to be aware of the inconsistency and unreliability of eyewitness recollection. The results of the current research suggest that eyewitness evidence is not a powerful type of evidence, which contradicts previous research findings (Loftus, 1980). In fact, because jurors are able to take the central route to persuasion when examining eyewitness evidence, the evidence may be scrutinized more than DNA evidence, which allows the juror to take the peripheral route. When jurors take the central route, they examine and analyze the evidence, therefore, jurors would notice the unreliability and inconsistencies that surround eyewitness identification. Because of the technicality of the evidence in the DNA conditions, the mock jurors, as in the study conducted by Cooper et al. (1996), were forced to take the peripheral route to persuasion and, therefore, perceived the DNA expert witness to have greater expertise and credibility than the eyewitness.

There were several limitations of this study. Due to time constraints and lack of funding, written court transcripts were used. The use of a live courtroom setting or the use of a video recording of a trial so that jurors could actually see and hear the testimony would improve this study. The responses of the jurors to reading the evidence might be different than the responses from hearing and seeing the evidence being presented by a real person. It may be that participants are better able to process technical information when reading it than when hearing it from a witness.

In addition, the education level of the participants used in this experiment may have influenced the results. Previous research indicates that the average juror has an eighth-grade education (Cooper et al., 1996). Because we used only college students, who have a much higher education level than the average juror, the results may not generalize to the larger population. In addition, because most college students have a background in science and may have studied DNA, they may have more confidence in the reliability of DNA testing than the typical juror. Another limitation with the sample was that all participants were between the ages of 18 and 23. This age group is the least likely to actually serve on a real jury. Although one study (Kassin & Barndollar, 1992) found that students and nonstudents (adults) do not significantly differ in their sensitivity to factors that affect eyewitness evidence, the present study should be conducted again using both college students and adults to verify that the findings are robust across age groups.

Another limitation of the present study was that participants did not engage in the jury deliberation process. Participants rendered a verdict and completed the questionnaire individually without knowledge of other participants’ responses. Results may have varied if the participants had discussed their verdicts with other mock jurors.

To increase knowledge as to how jurors perceive various types of evidence, several future studies could be conducted. One possible study could address the issue of how DNA evidence is presented. The use of visual aids could affect persuasiveness of the evidence. It would be interesting to investigate how jurors’ understanding of DNA evidence is affected by the way the DNA is presented. In addition, understanding could be influenced by jurors’ previous knowledge of mathematics and science. Jurors who have a vast understanding of mathematics and science may be more prone to trust DNA and believe it is a reliable form of evidence than those jurors who are not as experienced with math and science. Further research conducted in the psychology laboratory can provide additional insight concerning the variables that influence juror decision making.

References


