RESEARCH ARTICLE

‘Objection, Your Honor! Television is not the relevant authority.’ Crime drama portrayals of eyewitness issues

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Using a coding protocol based on a juror knowledge survey, this study focused on identifying changes, if any, in the prevalence and type of media portrayals of eyewitness issues over time in television crime dramas. Content of 263 episodes of 12 popular television crime dramas from the 1980s, 1990s, and 2000s were coded for 35 specific eyewitness issues with respect to: (1) presence or absence, (2) type (e.g. explicit, implicit), and (3) meanings and implications of these presentations for eyewitness accuracy. Results demonstrated portrayals of eyewitness issues, and the broad topic of memory, generally increased since the 1980s, with prevalence highest in episodes from the 1990s. With rare exceptions, the meanings and implications of the presentation were not made explicit, but were implicitly depicted, inferred from character dialogue or episode events. In general, media portrayals failed to depict a relationship between eyewitness variables and memory accuracy, and, as a result of their omission, the relationships typically differed from those agreed upon by experts.

Keywords: juror knowledge; eyewitness testimony; television portrayal; expert testimony

Introduction

Despite compelling evidence that eyewitness testimony is fallible, many North American courts have precluded the admission of expert opinion evidence on the topic. The proffered testimony has often been declined by ruling that such knowledge is within the common experience of the triers-of-fact (Leippe, 1995; Penrod, Fulero, & Cutler, 1995; Yarmey, 2001). In contrast, surveys of juror knowledge have traditionally characterized overall lay person knowledge as low and highly variable (e.g. Deffenbacher & Loftus, 1982; Kassin & Barndollar, 1992; Yarmey & Jones, 1983). More recent findings have generally been no more favorable, with authors emphasizing the differences between potential jurors and experts in their opinions about and understanding of the issues (e.g. Benton, Ross, Bradshaw, Thomas, & Bradshaw, 2006; Schmechel, O’Toole, Easterly, & Loftus, 2006; for an exception see Read & Desmarais, 2007).

Many scholars have discussed options for improving juror knowledge or protecting against the adverse effects of mistaken juror beliefs, with some suggesting that in certain cases expert testimony could improve juror decision-making (e.g. Benton et al., 2006; Cutler & Penrod, 1995; Leippe, 1995; Leippe & Eisenstadt, 2007; Schmechel et al., 2006; Yarmey, 2001). However, there has been noticeably less focus on identifying the sources of
juror knowledge, whether consistent or inconsistent with expert opinion on the issues. Some researchers suggest that knowledge about eyewitness issues has been influenced by recent media fascination with ‘hot’ forensic psychological topics including the recovered and false memory debate, childhood abuse, and wrongful convictions (e.g. Read & Desmarais, 2007). Yet, there has been little empirical evaluation of media coverage of these topics, or of the effects of the hypothesized media coverage on jury decision-making. The former is the focus of the present paper.

In recent years, there has been considerable interest in the effects of media exposure on public perceptions and beliefs more generally (e.g. Casey & Mohr, 2005; Slater, Rouner, & Long, 2006). The results of these studies point to the media’s ability to educate and influence public perceptions. For example, the ‘CSI effect’ has been a prominent topic in the popular press (e.g. Goehner, Lofaro, & Novack, 2004; Houck, 2006; Lovgren, 2004; Tyler, 2006). The CSI effect describes the potential impact television has on today’s real jurors such that they may now have expectations about the type and quality of evidence that should be presented during the course of a trial. As a result, jurors may anticipate seeing in every trial the high-tech, beyond-a-reasonable-doubt type of evidence that is described in the Crime Scene Investigation (CSI) family of television programs. Evidence that does not meet these high standards may be judged to be insufficient, resulting in increasing acquittal rates. Alternatively, however, evidence such as fingerprints is judged to be more reliable than experts believe it to be (e.g. Smith, Stinson, Patry, Fitzsimmons, & Prosser, 2006), potentially increasing rates of conviction (O’Neil, 2007; Tyler, 2006). Television programs such as CSI and Law and Order are proposed to be an important source of lay knowledge of these and related forensic topics, affecting jurors’ understandings of ‘reality’ (e.g. Goehner et al., 2004; Lovgren, 2004).

However, despite the widespread acceptance of the CSI effect in mass media, there is little empirical support for the phenomenon to date. Instead, most discussions focus on anecdotal evidence, such as prosecutor observations (e.g. Cather, 2004). As empirical explorations of the CSI effect (or the effects of similar programs) are just now beginning to emerge (e.g. Casey & Mohr, 2005; O’Neil, 2007; Smith, Stinson, & Patry, 2007; Stinson, Smith, & Patry, 2007; York & O’Neil, 2007), we can look to research examining television dramas’ influence on public perceptions (e.g. Goidel, Freeman, & Procopio, 2006; Slater et al., 2006) and the effects of pretrial publicity on decisions by mock and real jurors (e.g. Greene, 1990; Hope, Memon, & McGeorge, 2004; Kovera, 2002; Ogloff & Vidmar, 1994; Studebaker & Penrod, 1997) for support and understanding of the role of popular media in educating our jurors. For example, Goidel et al. (2006) examined the association between television viewing (of television news and reality-based crime shows) and perceptions of juvenile crime by sampling 498 Louisiana residents. Analyses revealed an association between television viewing and (mis)perceptions that crime rates are increasing. Not surprisingly, television viewing also was associated with overestimation of the percentage of young offenders convicted of violent crimes and endorsement of imprisonment over rehabilitation.

Slater et al. (2006) examined the impact of viewing television dramas (an episode of the Home Box Office series and an episode of Law and Order) on support for controversial public policies (gay rights and marriage, and the death penalty, respectively). The authors randomly assigned 178 undergraduate university students to view one of the episodes. Results demonstrated that television dramas can influence viewers’ support for public policies, but only for one of the episodes. In contrast to viewing the Home Box Office
episode which did not have an effect on viewer support for gay rights and marriage, viewers of the *Law and Order* episode were more likely to support the death penalty (in contrast to support for the death penalty among the *Home Box Office* viewers). These findings suggest that effects of media portrayals on public opinion can be content specific.

With respect to pretrial publicity, research demonstrates that news coverage can contribute to bias in jury decision-making, generally increasing the likelihood of ‘guilty’ decisions (Greene, 1990; Hope et al., 2004; Ogloff & Vidmar, 1994). To illustrate, Hope et al. (2004) examined the effect of negative (for the accused) pretrial publicity on mock jurors’ predecisional bias (i.e. tendency to bias new evidence in favor of prosecution or defense rather than evaluating this information for its probative value) and verdicts. With 116 jury-eligible university students acting as mock jurors, the authors found a significantly higher predecision pro-prosecution bias and rates of guilty verdicts when students were exposed to negative pretrial publicity, compared to when they were not. Greene (1990) discussed the possibility of similar effects of trial-relevant publicity on jurors even in cases unrelated to the publicized one. With an interest in the extent of prejudicial pretrial information reported in the news, Imrich, Mullin, and Linz (1995) conducted a content analysis of 14 major US newspapers over an 8-week period. Analyses revealed a surprisingly low rate of potentially prejudicial publicity, in comparison to past research (e.g. Tankard, Middleton, & Rimmer, 1979) and in contrast to beliefs of legal professionals: Potentially prejudicial information was coded for only 27% of suspects described in news stories about crimes. However, as the authors suggest, any prejudicial publicity in an individual case may reduce the likelihood that the defendant will receive a fair trial.

The present study

In contrast to the above varied investigations, we are unaware of any research that has examined media portrayals of eyewitness issues, despite an abundance of evidence demonstrating the importance of beliefs about such issues in jury decision-making (e.g. Cutler & Penrod, 1995; Devenport, Penrod, & Cutler, 1997). Recognizing the media’s role in shaping public beliefs (cf. Parenti, 1993), the current study explored the nature of media portrayals of eyewitness topics. Here we focus on relevant media portrayals in light of recently renewed interest in evaluating jurors’ understanding of eyewitness issues (e.g. Alonzo & Lane, 2006; Benton et al., 2006; Read & Desmarais, 2007; Schmechel et al., 2006), as well as the foundation of empirical research in the field (e.g. Deffenbacher & Loftus, 1982; Kassin & Barndollar, 1992; Yarmey & Jones, 1983). Importantly, following confessions by true perpetrators, DNA exonerations, and other independent sources of evidence, we now know that wrongful convictions do occur and at alarming rates (Wells et al., 2000; Scheck, Neufeld, & Dwyer, 2000; Wise & Safer, 2004). According to the Innocence Project, 75% of studied wrongful convictions have resulted from faulty eyewitness identification and testimony (Innocence Project, 2007). To gain a better understanding of the sources of juror knowledge about eyewitness topics, we examined what is arguably the primary source of public information on these and other forensic psychological issues – popular television crime dramas. We were particularly interested in identifying changes, if any, in the prevalence and nature of presentations of these issues over time.
Method

Media

Fictitious television programs were targeted for analysis in this study. Programs were selected if: (1) the program covered (or had the potential to cover) both the police investigation and trial components of the criminal justice system, and (2) the program was popularly viewed (i.e. consistently within the top 10 broadcast programs according to viewership) as determined by the Nielsen criteria (television rating service, which analyzes broadcast popularity in the USA and Canada). To examine variability over time in the representation of eyewitness topics, four programs from the early years in each of three decades (1980s, 1990s, and 2000s) were selected from programs and specific seasons obtainable. As a result, one season (13–22 episodes per) of each of 12 programs were selected for analysis. Selected programs for the 1980s were: Hill Street Blues (1981), T.J. Hooker (1982), Miami Vice (1984), and Magnum, P.I. (1980). Selected programs for the 1990s were: The Commish (1992), Law and Order (1992), Homicide: Life on the Streets (1994), and NYPD Blue (1994). Selected programs for the 2000s were: Law and Order (2003), Law and Order: Special Victims Unit (2003), CSI Miami (2003), and CSI (2003). In total, 263 episodes were coded (88 for the 1980s, 79 for the 1990s, and 96 for the 2000s).

Coding protocol

A coding protocol was developed to assess the presence and specific depiction in popular television programs of 35 forensically and psychologically relevant issues. These topics were selected from the Read and Desmarais (2007) multiple-choice format juror survey (27 of which were derived from the Kassin, Tubb, Hosch, and Memon (2001) survey of experts) and slightly revised to be amenable to coding television programs (see Table 1 for a list of coded issues). Each issue was coded on three dimensions:

1. presence or absence of the eyewitness issue;
2. type of presentation (explicit or implicit);
3. meaning and implications of the presentation for eyewitness accuracy.

Coders first recorded, for each episode, the presence or absence of each issue (e.g. effect of eyewitness stress on memory accuracy). Next, they indicated whether the presentation of the issue was explicit (indicated or referred to clearly; e.g. characters discuss the effect, or lack thereof, of stress on witness recall accuracy) or implicit (not as clearly indicated, but still present; e.g. characters do not discuss the issue, but their actions or the events in the episode portray a specific effect, or lack thereof, of stress on memory accuracy). Finally, if the issue was present, coders determined the implications of the issue’s presentation (i.e. how the issue was described). For example, coding options for the eyewitness stress issue included: a – stress increases memory accuracy, b – stress reduces memory accuracy, c – stress does not affect memory accuracy, or d – other. Each issue could be coded as ‘present’ multiple times per episode (i.e. there could be multiple codings of a single issue within a specific episode); however the absence of an issue was only noted once per episode. Two coders obtained 82% agreement on a random selection of 10% of the episodes. Each coder then coded approximately one half of the remaining episodes. Of the 35 issues coded, the following four were not present in any episodes and thus, will not be discussed further: characteristics of true and false memories, effect of post-event information, forgetting curve, and hypnotic suggestibility.
Table 1. Overall frequency of items depicted across decades and percentage of episodes in which the issue was presented at least once.

<table>
<thead>
<tr>
<th>Overall Frequency</th>
<th>1980s Frequency</th>
<th>1990s Frequency</th>
<th>2000s Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall overall</td>
<td>2138</td>
<td>516</td>
<td>774</td>
</tr>
<tr>
<td>Per cent of episodes</td>
<td>96</td>
<td>89</td>
<td>100</td>
</tr>
<tr>
<td>1980s overall</td>
<td>688</td>
<td>141</td>
<td>230</td>
</tr>
<tr>
<td>Per cent of episodes</td>
<td>87</td>
<td>77</td>
<td>95</td>
</tr>
<tr>
<td>1990s overall</td>
<td>156</td>
<td>18</td>
<td>72</td>
</tr>
<tr>
<td>Per cent of episodes</td>
<td>33</td>
<td>18</td>
<td>44</td>
</tr>
<tr>
<td>2000s overall</td>
<td>121</td>
<td>18</td>
<td>37</td>
</tr>
<tr>
<td>Per cent of episodes</td>
<td>32</td>
<td>17</td>
<td>33</td>
</tr>
<tr>
<td>Eyewitness stress</td>
<td>156</td>
<td>18</td>
<td>72</td>
</tr>
<tr>
<td>Per cent of episodes</td>
<td>33</td>
<td>18</td>
<td>44</td>
</tr>
<tr>
<td>Additional detail</td>
<td>59</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td>Per cent of episodes</td>
<td>18</td>
<td>2</td>
<td>16</td>
</tr>
<tr>
<td>Elderly witnesses</td>
<td>44</td>
<td>8</td>
<td>19</td>
</tr>
<tr>
<td>Per cent of episodes</td>
<td>10</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Exposure time</td>
<td>28</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>Per cent of episodes</td>
<td>8</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>Lineup procedures</td>
<td>26</td>
<td>9</td>
<td>14</td>
</tr>
<tr>
<td>Per cent of episodes</td>
<td>9</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>Alcohol/drug intoxication</td>
<td>22</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Per cent of episodes</td>
<td>8</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Child witness accuracy</td>
<td>17</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Per cent of episodes</td>
<td>7</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Identification speed</td>
<td>14</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>Per cent of episodes</td>
<td>4</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Cross-race bias</td>
<td>14</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Per cent of episodes</td>
<td>4</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Event violence</td>
<td>13</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>Per cent of episodes</td>
<td>4</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Lineup fairness</td>
<td>12</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Per cent of episodes</td>
<td>5</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Weapon focus effect</td>
<td>9</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Per cent of episodes</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Long-term repression</td>
<td>7</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Per cent of episodes</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Trained observers</td>
<td>7</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Per cent of episodes</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Lineup instructions</td>
<td>6</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Per cent of episodes</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Description-matched lineup</td>
<td>6</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Per cent of episodes</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Unique characteristics</td>
<td>5</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Per cent of episodes</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Child victim and abuser</td>
<td>5</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Per cent of episodes</td>
<td>2</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Question wording</td>
<td>4</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Per cent of episodes</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Unconscious transference</td>
<td>4</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Per cent of episodes</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Mugshot-induced bias</td>
<td>3</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Per cent of episodes</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Accuracy and confidence</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Per cent of episodes</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Frequency overall</td>
<td>Per cent of episodes</td>
<td>Frequency overall</td>
</tr>
<tr>
<td>---</td>
<td>------------------</td>
<td>---------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>26. Confidence malleability</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>27. Attitudes and expectations</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>28. Child suggestibility</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>29. False childhood memories</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>30. Frequency of repression</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>31. Hypnotic accuracy</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

*Note.* Items are ordered from most to least prevalent overall.
Results

**Prevalence of issues**

On average, there were 13.06 (SD = 6.80) presentations of eyewitness issues per episode (range = 0–39). A one-way analysis of variance demonstrated that there was a significant difference in the mean number of presentations per episode across decades, as may be seen in Figure 1, $F(2,260) = 41.22, p < 0.001, \eta^2_p = 0.24$. As expected, LSD post hoc comparisons showed that there were significantly fewer portrayals in episodes from the 1980s ($M = 8.42, SD = 6.04$; range 0–25) than from the 1990s ($M = 16.09, SD = 4.98$; range 3–39), $t(165) = 8.90, p < 0.001$, when prevalence was highest, and the 2000s ($M = 14.81, SD = 6.56$; range 2–30), $t(182) = 6.86, p < 0.001$. However, there was no difference in the frequency of portrayals between the 1990s and 2000s.

In terms of frequencies of each specific issue, the memory for specific details of normal events and memory for specific details of traumatic events were most prevalent ($n = 2138$ and $n = 688$, respectively). This pattern held across decades with 528 and 143 times, respectively, across 88 episodes for the 1980s; 779 and 232 times across 79 episodes for the 1990s; and 842 and 313 across 96 episodes for the 2000s. As may be seen in Table 1, the remaining 29 eyewitness issues occurred substantially less frequently. Eyewitness stress (presented a total of 156 times: 18, 72, and 66 times for the 1980s, 1990s and 2000s, respectively) and memory for specific details of repeated events (121 times overall: 18, 37, and 66 times for the 1980s, 1990s, and 2000s, respectively) were the next most frequently presented issues across decades. Exposure time, witnesses providing additional detail, lineup procedures, and elderly witnesses issues also were relatively common, with frequencies equal to or greater than 10% of the coded episodes (i.e. presented at least 26 times overall). There were 10 issues for which there were significant changes in prevalence across the decades, $\chi^2$s ($2) \geq 8.60, ps \leq 0.01$. Specifically, the prevalence of witnesses providing additional detail, memory for specific details of repeated events, of normal events, and of traumatic events, and child witness accuracy all increased over the decades, whereas the prevalence of eyewitness stress, exposure time, lineup procedures, identification speed, and event violence issues was highest in the 1990s, and decreased in the 2000s.

Figure 1. Mean number of issues presented per episode across decades. Bars represent 95% confidence intervals.
Table 2. Kassin et al. (2001) expert survey results and media presentations compared.

<table>
<thead>
<tr>
<th>Topic and Kassin et al. (2001) statement</th>
<th>Experts who considered statement a reliable finding (%)</th>
<th>Media portrayals consistent with the statement</th>
<th>Overall</th>
<th>1980s</th>
<th>1990s</th>
<th>2000s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wording of questions: An eyewitness’s testimony about an event can be affected by how the questions put to that witness are worded.</td>
<td>98</td>
<td></td>
<td>50 (2)</td>
<td>0</td>
<td>67 (2)</td>
<td>–</td>
</tr>
<tr>
<td>Lineup instructions: Police instructions can affect an eyewitness’s willingness to make an identification.</td>
<td>98</td>
<td></td>
<td>33 (2)</td>
<td>100 (1)</td>
<td>0</td>
<td>33 (1)</td>
</tr>
<tr>
<td>Confidence malleability: An eyewitness’s confidence can be influenced by factors that are unrelated to identification accuracy.</td>
<td>95</td>
<td></td>
<td>50 (1)</td>
<td>–</td>
<td>50</td>
<td>–</td>
</tr>
<tr>
<td>Mugshot-induced bias: Exposure to mug shots of a suspect increases the likelihood that the witness will later choose that suspect in a lineup.</td>
<td>95</td>
<td></td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>–</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Post-event information: Eyewitness testimony about an event often reflects not only what they actually saw but information they obtained later on.</td>
<td>–</td>
<td></td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Child suggestibility: Young children are more vulnerable than adults to interviewer suggestion, peer pressures, and other social influences.</td>
<td>94</td>
<td></td>
<td>50 (1)</td>
<td>–</td>
<td>100 (1)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Attitudes and expectations: An eyewitness’s perception and memory for an event may be affected by his or her attitudes and expectations.</td>
<td>92</td>
<td></td>
<td>100 (2)</td>
<td>–</td>
<td>100 (1)</td>
<td>100 (1)</td>
</tr>
<tr>
<td>Hypnotic suggestibility: Hypnosis increase suggestibility to leading and misleading questions.</td>
<td>–</td>
<td></td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Alcoholic intoxication: Alcoholic intoxication impairs an eyewitness’s later ability to recall persons and events.</td>
<td>90</td>
<td></td>
<td>18 (4)</td>
<td>20 (1)</td>
<td>43 (3)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Cross-race bias: Eyewitnesses are more accurate when identifying members of their own race than members of other races.</td>
<td>90</td>
<td></td>
<td>14 (2)</td>
<td>0 (0)</td>
<td>20 (1)</td>
<td>20 (1)</td>
</tr>
</tbody>
</table>
Table 2 (Continued)

<table>
<thead>
<tr>
<th>Topic and Kassin et al. (2001) statement</th>
<th>Experts who considered statement a reliable finding (%)</th>
<th>Media portrayals consistent with the statement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Overall % (n) 1980s % (n) 1990s % (n) 2000s % (n)</td>
<td></td>
</tr>
<tr>
<td>Weapon focus: The presence of a weapon impairs an eyewitness’s ability to accurately identify the perpetrator’s face.</td>
<td>87 44 (4) 29 (2) 100 (2)</td>
<td></td>
</tr>
<tr>
<td>Accuracy-confidence: An eyewitness’s confidence is not a good predictor of his or her identification accuracy.</td>
<td>87 100 (3) 100 (3) 100 (3)</td>
<td></td>
</tr>
<tr>
<td>Forgetting curve: The rate of memory loss for an event is greatest right after the event and then levels off over time.</td>
<td>– – – –</td>
<td></td>
</tr>
<tr>
<td>Exposure time: The less time an eyewitness has to observe an event, the less well he or she will remember it.</td>
<td>81 14 (4) 33 (1) 15 (3) 0 (0)</td>
<td></td>
</tr>
<tr>
<td>Unconscious transference: Eyewitnesses sometimes identify as a culprit someone they have seen in another situation or context.</td>
<td>81 100 (4) 100 (2) 100 (2)</td>
<td></td>
</tr>
</tbody>
</table>

– issue was not presented.
Because the above frequency data include multiple occurrences of an issue in some episodes, we also examined the number of episodes in which each eyewitness issue was presented at least once. Overall, 10% of the episodes included at least one presentation of an issue. Table 1 also presents the percentage of episodes in which each issue was presented at least once overall and within each decade. To account for variation in the number of episodes across decades, a one-way analysis of variance was conducted examining the average percentage of portrayals per episode. As may be seen in Figure 2, results echoed the overall prevalence data described above. There was a significant difference in the percentage of episodes per issue across decades, $F(2,33) = 10.35$, $p < 0.001$, $\eta^2_p = 0.38$, and issues generally were presented in a significantly smaller percentage of the episodes from the 1980s ($M = 7.07$, $SD = 19.44$; range 0–89%) than from the 1990s ($M = 11.93$, $SD = 23.35$; range 0–100%), $t(34) = 4.47$, $p < 0.001$, and the 2000s ($M = 11.01$, $SD = 23.31$; range 0–98%), $t(34) = 2.94$, $p < 0.01$.

In terms of the individual eyewitness issues presented at least once per episode, the memory for specific details of normal events and memory for specific details of traumatic events issues were presented in the greatest number of episodes overall (see Table 1) and the remaining 29 issues occurred substantially less frequently. However, as before, eyewitness stress and memory for specific details of repeated events were presented in a substantial percentage of episodes (33% and 32%, respectively), as were the issues of exposure time, witnesses providing additional detail, lineup procedures, and elderly witnesses, receiving presentation in at least 10% of the episodes overall and/or within a specific decade.

**Type of presentation**

The overwhelming majority of portrayals were implicitly rather than explicitly depicted: Of the total 3434 portrayals, 98% ($n = 3366$) were implicitly presented. On average, the type of presentation was implicit for 12.80 ($SD = 6.75$) portrayals per episode (range = 0–39), and less than one portrayal was explicit ($M = 0.11$, $SD = 0.38$, range = 0–2) per episode.

![Figure 2](image_url)  
**Figure 2.** Mean percentage of episodes in which issues were presented at least once across decades. Bars represent 95% confidence intervals.
Generally, analyses within each issue supported the finding that the relationships between the eyewitness issue and memory accuracy were most often implicitly presented. To illustrate, 100% of the presentations for 18 issues in the 1980s, 14 issues in the 1990s, and 16 issues in the 2000s were implicitly presented. Issue-by-issue analyses of changes in type of presentations (explicit or implicit) from the 1980s to the 1990s to the 2000s did not evidence significant differences. That is, as a result of the high proportion of implicit presentations and the comparatively infrequent explicit presentations, type of presentations did not differ within each issue across decades.

Meaning and implications of the presentations for eyewitness accuracy

To determine whether eyewitness issues were presented similarly in their implications for memory accuracy across episodes (generally, whether the variable in question improves or impairs eyewitness accuracy), chi-square analyses were conducted. For 11 issues (which comprised the vast majority of presentations overall), the variable was presented as either improving or impairing eyewitness accuracy quite consistently (rather than inconsistently). That is, for these 11 issues, the possible implications of the presentations for eyewitness memory accuracy differed significantly across all coded episodes ($\chi^2$s (1–3) ≥ 7.14, $p < 0.01$): eyewitness stress, exposure time, witnesses providing additional detail, memory for specific details of repeated events, memory for specific details of normal events, memory for specific details of traumatic events, child accuracy, alcohol and/or drug intoxication, lineup procedures, cross-race bias, and elderly witnesses. This finding suggests substantial agreement between the writers of these series because the portrayals of relationships between eyewitness issues and memory accuracy appeared consensual (rather than random). The specific relationships presented are described below.

Overall, as described above, although the presentations were often consistent, it was the case that for virtually all issues, there was a mention of the factor or variable, but no clear indication (explicitly or implicitly) regarding its positive or negative effect on eyewitness memory. Overwhelmingly, an effect of eyewitness stress (99% of the time; $n = 154$) on witness accuracy was not depicted. Similarly, an effect of exposure time was most often (86%; $n = 24$) not depicted, nor was a relationship between alcohol and/or drug intoxication on later recall ability (82%, $n = 18$) depicted. That is, the factors were introduced in the context of eyewitness memory, but the dialogue, situation, or events did not communicate whether the factor increases or reduces memory accuracy. However, the remaining four exposure time presentations did indicate a positive relationship between exposure time and eyewitness memory (i.e. the more time a witness has to observe, the more will be remembered) and the remaining four alcohol and/or drug intoxication presentations did indicate a negative relationship (i.e. alcohol and/or drug intoxication reduces an eyewitness’s ability to later recall). As another example, of the 14 presentations of the cross-race bias issue, 86% ($n = 12$) failed to communicate a relationship between observer and perpetrator race: Witnesses were portrayed as accurate in their identifications of people of other races. Two presentations, however, did depict the cross-race bias (i.e. witnesses are less accurate when identifying people of other races).

For six issues (child witness accuracy, elderly witnesses, additional detail, hypnotic accuracy, unique characteristics, and trained observers), descriptions of the variable as improving or as having a positive relationship with eyewitness accuracy were most prevalent. With respect to the role of witness age, for example, child witnesses were generally portrayed as being accurate (88%, $n = 15$), with only one presentation suggesting that child witnesses were only partially accurate and another demonstrating that child
witnesses were sometimes accurate, but other times inaccurate. Elderly witnesses were predominantly portrayed as being accurate in event recollections (93%, n=41), while the remaining three presentations indicated that elderly witnesses are inaccurate in event recollections. Further, when witnesses provided additional detail, it was most often (83%; n=49) portrayed as a reflection of the recall of new accurate information, whereas 15% (n=9) of portrayals indicated that the witness was fabricating information or lying.

There were relatively few presentations demonstrating a negative influence of, or relationship between, the specific variable and eyewitness accuracy. In fact, for only two items (attitudes and expectations and unconscious transference) did the majority of presentations depict that the variable impairs eyewitness accuracy. Only 5% (n=6) of the memory for specific details of repeated events presentations indicated that these details were more difficult to recall the more often an event is experienced, whereas the remaining 114 (95%) indicated that the number of times the event is experienced has no apparent influence on recall. Similarly, most presentations for both memory for specific details of normal (but not daily) events and memory for specific details of traumatic events suggested that these details were just as likely to be remembered as general information about the events (97%, n=2057; 91%, n=617). Only 14 (<1%) presentations indicated that specific details of normal events were less likely to be remembered than general details and 55 (3%) presentations indicated that they were more likely to be remembered. Similarly, only five (<1%) presentations indicated that specific details of traumatic events were less likely to be remembered than general information and 58 (8%) indicated that they were more likely to be remembered.

A central purpose of this project was to examine changes over time in portrayals of these topics, thus, we conducted chi-square analyses on the frequency of relationships depicted across decades. There were significant changes for only two issues: memory for specific details of normal events, $\chi^2 (6) = 74.38, p < 0.001$, and memory for specific details of traumatic events, $\chi^2 (6) = 31.64, p < 0.001$. For the former, the proportion of presentations of specific details of normal events as being more likely to be remembered than general details increased significantly from the 1990s (<1% of the time; n=3) to the 2000s (6%; n=52), $\chi^2 (1) = 5.10, p < 0.05$. This relationship was not depicted in the 1980s. For the latter issue, memory for specific details of traumatic events was depicted as more likely to be remembered than general information proportionally more often in episodes from the 2000s (15%; n=45) than the 1990s (2%; n=4), $\chi^2 (1) = 10.11, p < 0.001$. There were no significant differences between episodes from the 1980s (6%; n=9) and 1990s or 2000s. Finally for both normal events and traumatic events, the proportion of presentations of specific details as equally likely to be remembered versus less well-remembered than general information did not differ significantly across decades.

**Comparisons between expert opinion and media portrayals**

Two additional interests of the present study were (1) to determine whether the issues relevant to the eyewitness community of researchers and experts were raised in popular television programming, and (2) to assess the accuracy of media portrayals of eyewitness issues. As to the first, it is clear from Table 1 that indeed the issues generally are in the public domain: Of the 30 issues discussed by Kassin et al. (2001) in their survey of eyewitness experts’ opinions, 25 appeared in the sampled television programming (albeit highly variable in their frequencies). As to the second, we relied upon the opinions of the Kassin et al. experts as our standard for ‘accuracy’ as we examined the frequency, type, and implications of the presentations within the context of expert consensus. That is, we
compared the accuracy of the media presentations for those items for which we had both media data and expert consensus from the Kassin data \((n = 12)\). Specifically, for the following 12 items included in the present study, at least 80% of Kassin’s experts agreed that the described phenomenon or relationship between the eyewitness variable and memory performance was ‘reliable’: question wording, lineup instruction, confidence malleability, mugshot-induced bias, child suggestibility, attitudes and expectations, hypnotic suggestibility, cross-race bias, weapon focus effect, accuracy and confidence, exposure time, and unconscious transference. Table 2 presents the topics included in the present study that were drawn from the Kassin survey (as well as the original Kassin statements), the percentage of experts who agreed that the statement was a reliable finding, and the percentage of media portrayals consistent with the statement (overall and within each decade).

Of the above 12 items, there were only three items for which the majority of portrayals were consistent with experts’ responses. Indeed, as may be seen in Table 2, 100% of the presentations of attitudes and expectations, accuracy and confidence, and unconscious transference depicted the relationship described by the Kassin et al. statement. In contrast, only half of the question wording, confidence malleability, and child suggestibility presentations were consistent with expert opinion. The other question wording and child suggestibility presentations generally failed to specify a relationship between the variable and eyewitness accuracy, whereas the remaining confidence malleability presentations suggested a positive relationship. The majority of presentations for the remaining six variables were in direct contrast with expert consensus regarding the relationship between the variable and eyewitness accuracy. Further comparison between expert consensus and media portrayals across decades highlighted a few issues for which presentation accuracy actually decreased over time: lineup instructions, alcohol and/or drug intoxication, and exposure time (see Table 2). Interestingly, three of the four eyewitness issues which were not present in any episodes (post-event information, forgetting curve, and hypnotic suggestibility) were both included in the Kassin et al. survey and were also among those items for which experts reached a consensus of at least 80% (94%, 91%, and 81%, respectively, indicating that the variable reduced eyewitness accuracy), and, at least for viewers of the selected programs, afforded no opportunity to affect public beliefs.

**Discussion**

This study explored the nature of media portrayals of eyewitness issues by examining popular television crime dramas in the 1980s, 1990s, and 2000s. Recognizing the role of media, and television in particular, as public educator, the goal of the present work was to increase our understanding of the sources of juror knowledge about eyewitness issues. We had a particular interest in identifying changes, if any, in the prevalence and implication of presentations of these issues across recent decades. Results demonstrated that the prevalence of eyewitness issues in the media has approximately doubled since the 1980s. Importantly, not only have eyewitness issues increased but so have the sheer number of crime drama programs (both in quantity and popularity). Thus, the observed plateau from the 1990s to 2000s may simply reflect dispersion of items across a greater number of television programs, not captured due to our sampling method. However, even when controlling for opportunity (number of episodes), there were more presentations of eyewitness issues from the 1980s to the 1990s and, at times, to the 2000s. Alternatively, the frequency peak observed in our sample of episodes in the 1990s may reflect audience
satiation; that is, once a topic has been presented, it may be less likely to be pursued into the following seasons.

The present findings reveal that although eyewitness issues may be brought into public view via fiction crime dramas frequently, depiction of specific positions on these issues is rare. Many, if not most, of the presentations portrayed a lack of a relationship between an eyewitness issue and memory accuracy or, perhaps more appropriately, failed to describe the relationship. For example, witnesses often were portrayed recalling events that occurred during which they were inebriated or under the influence of drugs and victims often were depicted recalling events during which they experienced high levels of stress. However, in the majority of presentations, no reference was made to the impact of such factors on memory; in fact, the testimonies were generally assumed to be both accurate and truthful across programs and decades. Such uninformative or ambiguous implicit portrayals may be just as important in promoting uneducated views of eyewitness issues as an inaccurate explicit portrayal.

Further, there was very little change in the presentations over time; specifically, and somewhat unexpectedly, there was remarkable consistency in the implications of the presentations of these issues. That is, although the frequency of presentation of an eyewitness issue may have increased, the specific presentations were most often similar in their implications. For example, there were 10 issues for which the majority of presentations concerning the accuracy of eyewitness memory remained constant across decades: eyewitness stress, exposure time, additional detail, memory for specific details of repeated events, of normal events, of traumatic events, child accuracy, alcohol / drug intoxication, lineup procedures, and elderly witnesses. Further, the vast majority of presentations (85–99%), across decades and overall, depicted that specific details of normal (but not everyday events) and specific details of traumatic events were just as likely to be remembered as general information.

With only a few exceptions (long-term repression, weapon focus, lineup fairness, lineup instructions, and event violence; for which there appeared to be substantial disagreement across shows and, concomitantly, with the experts), writers appeared largely in agreement and/or took no position on the relationship between an issue and memory accuracy. To clarify, although the sampled crime dramas did not explicitly provide misleading information on eyewitness issues, there were clearly a number of issues presented erroneously. Indeed, ‘accuracy’ of portrayals of eyewitness issues does not appear to be increasing over time. Specifically, media presentations were consistent with expert consensus (as compared with the Kassin et al. (2001) items) for only three of 12 issues (attitudes and expectations, accuracy-confidence, and unconscious transference). Generally, where experts agreed that there was a relationship between the eyewitness issues in question and memory accuracy, our presentation codings failed to depict a relationship. To illustrate, in contrast to 81% of experts who thought the statement ‘The less time an eyewitness has to observe an event, the less well he or she will remember it’ was a reliable finding, 88% of the coded presentations did not depict a relationship between exposure time and eyewitness accuracy. Further, only 33% of coded presentations indicated that police instructions during a lineup can affect an eyewitness’s identification. Although our analyses focused on expert consensus as a standard against which to compare media presentations, even where experts did not achieve consensus, coded presentations still appeared to differ with expert responses. For example, 99% of the coded presentations depicted that ‘Stress does not affect memory accuracy’ in contrast to the 60% of experts thought the statement ‘Very high levels of stress impair the accuracy of eyewitness testimony’ was a reliable finding.
It is important to remember, however, that fiction television’s primary purpose is to entertain, and not necessarily to educate. Thus, if we conceive of television or media more generally as a (loose or exaggerated) representation of real world procedures, rather than as representing how things ‘ought’ to be, would the ‘accuracy’ of the presentations coded in this study increase? Results for the lineup procedures issue, for example, suggest not. The vast majority of coded presentations (92%, n = 24) depicted the procedure of showing the witness photographs of several different people simultaneously. In contrast, research examining ‘real world’ policing procedures would suggest that these media portrayals seriously underrepresented the frequency with which the show-up identification procedure (i.e. the use of a single photo or person, rather than several, in a ‘lineup’) is used: Whereas only one coded presentation depicted such a procedure, show-ups reportedly were used from 30 to 55 to 77% of the time across three studies of types of identification procedures used by police departments in the US (Dysart & Lindsay, 2007).

Our analyses also demonstrated that the overwhelming majority of presentations of eyewitness issues were implicit in nature. This, again, makes sense when one considers television’s entertainment objective; that is, the implicit presentations are likely more believable, increasing the program’s realism and entertainment value. Yet, for our purpose of understanding sources of lay knowledge of eyewitness issues, the implications of the implicit nature of these presentations are unclear. It seems reasonable to assume that explicit presentations would have a greater impact on audience knowledge and beliefs than would implicit ones. Thus, it may be the case that eyewitness issues for which there were even just one or two explicit presentations, such as the child suggestibility issue (both coded presentations were explicit depictions that young children are highly influenced by suggestions) may have had a greater impact and been more ‘instructive’ to a lay audience than issues for which there were many implicit presentations. However, to better understand the importance of type of presentation for informing lay knowledge, future research should compare the effects of explicit and implicit presentations of specific issues on lay beliefs and subsequent (mock) jury decision-making.

This issue of number of presentations highlights an important inference question in the present study: How should we interpret results in light of widely varying base rates of presentations? For example, changes in the number of presentations from 6 to 8 or 100 to 133 both represent overall increases of 33%, but are the implications for lay knowledge the same? Despite the widely variable base rates observed in the presentations of items, and the rather low frequency of particular issues, the patterns of presentation frequency across decades may be important in understanding overall exposure to such information. That is, the patterns observed in the present study may be indicative of a larger media trend. Therefore, we examined the percentage increases and decreases in representations of the coded issues over the decades. From the 1980s to the 1990s, 18 of the 31 items increased in representation by 50% or more, while only five items decreased by 50% or more. Conversely, from the 1990s to the 2000s, there were only three items for which there was a 50% or more increase in representations, whereas seven items evidenced a 50% or more decrease in representations. Thus, although there was a large increase in the relative percentage of representations of the present items from the 1980s to 1990s, the same was not true from the 1990s to 2000s. Again, however, we are left with the question of the meaning of these findings for jury knowledge and decision-making. With the present data, it is not possible to gauge the impact of media’s portrayals of the relationships between eyewitness issues and memory accuracy, as we neither examined nor tested effects of specific portrayals on lay beliefs.
At first blush, the absolute frequencies of portrayals of most eyewitness topics appear low. However, our data derive from a sampling technique that selected a limited number of shows aired early in the 1980s, 1990s, or 2000s. There were, of course, many other relevant fiction series and made-for-television movies that were aired within each decade. For example, inspection of the 1980, 1990, and 2000 television seasons reveals that there were, respectively, 11, 12, and 14, law-related fiction series across the major US networks (i.e. FOX, CBS, NBC, and ABC). Indeed, even within a particular series from which we sampled, for example Law and Order, additional seasons and multiple episodes within each were aired within a specific decade. In these cases, our sampling represents less than 10% of all of the episodes aired over the decade. As a result, the absolute frequencies are not reflective of the sheer amount or weight of law-related programming in which eyewitness memory issues were presented. For many topics, although the absolute frequencies of coded presentations were small in number, their increases across decades were frequently in the range of 100%. If one assumes that our frequencies represent less than 10% of the presentations in the 12 series we sampled and one considers the opportunities for these same issues to be depicted in other series or one-time shows not sampled, the absolute number of presentations within a given decade is clearly much larger than reflected in our sample.

In addition, our sampling was restricted to fiction series; however, there were many current affairs and investigative journalism portrayals of law-related and eyewitness issues on television, to say nothing of their presentation in film or the print media, including both fiction and non-fiction accounts of law-related stories. For example, most readers have likely watched discussions of wrongful convictions that have occurred frequently in these latter genres over the last decade. All of this, of course, raises the issue of the potential impact of our observed doubling of portrayals of eyewitness memory issues on viewers in North America. As emphasized throughout this discussion, we can only speculate on the possibility or magnitude of impact; however, we know that a single depiction of a topic in the media can have enormous effects on public familiarity with a topic. Earlier we discussed the analyses of the so-called CSI effect on jury decision-making, effects that may be attributed to television depictions of scientific evidence. Similarly, a single case history and made-for-television movie, Sybil, in 1973 appeared to have had an impressively large, if not overwhelming, impact on North Americans’ familiarity with the purported effects of childhood sexual abuse on memory and psychopathology (cf. Haaken, 1998; Ofshe & Watters, 1994; Spanos, 1996).

In sum, although many of the absolute frequencies reported herein are small, they derive from a sampling technique, one that cannot do justice to the plethora of opportunities in North American media for portrayals of eyewitness issues. Nonetheless, we believe the data strongly suggest considerably more exposure to these topics over the last 20 years. To what extent such familiarity alters the need for expert opinion on these topics in court remains to be seen. However, as discussed in the introduction, research has demonstrated that television viewing can affect public perceptions. If media portrayals are inaccurate or misleading, there is a danger that juror decision-making will reflect these misconceptions. Further, where media are simply uninformative regarding the relationship between an eyewitness variable and identification or memory accuracy, consumers may infer that such variables do not affect eyewitness accuracy. The lack of relationships between eyewitness issues and memory accuracy, and apparent disagreement with expert opinion, observed in this study indicates that this may indeed be a concern for the vast majority of issues. Therefore, based on the results of this study and surveys of juror knowledge of eyewitness issues, expert testimony may be most appropriate where there are
known deficits in lay knowledge and media representations appear to be misleading, uninformative, or, perhaps more alarmingly, decreasing in accuracy over time.

The present study provides a starting point for determining which eyewitness issues may be misrepresented in media. Fiction crime dramas are but one of the many forms of media ‘informing’ potential jurors. Future research should examine portrayals of the eyewitness phenomena included in the present study, as well as other forensically-relevant issues, in other common television media, such as investigative journalism and current affairs programs, for example, but also print media, film, radio, popular music, and the Internet. Although it is unlikely that newspaper accounts of crime, for example, have grown more sensitive to eyewitness issues over time, the substantial news coverage of DNA exculpations and the recognition of eyewitness misidentification as a major source of error likely affects lay understanding of eyewitness issues. Some readers even may speculate about the reasons for those misidentifications, including consideration of the factors coded in this study. The findings from the present preliminary exploration of media portrayals of eyewitness issues indicate that closer examination of multiple sources of juror knowledge is required before we are able to understand, and begin to manage, the implications of these sources of (mis)information on juror knowledge and subsequent decision-making.

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Note
1. Full item descriptions are available from the authors upon request.

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