

## PAPER

## JURISPRUDENCE; GENERAL

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## The CSI Effect and the Canadian and the Australian Jury<sup>\*,†</sup>

**ABSTRACT:** Television shows, such as CBS's *CSI* and its spin-offs *CSI: Miami*; *CSI: Las Vegas*; and *CSI: New York*, have sparked the imagination of thousands of viewers who want to become forensic scientists. The shows' fictional portrayals of crime scene investigations have prompted fears that jurors will demand DNA and other forensic evidence before they will convict, and have unrealistic expectations of that evidence. This has been dubbed the "CSI effect." This phenomenon was explored using results from a Canadian study based on 605 surveys of Canadian college students who would be considered jury-eligible and Australian quantitative and qualitative findings from a study that surveyed and interviewed real posttrial jurors. Information about the way jurors deal with forensic evidence in the context of other evidence and feedback about the way in which understanding such evidence could be increased were gained from both these studies. The comparison provides insights into the knowledge base of jurors, permitting adaptation of methods of presenting forensic information by lawyers and experts in court, based on evidence rather than folklore. While the Canadian juror data showed statistically significant findings that jurors are clearly influenced in their treatment of some forensic evidence by their television-viewing habits, reassuringly, no support was found in either study for the operation of a detrimental CSI effect as defined above. In the Australian study, in fact, support was found for the proposition that jurors assess forensic evidence in a balanced and thoughtful manner.

**KEYWORDS:** forensic science, CSI effect, forensic evidence, Canadian criminal justice, Australian criminal justice, DNA evidence, jurors, juries, judges

Ever since the hit television show *CSI: Crime Scene Investigation* and its spin-offs appeared on television in 2000, prosecutors and law enforcement personnel have speculated that this show (and other forensically focused shows) has given jurors heightened expectations about the evidence to be presented at trial. This so-called CSI effect includes the increased and unrealistic expectation that crime scenes will yield plentiful forensic samples that can be analyzed by near-infallible forensic science techniques and will be presented as such in the courtroom. The popularity of these shows has been said to have detrimentally influenced jury deliberations as discussed anecdotally in the world media. For example, Washington Post Staff Writer, Jamie Stockwell, outlines a case where a Prince George's country jury would not convict a man accused of stabbing his girlfriend to death because a half-eaten hamburger was not tested for DNA (1). Other authors have suggested that jurors are not influenced particularly by CSI-type shows but that a "tech effect" exists as a result of much broader cultural influences related to modern technological advances, and hence, it is reasonable for jurors to expect more from the prosecution in the way of scientific evidence than they have in the past (2). While it has been argued that pretrial publicity can have a prejudicial impact

on juror verdicts in both criminal (3,4) and civil cases (5), little scientific research exists specifically on the CSI effect and the Australian and Canadian juror. As a result, this article will focus on some of the preliminary results from a survey given to 605 Canadian jury-eligible individuals asking specific questions related to popular crime-related television shows, specifically *CSI: Crime Scene Investigation* and the subsequent series and the findings of the survey given to actual Australian jurors about their deliberations in trials in which forensic evidence played an important part (6). Given the common heritage of the Australian and Canadian criminal justice systems, including the similarity of the two jury systems, it was considered a useful and informative exercise to compare some of the findings of the two studies. It should be noted however that the studies were conceived and executed independently, with different aims, participants, and methods. There was some fortuitous overlap in the fields of inquiry, thus permitting a partial triangulation and enabling this discussion.

### Method

#### Participants

*Canadian Survey-eligible Jurors*—The Canadian participants in this study were all college students at Mount Royal College (now Mount Royal University), Calgary, Alberta, Canada, who were jury-eligible under the *Alberta Jury Act*. In Canada, each province has a separate jury act. However, these acts cannot be inconsistent with the *Criminal Code of Canada*. Thus, the *Alberta Jury Act* acknowledges a person's place of residence which must be Alberta in order for a person to serve as a juror in an Albertan case. Each participant had to read a document establishing their eligibility and sign a consent form for participation. Each survey was completed anonymously and sealed in an envelope. The students asked to

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participate were randomly selected using a snowball sampling method (7), which was based on individual instructors' willing participation. Different academic areas were selected to allow for a more varied sample than having participants from just one area of study allowing for a more representative sample similar to actual jurors.

*Australian Jury Participants*—Jury research in both Australia and Canada has been constrained by legislative barriers. In Canada, obtaining jury information and researching the jury are prohibited under s. 649 of the *Canadian Criminal Code*. Even the slightest communication with jurors about the case, including an attempt to elicit from a juror discharged under s. 644 what the other jurors thought of the case, is prohibited by law. Similar legal prohibitions upon inquiry into jury deliberations apply in all jurisdictions in Australia.

As previously noted, similar to Canada, Australian jury research has been constrained by legislative barriers. Without this permission, soliciting, disclosing, obtaining, or publishing jury deliberation information is an offense (*Juries Act 1957*[WA] s56). However, rare permission was granted by the Attorney General of Western Australia for the interviewing of jurors after criminal trials in which expert testimony was presented. Thus, the Australian participants were real jurors deciding real criminal cases.

## Survey Design

### *The Canadian Survey*

The Canadian survey distributed to jury-eligible participants consisted of five pages. The first 12 questions were “yes” or “no” type of questions, pertaining to any experience they might have had of criminal trial (e.g., Question 6: “Have you ever served as a juror?” and Question 7: “Have you ever attended a criminal trial where a jury was present?”). Five of the questions sought demographic or personal information. These 12 questions were followed by 29 assertions. The assertions addressed various issues related to the respondents' perceptions, interpretations, and understanding of various forensic concepts as they were portrayed by a number of different crime-related television shows, such as *Law and Order* and its affiliate *Law and Order Special Victims Unit* and *CSI* and its spin-offs *CSI: Miami*, *CSI: New York*, and *CSI: Las Vegas*. This research did not include the recently launched *Law and Order: UK* (United Kingdom, 2009) episodes. Necessarily, these questions were constructed and based on the researcher's interpretation of the forensic concepts as they were portrayed on these shows. Three varying probabilistic statements were also included, whereby the participant had to assign significance to an expert's testimony, for example, agreeing or disagreeing on a finding of guilt based on a probability statement made by an expert's testimony. An example of this is found in question number 25 of the survey found in Appendix A, which asserts that “[i]f an expert, at a trial, testifies that the likelihood of a person matching this DNA profile would be 1 in a billion, you would think that the accused's DNA is the source left at the crime scene.” The last question asked for the participants to write out how many zeros they thought can be found in the number one trillion. The reasoning behind this question was to address whether potential jurors actually understand how small some of the numbers discussed in a criminal case actually are. The descriptive analysis of this question would only be able to tell us what percentage of participants actually knew how many zeros could be found in a trillion. The data cannot however tell us whether they actually could conceptualize the size of this number.

### *The Australian Survey and Interviews*

The Australian survey distributed to jurors who had deliberated and reached a verdict in a criminal case consisted of eight pages. The questions were presented in the form of nominal, ordinal, and ratio-level measurements, including open-ended qualitative questions and six closed-ended questions requiring a Likert scale response. As a follow-up to the questionnaire, the jurors were invited to take part in individual semi-structured interviews (see Appendix B) at their convenience. The semi-structured interviews explored approximately 52 questions to which the responses were recorded and transcribed. The questions in the interviews were divided into six broad areas relating to jury service and their understanding of forensic evidence (the term “expert evidence” was generally used):

- *The jury experience:*

How the juror felt about their jury experience, including whether or not they would recommend such an experience to others;

- *The expert testimony:*

What expectations the juror had had about the experience and the source of their expectations;

- *Understanding*

Which methods of presentation were considered most effective to their individual and collective understanding;

- *The evaluation:*

Whether the individual juror felt that an alternate method of presentation of expert evidence would have been more effective;

- *The jury room:*

The deliberation process—in particular, how the jurors approached the task of understanding and weighing the expert evidence; and

- *Opposing expert:*

If an opposing expert was presented, how this opposing evidence was perceived, understood, and used.

## Procedure

### *The Canadian Survey Procedure*

The location of the distribution of the Canadian jury-eligible surveys was Mount Royal College in Calgary, Alberta. The jury-eligible participants were all college and university students. Mount Royal College became Mount Royal University in September, 2009. The main programs of study engaged in by participants can be seen in Table 1. In addition to the main programs of study, 24 “other” programs were listed (e.g., general studies, education, languages).

TABLE 1—Canadian survey participants' main program of study.

	Frequency	Percent
Business	60	9.9
Child Studies	33	5.5
English	16	2.6
Justice Studies	85	14.0
Science	105	17.4
Sociology	18	3.0
Nursing	56	9.3
Physical Education	35	5.8
Psychology	72	11.9
Other	124	20.5
Missing Information	1	0.2
Total	605	100

*The Australian Survey Procedure*

The researcher selected trials in which expert (forensic) evidence was likely to be important and, before trial, sought permission from the trial judge to approach the jurors after they had delivered their verdicts. This permission was almost always given. The researcher sat through as much of the trial as time allowed, focussing in particular on the expert testimony. Upon the jury reaching a verdict in their given case, the trial judge told the jurors that approval had been granted for their participation in a survey related to their expert evidence in the case. At this point, the trial judge invited the jurors' participation, and the willing participants returned to the jury room or another secure area to participate in the survey which took approximately 15 min. Upon the completion of the survey, jurors were invited to participate in semi-structured interviews at a later date. It is important to note that the jurors were not told about the research or the survey until after their verdict.

**Results**

*Descriptive Analysis of the Nominal Data of the Canadian Jury-eligible Survey*

Six hundred and five surveys were completed at Mount Royal College in Calgary, Alberta. The mean age of the participants was 22 (youngest = 18; oldest = 58). In total, 377 women (62.4%) and 227 men (37.6%) completed the survey. One survey did not specify gender.

Most of the Canadian jury-eligible individuals surveyed had no experience with criminal trials other than 51 respondents (8.4%) who had attended a criminal trial and two people (0.33%) who said they had served on a jury.

A large number of the participants ( $n = 453$ ) surveyed (74.9%) stated that they watched crime-related television shows on a regular basis. Based on the responses, 79% of women ( $n = 298$ ) said that they watched crime-related television shows on a regular basis compared to 68% of men ( $n = 155$ ). An analysis using Pearson's correlation coefficient indicates this to be a statistically significant relationship ( $r_{605} = 0.124, p < 0.01$ ). Only 17.7% ( $n = 107$ ) of respondents said they watched no crime-related television shows per week. The majority of the participants watched between 1 and 6 h per week ( $n = 458, 75.7%$ ), while a small number ( $n = 38, 6.3%$ ) noted that they watched between 6 and 22 h of crime-related television shows per week. The survey did not specify whether the participants watched regularly scheduled television programs or programs taped or otherwise recorded (e.g., PPV). The crime-related shows found to be most popular among the participants were CSI (and its spin-offs) and Law and Order (and its spin-offs; see Table 2).

Most respondents (71%,  $n = 430$ ) said they learned about DNA evidence mostly from the media (i.e., newspapers, news, and crime television shows).

The survey shed light on some prevailing attitudes toward crime scene investigation. Responses to various questions indicated the importance that people put on forensic evidence. For example, 76.2% ( $n = 461$ ) responded that DNA testing is the best piece of evidence in any type of case. The majority of the respondents who felt this way were women (82.4%,  $n = 310$ ) compared to 65.7% ( $n = 150$ ) of men. A Pearson's correlation coefficient supported a statistically significant relationship between gender and DNA being the best piece of evidence in any case ( $r_{605} = -0.189, p < 0.01$ ). In addition, 83.6% ( $n = 506$ ) responded that DNA evidence should always be used in sexual assault cases. Women (85.3%,  $n = 321$ ) are more likely than men (80.7%,  $n = 184$ ) to feel that DNA

TABLE 2—Canadian's first favorite crime-related television show.

	Frequency	Percent
<i>American Justice</i>	4	0.7
<i>24</i>	12	2.0
<i>48 h Mystery</i>	9	1.5
<i>America's Most Wanted</i>	6	1.0
<i>Bones</i>	1	0.2
<i>Boston Legal</i>	1	0.2
<i>C.S.I.</i>	248	41.0
<i>CSI Las Vegas (CSI: LA)</i>	40	6.6
<i>CSI Miami</i>	28	4.6
<i>CSI New York (CSI: NY)</i>	17	2.8
<i>Cold Case</i>	22	3.6
<i>Cold Case Files</i>	4	0.7
<i>Cops</i>	3	0.5
<i>Criminal Minds</i>	5	0.8
<i>Crossing Jordan</i>	1	0.2
<i>Da Vinci's Inquest</i>	1	0.2
<i>Forensic Factor</i>	2	0.3
<i>Homicide: Life on the Streets</i>	1	0.2
<i>Investigative Reports</i>	2	0.3
<i>Law and Order</i>	50	8.3
<i>Law and Order: Criminal Intent</i>	4	0.7
<i>Law and Order: Special Victims</i>	9	1.5
<i>Medium</i>	6	1.0
<i>Missing</i>	7	1.2
<i>Murder She Wrote</i>	1	0.2
<i>Mystery</i>	1	0.2
<i>NCIS</i>	1	0.2
<i>Numb3rs</i>	6	1.0
<i>NYPD Blue</i>	1	0.2
<i>Prison Break</i>	2	0.3
<i>Secrets of Forensic Science</i>	1	0.2
<i>The FBI Files</i>	2	0.3
<i>The First 48</i>	6	1.0
<i>The Shield</i>	1	0.2
<i>The Sopranos</i>	1	0.2
<i>Third Watch</i>	2	0.3
<i>True Crime Scene</i>	1	0.2
<i>Unsolved Mysteries</i>	2	0.3
<i>Without a Trace</i>	1	0.2
<i>A &amp; E</i>	6	1.0
<i>OZ</i>	1	0.2
<i>Dallas S.W.A.T</i>	1	0.2
<i>Dog the Bounty Hunter</i>	1	0.2
<i>X-Files</i>	1	0.2
<i>Lost America Fights Back</i>	1	0.2
Total	523	86.6
Missing Information	82	13.6
Total	605	100

evidence should always be used in sexual assault cases. A Pearson's correlation coefficient supported this observation ( $r_{605} = -0.122, p < 0.01$ ). Some respondents (27.4%,  $n = 166$ ) agreed that because computers and other "state-of-the art" technology are used in forensic testing, human errors and corruption are unlikely to take place.

The study supports the notion that regular viewing of crime-related television shows influences the population's opinions of the criminal justice process. A number of respondents ( $n = 187, 41.3%$ ) who watched crime-related television shows agreed that they have learned about the criminal justice process from these types of shows. On the other hand, 15.2% ( $n = 23$ ) noted that they did not. A Spearman's correlation coefficient shows a relationship between gender and having learned about the criminal justice system from shows such as, for example, CSI ( $r_{605} = 0.145, p < 0.01$ ). Of these respondents, women accounted for 36.9% ( $n = 139$ ) and men for 31.4% ( $n = 71$ ). In addition, 23% ( $n = 139$ ) of respondents who said they regularly watch crime-related television shows strongly agreed that DNA testing is the best piece of



evidence against an accused in any case. Out of those who responded that they do not watch crime-related television shows regularly, only 12.6% ( $n = 76$ ) stated that DNA testing is the best piece of evidence against an accused in any type of case.

The survey asked potential jurors whether they thought “time of death” was easy to determine. Many respondents (50.4%,  $n = 305$ ) said that based on the television show CSI, they think time of death is easily determined. In fact, in death investigations, many factors influence the degree of difficulty in determining time of death (8,9).

Those who said they regularly watched crime-related television shows were much more likely to agree that the time of death is easily determined (57.2%,  $n = 346$ ) as opposed to 29.8% ( $n = 180$ ) of those who said they do not watch crime-related television shows regularly. The responses to this question support the notion that those who regularly watch crime-related television shows more often have an incorrect belief that crime scene investigation easily yields concrete results. However, a Pearson’s correlation coefficient did not show a relationship between these two variables.

Of regular crime-related television show watchers, 19.7% ( $n = 119$ ) agreed that forensic science is capable of solving any criminal case, whereas of those who did not watch crime-related television shows regularly, 10.7% ( $n = 65$ ) agreed. Therefore, on this issue, regular crime-related television show watchers were more likely to err in their beliefs about forensic science.

The survey data of the Canadian jury-eligible participants indicate some possible ways to make understanding of DNA evidence less complicated. For example, 41.5% ( $n = 251$ ) of respondents agreed that DNA evidence would be easier to understand if an expert simply said that the match is known to be extremely rare in the general population. In previous research related to DNA evidence and the meaning of a match, it was noted that the majority of mock jurors found probability and ratio values difficult to understand and much preferred simplified language (10–12). Another factor for both the defense and the prosecution to consider is that 73.1% ( $n = 442$ ) of those surveyed said that if they were a juror, they would find it difficult to convict someone of a crime if there was not any forensic evidence available. For example, 284 women (75.3%) and 158 men (69.2%) agreed that they would have difficulty convicting someone if forensic evidence was not available. A Pearson’s correlation coefficient indicates a statistically significant relationship between gender and forensic evidence being available ( $r_{605} = 0.264$ ,  $p < 0.01$ ). Of course, the data only provide information on what the jury-eligible participants’ perception is/was, and this does not necessarily mean that this would apply in a real criminal case. Nonetheless, this finding underlines the need for jurors to be educated about reasons forensic evidence is not always available and untainted (for additional information on the Canadian jury-eligible study, see [13]).

In Maricopa County, USA, 102 attorneys were surveyed about their belief about the so-called CSI effect and their cases (14). In this survey, 38% believed that they had either acquittals or hung juries because of a lack of expected forensic evidence on behalf of the jurors (the basis for their belief was unclear). In addition, the survey found that some jurors were asking for evidence not even mentioned or presented at trial. However, of greatest concern in this study is the expressed fear that jurors might display or believe that they have greater expertise about forensic science and evidence than they actually do, which could sway other jurors during deliberations. In fact, Thomas (15) suggests that perhaps “judges could actively acknowledge the existence of the CSI effect and take steps during voir dire to prevent biased jurors from improperly

influencing the jury. When they instruct juries before deliberations, judges could also mention that jurors should not use outside standards like those presented in forensic crime television shows” (p. 72). Some of the Maricopa County survey findings are echoed in the Canadian and Australian research.

### *Descriptive Analysis of the Nominal Data of the Australian Jury Survey*

Seventeen criminal Australian trials with a total of 204 jurors deliberating were followed between May 2006 and April 2007. The trials were selected based on information given by judges, lawyers, and police who thought that expert evidence might be an important component of the upcoming trial. Out of these trials, 71.6% ( $n = 146$ ) of jurors elected to participate in the survey administered at the end of the returned verdict. The mean age of the participants was 42 (minimum = 18; maximum = 68). Table 3 lists the work status and professions of the Australian participants at the time of the trial conclusion.

The Australian jurors were asked questions largely related to their experiences and their perceptions of the trials in which they deliberated. For example, the majority of the jurors felt that their trial experts were “extremely impartial” (45.2%,  $n = 66$ ), “considerably impartial” (30.8%,  $n = 45$ ), and “to some extent impartial” (11%,  $n = 16$ ). Only 2.7% ( $n = 4$ ) felt that the expert was “not at all impartial.” However, it is interesting to note that the jurors’ answers varied when they were asked how useful the expert was in helping their understanding of the evidence: 40.4% ( $n = 59$ ) felt that the expert was “extremely helpful” in their understanding of the evidence; 34.9% ( $n = 51$ ) felt that the expert was “considerably helpful”; 10.3% ( $n = 15$ ) felt that the expert was helpful “to some extent”; and 0.7% ( $n = 1$ ) felt that the expert was “not helpful at all” to their understanding of the evidence. About 8.9% ( $n = 13$ ) of jurors did not answer this question. Similar responses occurred when the jurors were asked about how helpful the judge, the prosecutor, and the defense lawyer were to their understanding of the expert evidence. When the jurors were asked, in the survey, about how helpful their own knowledge was to their understanding of the expert evidence, 10.3% ( $n = 15$ ) responded that their own knowledge was “extremely” useful; 32.2% ( $n = 47$ ) responded that their own knowledge was “considerably” useful; 37.7% ( $n = 55$ ) responded that their own knowledge was “to some extent” useful; and 5.5% ( $n = 8$ ) responded that their own knowledge was “not at all” useful. This question, depending on the source of that knowledge, was as close as this survey went examining the CSI effect directly.

Fascinatingly, jurors seem to take the views of the other jurors into account in their evaluation of expert evidence (68.5%,  $n = 100$ ). In this study, only 15.1% ( $n = 22$ ) of the jurors felt that

TABLE 3—*Australian survey participants’ work status at time of trial.*

	Frequency	Percent
Clerical, Sales, and Services	50	34.2
Homemaker	12	8.2
Managers and Administrators	14	9.6
Professionals	26	17.8
Retired	7	4.8
Student	6	4.1
Tradesperson, Laborer, Transport, and Production	29	19.9
Unemployed	1	0.7
Other	1	0.7
Total	146	100

the other jurors views were “not at all” important in their understanding of expert evidence.

About 85.6% ( $n = 125$ ) of the jurors felt that the expert evidence was important to their decision in the case. Only 6.8% ( $n = 10$ ) felt that the expert evidence was “not at all” important to their decision. This should be understood against the context of the method of trial selection (that is, those where it was predicted that expert evidence would be important in the trial). Interestingly, when the jurors were asked whether the expert evidence was more important to them than any other evidence, the responses were more varied. A total of 21.9% ( $n = 32$ ) of the jurors felt that the expert evidence was “not at all” more important than any of the other evidence presented; 26.7% ( $n = 39$ ) of the jurors felt that the evidence was “to some extent” more important; 25.3% ( $n = 37$ ) jurors thought that the expert evidence was “to a considerable extent” more important than other evidence; and 18.5% ( $n = 27$ ) of the jurors felt that the expert evidence was “extremely” more important than the other evidence. When the question was how important other evidence was when jurors considered the expert evidence, 26% ( $n = 38$ ) felt that other evidence was “extremely” important; 40.4% ( $n = 59$ ) felt that other evidence was “considerably” important; and 21.9% ( $n = 32$ ) felt that other evidence was “to some extent” important to them. Only 3.4% of jurors ( $n = 5$ ) thought that other evidence was not important. Of course, these data cannot lead to conclusions about any kind of CSI effect, but for forensic science and criminal justice in general, it is reassuring to see that jurors do value other evidence, as this suggests they may be critically evaluating forensic evidence.

#### *Descriptive Analysis of the Qualitative Data of the Australian Jury Survey*

A preliminary analysis (6) of the qualitative data in this study (drawn from the survey comments and the interviews) suggests that jurors are more sophisticated than they are often given credit for and do consider such issues as bias, congruence of the expert evidence with other evidence in the trial, and the expert’s basis for his or her opinion, including an evaluation of their reasoning process.

The study produced mixed messages about the so-called CSI effect. One juror commented on the absence of DNA evidence in a murder trial:

We were so upset that ... they never did the nail scrapings. It leaves us jurors thinking ‘why not?’ ... on TV they say that they can get DNA ... There was all these questions that we asked. Even though we know we’re not meant to, we still ask ourselves that in the juror’s room ... it was such a hard case anyhow, but we thought ‘oh well, if they’ve got DNA we’ll be fine. It will just give us the answers’, ... if he had DNA under his fingernails because of the fighting ... belonging to someone else, then we’re going to know...

So what they probably should do is really present the thing on how it is you get DNA and that it’s not that easy and maybe show the jurors that first, before you don’t give them any evidence otherwise they’re really disappointed because we just expect it ... and really explain it because they explain so many other things and I think ‘why didn’t they explain that’ ... [A]ll they said to us was ‘it’s not like it is on TV’ but that isn’t really explaining. ... On TV they show us that you can get DNA out of that bit of blood. Can you? Can’t you? Do you need this, do you need that? Really explain how you get the problem and why didn’t you get it. [T]he

police obviously knew what they were doing ... they didn’t get the DNA just because they couldn’t be bothered not because they couldn’t get it. That’s how we all took it. [They should have] [t]horoughly explained why it was absent. Not just ‘we haven’t got it, don’t worry about that’ because we do worry about that.

... To me it was like a lot of it was circumstantial and if I was in that position and it was based on that evidence and then I was charged it is not enough. ... Whereas if they did have the DNA, that’s just 100%.

... [M]y husband says I’m crazy for watching those shows ... *CSI* ... *Law and Order* ... I’ve stopped watching them since I’ve done jury duty [b]ecause I was disappointed. I got in there and they didn’t give me the evidence—oh those shows are a load of rubbish. I don’t want to watch them anymore ... They had no results at all for any of the DNA stuff and on *CSI* they always get results. They can always see the blood too with their shiny lights and they couldn’t do that here. ... Look at reality instead of what the movies are saying. [T]he movies are wrong. I’ve always had a problem with a lot of the detail that they used to pull out. I thought I wish I had that program on my PC.

Jurors were alive to the possibility of unconscious or conscious bias:

... I think he knew his role. I think he knew his duty was to just be concise... But I think, you know, in the end it’s that he is a prosecution witness, and... where they get their expert witnesses from, whether they’re friends of friends, ... there’s always going to be a little issue there, you know, as to whether or not he’s completely fair. It’s a human thing, isn’t it? ... You’re there to do a job, in the end... he did his role, but that’s not to say that a juror is 100%, you know, convinced. I think that’s what a juror’s for, isn’t it? Like ... that’s a part of it, you’ve got to decide, because it is objectivity...

Experts who admitted they had made a mistake or were willing to alter their position in the face of new information enhanced their credibility in the eyes of many jurors:

... [H]e also referred to a mistake that he made that the other person had picked up on and then he then looked at that as well ... I guess it proved that he wasn’t closed to ideas.

Those who resisted the attempts of the party calling them to give a particular answer also favorably impressed jurors. Experts who acquiesced when they should not have were also noticed, unfavorably:

He agreed when he shouldn’t and I really don’t, I expect if he’s not sure or if he needs to work something out, well he should say it shouldn’t he? [It’s wrong to] agree to get out of there.

Some jurors were unhappy that the expert could not give a definitive solution to the case: others were aware that this was not possible and appreciated the expert’s limitations:

[T]hey basically left it to the jury to make that final decision. Several of them said nothing was absolutely 100% watertight, but this was their best guess. Then it was really a matter for the

jury looking at all the various evidence presented by all the witnesses to then say in the total picture what is **the best** outcome?

A strong theme was that jurors are very careful not to just accept expert evidence at face value but to look to see what other aspects of the evidence supported or contradicted the expert evidence and assess evidence on that basis.

Well the evidence that was presented to us in the form of the video and also the photos of the tire marks seemed to support his conclusions as to the course that the vehicle took...

They were also conscious of which witnesses were independent and ascribed more weight to their evidence, all other things being equal. This was a powerful factor in assessing expert testimony.

The witnesses are too close to the action. They're all emotionally involved. Even bypassers, that's important. Everyone external to the situation is important ... you do weight the expert evidence heavily because they're emotionally uninvolved.

Jurors had many suggestions for how those in the justice system could assist their understanding of expert evidence ranging from permitting note-taking, more use of diagrams, whiteboards, and charts, having opposing experts testify "back to back," training experts to be better teachers, and explaining the absence of evidence which might have been expected. Importantly, from a CSI perspective, jurors generally appreciated their role as the final arbiters and expressed resistance to the expert determining the case:

I think an expert witness is there to just put a perspective ... If a juror takes guidance, complete guidance off him, I don't think they're doing the job, because ... there's two sides to the story, and ... [his evidence was] just a part of the process.

To provide a scientific or technical or a knowledgeable ... explanation of a circumstance that occurred and why it occurred and how it occurred and probabilities about it, but not to actually pinpoint something. It's not their job to say that's what did it without a reasonable doubt.

## Discussion

The so-called CSI effect is a term that the popular media have coined to describe the apparent influence that watching television shows, such as *CSI: Crime Scene Investigation*, has on jurors. In particular, it has been speculated that jurors have unrealistic expectations of such evidence and give it undeserved weight, resulting in unjust verdicts.

The Canadian study showed some important differences in the population of potential jurors who were identified as regular watchers of crime-related television shows as opposed to those who did not. However, despite examining two populations, Canadian jury-eligible individuals and Australian jurors, we cannot support the existence of a CSI effect as it has been popularly understood.

While *CSI: Crime Scene Investigation* and its spin-offs continue to be among the top 10 ratings in Australia, Canada, and the United States, with millions of weekly viewers, it is unclear whether potential jurors generally develop unrealistic expectations about types of evidence presented in a trial. Jurors did have expectations of, and put weight on, forensic evidence in certain situations, such as sexual assault cases.

These studies shed light on the issue of jurors wanting to understand why, for example, DNA evidence was not available in a given trial and why, perhaps, certain evidence was not discussed at trial, knowing that the evidence was collected at the crime scene; however, this does not mean that those same jurors would shape their verdicts or acquit on this fact alone. It is also plausible that individuals with high expectations about forensic evidence and its presentation may well have the same high expectations regarding other evidence, such as an eye witnesses' testimony. This is not necessarily a bad thing.

What these studies suggest is that while jurors may question why such evidence was not introduced, they would still carefully weigh all other evidence, including the reliability and presentation of the expert witness. This was seen in both the Canadian and Australian data. The proposition that jurors ignore or discount nonforensic evidence is not supported by these studies. In fact, the interviews with Australian jurors strongly support the proposition that all evidence, forensic or not, is considered and given appropriate weight. It is clear that expert testimony and presentation needs to be clearly explained in order for the jurors to understand it and deliver a just verdict based upon all the evidence.

## Conclusion

The two populations studied were drawn from different cohorts (jury-eligible Canadian college students and real Australian jurors), neither population was randomly sampled, and the two studies asked different questions with different aims. Nevertheless, the fortuitous overlap of the two studies provides perhaps unexpected and reassuring information regarding existence and operation of the so-called CSI effect on juries of two countries.

**Conflict of interest:** The authors have no relevant conflicts of interest to declare.

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**Appendix A: Eligible Juror Questionnaire**

*Background Information*

1. Which best describes your main program of study?		2. What year are you in?	
Business		0–1	
Child Studies		1–2	
English		2–3	
Justice Studies		3–4	
Science		4+	
Sociology		Other	
Nursing			
Physical Education			
Psychology			
Other (please describe)			
3. What is your gender?		4. What is your age?	
Female	Male		

5. Are you completing a degree in the above area of study?  
 Yes \_\_\_ No \_\_\_

6. Have you ever served as a juror?  
 Yes \_\_\_ No \_\_\_

7. Have you ever attended a criminal trial where a jury was present?  
 Yes \_\_\_ No \_\_\_

8. Do you watch crime-related television shows on a regular basis (e.g., *CSI, Law and Order*)?  
 Yes \_\_\_ No \_\_\_

9. On average, how many hours a week do you watch crime-related television shows?  
 None \_\_\_ 1–3 h \_\_\_ 3–6 h \_\_\_ 6–9 h \_\_\_ 9+ h \_\_\_ Other \_\_\_

10. What are your two favorite crime-related television shows? (please specify)  
 1. \_\_\_\_\_ 2. \_\_\_\_\_ None \_\_\_\_\_

11. In grade school, did you grasp mathematical concepts easily?  
 Yes \_\_\_ No \_\_\_

*Opinion Questions*

*After Reading the Statement, Please Check Off the Answer You Agree or Disagree With the Most*

12. In a sexual assault case, the suspect says that “she agreed to sex” and she said: “he raped me! I did not consent.” There is no DNA evidence entered into evidence in court. Based on this information, you would find the accused guilty.

Strongly disagree	Disagree	Disagree slightly	Agree	Agree slightly	Strongly agree	I don’t know
-------------------	----------	-------------------	-------	----------------	----------------	--------------

13. DNA testing, according to you, is the best piece of evidence against an accused in any type of case.

Strongly disagree	Disagree	Disagree slightly	Agree	Agree slightly	Strongly agree	I don’t know
-------------------	----------	-------------------	-------	----------------	----------------	--------------

14. DNA evidence should always be used in sexual assault cases.

Strongly disagree	Disagree	Disagree slightly	Agree	Agree slightly	Strongly agree	I don’t know
-------------------	----------	-------------------	-------	----------------	----------------	--------------

15. In a Break and Entry case (house break-in), you would convict an accused if the police were able to gather fingerprints at the crime scene.

Strongly disagree	Disagree	Disagree slightly	Agree	Agree slightly	Strongly agree	I don’t know
-------------------	----------	-------------------	-------	----------------	----------------	--------------

16. The police could not find any biological evidence at a murder scene, but they have an eyewitness who saw the suspect flee the scene. You would convict the accused.

Strongly disagree	Disagree	Disagree slightly	Agree	Agree slightly	Strongly agree	I don’t know
-------------------	----------	-------------------	-------	----------------	----------------	--------------

17. If the police did not find biological evidence at a crime scene, you would want to know why they didn’t find any.

Strongly disagree	Disagree	Disagree slightly	Agree	Agree slightly	Strongly agree	I don’t know
-------------------	----------	-------------------	-------	----------------	----------------	--------------

18. I have learned about DNA evidence mostly from the media (i.e., newspapers, news, crime television shows).

Strongly disagree	Disagree	Disagree slightly	Agree	Agree slightly	Strongly agree	I don’t know
-------------------	----------	-------------------	-------	----------------	----------------	--------------

19. The crime scene investigators carry DNA analysis equipment to crime scenes to see if they can match a suspect to the crime scene.

Strongly disagree	Disagree	Disagree slightly	Agree	Agree slightly	Strongly agree	I don’t know
-------------------	----------	-------------------	-------	----------------	----------------	--------------

20. If you knew that the police had collected many items from the crime scene, you as a juror, would want to know all of the results from the crime lab.

Strongly disagree	Disagree	Disagree slightly	Agree	Agree slightly	Strongly agree	I don’t know
-------------------	----------	-------------------	-------	----------------	----------------	--------------

21. If the crime lab did not give you results of all of the items collected at a crime scene, you would be less likely to convict the person accused of a crime.

Strongly disagree	Disagree	Disagree slightly	Agree	Agree slightly	Strongly agree	I don’t know
-------------------	----------	-------------------	-------	----------------	----------------	--------------

22. If an expert, at a trial, says that there is a match between evidence found at a crime scene and that of the accused, you would think that the accused is the one who left the sample at the crime scene.

Strongly disagree	Disagree	Disagree slightly	Agree	Agree slightly	Strongly agree	I don’t know
-------------------	----------	-------------------	-------	----------------	----------------	--------------

23. If an expert, at a trial, testifies that the probability of the sample having come from someone other than the accused is 1 in 19 billion, you would think that the accused is guilty.

Strongly disagree	Disagree	Disagree slightly	Agree	Agree slightly	Strongly agree	I don’t know
-------------------	----------	-------------------	-------	----------------	----------------	--------------



24. Based on television shows like *CSI*, you would want to serve as a juror in a criminal case.

Strongly disagree	Disagree	Disagree slightly	Agree	Agree slightly	Strongly agree	I don't know
-------------------	----------	-------------------	-------	----------------	----------------	--------------

25. If an expert, at a trial, testifies that the likelihood of a person matching this DNA profile would be 1 in a billion, you would think that the accused's DNA is the source left at the crime scene.

Strongly disagree	Disagree	Disagree slightly	Agree	Agree slightly	Strongly agree	I don't know
-------------------	----------	-------------------	-------	----------------	----------------	--------------

26. DNA would be easier for you to understand if an expert simply said that the match is known to be extremely rare in the general population.

Strongly disagree	Disagree	Disagree slightly	Agree	Agree slightly	Strongly agree	I don't know
-------------------	----------	-------------------	-------	----------------	----------------	--------------

27. In order to accurately match DNA, we must, for example, match hair with hair and blood with blood.

Strongly disagree	Disagree	Disagree slightly	Agree	Agree slightly	Strongly agree	I don't know
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28. If an expert, at a trial, testifies that the defendant's (accused) DNA matches the evidence and that the frequency of the matching characteristics is 1 in 30 billion would mean that the source of DNA belongs to the accused.

Strongly disagree	Disagree	Disagree slightly	Agree	Agree slightly	Strongly agree	I don't know
-------------------	----------	-------------------	-------	----------------	----------------	--------------

29. Based on the television show *CSI*, you think time of death is easily determined.

Strongly disagree	Disagree	Disagree slightly	Agree	Agree slightly	Strongly agree	I don't know
-------------------	----------	-------------------	-------	----------------	----------------	--------------

30. Mitochondrial DNA (mtDNA) testing is a commonly used technique in many Canadian criminal cases.

Strongly disagree	Disagree	Disagree slightly	Agree	Agree slightly	Strongly agree	I don't know
-------------------	----------	-------------------	-------	----------------	----------------	--------------

31. If you were a juror, it would be difficult for you to convict someone of a crime if there wasn't forensic evidence available.

Strongly disagree	Disagree	Disagree slightly	Agree	Agree slightly	Strongly agree	I don't know
-------------------	----------	-------------------	-------	----------------	----------------	--------------

32. Based on television shows like *CSI*, you have learned a great deal about how the criminal justice system works.

Strongly disagree	Disagree	Disagree slightly	Agree	Agree slightly	Strongly agree	I don't know
-------------------	----------	-------------------	-------	----------------	----------------	--------------

33. In Canada, like the television show *CSI, Crime Scene Investigators* collect and analyze the evidence before they bring it into the courtroom.

Strongly disagree	Disagree	Disagree slightly	Agree	Agree slightly	Strongly agree	I don't know
-------------------	----------	-------------------	-------	----------------	----------------	--------------

34. A fingerprint match is determined by a computerized machine with thousands of prints from previously convicted persons.

Strongly disagree	Disagree	Disagree slightly	Agree	Agree slightly	Strongly agree	I don't know
-------------------	----------	-------------------	-------	----------------	----------------	--------------

35. If a suspected murderer agrees that he/she was at the crime scene. You would still want the bloody coat introduced as evidence, tested for DNA.

Strongly disagree	Disagree	Disagree slightly	Agree	Agree slightly	Strongly agree	I don't know
-------------------	----------	-------------------	-------	----------------	----------------	--------------

36. The investigators at a homicide find a bloody pair of pants at the crime scene. A suspect agrees to having been at this location. Upon testing the DNA from the pants, the suspect's DNA is not found. You would agree that the suspect cannot be guilty of this crime.

Strongly disagree	Disagree	Disagree slightly	Agree	Agree slightly	Strongly agree	I don't know
-------------------	----------	-------------------	-------	----------------	----------------	--------------

37. Canadian forensic technicians, as seen on *CSI*, will pour caulk into a knife wound to make a cast of the weapon to make it easier to identify what type of weapon was used.

Strongly disagree	Disagree	Disagree slightly	Agree	Agree slightly	Strongly agree	I don't know
-------------------	----------	-------------------	-------	----------------	----------------	--------------

38. Since computers and other "state-of-the art" technology is used for forensic testing, human errors, and corruption is unlikely to take place.

Strongly disagree	Disagree	Disagree slightly	Agree	Agree slightly	Strongly agree	I don't know
-------------------	----------	-------------------	-------	----------------	----------------	--------------

39. Having watched crime-related television shows, you would like to serve as a juror in a criminal case.

Strongly disagree	Disagree	Disagree slightly	Agree	Agree slightly	Strongly agree	I don't know
-------------------	----------	-------------------	-------	----------------	----------------	--------------

40. Forensic science is capable of solving any criminal case.

Strongly disagree	Disagree	Disagree slightly	Agree	Agree slightly	Strongly agree	I don't know
-------------------	----------	-------------------	-------	----------------	----------------	--------------

41. How many zeros can be found in the number "a trillion"?

\_\_\_\_\_

*Please Feel Free to Make any Comments Here*

\_\_\_\_\_

*Thank you again for participating!*

\_\_\_\_\_

**Appendix B: Australian Semi-Structured Survey**

(The content of the questionnaire has been reproduced here, but for space reasons, not the instructions nor the layout/formatting.)

All questions are about the [researcher inserts type, e.g., pathologist, DNA] expert who gave evidence in this trial. Please mark the box which best fits your own opinion, not what other jurors may have thought.

1. Was the expert...

	Not at all	To some extent	To a considerable extent	Extremely
--	------------	----------------	--------------------------	-----------

- Well prepared?
- A good communicator?
- Qualified?
- Experienced?
- Impartial (not biased)?

\_\_\_\_\_



2. How useful for you in understanding the expert evidence was the...

	Not at all	To some extent	To a considerable extent	Extremely
Expert?				
Prosecutor?				
Defense lawyer?				
Judge?				
Your own knowledge?				
Other jurors?				

3. Was the expert evidence...

	Not at all	To some extent	To a considerable extent	Extremely
Easy to understand?				
Important to your decision?				
More important than any other evidence?				

4. When you considered the expert evidence how important to you...

	Not at all	To some extent	To a considerable extent	Extremely
Was what the prosecutor said about it?				
Was what the defense lawyer said about it?				
Was what the expert said?				
Was what the Judge said about it?				
Was your own knowledge?				
Was other evidence?				
Were the views of other jurors?				

5. Was there anything else that was important to you when you were considering the expert evidence?

Yes  
No

If yes, what was it?

6. How confident were you about using the expert evidence properly...

	Not at all	To some extent	To a considerable extent	Extremely
After the expert gave it?				
After the defense lawyer made a speech at the end?				
After the prosecutor made a speech at the end?				
After the judge summed up?				
After you discussed it with other jurors?				

7. Do you think that...

	Not at all	To some extent	To a considerable extent	Extremely
The prosecution case was clear?				
The defense case was clear?				
The scientific evidence was clear?				
You were confused at any time?				

8. If you were confused at any time, please briefly describe what you were confused about:

9. Do you have any other comments about the trial?

AND LASTLY

(remember all personal information in this survey is confidential)

Highest level of education attained: .....

Age .....

Main Occupation .....