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Blinded by Science

The Social Construction of Reality in Forensic Television Shows and its Effect on Criminal Jury Trials

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Using a social construction of reality perspective, this article examines the social distance between popular media depictions of criminal investigations and reality, and the extent to which these depictions influence criminal jury trials. Data were collected from a nationally representative, random sample of trial counsel and judges and was analyzed using qualitative methods. Results indicate there is a great deal of social distance between popular media depictions of criminal investigation and reality. Moreover, jurors appear to have no tools to assess the credibility of forensic testing on television shows or in trials. Furthermore, the social construction of reality on forensic television shows has not only influenced jury decisions but has also affected the ways in which trial counsel and judges do their jobs. Suggestions for further research and discussion of public policy implications are included in the study.

Keywords: criminal trials; CSI; media

For better or worse, the social construction of reality through the media is part of modern life (Gamson, Croteau, Hoynes, & Sasson, 1992). The media educate and entertain using images of the social world that are not always accurate but can be powerful enough to influence social discourse and public policy, particularly in the criminal justice arena (see Barak, 1988; Chermak, 1998; Chermak & Gruenewald, 2006; Hallgrimsdotter, Phillips, & Benoit, 2006). A recent story in the *San Diego Tribune* reported during 1 week of September 2005, there were 63 homicides on forensic television shows during prime time television on the six broadcast networks—2½ times as many as the same period in 2004 (Bauder, 2005). All of these 63 homicides were solved in under an hour using a variety of complex scientific techniques from holographic skull reconstruction to mass spectrometer analysis of chemicals.

In anecdotal accounts and informal interviews, criminal justice practitioners bemoan the popularity of forensic television shows because juries have developed unrealistic expectations of evidence in criminal trials. Not only does it appear juries expect the same level of evidence in a courtroom as they see on television shows

Authors' Note: I would like to thank Michael S. Rankin for his legal expertise and suggestions in this study.

(regardless of an agency's resources), but they also expect evidence to be produced extremely quickly (Lovgren, 2004). Trial counselors refer to such unrealistic expectations as the Crime Scene Investigation (CSI) effect and have started asking potential jurors during voir dire whether they watch forensic television shows (Franzen, 2002). Anecdotal accounts also suggest juries are quick to acquit defendants in cases where forensic evidence does not match their high expectations.

Using the social construction of reality paradigm, this article examines the social distance between popular media depictions of criminal investigations and reality (the CSI effect hereafter), and the extent to which these depictions influence criminal jury trials as experienced by trial counsel and judges.

There are three main rationales for the current study. First, if fictional television shows are consistently influencing jury decision making in criminal trials, the validity of jury trials in their current form must be reevaluated. We already know from prior research, instructions to juries to ignore stimuli external to the trial are ineffective (see Studebaker & Penrod, 1997, for discussion); therefore, if the current study finds the CSI effect is influential, recommendations for better educating juries could be made. Education may need to address misconceptions about forensic evidence, trial procedure, police function, expert witnesses, and crime scene investigators.

Second, results from the current study could be used to help criminal justice professionals prepare for jury expectations of forensic evidence. Currently, the lack of research in this area means criminal justice personnel have little guidance and have to react quickly when a jury member comments in the middle of a trial, "that's not how it is done on television."

Third, the current study can add to a growing body of literature addressing the social construction of crime issues by the media, particularly popular media, as investigations have typically examined newspaper and news reporting (see Ericson, Baranek, & Chan, 1991; Peelo & Soothill, 2000; Schlesinger & Tumber, 1992; Schlesinger, Tumber, & Murdock, 1991). Practically, such additions to literature could include recommendations for local criminal justice officials to educate the public about misconceptions stemming from television shows.

Background

Media and the Social Construction of Reality

There has been a great deal written about the social construction of reality through the media, and not all of it is optimistic. Gamson et al. (1992) commented the media "generally operates in ways that promote apathy, cynicism, and quiescence, rather than active citizenship and participation" (p. 373). Classic studies in the field consistently indicate the media's portrayal of the social world is determined by factors other than reality (e.g., see Croteau & Hoynes, 1994; Epstein, 1973; Gans, 1979; Sigal, 1973; Tuchman, 1978). Recent studies on the media's social construction of crime also indicate a disjunction between media portrayals and reality (see Altheide, 2002; Chermak, 1998; Chiricos, Padgett, & Gertz, 2000; Weitzer & Kubrin, 2004). For example, in a study examining newspaper reports of homicides in England and Wales during the 1990s, Peelo, Francis, Soothill, Pearson, and Ackerly (2004) investigated the extent to which newspapers socially constructed perceptions of homicide. Results from the study indicated only homicides with particular characteristics were reported, such as sexual homicides, homicides involving children, or cases involving jealousy or revenge (p. 272). Other more "run-of-the-mill homicides" were often ignored, leaving readers to construct inaccurate observations of homicides and homicide rates. Peelo et al. questioned whether media coverage of serious crime issues such as homicide helps or hinders the creation of effective crime policy (p. 274).

There have been a number of other studies examining the media's portrayal of criminal justice issues presented under the news-making criminology paradigm. Although this paradigm is primarily concerned with how criminologists use the mass media to change perceptions of crime, law, and justice (see Barak, 2001, p. 190), studies do provide a further theoretical foundation for the current study. For example, in a study examining news production and presentation of crime in the media, Chermak (1994) suggested criminal justice sources, such as police spokespersons, prosecutors, and judges, who provide information to the media, are contributing to the media's shaping of public perceptions of crime and justice. Another study also by Chermak (1998) indicates the number of victims is the most salient variable in predicting the amount of media coverage a story receives. This variable was confirmed as a salient predictor variable in a later study of terrorism reporting in the New York Times (Chermak & Gruenewald, 2006).

Jury Decision Making, Forensic Evidence, and the CSI Effect

The CSI effect refers to the phenomenon in which jurors hold unrealistic expectations of forensic evidence and investigation techniques, and have an increased interest in the discipline of forensic science because of the influence of CSI-type television shows. This effect includes raising the state's burden of proof because of jury expectations that forensic evidence should always be discussed at trial, and the belief forensic evidence is never wrong. Dowler, Fleming, and Muzzatti (2006) wrote:

The CSI effect relates to the popularity of CSI, Criminal Minds, Crossing Jordan, and other programs that portray scientific and forensic evidence-gathering procedures to catch criminals; the "effect" is the rise in expectations of real-life crime victims and jury members. (p. 838)

Although many criminologists and practitioners have written about the CSI effect, at the current time, there appears to be just one empirical study published addressing this topic. This study, conducted by Podlas (2006), examines the antiprosecution aspect of the CSI effect. Using a rape trial scenario posed to a group

of students, Podlas tested differences in students' decision making between those who regularly watched CSI shows and those who did not. She found there were no differences in decision making between the two groups; however, she noted there was only a very small group who did not watch the shows on a regular basis. It was also highly probable that students who were not regular watchers had actually seen an episode or two of a crime-related television show and were at least familiar with the concepts used in the shows. Podlas also indicated there was some evidence in her study to support other facets of the CSI effect, such as an increased awareness of forensic science (p. 461). She concluded further research addressing all aspects of the *CSI* effect is overdue.

There is a sizable body of research addressing the effects of forensic evidence on criminal trial proceedings. The most relevant studies from this research are those conducted after the introduction of forensic television shows, or after forensic evidence CSI-style had become household knowledge among potential jurors. One example is Briody's (2004) study of the influence of DNA evidence on pretrial and trial decisions in homicide cases in Australia. Briody found cases with DNA evidence were significantly more likely to be tried than cases without DNA evidence, and DNA evidence was significantly influential on a jury's decision to convict. In an earlier study, Koehler (2001) found that the method of presentation of DNA evidence by trial counsel also greatly influenced its persuasiveness.

There have been a number of studies on the effects of forensic evidence on jury decisions conducted prior to the introduction of forensic television shows, and most indicate forensic evidence was extremely compelling in decisions (e.g., see Connors, Lundregan, Miller, & McEwan, 1996; Peterson, Milajlovic, & Gilliland, 1984). Until there is additional research available, we can only speculate because the introduction of forensic television shows and the influential nature of forensic evidence has increased.

There is also a large body of research addressing jury decision making in general (Devine, Clayton, Dunford, Seying, & Pryce, 2001, provide an excellent overview of this research). Although examining this research is beyond the scope of the current study, studies indicate there are numerous factors influencing jury decisions such as the social climate on crime issues, and the gender of trial counsel (Devine et al., 2001). Research conducted by Arkes and Mellers (2002) suggests juries are influenced by many external factors and make many more errors than expected.

Despite the lack of empirical research on the CSI effect, it has not gone unnoticed by the court system. Most recently, in Boatswain v. State of Delaware (2005), the Supreme Court of Delaware heard an appeal of a conviction based on prosecutor's comments to a jury about the "television test" for reasonable doubt in forensic evidence. The court denied the defendant's appeal stating the comments did not meet the standard for plain error but recognized the lower trial court judge should not have allowed the prosecutor to discuss the television test. In two later cases, Mathis v. State of Delaware (2006) and Morgan v. State of Delaware (2007), this same issue was brought up during appeal and denied. These cases underscore the presence of the CSI effect in trial proceedings and the need for research in this area.

Forensic Television Shows

Just as murders help sell newspapers (see Peelo et al., 2004), murders help viewing ratings. The television program CSI was introduced in the year 2000 and has been rated the best-scripted program on television for the past 5 years by the Nielson Media Group. A myriad of forensic shows were introduced following the success of CSI, including CSI: Miami, CSI: New York, Bones, Numbers, NCIS, and Medical Investigations. In the summer of 2006, CSI: Miami was the most popular scripted television show in the world (Nielson Media Group, 2006).

According to the entertainment Web site TV.com ("CSI Show Summary," 2007), CSI shows focus on the howdunnit rather than the whodunnit, the latter of which had been the focus of most crime dramas on television prior to CSI. Although there has yet to be any empirical research on the CSI shows, observations of episodes indicate they consistently depict police agencies with limitless resources, small caseloads, unrealistic scientific testing procedures, unrealistic time frames for conducting forensic testing, and inaccurate depictions of what crime scene investigators actually do on a daily basis.

Method

The current study examines the social distance between popular media depictions of criminal investigations and reality, and the extent to which these depictions influence criminal jury trials as experienced by trial counsel and judges. Based on anecdotal evidence, the popularity of forensic television shows, research indicating media influences crime policy (e.g., Peelo & Soothill, 2000), and research indicating forensic evidence influences criminal procedure (e.g., Briody, 2004), we expect to find forensic television shows are influencing jury decisions and criminal jury trial procedure.

Because of the adversarial nature of trial procedure, we expect defense counselors and prosecutors will differ in their opinions of the CSI effect and its advantage. Also, based on previous research of the role of forensic evidence at trials (e.g., Connors et al., 1996), we expect the amount of influence of forensic television shows will change with the type of offense being adjudicated.

Sample and Sampling Method

Because this area of study is new, five prosecutors and five defense attorneys were asked to participate in a pilot study prior to the main sample selection. Pilot participants were provided with background information about the study and were asked to evaluate the questionnaire and offer suggestions. Results from the pilot test are not included in this article.

Respondents in the study came from a multistage cluster sample that began with a sampling frame of all state counties and cities in the contiguous United States (N = 3,141). These were obtained from www.census.gov. Using systematic random sampling, every 70th county or city was chosen bringing the final sampling frame to 45 jurisdictions. Prosecutors, public defenders, and judges working in criminal divisions were solicited randomly from each jurisdiction using e-mail, which introduced the study and requested participation. Where e-mail was not available, the researchers called the offices. Because of the disproportionate number of assistant district attorneys compared to public defenders, the latter were oversampled.

Respondents were mailed a cover letter, a survey containing an informed consent agreement, demographic questions and qualitative measures, and a self-addressed stamped envelope. In the case of district attorneys and public defenders, packets of surveys were sent to the point of contact from e-mail correspondence and were distributed to personnel in offices by the point of contact. Judges from the same jurisdictions were chosen randomly from publicly available lists of personnel. Cover letters mailed to judges were personalized. The total number of surveys mailed to respondents was 547. Three-hundred-and-sixteen respondents returned surveys, providing a response rate of 57%.

Given the introduction of forensic television shows occurred some 7 years ago, we wanted respondents in the sample to have experienced jury decisions prior to and after the popularity of these shows. Therefore, we included a question asking respondents how long they had been working in the field. Respondents with fewer than 7 years' experience were excluded from the study, bringing the final sample size to 290.

Data Collection and Analysis

Given there have been few studies addressing the social construction of criminal investigation issues through the popular media, we wished to provide a forum that encouraged open dialogue. Two open-ended questions were posed. First, respondents were asked to discuss specific instances in which juries' decisions were influenced by forensic television programs. Second, respondents were asked whether forensic television shows had affected their jobs and jury decisions generally. Respondents were provided with a half page for each response, although some submitted additional pages.

Included in the study was a demographic sheet, which asked respondents for their gender, age, race, occupation, number of years experience in the field, and the type and size of the agency or organization in which they worked. We also asked respondents whether they watched forensic television shows on a regular basis and which forensic television shows with which they were familiar.

The open-ended written responses were coded using open coding techniques suggested by Strauss and Corbin (1998). Analysis was based on recurring themes from the data, rather than a preexisting set of criteria (see Drapeau, Korner, Brunet, & Granger, 2004, p. 31, for rationale). The principal investigator and a research assistant coded the first 10 surveys and compared results to ensure interrater reliability. Three themes emerged from the analysis and are addressed separately in the Results. Any information that may help identify the respondent has been removed from discussion of the Results.³

Variable Frequency/Summary Statistics (n) Gender: Male 60% (174) Female 40% (116) 31 to 68 years (M = 48.62, SD = 8.67)Age Race: African American 6.2% (18) Asian 1.0% (3) Latino 11.7% (34) White 77.9% (226) Other 3.1% (9) Profession: Judge 30.7% (89) Prosecutor 34.5% (100) Defense attorney 33.4% (97) 7 to 35 (M = 18.20, SD = 7.73) Years of experience in the field Type of agency/Organization: state 61.7% (179) Local 37.6% (109) Other 7% (2) Size of agency: Fewer than 20 employees 5.9% (17) 21 to 50 employees 9.7% (28) 51 to 100 employees 11.4% (33) 101 to 500 employees 35.9% (104)

Table 1 Demographic Information

Sample Demographic Information

More than 500 employees

Summary statistics and frequencies for the demographic measures are presented in Table 1. Sixty percent of the respondents were male, and 78% indicted they were White. The next largest racial group was Latinos who made up 11% of the sample.

37.2% (108)

The occupations of the respondents are distributed almost in thirds between prosecutors, public defenders, and judges, an ideal split given we are trying to present a balanced view of the CSI effect. Respondents in the sample had an average of 18 years experience, so they were typically senior personnel. The majority work for agencies that have more than 100 employees.

Also included in the first section of the survey were questions about the respondents' familiarity with forensic television shows. Fifty-one percent of respondents indicated they did not regularly watch forensic television shows. Of those who did watch regularly, the most watched show was Law and Order (75.17% of regular viewers). This was followed by CSI (52.06% of regular viewers), and Law and Order: SVU (45.86% of regular viewers). Given the amount of forensic testing on the Law and Order show and its subsidiaries is fairly limited compared to the CSI shows, it therefore appears only about one half of all respondents in the current study would be very familiar with the types of forensic evidence and testing conducted on forensic television shows.

Theme One: Specific Instances

Of the 290 respondents in the study, 79% cited specific instances in which they felt juries had made decisions influenced by forensic television programs. Each case cited by respondents contained one or more of five elements (subthemes) listed below in Table 2. Totals for each element and the frequency by type of respondent are given.

The most frequently cited issue in specific cases postpopularity of forensic television shows was the discounting of eyewitnesses by jurors and preference for forensic evidence (53% of all respondents). The frequencies of judges who reported this element was similar to that for prosecutors (55% and 57%, respectively), whereas the frequency for defense attorneys reporting this element was slightly lower (49%). Comments from all three types of respondents were of a similar nature. For example, one prosecutor wrote:

I prosecuted an attempted murder case where the defendant stabbed a state employee six times, locked her inside the business and left with her keys. The defendant was arrested three blocks away, within 10 minutes of the commission of the crime, with the victim's keys in his pocket. The victim identified the defendant as the man who stabbed her. The first jury trial resulted in a hung jury because five jurors believed there should have been DNA evidence presented at trial because they saw blood in the crime scene photos. I explained the victim had identified this blood as her own because she was stabbed.

Another prosecutor wrote: "In a date rape trial where there was insufficient sperm left on the victim to complete an analysis. . . . The victim identified the defendant as the rapist but the jury acquitted because eyewitness testimony was not enough."

The second most frequently discussed element was the effect forensic television programs had on forensic evidence presentation at trial. One half of all respondents commented on this change. Respondents wrote that juries saw a lack of forensic testing on fluids, tissue, or other materials as sloppy police work even when such testing may not have been essential to the case. For example, one respondent, a prosecutor, wrote:

I tried an attempted murder case where the victim knew the man who slit his throat. . . . The jury wanted blood found in the defendant's vehicle tested to make sure the victim had identified the correct man. They felt eyewitness testimony was not enough since DNA testing could have been done and would have been "beyond a reasonable doubt." . . . [Jury members said] the state didn't do enough without the DNA. They believed DNA was a test that only took a few minutes to do; they had seen it used "all the time" on CSI.

All three types of respondents, with the percentage of judges and prosecutors who commented on this issue being almost identical (53.93% vs. 54%), reported cases like this. One judge wrote:

I have presided over a number of routine cases such as burglary and drug cases where the jury expected DNA analysis or other scientific evidence unnecessary for conviction. Based on the lack of forensic evidence, these defendants were acquitted.

Table 2 Frequencies for Theme One: Specific Cases

Elements (subthemes)	Frequency (in percentages) (n)
Lack of forensic evidence testing/sloppy police work	
Judges	53.93 (48)
Prosecutors	54.00 (54)
Defense counsel	45.36 (44)
Total	50.03 (146)
Forensic evidence irrelevant to case	
Judges	46.06 (41)
Prosecutors	49.00 (49)
Defense counsel	39.17 (38)
Total	44.13 (128)
Eyewitness testimony discounted	
Judges	55.05 (49)
Prosecutors	57.00 (57)
Defense counsel	49.48 (48)
Total	53.10 (154)
Jurors unable to distinguish between opinion and fact	
Judges	30.33 (27)
Prosecutors	23.00 (23)
Defense counsel	11.34 (11)
Total	21.03 (61)
Increased use of negative evidence witnesses	
Judges	44.94 (40)
Prosecutors	38.00 (38)
Defense counsel	21.64 (21)
Total	27.58 (80)

Fewer defense attorneys commented on this element; however, 45% of defense attorneys commented there had been changes to forensic evidence processing that affected specific cases. One defense attorney wrote:

Anytime there is the potential to take fingerprints or any sort of DNA processing, jurors want to see that being done. For example, I had a drug case where the defendant was seen trying to mail a box which was found to contain 25 pounds of marijuana. Even though the box was in the possession of the defendant, the jurors were bothered police did not check for fingerprints on the inside of the box to see if the defendant was responsible for packing the marijuana. Without that evidence, they decided to acquit.

Not all of the cases cited gave the advantage to the defense, as numerous respondents wrote when there is forensic evidence presented, evidence trumps all else, including the law. For example, one defense attorney wrote:

In a murder trial, jurors did NOT consider reasonable doubt when there was evidence of more than one person at the crime scene because the defendant had left bloody fingerprints at the scene of the crime . . . and forensic testing confirmed these belonged to the defendant.

The third element reported by slightly less than one half of respondents was the role of irrelevant forensic evidence in trials. This element linked to the previous element, where a lack of forensic evidence indicated sloppy police work. Forty-six percent of judges, 49% of prosecutors, and 39% of defense attorneys commented on this element in their discussions of specific cases. They discussed cases where irrelevant forensic evidence was introduced in trials because previous jurors had requested it and cases where the jury acquitted defendants because there was no forensic evidence. For example, one prosecutor wrote:

In a recent high-profile white-collar case, the jury acquitted one defendant because there was no fingerprint analysis conducted on fraudulent documents. It was explained to the jury this type of analysis would have been futile as the documents were handled by hundreds of people. Furthermore, plenty of other evidence presented tied the defendant to the crime.

The fourth element reported by about one third of respondents was the increased use of negative evidence witnesses in specific trials because of forensic television shows. Negative evidence witnesses are called to testify as to why forensic evidence was not needed, or why testing was not conducted. It is interesting to note that judges reported they had experienced this issue in specific cases most often (44%). Thirtyeight percent of prosecutors cited this issue in specific cases, and only 11% of defense attorneys mentioned negative evidence witnesses. The latter is not surprising given it is usually the prosecution who call these types of witnesses.

The last element cited in discussions of specific cases was jurors' inability to distinguish between opinion and facts. For example, one defense attorney wrote, "Jurors were unable to distinguish between opinion and fact in expert testimony about a child's brain damage and its prognosis." A judge commented, "in a case this week, jurors asked for clarification of expert testimony with regard to a particular law. The jurors were confusing expert testimony with facts and law."

Theme Two: Forensic Television Programs and Their Effects on Job Execution

The second theme in the results focused on changes in the way trial counsel and judges execute their jobs because of the widespread popularity of forensic television shows. Of all respondents, 248, or 85.51% indicated they felt their job had changed in some way. Subthemes appear below in Table 3.

Table 3 Frequencies for Theme Two: Changes in Job Execution

Elements (subthemes)	Frequency (in percentages) (n)
Mention of, and deference to television programs and diff	ferences
between programs and actual trials	
Judges	32.58 (29)
Prosecutors	31.00 (31)
Defense counsel	29.89 (29)
Total	30.68 (89)
Additional time spent in voir dire	. ,
Judges	NA
Prosecutors	58.00 (58)
Defense counsel	47.42 (46)
Total	35.86 (104)
Additional time spent discussing forensic evidence	` '
Judges	60.67 (54)
Prosecutors	76.00 (76)
Defense counsel	65.97 (64)
Total	66.89 (194)
Increased use of negative evidence witnesses	***** (** 1)
Judges	NA
Prosecutors	37.00 (37)
Defense counsel	9.27 (9)
Total	23.35 (46)
Increased time spent linking events	20.00 (10)
Judges	NA
Prosecutors	19.00 (19)
Defense counsel	11.34 (11)
Total	15.23 (30)
Increased time spent on establishing credibility of eyewith	
Judges	NA NA
Prosecutors	44.00 (44)
Defense counsel	7.21 (7)
Total	25.88 (51)
Increased time spent viewing forensic television shows in	· · · · · · · · · · · · · · · · · · ·
Judges	16.85 (15)
Prosecutors	29.00 (29)
Defense counsel	10.31 (10)
Total	18.62 (54)
Increased time learning specifics of forensic testing and p	. ,
Judges	20.22 (18)
Prosecutors	43.00 (43)
Defense counsel	43.29 (42)
Total	35.53 (103)
Increased time spent on highlighting the facts of a case d	
Judges	8.98 (8.00)
Prosecutors	28.00 (28)
Defense counsel	24.74 (24)
Total	20.68 (60)
Total	20.06 (00)

The most oft-cited change to job execution reported by respondents was the additional time everyone said they had to spend discussing forensic evidence. Judges wrote they spend more time clarifying forensic evidence for jurors. This was particularly problematic in jurisdictions where jury members are permitted to ask questions. For example, one judge wrote:

I now give specific instructions in every criminal case that jurors should not expect the type of forensic evidence they see on television shows and often I have to go through the evidence with the jury to make certain they are not holding trial evidence to television standards.

Prosecutors wrote they spend a lot more time carefully going through all the forensic evidence even after experts have discussed it. Defense attorneys also commented they had to spend a lot of time at trial addressing forensic evidence and discussing why it could cast doubt on their client's involvement in the offense. More than two thirds of all respondents commented on this postforensic television show change.

The second most commonly mentioned change to the execution of jobs applied to prosecutors and defense attorneys, and this was additional time spent during voir dire to assess the extent of the CSI effect. Similar comments came from both types of trial counsel, although more frequently from prosecutors. One prosecutor wrote, "I certainly address television shows like CSI during voir dire. If I find jurors who have difficulty distinguishing television from reality, I do my best to have them bumped from the jury."

A defense attorney wrote:

Much more time is spent in voir dire, and this affects both the prosecution and the defense. I try to weed jurors out who may be overly influenced by these shows. Although for a defense attorney, a juror who is very tuned into forensic shows may be more likely to dismiss a case because forensic evidence is lacking, he or she could also convict based on a piece of forensic evidence irrelevant to the case because jurors think forensic evidence is error proof.

More than one third of all respondents also commented they have to spend more time familiarizing themselves with forensic tests and procedures so they can be better prepared for trials. Prosecutors and defense attorneys reported this change to their jobs equally.

Thirty percent of all respondents in the study discussed the need to mention forensic television shows during trials and highlight the differences between them and reality. One prosecutor wrote, "I find myself having to spend more and more time discussing the CSI effect and trying to get jurors to put these shows aside." Another prosecutor wrote:

I routinely ask jurors about the CSI effect and whether they assign greater weight to technical or forensic evidence than testimonial evidence. . . . Jurors expect perfection and are easily misled by [defense] attacks on police investigation because they see how easy it is on CSI.

A defense attorney wrote:

I spend far more time at trials explaining the type of evidence on CSI shows is not realistic in most cases. . . . Regardless of what I say, jurors still seem to think there should be more forensic evidence, and when there is some, they see it as infallible.

All types of respondents expressed this sentiment equally.

Other elements mentioned by respondents ranged from spending additional time linking events and facts together for the jury, to establishing the credibility of eyewitness. It was also interesting that 54 respondents in the sample wrote they felt watching forensic television shows had now become part of their job. As one prosecutor wrote:

The only way to know what jurors are going to expect from forensic evidence and policing in a trial is to watch the forensic shows and familiarize yourself with the techniques they use. You have to be prepared to address why those things were not done in your case.

Theme Three: General Comments on Forensic Television Shows

The final theme in the results is general comments on the CSI effect. Again, respondents' comments are coded and divided into subthemes or elements. These appear below in Table 4.

Consistent with results presented in earlier themes, the most commonly cited issue raised by respondents was jurors now have unrealistic expectations of forensic evidence and police work. This includes the belief on the part of jurors that police have limitless resources to make a case, and all involved personnel have small caseloads. Almost 70% of all respondents expressed this sentiment. Prosecutors reported this issue with greatest frequency. For example, one prosecutor wrote:

Jurors have unreasonable expectations when it comes to forensic evidence. They believe every case should have some kind of DNA evidence. They expect all police officers to spend the time and resources to investigate cases the way they make cases on TV.

Some defense attorneys who discussed the issue of unrealistic expectations commented on the difficulty prosecutor's experience; for example, one defense attorney wrote:

I definitely believe jurors hold prosecutors to a higher standard in terms of being able to produce forensic evidence even when it may not necessarily be relevant. Jurors also don't seem to like the excuse that in some cases forensic processing would be too expensive and too much effort.

A prosecutor who summarized respondents' sentiment about jury expectations of resources spent on cases wrote:

Table 4 Theme Three: Frequencies of the General Effects of Forensic Television Shows

Element (subthemes)	Frequency (in percentages) (n)
Unreasonable expectations of forensic evidence/police	
Judges	68.53 (61)
Prosecutors	80.00 (80)
Defense counsel	61.85 (60)
Total	69.31 (201)
Conviction easier if any type of forensic evidence is presented	
Judges	35.95 (32)
Prosecutors	55.00 (55)
Defense counsel	53.60 (52)
Total	47.93 (139)
Defense attorneys are viewed more negatively	
Judges	0 (0)
Prosecutors	0 (0)
Defense counsel	11.34 (11)
Total	3.79 (11)
Criminal justice personnel need to be familiar with forensic tele	evision shows
Judges	17.97 (16)
Prosecutors	26.00 (26)
Defense counsel	9.70 (10)
Total	17.93 (52)
CSI effect is exaggerated	
Judges	0 (0)
Prosecutors	1.00(1)
Defense counsel	2.00(2)
Total	1.03 (3)
Juror understanding of evidence is improved	
Judges	2.24(2)
Prosecutors	11.00 (11)
Defense counsel	8.24 (8)
Total	7.24 (21)
Juror understanding of evidence is worse	
Judges	23.59 (21)
Prosecutors	48.00 (48)
Defense counsel	26.80 (26)
Total	32.75 (95)

I have found jurors now expect more evidence than they did before. They want to see DNA testing in very case. They expect police officers to fingerprint every square inch of a crime scene. In a way, it feels as though our burden of proof is raised; non-forensic evidence must be much stronger in the absence of forensic evidence.

Another oft-cited issue was convictions were easier if there was any type of forensic evidence, but more difficult if there was little or no forensic evidence. Prosecutors and defense attorneys agreed on this issue, and judges were not far behind.

The weighing of forensic evidence, therefore, did not seem to provide a clear advantage to either side. As one defense attorney pointed out,

Prosecutors may have to explain in argument how forensic evidence (or its absence) is relevant. Defense attorneys can often argue the investigation was incomplete, but just one tiny piece of forensic evidence seems to be enough to nail a defendant. Jurors still usually want to side with the government.

Other issues introduced about the CSI effect differed by type of respondent. For example, 11% of defense attorneys commented they felt forensic television shows portray defense attorneys in a poor light, and this made it difficult for jurors to view defendants and their attorneys objectively. For example, one defense attorney commented, "Jurors seem to view defense attorneys more negatively than they used to. Most forensic shows make defense attorneys look like bad guys."

Many respondents also commented on the level of knowledge among jurors about forensic evidence. Twenty-six percent of defense attorneys said juror understanding of forensic evidence has decreased since the popularity of forensic television shows, and 48% of prosecutors said the same. As one defense attorney said,

Juries expect forensic evidence in just about every case, which may make it somewhat more difficult for prosecutors in cases where there is no such evidence, but that is balanced out by their unquestioning, uncritical acceptance of the forensic evidence when it exists, despite any accurate understanding of its validity or significance to the case.

Of the judges who commented on this issue, 23% felt jurors were less educated about forensic evidence. The large differences in frequencies tend to suggest prosecutors feel more disadvantaged by the popularity of forensic shows. One prosecutor summed up the sentiment well by saying,

Juries have unrealistic expectations of resources in a criminal prosecution. They think everything can be tested nowadays, and often don't believe it when we say a certain test could not be conducted. Juror's have little accurate knowledge about forensic evidence. They also believe forensics produce only one answer. The truth is there can be differences among forensic experts.

Overall, results from this theme indicate what juror's view on forensic television shows greatly influences their impressions and expectations of the criminal justice system.

Discussion

The current study examined the social distance between popular media depictions of criminal investigations such as CSI, and reality (the CSI effect), and the extent to which these depictions influence criminal jury trials as experienced by trial counsel and judges. In other words, according to criminal justice practitioners, does the CSI effect exist?

Results from the study indicated three themes. Theme one addressed specific instances of cases where respondents felt case outcomes had been influenced by forensic television shows, and 79% of all respondents responded in the affirmative. Specifically, respondents cited instances where juries had discounted eyewitness testimony, discounted victim testimony, had unrealistic expectations of forensic evidence, and viewed lack of forensic testing as sloppy police work, despite the relevance of testing. The influence of forensic television shows on jury decisions was reported as being most influential in murder trials, drug cases, and sexual assault cases.

Theme two addressed changes in respondents' job execution because of forensic shows. Eighty-five percent of respondents commented their jobs had changed in some way. The most commonly cited change was additional time spent at trial discussing forensic evidence. Theme three examined the general effects of the CSI effect, and with results strongly indicating jurors' construction of the criminal justice system were shaped by what they viewed in popular media. Respondents commented on jurors' belief that investigators had small caseloads and unlimited resources for solving crimes. Prosecutors and defense attorneys noted in the presence of any kind of forensic evidence, convictions were easier; and in cases where there was no forensic evidence, convictions were more difficult. Prosecutors also commented on the increased use of negative evidence witnesses to counter unrealistic juror expectations.

Like Hallgrimsdotter et al. (2006), we would argue the average juror's experience and exposure to real forensic evidence is extremely limited, and thus their judgment of evidence is influenced a great deal by what they watch on television. Our results also indicate there is a great deal of social distance between media depictions of criminal investigation and reality. It also appears that jurors have no tools to assess the credibility of forensic testing on television shows or in trials.

Peelo et al. (2004) suggested there are two levels of distortion in newspaper accounts of homicides: a general distortion about homicide and distortions of specific instances of homicide (p. 272). The same differentiation was found in the current study. Popular media has made general distortions about criminal investigations, such as giving the impression investigators have small caseloads, and infinite resources, and specific distortions about specific methods of forensic testing, such as DNA testing and holographic reconstruction in homicide cases.

In the current study, we asked trial counsel and judges to discuss the effects of forensic television shows on criminal trials based on their experiences of criminal trials. We included only respondents who had had criminal trial experience prior to and after the CSI explosion. We would argue this group of respondents has a much better handle on how criminal trial proceedings have changed since the popularity of forensic television shows than jury-eligible individuals because the latter may have had little, or no exposure, to criminal trials prior to or after the popularity of forensic television shows. We would also argue that given their experience, our respondents are in a very good position to endorse suggested policy changes from the current study.

There are a number of possible shortcomings of the current study. One example is we asked respondents in the current study to give us their perceptions of how juror decision making has changed with the popularity of forensic television shows. There are various problems with asking for retroactive recall (see Babbie, 2004, for discussion) however, using a probability sample of practitioners from across the United States may have helped us gain a realistic picture of practitioner's perspectives.

A second possible shortcoming of the current study is the measures used. Given there was no empirical research on the CSI effect at the time the current study began, we posed open-ended measures for respondents. Thus, our results were presented in broad themes. Clearly, there is much more work to be done on this topic. Future studies could use our results as a foundation for arriving at more structured measures.

Overall, results from the current study support the notion popular media are actually hindering the criminal justice process. Gamson et al. (1992) wrote people "walk around with media-generated images of the world, using them to construct meaning about political and social issues" (p. 374). However, the social construction of reality is not a static process, thus allowing a number of recommended policy changes. First, there needs to be more dialogue about the CSI effect. This discussion should take place among all criminal justice practitioners and could be aided by media. Practitioners need to be aware of the extent of the CSI effect and how to address it during trials. Police officers may need refresher courses in basic evidence recovery and forensic testing, and departments should hire individuals with forensic backgrounds. Given estimates of a 250% increase in forensic science programs offered by U.S. colleges and universities (see Dutelle, 2006), locating such individuals should not be problematic. Some agencies have already taken this step; all new special agents coming through the FBI training facility at Quantico complete training on the CSI effect, which includes how it may affect investigations and trials.

A second recommended policy change is the introduction of a compulsory, nonpartisan briefing for jurors in criminal trials that provides an accurate depiction of criminal trials and criminal investigation procedure. This could also be done with citizen's police academies, which in turn could help educate the public about actual criminal investigative techniques, or could be done with an educational video shown to all potential jurors. Bradshaw, Ross, Bradshaw, Headrick, and Thomas (2005) found that orientation videos help juries make fewer errors, although there is little other research on this.

A third recommendation for policy change would be with regard to actual jury selection. Although not legally mandated, it has been common practice for prosecuting and defending attorneys to excuse criminal justice professionals, attorneys, professors, or anyone else working in the field, from jury selection because of their knowledge of the system. Results from the current study indicate that inclusion of individuals with specialized knowledge may be beneficial for both sides.

A final recommendation from the current study is a call for further research on the CSI effect. Criminologists and criminal justice professionals may even consider research at the local level to allow for local variations in juror viewing, knowledge, and crime rates. Future studies could also examine whether the CSI effect has an impact in civil proceedings.4

Just as public scandals eventually become less interesting, and cult followings eventually dwindle, perhaps the popularity of forensic television shows might decline. Until then, awareness of hyperreality may be the best weapon against the CSI effect in the courtroom.

Notes

- 1. Popular media refers to fictional or scripted television shows and films.
- 2. This number includes county equivalents, such as parishes, independent cities, districts, and boroughs.
- 3. Some respondents gave details about high-profile cases that have been removed from analysis to ensure anonymity.
- 4. A few respondents in the current study were involved in criminal and civil proceedings and indicated that the CSI effect influenced both types of trials.

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