A Meta-Analysis of the CSI Effect: The Impact of Popular Media on Jurors' Perception of Forensic Evidence

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abstract: *The CSI effect describes the perception in the criminal justice system, popular media, and general population that consumption of crime-based television programming focusing on the forensic sciences has created a juror bias toward the requirement of forensic evidence at trial to justify a conviction. It is proposed that this bias has resulted in increasing the burden of proof laid upon the state at trial from beyond a reasonable doubt to beyond any doubt. This raised standard of proof has allowed guilty defendants to go free because of this bias. This article provides a meta-analysis of empirical studies of the CSI effect that examine the behavior of jurors and the influence of popular media on the trial decision-making process.*

> *Physical evidence cannot be wrong; it doesn't lie. It's not influenced by emotion or prejudice; it's not confused by the excitement of the moment.*
>
> *CSI: Crime Scene Investigation*
> (Bruckheimer, Zuiker, and Fink, 2005)

Introduction

In 2000, U.S. and British television launched two crime drama series focusing on forensic science and its use in the criminal justice system. These two programs were, respectively, *CSI: Crime Scene Investigation* and *Waking the Dead* (Cole, 2013). *CSI* became a cultural phenomenon over its 15-year run, spawning several spin-offs, including *CSI: Miami*, *CSI: New York*, and a variety of others. Forty-two million people viewed one or more of the three series in October 2009, while all of these shows and their reruns ranked in the top 30 in global markets (Cole, 2013; Shelton, 2010). Researchers have investigated whether viewers' perceptions of the validity of forensic science could be skewed if later summoned to serve as jury members. Popular media had already introduced the idea of *jury incompetence* as early as 1997 (Edmon & Mercer, 1997). This phenomenon was related to another made popular by the media in the wake of the new programs: the *CSI effect*. *Time* magazine first used this phrase in 2002 to describe the increasing public awareness of the importance of crime scene investigation evidence and subsequent police laboratory findings in U.S. criminal cases (Cole, 2013). Anecdotal reports from prosecutors at the time suggested that potential jurors were developing unrealistic expectations of the state's ability to provide forensic evidence. Prosecutors feared that juries, under bombardment from forensic-related shows, were erroneously acquitting defendants based on expectations created by these fictional representations (Lawson, 2009).

Could a belief in assertions like those of one of *CSI*'s main characters in the epigram influence U.S. jurors' deliberation process? In the following, we first review the main definitions of the CSI effect and explore the role popular media play in perpetuating it. We then utilize a meta-analysis of empirical studies that examined data on this question. Finally, we assess whether the data support the anecdotal claims put forward by U.S. popular media, prosecutors, and defense attorneys.

Defining the CSI Effect

The CSI effect can be defined in three ways. The first and most common definition holds that the televised portrayal of forensic investigations creates, "unreasonable expectations on the part of jurors, making it more difficult for prosecutors to obtain convictions" (Podlas, 2006, p. 433). The counterpart to this is the *reverse CSI effect*, by which "*CSI* raises the stature of scientific evidence to virtual infallibility," (Podlas, 2006, p. 433) creating an almost insurmountable obstacle for the defense where this type of evidence is presented. The third definition

recognizes the shows' effect on creating general interest, producing more public funding for and educational opportunities in the forensic sciences (Podlas, 2006). We focus on the first two definitions.

Increasing the Burden of Proof for Prosecutors

The CSI effect has taken up residence in many courtroom attorneys' minds. For example, the Maricopa County Attorney insisted that the *CSI* franchise had a "real-life impact on justice" (Cole & Dioso-Villa, 2009, p. 1340), and called on the CBS network to place disclaimers in the television shows. Some prosecutors fear that juries will reject the typical testimony and circumstantial forms of evidence presented at actual trials on the grounds that they lack the scientific certainty inherent in forms that dominate these fictional representations. "Typically, the State attempts to bear its burden by piecing together many types of evidence, each having some probative value but also carrying a degree of uncertainty and, potentially, error" (Tyler, 2006 p. 1053). The phenomenon would effectively make these forms of evidence irrelevant.

In contrast to these claims, others in the court work group, including prosecutors and defense attorneys, dispute the very existence of the phenomenon. Some researchers concur, arguing that these accounts are not universally accepted and that prosecutors are split on their validity (Tyler, 2006). Cole and Dioso-Villa observed that "'To argue that 'CSI' and similar shows are actually raising the number of acquittals is a staggering claim, and the remarkable thing is that, speaking forensically, there is not a shred of evidence to back it up'" (quoted in Tyler, 2006).

However, high profile cases such as the trials of actor Robert Blake and real estate heir Robert Durst that unexpectedly end in acquittals further the perception among court officials of the CSI effect's reality. Jurors in the Blake trial felt latent prints, DNA analysis, and the presence of gunshot residue should have played a role in the prosecution's case. This despite the fact that such evidence is rare compared to its omnipresence in the television shows (Tyler, 2006). Durst confessed to shooting, dismembering, and then throwing his victim's remains in the ocean. A jury consultant for the defense advised council to select jurors familiar with *CSI* in the hope that they would find the lack of forensic evidence significant (Call, Cook, Reitzel, and McDougle, 2013). The victim's head was never found and Durst was acquitted. The defense argued that if the head had been found, it might have revealed evidence that could have substantiated Durst's claim that he killed the man in self-defense (Mann, 2005).

Judges also assert the presence of the CSI effect. In a 2004 Phoenix murder trial, jurors "noticed that a bloody coat introduced as evidence had not been tested for DNA. They alerted the judge. The tests hadn't been needed because the defendant had acknowledged being at the murder scene. The judge decided that TV had taught jurors about DNA tests, but not enough about when to use them." (Willing, 2004) Such partial education of the juror pool results in steps being taken to counter misinformation. "In Arizona, Illinois, and California, prosecutors now use 'negative evidence witnesses' to try to assure jurors that it is not unusual for real crime-scene investigators to fail to find DNA, fingerprints and other evidence at crime scenes" (Willing, 2004). The FBI even created a video addressing the phenomenon (Cole & Dioso-Villa, 2009).

These anecdotes raise the question whether the state now faces the burden of proving its case not beyond a reasonable doubt but beyond any doubt. Yet, given that the Bureau of Justice Statistics reports only 10% of criminal cases ever make it to trial, does it matter? These cases do still involve the most serious offenses and severe possible sentences. In such cases false acquittals can, therefore, pose a significant threat to public safety (Lawson, 2009).

Problems for the Defense

Defense attorneys for their part argue that there exists a reverse CSI effect. They believe that glorified television portrayals of crime scene investigators and the forensic scientists they work with elevate the credibility of their real-life counterparts (Cole & Dioso-Villa, 2009). Data collected two years prior to *CSI*'s debut by the National Opinion Research Center's 1998 General Social Survey showed the scientific community enjoyed a 40% approval rating. A scant 19% of Americans in contrast had a "great deal of faith" in the criminal justice system (Tyler, 2006). At the time of *CSI*'s debut, therefore, the public was predisposed to believe the scientific community over the legal community. The concern is that this predisposition toward over-confidence in science combined with the reverse CSI effect "will lead jurors to blindly believe in forensic science" (Podlas, 2006, p. 437). Indeed, "scientists say *CSI*'s main fault is this: The science is always above reproach" (Willing, 2004, p. 28). In the programs, we "'never see a case where the sample is degraded or the lab work is faulty or the test results don't solve the crime'" (Willing, 2004, p. 31).

Ironically, some in the crime scene investigation community also share the maxim that "the physical evidence never lies" (Gardner, 2012, p. 7) and is completely

objective. This objectivity, however, can be affected by the subjectivity of investigators or technicians interpreting evidence (Gardner, 2012). Defense attorneys worry that "jurors will be unwilling to accept that forensic proof could be compromised by human error, or is merely an educated guess" (Podlas, 2006, p. 438). Anecdotally, the misconception that investigators and the evidence they collect are infallible is said to favor the prosecution in any case where forensic evidence plays a role (Willing, 2004).

Another consideration is the reality of the ongoing evolution of evidence collection techniques versus their fictional portrayal. DNA testing has been evolving for the past 20 years. Several old verdicts were reversed based on new evidence found after retesting DNA samples. Yet, while DNA testing continues to become a more exact science, the evolving field of bite mark evidence is far less so. Similarly, the use of microscopic hair comparisons is also lagging. DNA testing of hairs from older cases has proved that hair comparison is not accurate. These are just a few examples in which DNA testing has revealed what was believed to be an exact science to be less so (Godsey, 2011).

The Role of the Popular Media

While the CSI effect's specific influence on jury deliberations remains debatable, the media's influence, in general, is not. The effect of mass media on public beliefs concerning crime and investigations has been present at least since Sir Arthur Conan Doyle's creation of Sherlock Holmes (Schweitzer, 2007). Television has portrayed its own version of the legal system since the 1960s. The CSI effect is only the most recent in a string of effects attributed to television programming. For example, *Perry Mason* purportedly changed the public's expectations of defense attorneys because of the way in which its title character always won his case or cross examination (Mann, 2006). Similarly, entire generations have no difficulty reciting their Miranda Rights after having heard them read to suspects on television since *Dragnet* and in subsequent, ubiquitous police procedurals (Call et al., 2013). Considering that 97% of U.S. households as of 2005 had a television (Media > Households with television, 2005), it is easy to assume that the medium would have some effect on views, preconceptions, and expectations. As the theory and *CSI* grew in popularity so did media attention. In 2003, the CSI effect was mentioned only twice after the first 2002 *Time* article (Cole and Dioso, 2009). By 2006, the number skyrocketed to 78 individual news articles on the topic. Many of these were in major publications such as *National Geographic* and *Scientific American*. The subject became sensationalized with news reports declaring that there was no debating the existence of the CSI effect (Cole & Dioso, 2009).

Episodes of *CSI* rarely leave any doubt as to the identity of the guilty party, and must often provide resolution in an hour. However, unlike television depictions of the legal system, the real one can often lead to uncertainty as to what the truth actually is. A not guilty verdict can be frustrating. "This frustration is most palpable when perpetrators are never identified, but even lingering doubts about whether justice has been served trigger this sentiment" (Tyler, 2006, p. 1050). The psychological desire for closure and the popular media's ability to fulfill it may play a substantial role in what is considered to be the pervasive influence of television on the public's perception of the legal system. The state seeks through the legal system to fulfill its responsibility to restore balance when the social contract is violated. The system's goal is to establish the truth through which justice can be served (Tyler, 2006). Toward this end, Podlas (2009) describes the trial courtroom as the setting for competing narratives in which prosecutors tell one story while the defense tells another. Both place evidence in specific contexts that lead to the desired verdict (Podlas, 2006). Whoever provides the most satisfying story generally wins. Partly because "television is one of society's primary storytellers" (Podlas, 2009, p. 496), the story jurors hear in court is not the first one they encounter, especially about the legal system. Most people do not study the law or read scholarly legal sources, but instead obtain most of their education about the legal process from television (Podlas, 2006). Jurors enter the courtroom with a lifetime of stories concerning crime, attorneys, and justice. Many of those stories and the morals and lessons they impart inevitably create preconceptions (Podlas, 2009).

Tyler (2006) found 44 tests where pre-trial publicity shaped verdicts. In trials where jurors were exposed to a large amount of negative pre-trial publicity there was a significant increase in the likelihood of a conviction. This was in comparison to those jurors who had been exposed to positive publicity or no publicity at all prior to jury selection. Still, most jurors probably watch television; do they really have a clear comprehension of forensic science? If jurors do understand forensics, is it possible for them to apply this knowledge in the courtroom or could they use it in committing a crime? Vicary and Zaikman (2017) examined police chiefs' attitudes toward the CSI effect. They found that despite high levels of crime show viewership, this did not relate to an understanding of forensic science. Individuals were able to discuss various components of forensics pertaining to footprints, finger-

prints, hair, and dirt. This conceptual knowledge indicates that they thought about this more than those who did not view crime shows. The study was inconclusive and only indicated a need for further investigation.

Preconceptions driven by the media, "are only problems if jurors are unable to put them aside" (Tyler, 2006, p. 1050). Hawkins and Scherr (2017) found that individuals watching crime dramas tended to be less questioning of forensic science application in the trial process. These individuals tended to focus more on the value of the forensic examples brought into the trial when making their decisions. Tyler (2006) suggests that the influence of mass media depictions of the criminal justice system on the future deliberations of media consumers may persist even when attempts are made to mitigate their effect. This inability to set aside fictional notions is said to be the primary result of the CSI effect. The belief in the CSI effect has further consequences affecting both sides in court. Call, Reitzel, and McDongule's (2013) national survey of prosecutor and defense attorneys found that 58% of prosecutors and 47% of defense attorneys reported spending additional time during voire dire questioning potential jurors about their television viewing habits. The answers to these questions are then used to eliminate jurors that one or both sides felt were unable to distinguish between fact and fiction.

The Meta-Analysis of Empirical Studies of the CSI Effect

Several studies investigate the CSI effect directly. Some of these examine whether or not the claimed CSI effect is empirically sound. The following meta-analysis evaluates five of these studies, including the two largest conducted.

1. Call, Cook, Reitzel, and McDougle (2013)

This minor study was conducted in the Mid-Atlantic region in 2013. It focused on what the researchers refer to as "malicious wounding cases." Five cases were examined, with post-verdict surveys being conducted with each of the 12-member juries. These surveys were voluntary and all 60 jurists chose to participate. Each of the cases involved trials where forensic evidence would play a factor in determining guilt or innocence (Call et al., 2013).

The jurors completed a questionnaire consisting of seven questions assessing jurors' attitudes about the necessity of evidence. These included whether forensic evidence should always be found, their willingness to convict with or without said evidence, and their television viewing habits. The last specifically referred to the *CSI* television program. Those who watched *CSI* also answered whether or not they believed it accurately portrayed the techniques and procedures used by real police departments (Call et al., 2013).

The researchers found some support for the theory that viewing *CSI* was affecting juror decision-making processes. Specifically, a juror's belief in the television program's realism provided a significant indicator whether individual jurists voted not guilty (Call et al., 2013).

Privacy and legal constraints prevented collevtion of demographic data on the jurors. These data might have indicated of other influences on jurors such as a general mistrust of the system and police or previous personal involvement in the criminal justice system affect their perception of the validity of any evidence presented. This, combined with a small sample size, led the researchers to conclude that, "we cannot isolate the true significance of the *CSI* effect in comparison to other jury influences" (Call et al., 2013, p. 63).

2. Cole and Dioso-Villa (2009)

The CSI effect primarily claims that jurors influenced by these programs have a tendency to acquit in cases where forensic evidence is not presented to the degree that the programs have led them to expect. Cole and Dioso-Villa (2009) examined acquittal rates between 1986 and 2008. This study made 132 observations over nine jurisdictions including eight different states and the federal criminal justice system. Their observations included a total of 22,878 trials (Vermont = 60; Florida = 4,131; North Carolina = 2,025; Illinois = 1,009; New York = 2,478; Hawaii = 260; Texas = 3,180; California = 5,594; Federal = 4,141). The acquittals ranged from a low of 11% in federal trials from 2005 to 2007 to a high of 46% in Vermont in 2008. The researchers concluded, "when we tested the change in acquittal rates between these two groups (pre- and post-*CSI*), we found that the difference between them may have occurred due to chance or by coincidence, rather than inferring the events somehow correlated" (Cole & Dioso-Villa, 2009, p. 1361). Analysis of the data indicated a statistically insignificant 1% increase in acquittals from the period before the introduction of *CSI* and after. The possibility that this change was merely chance cannot be discarded (Cole & Dioso-Villa, 2009).

Recognizing weaknesses in the initial observation such as variations in the number of trials between large and small states (e.g., California versus Vermont), a second analysis was conducted in which individual state and federal rates were omitted. Data was analyzed as random

Table 1. Aggregate Number of Trials and Acquittals from 1997–2006

Year	Trials	Acquittals	Acquittal Rate
1997	24,343	5,405	21.9%
1998	22,553	5,316	23.5%
1999	22,133	5,311	24.1%
2000	21,291	5,399	25.0%
2001	19,768	5,027	25.5%
2002	19,179	4,957	25.9%
2003	20,219	4,887	24.2%
2004	19,235	4,747	24.7%
2005	18,807	4,345	23.2%
2006	19,746	4,728	24.0%

Adapted from Cole and Dioso-Villa (2009)

samples of jury verdicts in the United States. These observations were made over a shorter time frame of 1997 to 2006 with acquittal rates pre- and post-*CSI* being the focus (Cole & Dioso-Villa, 2009). The study's findings appear in Table 1.

The researchers found, "a statistically significant increase in acquittal rates from the year's pre-*CSI* to post-2001 and post-2002, but not post-2003" (Cole & Dioso-Villa, 2009, p. 1335). This trend could be attributed to a general increase in acquittal rates beginning in 1997. The researchers attempted to account for this possibility by comparing acquittal rates from 2000 to 2006 with different aggregate groups beginning in 2001, 2002, and 2003. This resulted in there being no noteworthy increase in the rates of not guilty verdicts. Contrary to expectations there was a statistically significant decrease in acquittals (Cole & Dioso-Villa, 2009).

The study concluded that a CSI effect that favors the defense and a *reverse CSI effect* that favors the prosecution may be canceling each other out. "Given the equivocal nature of the data and the relatively small changes in acquittal rates, existing acquittal rate data would not seem to warrant panic about the existence of the CSI effect" (Cole & Dioso-Villa, 2009, p. 1335).

Table 2. Viewing Profiles in the Podlas Study

Responses	Frequent Viewers	Non-Frequent Viewers
n=250	187 (75%)	63 (25%)
Television	164 (88%)	40 (63%)
Law Genre	148 (79%)	36 (57%)

Adapted from Podlas (2006)

3. Podlas (2006)

Podlas conducted one of the first empirical studies of the effects of *CSI* on juror deliberations. Her focus was based on the definition of the CSI effect that emphasized a heightened burden on the prosecution. The forensic issues the series portrayed are broken down based on prevalence. The empirical portion of her study used a 2-part instrument to analyze show content. It was designed to determine whether or not guilty verdicts "of frequent viewers of *CSI* rested on *CSI*-oriented reasons" and if "frequent viewers of *CSI* would rely on *CSI*-oriented reasons in reaching 'not guilty' verdicts to a greater degree than would non-viewers" (Podlas, 2006, p. 454).

The study's first part examined the viewing habits of 306 undergraduate participants. This section included *CSI*, legal dramas, and reality courtroom shows such as *Judge Judy* and *The People's Court*. The number of viewing hours per month was also counted. The second part was built on a criminal law scenario. The respondents learned the facts surrounding a hypothetical case involving a sexual assault in whivh intercourse was not disputed. They were then asked to render a verdict in the matter and select reasons that played a role in their determination. Four of the seven reasons they could select focused on the lack of forensic evidence. Since sexual contact was not disputed, the scenario relied on witness credibility rather than forensic evidence in order to determine if the lack of forensics would sway deliberations despite this form of evidence being irrelevant to the case (Podlas, 2006). The remainder of the study focused on 250 respondents who reached a not guilty verdict. Viewing profiles were created for these individuals dividing them between frequent and non-frequent viewers (Table 2). Post-verdict questions were analyzed, scoring the *CSI*-related answers in relation to how many respondents selected them and if they selected more than one (Tables 3 and 4). Only 10% selected any of the *CSI*-related reasons as determining factors in their choice of the verdict.

In related findings, when broken down between frequent and non-frequent viewers of law-related television, only 12% marked any *CSI*-related reason, while 16% of non-frequent viewers marked at least one reason. The most commonly cited reason was the absence of DNA evidence. It is interesting to note that the most selected

Table 3. Denominations (Respondents' Selections) of *CSI* Viewing in the Podlas Study

Reasons	*CSI* Viewers	Non-*CSI* Viewers
Evidence not tested for fingerprints	3	3
Prosecution did not perform forensic tests that could have shown defendant was innocent	5	3
No DNA evidence or no DNA test completed	8	6
Prosecution did not perform forensic tests to prove defendant was in apartment/bedroom	7	5

Adapted from Podlas (2006)

Table 4. Frequencies and Percentages of Denominations (Respondents' Selections) of *CSI* Viewing in the Podlas Study

Number of Reasons	*CSI* Viewers		Non-*CSI* Viewers	
	Frequency	Percent	Frequency	Percent
1	8	4	5	8
2	5	3	4	6
3	2	1	1	2
4	0	0	0	0

Adapted from Podlas (2006)

Table 5. Juror Expectations for Scientific Evidence in the Shelton Studies

Case	Scientific	DNA	Fingerprint	Ballistics
Every Case	52.8	32.9	47.3	41.5
Murder	79	61.9	73.8	73.8
Assault	49.6	38.8	45.2	34.7
Rape	78.6	81.5	53.9	27.7
Breaking & Entering	53.3	24.6	78	23.5
Any Theft	41.9	18.7	66.2	22.4
Gun Related Crime	60.4	28	75.4	83

Adapted from Shelton (2010)

answer chosen was the least relevant to the case provided in the study because intercourse was not disputed. In this case, DNA evidence would have no probative value in any determination of guilt or innocence.

In order to be valid, the CSI effect theory defined in the study would have to be supported by data indicating a greater disposition in respondents to desire or require forensic evidence in order to come to a guilty verdict. This desire should be reflected in the study by the selection of answers in the post-verdict questionnaire that indicate a lack of forensic evidence as a determining factor in a not guilty verdict. Podlas found the exact opposite. "The results do not support the hypothesis that *CSI* viewers are influenced by *CSI*-marked reasons any more than non-viewers may be." Furthermore, "the empirical evidence does not support any anti-prosecution 'CSI Effect'" (Podlas, 2006, p. 461).

Podlas (2006) concluded that despite media warnings of a CSI effect, there is little evidence to support this conclusion. While not the focus of her study, she went on to note, "the data hints that, if there is any effect of *CSI*, it is to exalt the infallibility of forensic evidence, favor the prosecution, or pre-dispose jurors towards findings of guilt" (Podlas, 2006, p. 465).

4. Shelton, Kim, and Barak (2006) – Phase One, Washtenaw County

5. Shelton (2010) – Phase Two, Wayne County

Podlas focused on non-jurors in her 2006 study. Shelton et al.'s (2006) methodology was based on a survey administered to persons selected for jury duty in, Washtenaw County, Michigan in 2006. To address issues pertaining to demographic limitations in this suburban county with 53% of the population having this college degree in this first study, a second study by Shelton (2010) was conducted in Wayne County, which includes Detroit. The following meta-analysis will provide an overview of the methodology of both studies and will analyze the conclusions of each.

Phase One: Washtenaw County

In phase one, groups of 100–150 potential jurors participated in a 4-part survey. These jurors were selected randomly through computerized selection based on state law (Shelton et al., 2006).

Part one of the survey examined television viewing habits. This focused on news, crime news, forensic and general crime documentaries and forensic and general crime dramas. Frequency of viewing and the degree to which respondents found the programs accurately portrayed reality were also measured on a scale of 1 to 5, with 1 representing the most time spent viewing or most accurate representation (Shelton et al. 2006). Part two focused on jurors' expectations as related to the types of evidence they would expect to see if selected to a jury. Expectations were further divided based on the type of trial: any criminal case, murder or attempted murder, breaking and entering, assault, rape or other sexual misconduct, theft, and any gun-related offense. For each of these scenarios, jurors were asked what form of evidence they would expect to see presented at trial. This included testimony from victims and witnesses, circumstantial evidence, and any potential scientific or forensic evidence (Shelton et al., 2006). Part three focused on the burden of proof required for conviction. It also examined particular types of evidence that may influence decision-making. The subjects were provided with the same jury instructions given to every jury in the State of Michigan (Shelton et al., 2006).

Thirteen scenarios were then given to the respondents based on the types of crimes presented in part one. Each scenario presented a different type of evidence. The type of evidence varied from case to case. Some cases focused specifically on DNA, ballistics, or fingerprint evidence that could be relevant. In each scenario, participants were requested to assume that the prosecution offered no scientific evidence at trial (Shelton et al., 2006).

The fourth and final portion of the survey focused on the demographics of the participants. This included age, race, gender, education, and income levels. Potential jurors were also asked for their views on crime in their community, what type of community they came from, whether or not they had personally been the victim of crime, and political tendencies (Shelton et al., 2006).

Phase Two: Wayne County

The phase two study was conducted using the same methodology in Wayne County. It was conducted several years after the first study from 2008–2009. Wayne County reflected a demographic quite different than that of Washtenaw County. Respondents were generally more ethnically and racially diverse, less affluent, and less educated. They had more instances of having experienced crime on a personal level. A 93% level of urban residents in the second survey reflected the change from Washtenaw County to Wayne County; the location of Detroit (Shelton et al., 2006; Shelton, 2010).

Table 6. Findings of the Meta-Analysis - Empirical Studies of the CSI Effect

Study	Year	Finding
1. Call, Cook, Reitzel, and McDougle	2013	Inconclusive
2. Cole and Dioso-Villa	2009	Not Significant
3. Podlas	2006	Not Significant
4. Shelton, Kim, and Barak	2006	Not Significant
5. Shelton	2010	Not Significant

Results of Studies

Despite the demographic differences between the two locations in which the studies were conducted, similar results were found in both (Shelton et al., 2006; Shelton, 2010). In both locations juries exhibited an expectation that scientific evidence would be provided. This expectation increased with the seriousness of the alleged offense. The combined data on the expectation of scientific evidence, varying by type of case, is represented in Table 5 (Shelton, 2010).

From the data represented above it becomes clear that the type of evidence expected varies depending on the type of case. Firearms offenses require ballistics while breaking and entering cases see a rise in the expectation of fingerprints. Over 81% of respondents surveyed report an expectation of DNA evidence in crimes of a sexual nature (Shelton, 2010). This seems to indicate a more informed public at least in terms of having a rational understanding of why they expect certain evidence to be presented in specific types of cases. Does this finding correlate with an increase in acquittals?

While jurors clearly have some expectation of some forensic evidence, Shelton found that even without the benefit of this evidence, jurors remained more likely to convict rather than acquit if presented with some form of testimony from either victims or witnesses. "The combined data reflected the conclusion that jurors still repose a considerable weight in the testimony of fact witnesses" (Shelton, 2010, p. 20). Only in cases involving rape where the demand for scientific evidence is excessively high or where the prosecution formulates their narrative based solely on circumstantial evidence does this trend reverse itself. This holds true even in cases of homicide where, if based on circumstantial evidence alone, "over one-third would reach a similar result" (Shelton, 2010, p. 20).

Unfortunately, for popular media proponents of the CSI effect, the combined empirical data from both studies does nothing to support the theory's premise. "The results of the combined data showed no significant relationship in any of the thirteen scenarios between the likelihood of a not-guilty verdict without scientific evidence and whether jurors watch *CSI*-type programs" (Shelton, 2010, p. 22). Furthermore, "there is no significant difference in the demand for scientific evidence as a condition of guilt between those jurors who watch *CSI* and those who do not" (Shelton, 2010, p. 23). The only influence the CSI effect has on acquittal rates is in the minds of the popular media and the members of the court that believe it (Shelton, 2010).

Table 6 represents a summary of the meta-analysis. No empirical study provided significant support for the CSI effect in any of its forms.

Conclusions

A series of television programs popularized the science of crime scene investigation. The public were so fascinated with these programs and their content that a theory known as the CSI effect came to life that ingrained itself through a feedback loop in the minds of viewers (and, thus, potential jurors), the popular media, and those working in the criminal justice system.

It should be pointed out that publicizing this phenomenon was certainly in the popular media's interest to keep viewer ratings high. Shelton (2008) purports not a CSI effect but a tech effect created by the public's knowledge of advances in the sciences and the societal expectation that science, including forensic science, will continue to move forward. Driven by media messages

that crime is rampant and that the criminal justice system is ill-equipped to deal with the danger, the public may now see technology as a means of holding back the storm (Shelton, 2008, 2010).

Regardless of the empirical evidence of a direct CSI effect, the belief that it exists may have more power than the effect ever could. The anecdotal evidence presented in this study suggests that a few officers of the court believe that some action must be taken to mitigate the alleged consequences of the CSI effect. This is apparent in changes in questioning during voire dire discussed earlier and the fact that time and resources have gone into studying the subject. The idea of a CSI effect has also found a home in the community of crime scene investigations. The primary investigator of this study continues to work in this field and regularly discusses the subject with colleagues. If only anecdotally, he has found that all of them believe the CSI effect exists to one degree or another.

While the research summarized in this meta-analysis strongly suggests that the CSI effect does not exist in terms of the popular media definition, it has still affected the criminal justice system. Shelton (2008) argues that one response to changing juror expectations would be to give juries the evidence they are seeking. While this may be impossible or unreasonable given the cost, the issue itself must be addressed regardless of the reality of the CSI effect. Nonetheless, officers of the court must find more convincing methods of explaining to jurors the relevance or irrelevance of forensic science in the courtroom. They must also come to terms with the fact that many jurors enter the courtroom "with a lot of knowledge about the criminal justice system and the availability of scientific evidence" (Shelton, 2008, p. 6). This knowledge, be it accurate or not, is sitting in the jury wells of our criminal justice system and the court work group must adapt to the expectations of those we call upon to render verdicts of guilt or innocence.

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References

Call, C., Cook, A. K., Reitzel, J. D., & McDougle, R. D. (2013). Seeing is believing: the *CSI* effect among jurors in malicious wounding cases. *Journal of Social, Behavioral, and Health Sciences*, *7*(1), 52–66. doi: 10.5590/JSBHS.2013.07.1.04

Cole, S. A. (2013). A surfeit of science: the "CSI effect" and the media appropriation of the public undestanding of science. *Public Understanding of Science, 24(2), 1–17. doi: 10.1177 /0963662513481294*

Cole, S. A., & Dioso-Villa, R. (2009). Investigating the '*CSI* Effect' effect: media and litigation crisis in criminal law. *Stanford Law Review*, *61*(6), 1335–1373.

Edmond, G. & Mercer, D. (1997). Scientific literacy and the jury: reconsidering jury 'compentence.' *Public Understanding of Science 6*, 329–357.

Gardner, R. (2012). *Practical crime scene processing and investigation*. Boca Raton: CRC Press.

Lawson, T. F. (2009). Before the verdict and beyond the verdict: the '*CSI* Infection' within modern criminal jury trials. *Loyola University Chicago Law Journal*, *41*.

Mann, M. (2005). The "CSI Effect": better jurors through television and science?, *Buffalo Public Interest Law Journal*, *24*, 211.

"Media > Households with television: Countries Compared," World Development Indicators database. Aggregates compiled by NationMaster. Retrieved from http://www.nationmaster .com/country-info/stats/Media/Households-with -television

Podlas, K. (2009). Impact of television on cross-examination and juror "truth." *Widener Law Review*, *14*, 479.

Podlas, K. (2006). "The CSI Effect": exposing the media myth. *Fordham Intellectual Property Media & Entertainment Law Journal*, *16*, 429–465.

Shelton, D. E. (2010). Juror expectations for scientific evidence in criminal cases: Perceptions and reality about the CSI effect myth. *Cooley Law Review*, *27*, 1.

Shelton, D. E. (2008, March). The '*CSI* Effect': Does it Really Exist? *NIJ Journal*(259), 1–6.

Shelton, D. E., Kim, Y. S., & Barak, G. (2006). A study of juror expectations and demands concerning scientific evidence: does the "*CSI* Effect" exist? *Vanderbilt Journal of Entertainment & Technology Law*, *9*, 330.

Schweitzer, N. J., & Saks, M. J. (2007). The *CSI* Effect: Popular Fiction about Forensic Science Affects the Public's Expectations about Real Forensic Science. *Jurimetrics, 47*(3), 357–364.

Tyler, T. R. (2006). Viewing *CSI* and the threshold of guilt: managing truth and justice in reality and fiction. *The Yale Law Journal, 115* (5), 1050–1085.

Vicary, A., & Zaikman, Y. (2017). The CSI effect: An investigation into the relationship between watching crime shows and forensic knowledge. *North American Journal of Psychology, 19*(1), 51–64.

Willing, R. (2004, August 5). 'CSI effect' has juries wanting more evidence. *USA Today*. Retrieved from http://usatoday30 .usatoday.com/news/nation/2004-08-05-csi-effect _x.htm

Zuiker, A., Mendelsohn, C., Catalani, R. (Writers) & Fink, K. (Director). (2005). A bullet runs through it: Part 2 [Television series episode]. J., Bruckheimer (Producer), *CSI: Crime Scene Investigation*. Studio City, CA: CBS Productions.