

# *Providing the CSI Treatment: Criminal Justice Practitioners and the CSI Effect*

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## ***Abstract***

The term 'CSI Effect' has been used since 2002 to describe changes in juror verdict requirements. As the name suggests, the CSI Effect refers to the suggestion that jurors who watch fictional crime scene television programs, such as *CSI* and *Law and Order*, have changed their requirements for delivering a verdict according to the presence or absence of forensic evidence. In short, the term CSI Effect is used in this article to describe instances where jurors ask for additional forensic evidence, or refuse to convict where there is an absence of forensic evidence (Franzen 2002; Willing 2004). This article examines two aspects of this effect. The article examines first how criminal justice practitioners in New South Wales, Australia, have changed their practices to accommodate the changing desires of the jury. Then, the article discusses how these changing practices have impacted on available resources in the criminal justice system and the people within it, including scientists and lawyers. This article examines also how the criminal justice practitioners' belief in the CSI Effect may have changed processes involved in the criminal justice system and how these changes can have a negative impact on both victims and offenders.

## **Introduction**

In the early 2000s the media started to report complaints from lawyers and judges about the perceived changing requirements of juror verdicts (Franzen 2002; Willing 2004; Roane 2005). The media reported frequently that police officers, lawyers and judges were complaining that jurors expected more forensic science in a criminal trial, and that they further expected definitive and conclusive answers from the scientific evidence presented (Hooper 2005; Franzen 2002; Willing 2004; Gonzales 2005). The media were quick to attribute this change in juror desires to the rise of crime television shows, such as *CSI: Crime Scene Investigation (CSI)*. In 2002, Robin Franzen was the first journalist to use the term 'CSI Effect' to describe the 'district attorneys increasing worry that the shows [*CSI: Crime Scene Investigation*] taint the jury pool with impossibly high expectations of how easily and conclusively criminal cases can be solved using DNA analysis and other forensic science'.

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As the name suggests, the CSI Effect relates to the popularity of the American television program: *CSI*. CBS screened its first season of *CSI* in 2000. In its second season, *CSI* was rated as the second most popular television program in America, and has since remained one of the most popular programs of the decade (Cole and Dioso-Villa 2007). The show follows a number of detectives and forensic scientists as they solve serious crimes. One of the main features of the show is its regular use of forensic science accurately to identify offenders. Science is portrayed as the overarching truth that exposes the lies of the offender and provides certainty to an investigation. The popularity of this type of show led to the creation of other similar television programs such as *Law and Order SVU: Special Victims Unit*, *NCIS: Naval Criminal Investigation Service*, and *Criminal Minds*.

One of the aspects of these programs that appeals to audiences is that they make forensic science, and the people involved with forensic science, look 'sexy'. The increased interest in forensic science by the general public, and therefore an increased interest in seeing forensic evidence in a criminal trial, has been attributed to the 'sexiness' of the shows. For example, the forensic science in *CSI* has been described by the media as 'sexy, fast, and remarkably certain' (Roane 2005). Forensic scientists are portrayed as sexy and quirky, and the scientific tests they perform are marketed as effortless and expedient (Cole and Dioso-Villa 2007).<sup>1</sup> These types of shows suggest that DNA samples are relatively easy to find, not easily contaminated, have a low error rate when they are profiled and can be examined in a matter of hours rather than days or weeks. In short, forensic sciences have been depicted as objective, reliable and infallible. The problem with this is that jurors are expecting to see the 'technical wizardry' that appears in *CSI* in the courtroom, and when the prosecution fail to produce such reliable and objective results, 'many Americans find themselves disappointed when they encounter the real world of law and order' (Roane 2005).

In turn, academics quickly picked up on the appeal of forensic sciences to the general public and began to elaborate further on the CSI Effect:

[T]he 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. Prosecutors lament the fact that they have to supply more forensic evidence because jurors expect this type of evidence, having seen it on television (Dowler, Fleming and Muzzatti 2006:838).

[A] term that legal authorities and the mass media have coined to describe a supposed influence that watching the television show *CSI: Crime Scene Investigation* has on juror behaviour. Some have claimed that jurors who see the high-quality forensic evidence presented on *CSI* raise their standards in real trials, in which actual evidence is typically more flawed and uncertain. As a result, these *CSI*-affected jurors are alleged to acquit defendants more frequently (Tyler 2006:1050).

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 (Robbers 2008:86).

The CSI Effect, then, is the rise in unrealistic expectations of real-life jurors for there to be conclusive and reliable forensic evidence presented throughout a criminal case. The absence of such evidence is taken to be a weakness in the prosecutor's case, which leads jurors to

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<sup>1</sup> See Nolan (2007) for a detailed academic description of the characters on *CSI* and how they affect the viewer.

acquit defendants. According to advocates of the CSI Effect,<sup>2</sup> these fictional qualities of forensic science, coupled with the ‘sexiness’ of these shows, have changed the way that the general public perceive criminal investigations and the type of evidence that jurors believe is necessary to convict a person.

Since the media’s use of the term, several studies around the world have looked specifically at the impact that programs such as *CSI* and *Law and Order* have on potential and real jurors.<sup>3</sup> Podlas (2006), for example, conducted a mock jury study of 306 American undergraduate and graduate students to determine whether their television viewing habits affected their likelihood of returning a guilty verdict. Respondents were identified as either frequent viewers of *CSI*, or non-frequent viewers of *CSI* in order to test directly the argument that jurors who watched *CSI* were more likely to convict where there was forensic evidence, and less likely to convict where there was an absence of forensic evidence (Podlas 2006:457). The results of the study indicated that there was no CSI Effect, and that frequent viewers of *CSI* were influenced by the same factors as the non-frequent viewers.

In 2006, Shelton et al (2006:332) claimed that they were the first researchers to examine empirically the ‘existence and extent’ of the CSI Effect on jurors. Shelton et al (2006) conducted a survey of 1027 Americans who had been called for jury duty during a three-month period in 2006. The survey examined the television viewing habits of the jurors and whether this had any effect on the verdict of criminal cases. Although Shelton et al (2006) found that jurors frequently expected to see forensic evidence in a case; they could not find any clear indication that this was the direct result of watching crime television programs such as *CSI*. Similar to Podlas (2006), Shelton et al (2006:367) found that there was no evidence to suggest the existence of the CSI Effect. Rather, they argued that the desire to have forensic evidence in a case:

may have more to do with a broader ‘tech effect’ in popular culture rather than any particular ‘CSI effect’. In other words, if there is a media effect on juror expectations, it is an ‘indirect’ effect and part of a larger transformation occurring in popular and technological cultures (Shelton et al 2006:333).

The results of this study raise questions about the possibly narrow label of the CSI Effect by suggesting that television programs are only a small part of a broader

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<sup>2</sup> Advocates, or proponents, of the CSI Effect are those journalists or academics that believe that the CSI Effect does exist. Most of the proponents of the CSI Effect are journalists, and criminal law practitioners. Journalists such as Robin Franzen (2002), Gonzales (2005), Blankstein and Guccione (2005), and Rincon (2005) have reported on the *actual* existence of the CSI Effect, rather than inferring that it might exist. While there are a large number of journalists who support the theory of the CSI Effect, there are very few academics that have conclusively stated that there is a CSI Effect. For example, Cooley (2007) offers a very conservative view when he states that forensic science dramas have created more interest in science, and a more ‘distorted’ view of forensic science. However, he does not conclusively state whether there is a CSI Effect or not. There have been academics, however, such as Ghoshray (2007) and Schweitzer and Saks (2007) who have argued, and used juror studies to prove, that the CSI Effect does exist.

<sup>3</sup> Examining the decision-making process of jurors is not a new phenomenon. Researchers have been interested in jury decisions for several decades, and a number of studies have focused on the role of forensic science in juror verdicts almost a decade before the term CSI Effect was coined. For example, Koehler (2001) conducted a study of mock jurors in America in 1995 to examine how jurors viewed forensic evidence. The study found that juries were influenced by forensic evidence, and were more likely to convict when there was strong scientific evidence, including DNA evidence (Koehler 2001). Studies, such as Koehler’s (2001), have been used as evidence to support the claims of lawyers and the media that dramatised crime scene television programmes, such as *CSI*, affect jurors, despite the fact that Koehler’s 2001 study predates the introduction of *CSI*. This suggests that the phenomenon described by the CSI Effect is nothing new; it simply has a new name and has been attributed with a greater emphasis in more recent years.

technological culture. This tech effect is a result of changing popular culture, which has recently placed a greater emphasis on forensic science and the dramatisation of actual cases (Shelton et al 2006:333–4). Despite the dismissal of the CSI Effect, the findings of Shelton et al (2006) indicate that jurors do expect forensic evidence, which may affect how it is used in the courtroom.

The existence of the CSI Effect is still being debated. While both Shelton et al (2006) and Podlas (2006) found no evidence that the CSI Effect exists, other researchers have found evidence that it does exist. A number of Australian academics, such as Wheate (2006) and Findlay (2008) have conducted studies that provide evidence that jury members over-rate DNA evidence, and Goodman-Delahunty and Tait's (2006:104) article similarly indicated that 'the introduction of DNA evidence may result in more convictions than are warranted'. Similarly, there have been American academics, such as Ghoshray (2007) and Schweitzer and Saks (2007) who have argued that the CSI Effect exists.

While there has been substantial discussion about whether the CSI Effect actually exists, and whether it has any influence on juror decisions, there has been little research on how criminal justice practitioners have been affected by the introduction and popularity of these television programs, which is the focus of this article. The CSI Effect can be a double-edged sword for both prosecutors and defence lawyers. On the one hand, the CSI Effect is attributed with increasing the number of guilty verdicts where the prosecution presents scientific evidence, such as DNA evidence or fingerprints, to corroborate a case. A number of defence lawyers also have complained about this phenomenon and have changed their tactics in an attempt to combat this aspect of the CSI Effect. On the other hand, it has been argued that the CSI Effect has placed greater emphasis on scientific and forensic evidence, and is reportedly causing jurors wrongfully to acquit guilty defendants in cases where the prosecution fails to produce scientific evidence (Shelton et al 2006:332).<sup>4</sup> As a result, in cases where little or no scientific evidence exists prosecutors have begun to explain this absence of evidence to the jury in order to avoid the defence focusing on, and taking advantage of, the issue.

The first part of this article explores the CSI Effect, the current debates surrounding whether it actually exists, and what effects it has allegedly had on criminal justice practitioners. This first section also examines the effects of the CSI Effect on criminal justice practitioners in the Australian police jurisdiction of New South Wales (NSW). In the second part of this article, there is a discussion of some of the implications for practitioners changing their behaviour in the process of securing a conviction. Specifically, this part looks at how the CSI Effect has negatively impacted on some of the resources of the criminal justice system and the processes involved in using forensic science as evidence. Finally, this article seeks to reconcile conflicting views over the long-term implications of the CSI Effect and the consequences for the criminal justice system.

## Methodology

The research that forms the basis for this article examined how DNA profiling has impacted on the NSW criminal justice system. A number of groups were included in this study, including the police, forensic scientists, scene of crime officers (SOCOs), prosecutors, defence lawyers, and judicial officers. Face-to-face interviews were conducted with

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<sup>4</sup> It is important to note that Shetlon et al (2006) actually found no evidence that the CSI Effect exists.

32 NSW criminal justice participants between 2006 and 2007.<sup>5</sup> Each semi-structured interview schedule covered six topics, including: general information about DNA profiling and evidence; the proliferation, legal implications and social implications of DNA profiling; the use of DNA evidence in different offence types; and the potential injustices that DNA profiling may create.

As the focus of the interviews was on the wider implications of the use of DNA profiling on the criminal justice system, the interviews were not designed to illicit extensive information about the CSI Effect, nor was the study designed to illicit a specific response from the participants about the CSI Effect. Of the 32 respondents, 14 criminal justice practitioners mentioned the CSI Effect and how it had affected their occupation. All of the 14 respondents believed that television shows such as *CSI* had affected their job in some way or another. The only participants to be directly asked about television programs, such as *CSI*, were the scientists. Scientists were asked two general questions about how popular television shows, such as *CSI*, affected their self-image and the public perception about their job. Despite this, three of the scientists introduced the topic of the CSI Effect before they were directly asked about it, and three of the defence lawyers, one of the judges, one of the police officers, one of the SOCOs, and three of the prosecutors openly discussed how they perceived the television shows affected the execution of their jobs. Nearly all of these practitioners introduced the topic of the CSI Effect when asked how widespread the use of DNA profiling was in the criminal justice system and how jurors responded to DNA evidence. This became a significant finding because anecdotally, the respondents reported that they were changing their practices to accommodate the CSI Effect.

As the sample size of this study is very small, and it is not a rigorous study focused specifically on determining the existence of the CSI Effect, it does have a number of limitations. The use of interviews will inevitably affect the data, especially when they are based on a small sample size (Sarantakos 2005:46). The small groupings of participants (the largest group was seven judicial officers) pose serious problems for the representativeness and generalisability of the findings. Where possible, the findings reported in this article have been supported by existing evidence to improve the level of representativeness of the study. There are, however, limits to the degree to which the findings of this study can be seen as representative of the broader community.

## The existing popularisation of forensic science

Over the past century there has been a growing public interest in law and order issues, stretching well beyond the desire for safety and security. According to Pyrek (2007), *CSI* is the newest attempt in history to dramatise the realm of forensic science. One of the earliest creators of dramatised investigations using forensic techniques was Sir Arthur Conan Doyle. Doyle's characters, Sherlock Holmes and Dr Watson, used a variety of medical and scientific techniques to identify the offending party. In *The Hound of the Baskervilles*, Doyle briefly mentioned the late 19<sup>th</sup> century French identification system of Bertillonage to provide evidence of Holmes' advanced knowledge of scientific identification techniques.<sup>6</sup>

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<sup>5</sup> This article uses interview data collected from police officers (n=5), forensic scientists (n=5), scene of crime officers (n=5), prosecutors (n=5), defence lawyers (n=5), and judicial officers (n=7) within the Sydney metropolitan region, NSW.

<sup>6</sup> Bertillonage refers to a system of anthropometry that was developed by Alphonse Bertillon while he was in the Paris Prefecture Police (Sûreté) in the 1870s. The system required police officers to take 11 different bone measurements from suspects in order uniquely to identify offenders, and specifically repeat offenders.

More recently, in the 1970's Quincy, MD became popular for its use of science and medicine in criminal investigations. This genre has now re-surfaced in *CSI* and its many spin-offs. *CSI*, in essence, introduced the public to the 'marriage of the police procedural to a focus on science' (Cole and Dioso-Villa 2007:438).

The popularity of this crime and science genre has not been limited to the dramatisation of television programs, books or movies. Rather, the fascination with forensics has created an increased public awareness and interest in the non-fictional practise of forensic sciences. This interest is evident in four main social developments. First, there has been increased tertiary student interest in enrolling in forensic science degrees (Stephens 2007:604) that has in turn led to more universities creating related courses (Heinrick 2006:59; Goehner et al 2004).

Second, there has been an increase in the level of funding provided to forensic sciences to enable laboratories to produce more timely results for court proceedings. For example, in NSW, the Lemma Government allocated \$2.27 billion for the police 2007/08 State Budget (NSW Legislative Assembly Hansard 19 June 2007:1191).<sup>7</sup> Over \$9 million of this budget was allocated to funding forensic and DNA profiling, with a specific focus on crime scene officers and SOCOs (NSW Legislative Assembly 2007 Motion:1211). A further \$1.4 million was allocated to robotic DNA analysis platforms, constituting a substantial proportion of the State Budget for the police. These figures are comparable across Australia. Most Australian jurisdictions increased their spending on forensic science around 2006/2007 when it became clear that laboratory backlogs were significantly affecting the use of forensic science at trial. The Victorian Government, for example, provided more than \$7 million to employ 25 new forensic scientists and \$3.5 million in 2006/2007 for new equipment that could be used to increase the turn-around time for DNA testing and provide more accurate results (Spokes 2007).

Third, there has been an increased interest from jurors to hear forensic evidence:

'Talking about science in the courtroom used to be talking about geometry — a real jury turnoff', says Hirschhorn [jury consultant], of Lewisville, Texas. 'Now that there's this almost obsession with the (TV) shows, you can talk to jurors about (scientific evidence) and just see from the looks on their faces that they find it stimulating' (Willing 2004).

As the quote suggests, dramatised crime scene television programs have increased juror's interest in forensic science testimony and evidence. Fourth, a greater public awareness of forensic science has led some victims of crime to direct attending crime scene investigators to what they believe is the best place to collect fingerprint or DNA evidence (Wise 2009:133). In one case reported in the media, an unimpressed victim allegedly informed a Los Angeles crime scene investigator that they were not dusting for fingerprints in the same way as on the television (Lovgren 2004). This popularisation of forensic science in the public sphere has been enhanced with the public's infatuation with new shows such as *CSI*. The CSI Effect, while it relates to the popularisation of forensic science, refers specifically to the effect of jurors watching specific television programs.

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Bertillonage was referred to as 'the cornerstone of modern criminology' because it allowed law enforcement agencies uniquely to identify repeat offenders for the first time (Thorwald 1965:13). At the beginning of the 20<sup>th</sup> century Bertillonage was considered to be the 'most accurate method of identification' (Safenstein 1998:437), which is why its mention in Doyle's work was significant.

<sup>7</sup> In NSW there are two different types of crime scene investigators; crime scene officers, and scene of crime officers (SOCOs). Crime scene investigators examine major crime scenes, while SOCOs focus on examining volume crime scenes.

## The CSI Effect and practitioners

As already mentioned, the CSI Effect relates to the rise in expectations of real-life jurors for there to be conclusive and reliable forensic evidence presented at trial. As such, there are three main groups of people who encounter the CSI Effect on a regular basis: jurors, prosecutors, and defence lawyers. To date, however, little evidence has been presented on how lawyers deal with these effects (such as jurors acquitting defendants on the basis of an absence of forensic evidence) and what the additional unforeseen consequences of the CSI Effect are. As Tyler (2006:1053) notes, much of the academic discussion about the CSI Effect is based solely upon the personal experiences of lawyers rather than empirical data, and there has been little consideration given to the broader 'side-effects' that occur outside the courtroom. This article seeks to address this in part by presenting additional evidence on the experiences of practitioners with the CSI Effect in NSW, with a specific focus on how these practitioners believe that jurors, and subsequently the broader criminal justice system, have been affected by television programs.

### *The CSI Effect helping the prosecution: Forensic science as overwhelming evidence*

When the media originally began reporting on the CSI Effect, it was seen as something that could help prosecutors win a case. According to the original media hype, juries were convinced, or overwhelmed, by the statistics of scientific results, such as a DNA match, presented by the prosecution. As already mentioned, this is not a new phenomenon, it is simply one that has been popularised by the increased number of *CSI*-type programs, and the media label of the CSI Effect. Nevertheless, the obvious outcome of jurors being 'convinced' is that they are more likely to convict where there is forensic evidence, such as DNA profiles or fingerprint identifications.

Defence attorneys in the United States have complained that some types of forensic evidence are impossible to challenge because the jurors perceive the evidence to be infallible (DiFonzo and Stern 2007:506). Defence lawyers have argued that because *CSI*-type programs present forensic science as sexy and infallible, jurors accept the evidence presented to them as accurate and reliable. In *CSI*, forensic evidence is used to correctly identify the culprit and rarely is portrayed as being inaccurate or inculcating an innocent person (Podlas 2006:438). In one episode of *NCIS*, 'Frame-Up', in Season 3, one of the agents, Anthony DiNozzo, was linked to a murder victim through DNA samples and bite mark evidence. The forensic scientist in the show, Abby, became distraught as she believed that science had 'turned against her': 'I almost stopped believing in [forensic evidence] ... But now I know Forensics was just testing me'. By the end of the episode, her faith in forensic science has been reinstated as it becomes apparent that another scientist planted the evidence. Abby was able to see through the fake evidence to find the 'true' scientific evidence that solved the case. In short, these programs may influence jurors to believe that crime scene evidence can, ultimately, present a finite truth that is indefensible (Podlas 2006:438). Supporters of the CSI Effect use this theory to argue that jury members associate the presence of forensic evidence at crime scenes with the equivalence of guilt. If the forensic evidence suggests an individual was involved, then there is an evident scientific truth — the truth is irrefutable, thus the individual must be guilty.

The prosecutors interviewed in NSW were very aware of jurors' desire to have forensic evidence in criminal cases. A number of prosecutors admitted to introducing forensic DNA evidence because they knew it would have a positive impact on a jury. As one prosecutor stated:

Juries are rapt, when they're watching DNA experts, their attention is as focused on the DNA expert as it was on the victim. Their eyes aren't wondering. I love it, I love calling DNA experts because it's a really juicy moment in the trial. They think they are getting the *CSI* treatment (Prosecutor 2).

This quote suggests that some prosecutors are aware of the effects of *CSI* on the general public, and that they play on the perceived expectations and desires of the jury to achieve favourable outcomes.

When asked about the widespread nature of DNA evidence in the criminal justice system and how juries react to DNA evidence, a number of the defence lawyers in this study complained about the CSI Effect and juries' treatment of DNA evidence. In one example, one NSW defence lawyer complained that after the prosecution presents the odds of the accused being the offender as being 18 billion to one:

A defence lawyer can talk till the cows come home about the fact that another test on another string on another sort of series of tests on the more remote test may be an exclusionary test. It doesn't work (Defence Lawyer).<sup>8</sup>

In this quote, the lawyer argues that juries are blinded by the probabilities presented by the prosecution and are incapable of understanding that a test on more loci could exclude the person from suspicion. Another NSW defence lawyer speculated that the population probabilities presented by the prosecution are 'extremely coercive' and cause problems for defence lawyers because juries believe that 'DNA doesn't lie', rather, it presents the 'truth'. The defence lawyers lamented that jury members often seemed to accept the DNA evidence at face value. While these problems may have existed prior to the introduction of *CSI*-type programs, the lawyers in this study directly attributed the juries' fascination with forensic science to these programs.

As some NSW defence lawyers believe that the CSI Effect has altered how jurors treat evidence: there has been a change in the way that some lawyers approach forensic evidence, like DNA profiles. For example:

There is an expectation that it will be very helpful, back to *CSI* and all those kind of things. The problem with those shows is that they misrepresent the reliability of DNA, as they do with all the other scientific stuff they get into. And sometimes you need to work a lot harder than you ought to, to try and explain how juries can and can't use it ... So when you want to start picking through the detail of the DNA analysis people can become exasperated, because DNA doesn't lie (Defence Lawyer 4).

Several of the NSW defence lawyers in this study believed that they needed to work harder when DNA evidence was presented, to try and debunk the myths that the jury may have picked up from television shows, such as *CSI*. Similarly, a juror's basic knowledge of forensic tests can also inadvertently help defence lawyers in cases when the prosecutor cannot produce forensic evidence linking an accused to a crime.

### ***The CSI Effect helping the defence: Weak forensic evidence leading to acquittals***

Not long after the CSI Effect was attributed to helping prosecutors, others began to argue that it was actually detrimental to prosecutors. Prosecutors argued that their jobs had become more difficult because the television shows created an unrealistic standard of

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<sup>8</sup> Throughout this article, some participants have not been assigned a number in order to protect their anonymity.



forensic tests that jurors expected to see in the courtroom. That is, prosecutors began to argue that jurors were acquitting people because the forensic evidence was not as strong as that portrayed on programs such as *CSI*. Podlas (2006:434) recognised that prosecutors could potentially be negatively affected by three consequences of the CSI Effect:

First, jurors weaned on *CSI* will expect police investigators to follow the script of *CSI*. When the collection of evidence deviates from this script, jurors will be more critical than would their predecessors. Second, jurors will expect scientific and quasi-scientific evidence to be conclusive ... Third, *CSI* furthers flawed notion that 'it is always possible to extract useful forensic evidence'.

According to the prosecutors in Podlas' (2006) study, these three aspects make it more difficult to secure a conviction because jurors expect too much. In one case in the Delaware Supreme Court, the prosecutor complained to the jury that the 'standard for guilt was no longer "beyond a reasonable doubt"'; instead the standard had been changed to 'Can they meet "*CSI*" standards (Cole and Dioso 2005:1).<sup>9</sup> Shelton et al's (2006:365) study supported the notion that the standards of reasonable doubt had shifted:

What is 'reasonable' evidence to expect from the prosecution today is very different from what it was twenty or even ten years ago. Ultimately, the legal system leaves the issue of defining 'proof beyond a reasonable doubt' to the jury. They appear to have decided that today it is reasonable to expect more from the prosecution in the way of scientific evidence than they have expected in the past.

In Podlas' (2006:461) American study conducted in 2006, there was further evidence to suggest that some *CSI* viewers were more inclined to find a defendant 'not guilty' because they were more 'educated in concepts of proof, or better prepared for jury duty'. While in general Podlas (2006:461) found a slight pro-prosecution effect, she did find that *CSI* viewers 'might be more stringent in assessing evidence, more educated in concepts of proof, or better prepared for jury duty'. Through being more stringent, and knowing more about forensic evidence as a result of watching shows like *CSI*, jurors may be more inclined to need strong forensic evidence before they rely on it to make a verdict.

Similar themes were found in this current study in NSW. The expectation that it is always possible to extract forensic evidence from crime scenes has led prosecutors to introduce experts whose role it is to explain why such evidence is missing. As several of the prosecutors in this study mentioned:

I think jury's expect it [DNA] to be there. As a result of watching *CSI* — shows like that — I really do and because the defence now make much of the fact, of the absence of DNA and where one would expect it, that is something we have to meet (Prosecutor 1).

If you haven't got evidence that goes to a DNA style of evidence it's amazing how many defence counsel will raise that as a submission in closing statements to the jury, to the effect of 'and you haven't even got DNA evidence'. So immediately people think, 'yeah I saw that series of *CSI* and I know they can do it' and I think it's a real cheap trick (Prosecutor 2).

For these prosecutors, the CSI Effect has provided defence lawyers with the opportunity to use the absence of DNA evidence to create 'reasonable doubt' in a criminal case.

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<sup>9</sup> This becomes problematic when jurors are expecting definitive results that cannot realistically be produced by forensic science. There have been suggestions that a large proportion of the scientific tests on these shows are fictional. For example, a forensic scientist in the USA, Thomas Mauriello argues that 40% of the forensic science depicted on *CSI* does not exist (cited in DiFonzo and Stern 2007:526).

In contrast, some academics view this tactic as a way to bolster reasonable doubt standards, by requiring prosecutors to provide more reliable evidence and explain why there is an absence of forensic evidence (Ghoshray 2007:555). The creator of *CSI*, Anthony Zuiker, voiced a similar opinion when he stated that: 'The "CSI effect" is, in my opinion, the most amazing thing that has ever come out of the series. For the first time in American history, you're not allowed to fool the jury anymore' (cited in CBS News 2005). While it may be a good thing that the CSI Effect is raising the standards of reasonable doubt, and ensuring that the jury have a more scientific basis for their decisions, the ability for prosecutors to explain the absence of forensic tests and evidence requires considerable resources that can have negative impacts on other criminal investigations, or the case at hand.

### **Accepting the CSI Effect as fact: Implications for the criminal justice system**

There is some evidence to suggest that prosecutors and defence lawyers have also been affected by the media hype surrounding the CSI Effect. An American researcher, Monica Robbers, has conducted one of the few extensive studies on the effects of forensic television shows, such as *CSI*, on criminal justice practitioners. In her study, Robbers (2008:95) found that 85 percent of 290 American lawyers and judges felt that the CSI Effect had changed their job, and in particular the time it took to explain DNA evidence to the jury (Robbers 2008:95).<sup>10</sup> Robbers (2008:89) asked respondents two distinct questions in open-ended questionnaires. The first question required respondents to detail specific cases where a jury decision was influenced by forensic television programs. Respondents were also asked whether they believed that forensic television shows had affected their jobs and jury decisions. As such, the survey was targeted at eliciting specific anecdotal information about the CSI Effect, which would have an effect on the findings of the data. While respondents were initially directed to consider the CSI Effect by the direct mention of forensic television programs, the use of an open-ended questionnaire allowed respondents to provide in-depth answers that were not directed by interview probing, or other leading questions, which significantly reduced the level of researcher bias. For example, lawyers provided a range of different examples of how they had changed their behaviour, and specific cases in which this occurred.<sup>11</sup> These behaviours were not suggested to the respondents prior to completing the survey, which indicates that the answers reflected their actual conduct.

There has also been evidence to suggest that lawyers are questioning jurors about their television watching habits during voir dire, requesting additional tests, explaining the absence of forensic evidence in opening or closing statements, and calling on experts to explain why no forensic tests were conducted (Cole and Dioso-Villa 2007:448; Cooley 2007:491; DiFonzo and Stern 2007; Pyrek 2007).

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<sup>10</sup> Respondents were limited to those lawyers who had over seven years experience so that they could comment on their occupation before, and after, the introduction of television programmes such as *CSI*.

<sup>11</sup> The respondents in Robbers (2008:94) survey reported that forensic television programmes had changed their job execution in the following ways: 'mention of, and deference to television programs and differences between programs and actual trial' (30.68%); 'additional time spent in voir dire' (35.86%); 'additional time spent discussing forensic evidence' (66.89%); 'increased use of negative evidence witnesses' (23.35%); 'increased time spent linking events' (15.23%); 'increased time spent on establishing credibility of eyewitness' (25.88%); 'increased time spent viewing forensic television shows in trial preparation' (18.62%); 'increased time learning specifics of forensic testing and procedures' (35.53%); 'increased time spent on highlighting the facts of a case during trial' (20.68%).

Cole and Dioso-Villa (2007:449) have tended to dismiss this aspect of the CSI Effect,<sup>12</sup> by arguing that even if the CSI Effect has forced lawyers to change their tactics, it does not 'actually change outcomes'.<sup>13</sup> Although it may be unlikely that a lawyer's underlying argument will change because of the CSI Effect, a number of processes within the criminal justice system will be affected if lawyers have changed their tactics. As Cooley (2007:501) aptly stated:

The misleading images of forensic science portrayed by these shows will potentially: (a) hamper the effectiveness of crime labs; (b) increase the likelihood prosecutors will make unreasonable requests to crime lab personnel; and (c) increase the chances [that] forensic examiners will fabricate evidence, offer unjustifiable opinions in order to support a prosecutor's unreasonable request, or maintain the unrealistic perception forensic science can somehow accurately answer all questions relating to a crime.

These are some areas where the CSI Effect on practitioners raises concerns and requires remedy within the legal community. The remainder of the article explores some of these issues and provides evidence of these problems already occurring in the NSW criminal justice system in relation to DNA testing.

It has been suggested that prosecutors will request additional forensic tests because they believe that a jury will not convict without some form of forensic evidence (Cooley 2007:491). Two of the NSW prosecutors in this study admitted to requesting further DNA tests, even where it does little to assist their case. In one example, a prosecutor described a case where she requested additional tests from the laboratory:

... the allegation was that the complainant had been hit with a knife ... the lab only tested clothing and the knife wasn't tested for the complainants DNA, so I asked for that additional testing to be done, and it wasn't found on the knife but it was a necessary question for us to answer (Prosecutor).

A defence lawyer supported the prosecutor's experiences by stating:

Because there is an expectation from the public that DNA will be called, DNA evidence will be produced in any contested criminal matter to prove the prosecution case. Thank you *CSI* (Defence Lawyer 1).

This is a significant problem because the NSW forensic laboratory is already hampered by backlogs. According to NSWGS1, the backlogs began in 2001, peaked in 2003, and are still a major problem despite the additional money that has been provided to forensic services in NSW. Between 2000 and 2004 the number of DNA samples sent to the government laboratory for testing has tripled, from 2638 in 2000/01 to 9113 in 2003/04 (NSW Ombudsman Report 2006:206). Although there is no direct link between the introduction of *CSI*-type programs, and the backlog in NSW, it is clear that DNA became more important in NSW at around the same time that these shows began to air. In August 2004, the NSW government-run forensic laboratory had a backlog of 7,000 samples (NSW Ombudsman Report 2006:68). NSW has insufficient staff levels and resources to cope with the number of DNA samples being lodged by police officers and prosecutors. As Stephens (2007:599) notes, the CSI Effect has had a 'definitive impact on crime labs' and the results of the backlogs can postpone court dates and increase the likelihood of laboratory errors as

<sup>12</sup> Cole and Dioso-Villa (2007) refer to this aspect as the 'weak prosecutor's effect'.

<sup>13</sup> According to Cole and Dioso-Villa (2007:452): 'It is difficult to see how ... the weak prosecutor's effect — if demonstrated, could be construed as something that should cause concern or even warrant remedy within the legal community'.

scientists try to work faster. The prosecutors in this study reported losing several trials because they were required to wait too long for DNA tests. Other trials were delayed substantially, which meant that the accused could have been unfairly detained in custody awaiting trial. The NSW Ombudsman (2006:205) found similar findings, reporting that magistrates believed that the DNA backlogs had caused 'excessive delays' that were unfair to the accused.

As mentioned earlier, prosecutors have begun to change their practices and call experts to explain why forensic evidence was not found at a crime scene or why certain tests are unnecessary because others have already been conducted. According to DiFronzo and Stern (2007:506), prosecutors are engaging in 'defensive law'. Defensive law occurs when prosecutors explain the absence of forensic evidence to juries so that the defence cannot argue that their client is innocent because there is no forensic evidence linking them to a crime. While this practice occurred prior to the alleged CSI Effect, prosecutors and scientists believe that it is now more likely that experts will be subpoenaed to court to explain the absence of DNA evidence to satisfy the perceived desires of the jury to have DNA evidence, or at the least, have its absence explained. One NSW scientist, in this study, reported being called by prosecutors to provide expert testimony to explain the absence of DNA evidence at a crime scene:

I think a lot of times the DNA evidence is not going to contribute to the case. For example a victim's profile on the victim's own clothing isn't going to have any bearing on anything, or an offender who lives in a house and his DNA is found in the house. Again, it's just not going to have any effect. It's strange sometimes to go to court where the DNA evidence was either unsuccessful or virtually contributed nothing to the trial (Government Scientist).

This process of defensive law is creating additional problems for scientists, who already have a strenuous workload. As the NSW laboratory has approximately 50 staff members working on current and backlogged DNA cases, any time spent at court means that less samples are profiled, which then creates additional backlogs and delays in other court proceedings. As such, the process of prosecutors calling expert witnesses to explain the absence of forensic material is having a negative impact on criminal justice resources.

There is also evidence to suggest that some prosecutors, and police officers, have begun to request unrealistic tests from scientists in order to present forensic evidence at court (Cooley 2007:491).<sup>14</sup> Two of the NSW scientists in this study voiced concerns about requests to conduct tests that they considered to be unachievable:

a lot more easier if they didn't watch *CSI* [laughs]. Cause we do get a lot of *CSI*-style questions, *CSI*-style requests. We do get swabs off glove marks because they think well maybe he has touched his face and then when he has touched his face he has transferred his DNA onto the counter, which might be fine, but 50 other people have touched that counter without gloves and with a lot more DNA to leave. It comes into that side of things where they don't really understand and that it's not the last person to touch it as to who's DNA you're getting. It is whatever DNA happened to be on that item at that time and that's not the thing — 'well can't you tell us if they were the last ones to touch it', or '[the] last ones to wear it'? So forensic awareness would be great ... (Government Scientist 3).

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<sup>14</sup> Cooley (2007: 491) acknowledges that prosecutors sought unrealistic tests prior to the *CSI* phenomenon. He goes on to state: 'If this behaviour occurred before the CSI Effect, one can only imagine what lengths some prosecutors will go to nowadays to combat the supposed CSI Effect and to secure a conviction or even worse — a death penalty' (Cooley 2007:492).

I've had police on the phone saying to me 'I was watching *CSI* and they did this', they got DNA for something ridiculous ... (Government Scientist 4).

The pressure placed on laboratories to conduct further tests, or to produce results, could lead to contamination or fabricated evidence to bolster the prosecutor's case (Cooley 2007:492). However, as there is evidence that scientists have fabricated forensic tests to falsely include individuals for some time (Aronson 2007), it is difficult to tell what direct effect the CSI Effect has had on placing enough pressure on scientists to fabricate evidence.

The CSI Effect, whether real, or imagined, is impacting upon the NSW criminal justice system, and criminal justice systems around the world. Criminal justice practitioners are changing their behaviour to accommodate the perception that jurors want scientific evidence. In the USA, a former crime scene investigator, Jeffrey Heinrick (2006:60) provides an anecdotal account of this:

The CSI Effect is exerting an influence on all parts of the criminal justice system. Both the prosecutors and defense attorneys are feeling the need to be more thorough where they didn't need to be before, despite the fact that the extra effort is usually not needed.

These defensive tactics, from both prosecutors and defence lawyers, have created negative impacts on forensic laboratories and certain court processes. The backlog of DNA samples creates multiple problems. Hayes (2005) discussed problems with the USA Wisconsin laboratory backlogs and referred to one case where a rape victim was made to wait eight months before her case was taken to court because the prosecutors would not proceed without DNA evidence. Similar cases have occurred in NSW. In 2004 there was also a case involving a victim of sexual assault who was made to 'wait eight months for the results of DNA tests before police' proceeded with her case (*Daily Telegraph* 2004:26). Prosecutor's desire to have forensic evidence has resulted in them delaying trials until the evidence is available. In addition, because prosecutors are requesting additional tests, and for experts to appear in court to explain the absence of evidence, more pressure is placed on the laboratories. This in turn could result in false matches. These are only some of the reasons why the CSI Effect, and its extended effects on the criminal justice process, requires further study.

## Conclusion

*CSI* is not the first type of show to influence the criminal justice system. Cole and Dioso (2005) discuss the 'Perry Mason effect' and how some academics believed that because of Perry Mason, jurors now expect on-the-stand confessions. Despite this, the large amount of media hype surrounding the CSI Effect has brought the issue to the forefront of a lot of criminal justice practitioner's minds. Although the exact nature and consequences of the CSI Effect are unclear, it is very clear that there are serious long-term changes within criminal justice systems. As Ghoshray (2007:539) commented 'it is indeed true that crime scene investigation shows have created some ripple in the legal community, and its impact is being felt in the criminal justice process'. Criminal justice practitioners are, by their own admission, changing their practices and behaviour to reflect the perceived need to have forensic evidence at trial, or else to explain the absence of evidence. This in turn, has had a wider impact on the resources available to forensic laboratories. For example, as prosecutors are now trying to meet, what they perceive to be, new juror demands based on the CSI Effect, they are removing scientists from laboratories, and therefore the backlogs, to testify on routine matters that would not normally warrant expert testimony.

Shelton et al (2006:368) have argued that ‘the criminal justice system must adapt to the “tech effect” rather than fight against it ... To adapt, law enforcement officials will have to commit additional resources to obtaining scientific evidence in many more situations’. While increasing the resources for obtaining scientific evidence may be the ideal situation, many criminal jurisdictions, including NSW, do not have the necessary resources to meet new juror standards which expect forensic tests in all types of cases. In the example of DNA evidence, the NSW government laboratory currently has insufficient resources to cope with the amount of DNA tests that are being submitted.<sup>15</sup> The need to meet increased juror expectations places pressures on the already limited resources of the police and forensic laboratories. In addition, the desire of jurors to have forensic evidence will negatively impact upon criminal cases where such evidence is unavailable, because they may acquit without the evidence. It is too simplistic to argue that prosecutors should be meeting this new standard and provide forensic evidence in all cases — quite simply in many cases the evidence will be unavailable, and in other cases the evidence will not provide any additional information. The one, undeniable conclusion we can reach is that recent (mis-)representations of forensic science advances in popular culture through programs such as *CSI* have had many far reaching and possibly still unrecognised and unidentified effects on the criminal justice system. As such, it is important to research the effects of *CSI*-type programs not only on jurors, but also on the practitioners working in the criminal justice system, especially if changing practitioner tactics are using more resources than the state can provide.

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<sup>15</sup> Towards the end of 2006 a new police laboratory was established in Pemulwuy to address some of the backlog issues. In addition, in 2008 the NSW Police Minister announced that criminal DNA tests would be outsourced to a private company in Sydney in another attempt to reduce the backlogs (Baker 2008). The government laboratory will continue to focus on serious crime samples, while the private company, Genetic Technologies Corporation, will test samples from volume crime cases (Wise 2009:126). It is yet to be seen whether these new initiatives reduce the backlog in NSW.

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