



Sacred Heart
UNIVERSITY

Sacred Heart University
DigitalCommons@SHU

CJ Faculty Publications

Criminal Justice

2-2008

Forensic Science, Wrongful Convictions, and American Prosecutor Discretion

Dennis J. Stevens
Sacred Heart University

Follow this and additional works at: https://digitalcommons.sacredheart.edu/cj_fac



Part of the [Criminal Procedure Commons](#), and the [Criminology and Criminal Justice Commons](#)

Recommended Citation

Stevens, D. J. (2008). Forensic science, wrongful convictions, and American prosecutor discretion. *Howard Journal of Criminal Justice*, 47(1), 31-51. doi: 10.1111/j.1468-2311.2008.00495.x

This Peer-Reviewed Article is brought to you for free and open access by the Criminal Justice at DigitalCommons@SHU. It has been accepted for inclusion in CJ Faculty Publications by an authorized administrator of DigitalCommons@SHU. For more information, please contact lysobeyb@sacredheart.edu.

Forensic Science, Wrongful Convictions, and American Prosecutor Discretion

DENNIS J. STEVENS

Associate Professor of Criminal Justice, Sacred Heart University, Fairfield, Connecticut, USA

Abstract: A hot controversy exists about the reliability of forensic science as reported by prime-time drama television series in bringing violent criminals to justice. This exploratory research will show that neither forensics or its fictionalised (CSI Effect) accounts, nor substantial evidence secured by police investigators, shape prosecutor decisions to charge a suspect with a crime, which can often result in freeing guilty suspects and convicting innocent individuals. In the summer of 2006, 444 American prosecutors responded to a survey. The findings reveal that judges, juries, and defence lawyers are influenced more by prime-time American drama forensic accounts than by the substantial documented evidence of a case. It was also discovered that regardless of the dangerous apprehension of violent criminals by the police, some suspects are never charged because of faulty prosecutor behaviour. One implication of these findings is that police officer alienation from the legal system is at an all-time high, and that prosecutors lack professional supervision and personal motivation to represent the 'people', giving rise to vast human and legal rights violations of suspects and defendants.

In the world of criminal justice, offenders and victims are routinely processed, but those processes have been challenged in the 21st Century through television dramas, because criminal justice practice must deal with fictional accounts of practices or what can be called the 'CSI Effect', which are media mass marketed (Rauxloh 2005; Wilson 2006). In the 20th Century, the media developed their full capacity for influencing the public in Europe and North America, but in the 21st Century, television performances are one of the main means to inform as well as to manipulate populations. For instance, the East German police programme, *Polizeiruf 110*, that had been broadcast from 1971 until 2005, showed how the state used the entertainment media to promote particular perspectives about crime, police, society, and the state. The name *Polizeiruf 110* means 'police call 110'. This is the police service number to be called in an emergency (like 999 in the UK, and 911 in the US). The name not only made every child memorise this number, but, in addition, demonstrated that all crime was dealt with by the 'ordinary' or rank and file police officer rather than special departments, such as a crime-gang units. In the United Kingdom,

the long-running series, *The Bill*, a televised version of police work, contains a more soap-like emphasis on ongoing hidden-agenda storylines, while *Prime Suspect* police dramas attempt to tackle hard-hitting social issues, including racism, child abuse, and homophobia. And in the US, CSI prime-time drama shows employ forensic technology that has yet to be fully operationalised in routine police investigations.

Government propaganda in the past century employed a variety of techniques to influence opinion, but largely it attempted to avoid truth. Often these techniques relied upon some element of censorship or manipulation, either omitting significant information or distorting it. In the 21st Century, distorting truth and avoiding reality has a new twist, it is called the *CSI Effect* (fictionalised accounts) which offers glamour, certainty, self-discipline, objectivity, truth and justice, all rolled into one, and in doing so, effortlessly accommodates much-heralded successes, argued David Wilson (2006). Yet, episodes concerning forensic science failures continue to plague constituents. For example, Brandon Mayfield, the Portland lawyer was arrested and held for two weeks in Madrid in 2004 after a terrorist attack on the train system. The FBI insisted it had found his fingerprints on several crucial pieces of evidence, only for the Spanish authorities to disagree and release Mayfield without charge. Other failures include wrongful convictions in the United States which have attracted a lot of attention because of the highly publicised post-conviction DNA exonerations of over 150 death row inmates, that forced the governor of Illinois to place a moratorium on the use of the death penalty (BBC News 2003; Huff 2002). The governor asked: 'How many more cases of wrongful convictions have to occur?' (BBC News 2003). Crime lab testing or forensic assessments often led to the original convictions of many prisoners in Illinois and elsewhere. For instance, in Omar Saunders's trial in Chicago, Illinois State Police crime analyst, Pamela Fish, testified that semen taken from the beaten and murdered (Lori Roscetti) victim's young body and underwear, belonged to the defendant in 1986 (Possley and Mills 2001). Later it was learnt that Fish lied in court about Saunders and many other defendants. Based on Fish's and other crime experts' testimony, Judge Berkos told Saunders: 'You're a strange being, and I avoid the word human being because as I look at the facts of this case, I don't know whether we can call that conduct human' (O'Connor 1987, p.1). State prosecutors relied upon Fish's persuasive courtroom appearance to charge and convict 17-year-old Saunders with the crime of murder, despite police observations that Saunders was incapable of such a heinous act and that he was likely to confess to any crime, if asked, which he had.¹

Boston, too, has experienced a crime analysis unit blamed for the wrongful conviction of Stephan Cowans, who had been convicted for attempted murder of a police officer (Smalley and Ranalli 2006). According to the Innocence Project (2006), despite all the advancements of CSI in both the field and the laboratory, several hundred defendants are wrongfully convicted every year, and subsequently many of those defendants are eventually exonerated because of human error from faulty CSI assessments and its process. We will never know how many prisoners

were actually victims of the system of 'scientific fraud', a label some attach to crime analyst, Fish (Possley and Mills 2001). Nonetheless, other reasons for wrongful convictions include eyewitness errors, over-zealous/unethical cops, lazy or incompetent prosecutors, and incompetent expert witnesses, including CSI personnel (Huff 2002).

However, since prime-time drama programming has fictionalised police practices, which include forensic science processes, a relevant question begging an answer relates to charging a suspect with a crime based upon forensic evidence. In the US, prosecutors play a key role in the criminal justice system at both the state and federal level. According to US Supreme Court, Justice Jackson noted in 1940: 'the prosecutor has more control over life, liberty, and reputation than any other person in America' (Davis 1969, p.48). The power to prosecute is an enormous responsibility and is less protected against abuse than any other process. The reality is that nearly all of the decisions to prosecute or not to prosecute, nearly all the influences toward release or trial, and, in fact, more than nine-tenths of local prosecutions are supervised or reviewed by no-one except for an occasional case that may be publicised (Gordon and Huber 2002). Spohn, Beichner, and Davis-Frenzel's (2001) study on American prosecutors reveals that none of the discretionary decisions made by prosecutors is more crucial than the initial decision to prosecute (charge) or not, which has been referred to as the 'gateway to justice'. In what way does prime-time drama impact on prosecutor discretion?

One prosecutor reveals that his primary responsibility is seeking truth and justice, regardless of where the search might lead – whether it results in prosecution and conviction, or in some cases, exoneration, regardless of what television might suggest (McCulloch 2006). This thought is consistent with the National District Attorney's Association's (2006) primary function of prosecutors: 'to seek justice' (p.9). However, it should be acknowledged that when a crime laboratory produces forensic evidence that includes DNA testing, its results are accepted as infallible (Layton 2006). However, most public crime forensic units are under-funded, under-certified, and under attack because they cannot standardise their operations, control their excessive objectives, or meet the judicial responsibilities of their mission (Cheurprakobkit and Pena 2003; Roane 2005; Saferstein 2006; Willing 2004). In some respects, prime-time drama myths as compared to real CSI performance place an extraordinary hardship upon the justice system almost as if it were a runaway train racing down a wintry slope, 'and if you don't accept their (crime lab) findings as reliable, regardless of the validity of those findings that train will derail a case faster than greased lightning', said one prosecutor.² 'To challenge crime lab findings it's almost as if you were unpatriotic', she added.

Does forensic analysis performed by a crime lab or documented evidence secured by investigators influence prosecutor discretion to bring a suspect to justice? It could be said with a great deal of confidence that, regardless of the dangerous apprehension of violent criminals by the police, some individuals are never brought to justice, because of faulty prosecutor practices, while others, including innocent individuals, are

charged and convicted. Furthermore, police officer frustration with the legal system is probably at an all-time high, confirming all the leading police stress experts, which include Katherine Ellison (2004), Patricia Kelly (2002), Dennis J. Stevens (2004, 2006, 2007, 2008), and Hans Toch (2001), while offender conviction levels for many serious crimes such as sexual assault are at an all-time low (less than 6% in the USA), advises the Bureau of Justice Statistics (2005).

In part, this study can explain why so many individuals are freed after an arrest and why police investigative personnel refrain from forensic participation with their cases (Lumb and Wang 2006). A latent thought pertains to the arrest and prosecution of terrorists, and racially motivated criminal justice response. Is the public under the impression that prime-time drama, in general, is reality? In early 2007, Tony Blair found himself involved in a racist bullying row resulting from the prime-time show *Celebrity Big Brother* linked to Shilpa Shetty. Actually, a 'racist' account could have been easily fabricated by the media to enhance ratings. While in France, the state is demanding a scrubbing of gritty vulgar words and brand name identification from films and television series. Also in this regard, news-reporters informing the public about murder in America emphasise the personal traits of the offender, while Turkish reporters accentuate social and situational causes of murder (Dayioglu 2007). With so much attention to media 'fallout', it is not a far stone's throw to affecting decisions made by the gatekeepers of criminal justice – prosecutors, whose responsibility is to safeguard truth.

Methodology

A questionnaire was developed after several prosecutors were interviewed. A series of questions and answers (in closed- and open-ended formats) were crafted and tested in the graduate classrooms of the University of Southern Mississippi and Loyola University. The results were reviewed by colleagues, graduate students, and prosecutors. Once a questionnaire was developed, it was pretested and eventually a final draft was created. In all, there were 31 questions: eight demographic questions (years of experiences, length of time, age, gender, race, employer, elected or appointed, and caseload); eleven questions related to performance contributions (performance affecting future jobs, factors aiding current performance, prosecutorial agendas, judgeship aspirations, personal incentives, acceptance of bureaucratic controls, personal benefits provided, undesirable benefits of the job, case rejection, unknowingly charging a suspect); three questions about forensic's impact upon juries, judges, and defence lawyers, and factors determining conviction; seven questions about law school (continuing training hours required, percentage of law school subject knowledge used in current job, how well had law schools prepared lawyers for a prosecutor's job, reasons they went to law school, ways to change law school admissions, methods to ensure becoming a prosecutor, and advice they would provide a law student about becoming a prosecutor); and two miscellaneous questions (grand jury and the elements of a crime and their predictive values).

The sample was selected from lists available at state prosecutor websites. A random process selection was accomplished after first establishing the desired number for the sample, and then dividing the total number on the membership list by that number – if 50 from a list were desired, the entire list of 200 entries divided by 50 equals 4. Therefore, every fourth name was selected for mailing. Duplicate name listings were ignored. A return stamped envelope, a questionnaire, and a copy letter were stuffed into addressed envelopes. The cover letter and the questionnaire asked participants to copy the questionnaire for others in their offices. In total, 1,100 envelopes were mailed in the late summer of 2006. Kim Cox, a graduate assistant developed, prepared, and distributed the questionnaires.³

Four hundred and fifty-five questionnaires were returned of which ten were less than one-half completed and one was illegible; therefore the data from 444 questionnaires were entered (by Kim Cox) into computer grids. With the returned surveys, 41 also contained letters from the prosecutors about themselves, their offices, and their jobs. Return envelope post-marks implied respondents represented the states shown in *Table 1*.

The data reveal that the average respondent reported 15 years of service as a prosecutor with a range of 1 to 32 years (see *Table 2*). Sixty per cent (264) worked full-time, the average age was 49 years, and most of the participants were white (402), males (298), who worked for the state (197) or the county (209), and 77% (341) were elected officials. Forty-three per cent (192) handled all types of cases, and 24% (107) handled felonies. Also, most of the respondents reported that the state required them to obtain twelve hours of yearly training, although several of the states do not have a mandatory set of hours of prosecutor training, nor do they have a specific administrative agency that conducts this training. Germany, in comparison as a matter of reference, maintains an in-service national training centre, the *Deutsche Richterakademie* (German Judicial Academy) which has been working to promote inter-regional further training of judges from all branches of the justice system, as well as of public prosecutors (Germany-reply 2004). It is financed jointly by the Federation (*Bundesministerium der Justiz* – Federal Ministry of Justice) and the *Laender*. The original location and administrative headquarters of the training institution is in Trier

TABLE 1
States

Arizona	Missouri
California (2 LA)	Nebraska
Georgia	New Hampshire
Idaho	New Jersey
Kentucky	New York
Illinois	Ohio
Maryland	Texas
Massachusetts	Washington (state)
Michigan	West Virginia

TABLE 2
Characteristics of the Sample (n = 444)

Characteristics	Number	Percent or Range
Years of service	15	1–32
Full-time	264	60%
Part-time	169	39%
Age (years)	49	29–72
Male	298	67%
Female	136	31%
White	402	91%
Black	28	6%
Hispanic	3	7%
Asian	6	1%
State	197	44%
County	209	47%
City	31	7%
Elected official	341	77%
Appointed official	99	22%
Cases prosecuted (all categories of crime)	192	43%
Felony: crimes against persons	107	24%
Crimes against property and weapons	106	75%
Crimes committed by juveniles	32	7%
Required future hours education	12	3–25
Percent of law school training used on job	29%	10–80%
How well law school prepares students	Average	45%
Professionalism and money are motivators in enrolling in law school	384	87%
Enhance admissions: less reliance on LSAT	161	37%
More criminal courses for future prosecutors	159	36%
Don't accumulate college debt	133	30%

(Notes: all percentages are rounded, missing cases not shown)

(Rhineland-Palatinate). At the beginning of 1993, the Academy acquired a second centre, the 'Zieten-Schloss' in Wustrau in the Mark Brandenburg.

When sample members were asked about how much law school learning they used as a prosecutor, the typical response was 29%. That is, prosecutors utilised a little over one-quarter of their law school knowledge on the job. Perhaps one reason for this low usage relates to the fact that most law schools concentrate on civil law as opposed to criminal law. Forty-five per cent (170) gave their law school a 'C' or average grade in preparing students to become prosecutors, and 87% (384) reported that professionalism of the job and money were the two reasons they went to law school. Less reliance on the LSAT entrance examination among law schools is the best way to improve law school admissions, reported 161 (37%) of the participants. More criminal courses should be required of

students wanting to become a prosecutor, reported 159 (36%) of the participants. And the best advice offered by prosecutors to law students who wish to become prosecutors is not to accumulate college debt, reported 133 (30%) of the prosecutors.

The CSI Effect

The 'CSI Effect' defined for this study are fictionalised accounts of forensic analysis practices: criminal cases can be solved through the employment of hi-tech forensic science as seen on prime-time American drama crime shows such as *CSI*, *Criminal Minds*, and *Crossing Jordan*. Generally, these dramas are inclined to raise crime victims' and jury members' real-world expectations of forensic science, and have changed the way many trials are presented. They are pressured to deliver more forensic evidence in court; however, in reality they are vastly limited, a thought consistent with the findings in this study, because of lack of funds, personnel, time, and expertise; thus prosecutors rely upon other avenues to charge suspects and convict defendants. Cases with DNA evidence go to trial more often than cases without it because incriminating DNA evidence can demonstrate a powerful influence on a juror's decision to convict a defendant, almost regardless of the substantial and documented evidence to the contrary (Briody 2004). Yet there are so many variables including human error, and DNA evidence does not provide criminal intent or opportunity. Also noticeable is that the lack of such hi-tech evidence can seriously prejudice a jury against a prosecutor's case (Willing 2004). One way to describe this perspective is that it is a manifestation of the 'if-it's-not-like-what-we-see-on-TV-then-it-can't-be-real mentality' (Boese 2004). Prospective students and other people who overestimate reality-based drama programmes might develop unreasonable expectations of actual forensic practitioners supporting the justification of utilising plea bargains as opposed to trials. But it could also justify laziness and issues of integrity among prosecutors, opening the door to corruption and misuse of office, implies Willing (2004).

Crime Scene Investigations (CSIs)

CSI units' or crime labs' standards and initiatives are administered through various local, state, and federal law-enforcement agencies and many are privately owned and operated (Saferstein 2006). Many CSI units can be categorised as field investigators tasked with gathering evidence from a crime scene and laboratory personnel who perform forensic assessments on the evidence gathered by field investigators. Often (although prime-time drama tells a different story), field investigators and lab personnel are distinctively different personnel who often possess distinctively different training, experiences, and are administered through a different chain of command. In addition, the CSI services vary because of: (i) variations in local laws; (ii) different capabilities and functions of the organisation to which a laboratory is attached; and (iii) budgetary and staffing limitations (Saferstein 2006, p.13).

CSI Tasks

Evidence gathered and processed by CSI personnel serves either the defence or the prosecution. The goal of CSI personnel, including forensic scientists, is the evenhanded use of all available information to determine the facts and, subsequently, the truth of a case (FBI Handbook of Forensic Sciences 2006). The FBI's perspective is consistent with the American Academy of Forensic Sciences.

Crime scene investigation is the meeting point of science, logic, and law (Layton 2006). Processing a crime scene is a tedious process, which includes documentation of the findings at the scene, collection of evidence, and laboratory analysis. Joe Clayton of the Colorado Bureau of Investigation implied that there is no typical crime scene (CS), there is no typical body of evidence (*corpus delicti*), and there is no typical investigative approach (Layton 2006). Physical evidence and its assessments are merely part of the equation towards justice and truth. At the CS, a crime scene investigator performs field CSI work and a crime scene analyst processes evidence from the laboratory. The process in the laboratory is often called forensic science. Depending on the size of the police department, field and lab personnel are two different individuals; however, sometimes their tasks overlap, but that is less often rather than more often.

The crime scene analyst endeavours to arrange and collate numerous individual events, details, and observations which present themselves in an order that might become a part of a comprehensive picture associated with the crime, victims, and suspects (Ruslander 2006). The crime scene investigator creates a hypothesis based on physical evidence of the actions of the victims and suspects before, during, and after a criminal event. What experts seem to be saying is that the goal of CS processing and documentation is to create a visual record that will allow the crime analyst, police investigators, and prosecutors to recreate easily an accurate view of the crime (Saferstein 2006). However, before evidence can be assessed, the crime must come to the attention of CSI personnel. Therefore, police detectives and first responders are often faced with a series of dilemmas.

Police Dilemma

The first dilemma of the American police enterprise is that there is an extraordinary number of unsolved homicide and sexual assault cases (Lovrich *et al.* 2004). Those numbers consist of an estimated 52,000 homicides and 169,000 sexual assaults. Researchers estimate that over 221,000 cases of violent crimes with possible biological evidence have not been submitted by local police agencies to any laboratory for analysis (Lovrich *et al.* 2004). Property crime cases with possible biological evidence are estimated at over 264,000. Furthermore, the number of unanalysed DNA cases reported by state and local crime laboratories is more than 57,000. Finally, in this regard, crime cases with possible biological evidence, either still in the possession of local law enforcement or backlogged at forensic laboratories, total over half a million (542,700). Although the

technologies lauded on prime-time drama programmes are fictionalised, these cases exist in real crime labs to some degree or another. They often require more time and deliver answers more equivocal in real life than the media reports. And although the Forensic Science Service (FSS) in England and Wales has publicised the idea that tens of thousands of unsolved crimes could be cracked with a new forensic technique, it has yet to be developed (BBC News 2006). It claims that the technique is a world first, which will boost its crime detection rates by more than 15%, and certainly that will aid America's unsolved crimes, yet it is unlikely it will affect its backlog of cases. Nonetheless, a jury's view might be that real criminal science has become as meaningful, swift, and certain as seen on prime-time dramas. Frankly, turnaround time for the cops is not on their side when investigating criminal activity because apprehending a perpetrator is less likely as time passes after a crime has been committed (Lumb and Wang 2006). Therefore, backlogs of unsolved crimes and turnaround issues of evidence appear to create reluctance on the part of the police to utilise CSI services.

Reality of Turnaround Lab Time

The reality of American crime lab turnaround time is different from the way the media present it. For instance, the 50 largest labs (FTE) in the US began in 2002 with about 117,000 backlogged requests for forensic services, and ended the year with over 93,000 backlogged cases, including about 270,000 requests for forensic services (Bureau of Justice Statistics 2004). One estimate is that about 930 additional FTEs would have been needed to achieve a 30-day turnaround for all requested forensic services in 2002.

Specifically, the Arizona Department of Public Safety's (DPS) crime lab analyses physical evidence submitted by police officers throughout the state (Arizona Office of the Auditor General 2000). Fewer than 2,000 (26%) of the 7,623 blood samples received by DPS on offences have been analysed with current DNA techniques and uploaded to the database. Initially, another 38% were analysed but are awaiting quality control reviews. This backlog is caused by changes in forensic DNA analysis methods, requiring additional training for lab personnel. The toxicology unit reported a backlog of 1,189 samples for 30 days or more, primarily because of the large increase in the number of samples submitted during 1998/1999. Alcohol submissions increased by 42% and drug screen requests increased by 31%.

Dean Gialamas, director of the forensics laboratory at the Orange County Sheriff-Coroner's office in Santa Ana, California, implied that the gadgetry seen on TV is similar to what his department uses, yet differences arise in their application. For example, on CSI dramas a computer automatically matches findings such as fingerprints to those in a database, yet the process might take weeks, assuming its match is in the database. In real life, scientists perform such detailed work themselves. While drama presentations depict DNA testing as instant, real life DNA requires months or longer, assuming there are no problems with the equipment (Willing 2004).

Police Reluctance to Utilise CSI

Police reluctance to use forensic analysis is reported in the data from a large, representative sampling of local law-enforcement agencies in the US (Lambert, Nerbonne and Watson 2003). The study (some agencies provided more than one response) arrived at the following estimates:

- 51% (of the sample) reported forensic DNA was not considered a tool for crime investigations;
- 31% reported no suspect had been identified;
- 9% indicated the prosecution had not requested testing;
- 10% responded a suspect had been identified, but not charged; and
- 24% of responding agencies reported poor funding.

Apparently, the police are not far off the mark about forensic analysis performance because there is congruence with the scholarly literature which is also consistent with a National District Attorney Associations' study about ten community prosecution profiles (Center for Court Innovation 2004). Other evidence supports police decisions to avoid the forensic analysis process whenever possible:

1. Clinical assessment performed by practitioners outperforms actuarial clinical risk instruments linked to predictions about recidivism and dangerousness among sexual offenders (Craig *et al.* 2005).
2. A study reviewed 155 Texas capital cases in which prosecutors employed forensic science techniques to predict a defendant's future dangerousness, and in 95% of these cases, those predictions were wrong, reported the Texas Defender Service ('Deadly speculation' 2004).
3. Another study revealed that first responders to CS in Boston had not adequately safeguarded evidence, inadequately secured the CS, and withheld their theory of the crime because of inadequate training and often, inappropriate supervisor manipulation of police personnel (Stevens 2006).
4. Police decisions to process CS evidence in forensic labs are directly related to budgetary issues and there are four (officers' attitude, institutional support, personnel, and network) additional elements that guide decision factors as to whether the police utilise crime labs (Cheurprakobkit and Pena 2003).
5. There is a pressing need to reconcile the consequences of resource allocation if forensic science at the local police level is ever going to succeed (Berger 2002).
6. Police officers in the state of Michigan reported that they had little background in forensics and really did not fully understand how they fit into a criminal investigation (Lambert, Nerbonne and Watson 2003).
7. Detectives who see less value of CSI assessment than their own theory of the crime are less likely to ask for CSI aid (Saverio and Pierre 2001).
8. Differences of forensic science opinions can derail investigative interviews among child abuse victims (Sternberg, Lamb and Davies 2001).

9. Forensic pathologists confront vague results when investigating various violent crimes such as child homicide (Cordner, Burke and Dodd 2001).
10. Trace evidence after a fire depends more on interpretation of field personnel than crime lab assessment (Hagimoto and Yamamoto 2006).
11. Natural diseases often masquerade as trauma and the fatal event is not usually witnessed by anyone other than the accused (Cordner, Burke and Dodd 2001).
12. Distinguishing accidental injury from assault and instances of multiple injuries, ascertaining the relationship between old injuries and death, and the relationship between shaken baby syndrome and subdural hemorrhage (Cordner, Burke and Dodd 2001).
13. Suicides diagnosed through CS initiatives are subsequently revealed to be homicide cases as discovered in Arizona, when over 10,000 bodies were reviewed by the five boards of certified forensic pathologists after receiving a pre-cremation examination over a two-year period (Nelson and Winston 2006).

In light of these studies and others, prosecutors have their challenges, especially when the literature is consulted.

Police Thoughts are Consistent with Investigations and Trial Experiences

Although prime-time dramas are entertaining, CSI programmes foster what analysts said are the mistaken notions that criminal science is fast and infallible and always gets its man. Other information suggests that crime shows help offenders (Willing 2004). For example, when Tammy Klein began investigating crime scenes eight years ago, it was virtually unheard of for a killer to use bleach to clean up a bloody mess (LexisNexis News 2006). 'Today the use of bleach, which destroys DNA, is not unusual in a planned homicide', said the senior criminalist from the Los Angeles County Sheriff's Department. Klein and other experts attribute such sophistication to prime-time dramas which provide helpful tips on how to tamper with, and in some cases destroy evidence. 'They're actually educating these potential killers even more', said Captain Ray Peavy, also of the Los Angeles County Sheriff's Department and head of the homicide division. 'Sometimes I believe it may even encourage them when they see how simple it is to get away with crime on television', he added. Willing (2004) offered the following examples of the CSI Effect:

- Phoenix, Arizona: Jurors in a murder trial noticed that a bloody coat introduced as evidence had not been tested for DNA. They alerted the judge. The tests were not 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.
- Richmond, Virginia: Jurors in a murder trial asked the judge whether a cigarette butt found during the investigation could be tested for links to the defendant. Defence attorneys had ordered DNA tests but had not

introduced them into evidence. The jury's hunch was correct – the tests exonerated the defendant, and the jury acquitted him.

- Arizona, Illinois, and California prosecutors now use 'negative evidence witnesses' attempting to assure jurors that it is not unusual for real crime scene investigators to fail finding DNA, fingerprints, and other evidence at crime scenes.
- Massachusetts: Prosecutors have begun asking judges for permission to question prospective jurors about their TV-watching habits. Several states have followed the Massachusetts' model.
- Wilmington, Delaware: Federal researchers studying how juries evaluate scientific evidence staged dozens of simulated trials. At one point, a juror struggling with especially complicated DNA evidence lamented that such problems never come up on 'CSI'.
- Dakota County, Minnesota, authorities thought their felony case against a driver charged with criminal vehicular operation was solid (Boese 2004). Jurors knocked it down to a misdemeanor, convicting the defendant of reckless driving instead. Then they told the prosecutor they were disappointed with the case. 'They wanted to see a computerized reenactment', said Phil Prokopowicz, chief deputy county attorney. 'It was something they expected', he added.
- Hennepin County, Minneapolis, attorney Amy Klobuchar argued that prosecutors are now explaining to potential jurors that real life is not like a television show. For instance, substantial evidence towards conviction does not necessarily mean DNA evidence. Because of 'CSI' shows, some prosecutors contend that more jurors believe every crime scene yields forensic evidence that offers conclusive scientific proof of innocence or guilt, almost instantly (Entertainment 2005).

Yorkshire Post (18 July 2006) reported an account from the UK explaining that John Lloyd represented a 20-year mystery that devastated many people who lived in the areas of South Yorkshire, Nottingham, Devon and Scotland. The exposure of Lloyd as a shoe rapist brought this typical response from one his neighbours: 'We can hardly believe it. It doesn't seem real that someone like Jim could do something like that'. Lloyd was convicted in 2006 based upon DNA evidence. Even so, on the day Lloyd was sent down, a juror in the case of Barry George – who was given a life sentence in 2001 for the murder of Jill Dando – broke her silence to say that she had felt 'tricked' into convicting George (Wilson 2006). The juror found support in her ambivalence from a number of forensic scientists, who afterward claimed that the forensic evidence on which his conviction rested (gunpowder residue) should have been dismissed as 'unreliable'. Too often, authorities said, forensic science is unproven, the analyses unsound, and the experts are unreliable (Roane 2005). When a case comes to court, 'Jurors expect it to be a lot more interesting and a lot more dynamic', said Barbara LaWall, a county prosecutor in Tucson, Arizona. It puzzles them, when it's not (Roane 2005). Thus prosecutors discover methods to offset the CSI Effect, this study reveals, and often those methods can be highly suspect.

Prosecutors

The traditional responsibility of an American prosecutor is highly infused through the moral judgment of two components (Commission on Behavioral and Social Sciences and Education 2001). First, a prosecutor is to see that ‘justice is done’ to those who engage in reprehensible illegal conduct by convincing the court to convict the defendant of the crime with which he has been charged. Second, a prosecutor is to impose an independent judgment between arrest and prosecution by deciding which cases to prosecute (Raghav, Ramseyer and Rasmusen 2005). The prosecutor is to present the government’s case at trial and bargain over guilty pleas that could reflect the likely outcome of a trial, without requiring the costs of prosecution of an actual trial. In terms of role, a prosecutor is more than an avenger and a social order maintainer, but has the equal concern about the justice system that imposes punishment. This is clearly illustrated by the rule that requires the prosecutor to turn over any evidence that might benefit a defendant at trial. If prosecutors present more and weaker cases of a given type, the ratio of conviction to prosecutions (the conviction rate) falls. If prosecutor budgets increase, they can choose either to prosecute more cases or to put more effort into existing cases (Raghav, Ramseyer and Rasmusen 2005). Depending on particular circumstances, either can be rational; however, prosecutors less often make decisions based on law and reply on factors other than the merits of the case. For instance, in 2005, state court prosecutors reported facing an increasingly complex composition of cases and issues with staff and budget resources essentially unchanged since 2001 (Bureau of Justice Statistics 2006). Prosecutors’ offices encountered hi-tech offences such as computer crime, credit card fraud, and identity theft. In addition, state prosecutors have homeland security responsibilities. In 2005, 2,344 American prosecutors’ offices prosecuted felony cases in state courts of general jurisdiction. Also in 2005, one-half of all offices closed 250 or more felony cases (Bureau of Justice Statistics 2006). Most offices prosecuted a broad range of domestic violence cases and electronically related crimes, ranging from credit card and bank card fraud, identity theft, transmission of child pornography, cyber stalking, computer forgery, and unauthorised access (hacking). In England and Wales, as a matter of comparison, the Crown Prosecution Service is a national organisation consisting of 42 areas. Each area is headed by a Chief Crown Prosecutor and corresponds to a single police force area, with one for London. Nonetheless, what issues link different reasons for prosecutors’ success or failure in court?

Prosecutor Success and Failure

One report shows that San Francisco’s prosecutors convicted less than one-third of all adult felony suspects arrested in this California city in 2001, according to the most recent California Department of Justice statistics available (Wallace 2003). The prosecutor’s office disputes the accuracy of the Justice Department statistics and said that factors beyond his control –

such as the city's liberal jury pool and sloppy police work – contribute to the comparatively low rate of felony convictions in San Francisco (Wallace 2003). The prosecutor said that he was elected in part because of his commitment to employing rehabilitative justice initiatives that divert narcotics and other non-violent crime offenders into programmes aimed at breaking cycles of recidivism as alternatives to incarceration. San Francisco prosecutors obtained convictions against 29% of all adult felony suspects in 2001. Statewide in 2001, prosecutors convicted 68% of all felony cases. Apparently, different prosecutors possess different judicial styles of prosecuting suspects.

Prosecutor Styles

All prosecutors are not equal, as illustrated by the San Francisco's prosecutor example. In similar American jurisdictions, each has what appears to be his/her professional agenda as evidenced by the following information. For example, in capital punishment states where execution eligibility among defendants is similar, certain prosecutors argued for the death penalty. Because of such factors as the quality of evidence, time, and financial limitations (among other factors) local prosecutors must 'pick and choose' among which death penalty eligible cases they will seek a death sentence (Paternoster, Brame and Bacon 2007).

After the US Supreme Court's *Gregg Decision*, it is local prosecutors who investigate cases and decide whether a case is a 'death eligible' case. In Georgia, the likelihood of a death sentence is about one-and-a-half times higher in rural than in urban areas, reported Paternoster, Brame and Bacon (2007). In the north-central part of Georgia, the death penalty is almost four times higher than in the northern area of the state and two-and-a-half times more likely than in Fulton County (Atlanta). Murder defendants in Mercer County, New Jersey were almost 50 times more likely to go to trial than comparable defendants in Camden County, New Jersey. In some New Jersey counties, approximately two-thirds or more of all death eligible defendants were sentenced to death, while in other counties less than one-third were so sentenced.

Paternoster, Brame and Bacon (2007) also reported that in Washington State's largest county (King), prosecutors historically sought a death sentence in 25% of the death eligible crimes. The rate of death sentences sought in the second largest county (Pierce) is approximately double, at 52%. Also, in Texas's Harris County (Houston), one-third of the executions in Texas sent more people to death row than all of Virginia's prosecutors combined (Paternoster, Brame and Bacon 2007, p.63). Similar statistics can be found across America, leaving these researchers with one conclusion: local prosecutors decide who shall face the death penalty.

Samuel Walker (2001) revealed that the high percentage of arrests that do not result in conviction is an issue linked to prosecutor decisions whether or not to charge a suspect. For example, cases can be dropped out of the system after an arrest in three ways: (i) A supervisor tells the officer that no evidence exists to make the case. Joan Petersilia found in California,

that about 11% of all arrests were dropped because supervisors thought there was insufficient evidence for prosecution. (ii) Prosecutors reject a case because they typically conclude that there is not sufficient evidence to prosecute the suspect. (iii) Some cases are dismissed later by the prosecutor or a judge.

Walker (2001) revealed reasons for prosecutor rejections in several cities. For instance, in New York City, insufficient evidence or lack of evidence accounted for an estimated 61% of the rejected cases. In San Diego, it was 51%. Witness problems are the second most important reason accounting for 18% in New York City and 19% in San Diego. For most crimes against persons (robbery, rape, and assault), the testimony of the victim or a witness is the primary evidence and accounts for 70% to 80% of most rejections. As for dismissals, witness competence accounts for 33% of those dismissals in New York City and 20% in San Diego. In other words, through the eyes of the prosecutor, witness credibility can determine whether a sexual assault case goes forward in the courts or is simply dropped. Two points require attention: (i) A prosecutor can divert or merge cases, which accounts for almost one-half of the dismissed cases (as opposed to the dropped cases before trial). (ii) Many cases are dismissed in the 'interest of justice' which requires little explanation or documentation on the part of the prosecutor (Walker 2001, p.47). However, these decisions are similar to those made by Crown Prosecutors because it has never been the rule in England and Wales that every criminal offence must automatically be prosecuted (Crown Prosecution Service 2006). For this reason, in each case, the Crown Prosecutor must consider the public interest in going on with a prosecution and balance factors for and against prosecution carefully and fairly before coming to a decision.

Success rates varied significantly across the country from jurisdiction to jurisdiction and it could be concluded that some prosecutors hold a greater expertise than others. For instance, government statistics (Bureau of Justice Statistics 2006) reported that of all offences in 2000, adjudication outcomes for felony defendants in the 75 largest counties were that 64% ended in a conviction. Fifty-six per cent of violent crimes, 66% of property offences, 65% of drug offences, and 72% of public disorder offences ended in conviction. Of the total conviction rate (56%) for crimes of violence, 38% were pled out, 4% went to trial, 37% were dismissed, 2% were acquitted, and the remainder were changed to misdemeanours or other outcomes.

Prosecutor Statistics

In the United States, an estimated 2,344 state court prosecutors' offices employed over 78,000 attorneys, investigators, and support staff. In 2005, this is a 27% increase from 1992 and a 9% increase from 1996 (Bureau of Justice Statistics 2005). One-half of the state prosecutors' offices employed nine or fewer people and had a budget of \$355,000 or less. In 2004, these prosecutors dealt with over 2.3 million felony cases each year.⁴ This represents approximately 95% of all criminal prosecutions in the country. Ninety-five per cent of all criminal cases entered a guilty plea in 2000, while

a jury tried 3%, and 2% were bench trials (Bureau of Justice Statistics 2005). The policies and practices of these offices vary from state to state and county to county, but nearly all of them share one common trait: the job of chief prosecutor or district attorney is usually an elected position.⁵ Two-thirds of prosecutors' offices used DNA evidence during plea negotiations or felony trials in 2001, compared to about one-half of the offices in 1996 (DeFrances 2002). In 2001, these state and local prosecutor offices experienced combined total budgets of over \$4.6 billion, an increase of 61% over the preceding five years. One-quarter of the prosecutor offices reported that their district maintains an offender DNA database. Unlike their appointed federal counterparts, the local district attorneys who prosecute the vast majority of criminal cases in this country must respond to the populist demands of politics (Simmons 2005). There are 94 federal judicial districts which employ a US Attorney and Assistant US Attorney who litigated over 70,000 criminal caseloads in 2005 (US Courts 2006). Also in July 2006, 25 additional federal prosecutors were added to US/Mexico Border Districts, advised US Courts (2006).

Findings

The data from the surveys reveal that neither forensic science nor substantial evidence shape prosecutor decisions to charge a suspect with a crime, and strongly imply that the CSI Effect shapes prosecutor discretion in unexpected ways, which includes reliance upon 'credible' (compelling) witnesses (including forensic personnel and victims). Specifically, 281 (63%) of the participants reported that grand juries (where used) and 267 (60%) reported the elements of the crime predicted judiciary outcomes, and the three factors that best helped prosecutors toward a conviction were substantial and documented evidence (70%), competence (prosecutor units as opposed to public police) investigative units (66%), and credible witnesses and victims (64%). However, 259 (56%) lawyers said that juries were always influenced by forensic analysis (regardless of its quality) and 359 (81%) said that judges were always influenced by forensic analysis (regardless of its quality). In fact, three (331) of every ten (75%) participants polled reported that defence lawyers portrayed unrealistic forensic analysis presentations to win favour with the court and juries.

Forensic analysis has a double blade, forcing 359 (81%) of the prosecutors to rely more upon creditable witnesses and 318 (72%) to rely on creditable victims to win a conviction, and therefore, their first choice to prosecute depended upon components they could manipulate – witnesses and victims as opposed to forensic science or substantial evidence secured by investigators. But the other side of the blade relates to forensic expert witnesses whom prosecutors defined as creditable, and this group of individuals takes priority in the decision-making process over police reports, secured evidence, and forensic analysis itself.

Credible witnesses are individuals who witnessed a crime, but credible witnesses can mean forensic scientists, but only if those scientists are believable on the witness stand (regardless of the quality of the information

they would offer). Few prosecutors sought forensic analysis to make a decision to charge a suspect with a crime because most relied on the plea-bargaining process if there was a question about witnesses, victims, evidence, or their own competence. This finding is not that puzzling, because 141 (32%) of the participants reported that rejecting a case 'in the best interests of justice' usually referred to lack of resources or that a trial would be too expensive, meaning that prosecutors lacked the necessary budgets to investigate a case, especially a case where there was a lack of legal evidence. Prosecutors make decisions, but sometimes those decisions, the data reported whereby 189 (43%) of the sample said they sometimes accept bureaucratic rules to regulate their behaviour, while 55 (13%) never or seldom accept rules that dictate or guide their behaviour. I read that to mean that some prosecutors have few boundaries, especially in light of the 52 (12%) of the prosecutors polled who clarified that they possess a strong personal incentive of their own when working as a guardian of justice.

Further computation shows that there is a significant correlation between the participants who reported that witnesses and victims were the most important link toward indicting a suspect, and reporting a low law school studies application to their present job. That is, the lower the score, such as 15% of their law school experiences were applied to current prosecutorial services, the more likely they saw credible witnesses and victims as the primary factors toward charging a suspect, and the more likely they reported that money was the primary motivator to attend law school in the first place.

Also, a significant correlation exists between those participants who reported that the most undesirable benefit of being a prosecutor was a lack of personal privacy, and those lawyers who reported that unbelievable victims and witnesses was the first criterion evaluated to reject indictment (maybe those prosecutors required privacy to prepare a witness or victim for trial), and the participants who added that privacy issues and police reports about a case were not sufficient criteria. Additional statistical assessment shows that grand juries, the elements of crime, and police secured evidence have little influence upon prosecutors.

Conclusion

What has been learned is that forensic science analysis and police secured evidence have little effect upon a prosecutor's decision to charge a suspect unless courtroom savvy scientists or witnesses possess the skill to compel others that the information they have is reliable and can play a leading role toward the conviction of a suspect. Wilson (2006) asks: 'Does this mean forensic science and the criminal justice system are incompatible?'. The answer is 'no', but there are changes in forensic science practices if it is to remain a professional tool of the justice community and there are changes in the processes of prosecutor behaviour should the American justice community wish to champion democracy. The findings reinforce an opportunity toward wrongful convictions. These findings are consistent with Raymond Paternoster, Robert Brame and Sarah Bacon (2007), Sam

Walker (2001), and David Wilson (2006), who imply that prosecutors make private decisions founded on personal perspectives of a case which can be manipulated by a prosecutor, regardless of the realities of the case. These findings also reveal that police officers and investigators must feel a sense of betrayal and frustration with the judicial process because of prosecutor discretion, which is shaped by a lack of commitment to a democratic process, incompetence, or pure laziness. Many prosecutors apparently lack professional guidance and personal motivation to represent the 'people', giving rise to vast human and legal rights violations. Wrongful convictions are more likely to occur when prosecutors ignore the constitutional rights of their constituents and pursue a hard-line approach toward criminal convictions, unlike their counterparts in England and Wales, where the Director of Public Prosecutions is responsible for issuing a Code for Crown Prosecutors under Section 10 of the Prosecution of Offences Act 1985, giving guidance on the general principles to be applied when making decisions about prosecutions.

Any type of arbitrary government intrusion into the lives of the American population is unsupported by the rule of law and therefore illegal. Finally, in this regard, when it comes to the cops, these data illuminate a notion that no matter what sacrifice officers use to identify, arrest, secure evidence, and secure the chain of custody, whether a suspect is charged or not charged with a crime depends upon the discretionary powers of a prosecutor as opposed to the merits of the case. There appears to be an urgent need for public policy responses to this problem. Statistics are available upon request.

Notes

- 1 From a confidential personal communication in October 1987, between the author and one of the investigating officers, who wishes to remain anonymous. Saunders was a member of an education class conducted by the author at Stateville Penitentiary.
- 2 Personal communication between the author and a Boston prosecutor, who wishes to remain anonymous, December 2005.
- 3 Kim Cox graduated from Southern Miss. with honours and a master's degree, and currently is employed by US Homeland Security. Other graduate assistants who contributed to this work are Linda Moss and Lacey Cochran.
- 4 This is the total number of cases closed by local prosecutors in 2001; the case may have been closed without an indictment, or may have proceeded all the way to a jury verdict. Local prosecutors also handle over seven million misdemeanour cases each year.
- 5 Only three out of the 50 states do not elect their local prosecutors (Alaska, Connecticut and New Jersey), also the District of Columbia – which is not a US state, but the federal capital.

References

- Arizona Office of the Auditor General (2000) *Performance Audit*, Phoenix, AZ.: Department of Public Safety: Scientific Analysis Bureau, State of Arizona.
- BBC News (2003) *Governor Clears Illinois Death Row* (11 January). Available at: <http://www.ccadp.org/news-ryan2003.htm> (accessed 10 August 2006).

- BBC News (2006) *New DNA Test Will Solve More Cases*. Available at: http://news.bbc.co.uk/2/hi/uk_news/england/5404402.stm (accessed 10 February 2007).
- Berger, M.A. (2002) 'Raising the bar: the impact of DNA testing on the field of forensics', in: A. Blumstein, L. Steinberg and C.C. Bell (Eds.), *Perspectives on Crime and Justice: 2000–2001 Lecture Series*, Washington, DC.: National Institute of Justice.
- Boese, A. (2004) *Hippo Eats Dwarf: A Field Guide to Hoaxes and Other B.S.*, New York: Harcourt Books.
- Briody, M. (2004) 'The effects of DNA evidence on homicide cases in court', *Australian and New Zealand Journal of Criminology*, 37(2), 231–52.
- Bureau of Justice Statistics (2004) *Fact Sheet: 50 Largest Crime Labs 2002* (NCJ 205988) Washington, DC.: US Department of Justice. Available at: <http://www.ojp.usdoj.gov/bjs/pub/pdf/50lcl02.pdf> (accessed 26 June 2006).
- Bureau of Justice Statistics (2005) *Prosecution Statistics*, Washington, DC.: US Department of Justice. Available at: <http://www.ojp.usdoj.gov/bjs/pros.htm> (accessed 2 August 2006).
- Bureau of Justice Statistics (2006) *Prosecutors in State Courts in 2005*, Washington, DC.: US Department of Justice. Available at: <http://www.ojp.usdoj.gov/bjs/pub/pdf/psc05.pdf> (accessed 9 August 2006).
- Center for Court Innovation (2004) *Lessons from the Field: Ten Community Prosecution Leadership Profiles*, New York and Alexandria, VA.: American Prosecutors Research Institute. Available at: http://www.ndaa.org/pdf/cp_lessons_from_the_field.pdf (accessed 11 August 2006).
- Cheurprakobkit, S. and Pena, G.T. (2003) 'Computer crime enforcement in Texas: funding, training, and investigating problems', *Journal of Police and Criminal Psychology*, 18(1), 24–37.
- Commission on Behavioral and Social Sciences and Education (2001) *What's Changing in Prosecution?* Available at: <http://darwin.nap.edu/books/0309075610/html/1.html> (accessed 3 August 2006).
- Cordner, S.M., Burke, M.P. and Dodd, M.J. (2001) 'Issues in child homicides: 11 cases', *Legal Medicine*, 3(2), 95–103.
- Craig, L.A., Browne, K.D., Stringer, I. and Beach, A. (2005) 'Sexual recidivism: a review of static, dynamic and actuarial predictors', *Journal of Sexual Aggression*, 11(1), 65–84.
- Crown Prosecution Service (2006) *The Decision to Prosecute*. Available at: http://www.cps.gov.uk/victims_witnesses/prosecution.html#02 (accessed 10 February 2007).
- Davis, K.C. (1969) *Discretionary Justice*, Baton Rouge: Louisiana State University.
- Dayioglu, M. (2007) 'Media representations of murder: a comparison of American and Turkish news reports' (paper presented at the annual conference: Turkish Institute for Police Studies, Istanbul, Turkey, June 2007, unpublished).
- 'Deadly speculation' (2004) *Misleading Texas Capital Juries with False Predictions of Future Dangerousness*, Houston, TX.: Texas Defender Service.
- DeFrances, C.J. (2002) *Prosecutors in State Courts, 2001* (NCJ 193441), Washington, DC.: US Department of Justice, Bureau of Justice Statistics. Available at: <http://www.la.utexas.edu/crimedata/page304.html> (accessed 2 August 2006).
- Ellison, K.W. (2004) *Stress and the Police Officer*, 2nd ed., Springfield, IL.: Charles C. Thomas.
- Entertainment (2005) *The CSI Effect* (29 November). Available at: <http://www.museumofhoaxes.com/hoax/weblog/comments/3793/> (accessed 30 June 2006).
- FBI Handbook of Forensic Sciences. Available at: <http://www.fbi.gov/hq/lab/handbook/intro.htm> (accessed 10 August 2006).
- Germany-reply (2004) *Council of Europe Co-Operation Programme to Strengthen the Rule of Law*. Available at: <http://www.coe.int/t/dg1/legalcooperation/judicialprofessions/lisbon/questionnaires/Germany-reply-A.pdf> (accessed 10 February 2007).

- Gordon, S.G. and Huber, G.A. (2002) 'Citizen oversight and the electoral incentives of criminal prosecutors', *American Journal of Political Science*, 46(2), 334–51.
- Hagimoto, Y. and Yamamoto, H. (2006) 'Analysis of a soldered wire burnt in a fire', *Journal of Forensic Sciences*, 51, 87–94.
- Huff, R.C. (2002) 'Wrongful conviction and public policy: the American Society of Criminology 2001 Presidential Address', *Criminology: An Interdisciplinary Journal*, 40(1), 1–18.
- Innocence Project (2006) Available at: <http://www.innocenceproject.org/press/> (accessed 8 August 2006).
- Kelly, P.A. (2002) 'Stress: the cop killer', in: J.M. Madonna, Jr. and R.E. Kelly (Eds.), *Treating Police Stress: The Work and the Words of Peer Counselors*, Springfield, IL.: Charles C. Thomas.
- Lambert, E., Nerbonne, T. and Watson, P.L. (2003) 'The forensic science needs of law enforcement applicants and recruits: a survey of Michigan law enforcement agencies', *Journal of Criminal Justice Education*, 14(1), 67–81.
- Layton, J. (2006) *How Crime Scene Investigation Works*. Available at: <http://science.howstuffworks.com/csi.htm> (accessed 7 August 2006).
- LexisNexis News (2006) *TV Crime Dramas Aiding Real Life Killers* (26 January). Available at: <http://yahoo.theherrens.com/index.php?tag=tammy> (accessed 3 March 2006).
- Lovrich, N.P., Pratt, T.C., Gaffney, M.J., Johnson, C.L., Asplen, C.H., Hurst, L.H. and Schellberg, T.M. (2004) *National Forensic DNA Study Report. Final Report* (NIJ 203970), Washington, DC.: US Department of Justice. Available at: <http://www.ncjrs.gov/pdffiles1/nij/grants/203970.pdf> (accessed 1 July 2006).
- Lumb, R. and Wang, Y. (2006) 'The theories and practice of community problem-oriented policing: a case study', *Police Journal*, 79(2), 177–93.
- McCulloch, R.P. (2006) 'What do prosecutors do?', *The American Legion Publication*. Available at: http://www.ndaa-apri.org/pdf/american_legion_article.pdf (accessed 7 August 2006).
- National District Attorney's Association (2006) Available at: <http://www.ndaa-apri.org/> (accessed 7 August 2006).
- Nelson, C.L. and Winston, D.C. (2006) 'Detection of medical examiner cases from review of cremation requests', *American Journal of Forensic Medicine and Pathology*, 27(2), 103–5.
- O'Connor, M. (1987) '2nd youth gets life for student's murder', *Chicago Tribune*, 7 May, 1.
- Paternoster, R., Brame, R. and Bacon, S. (2007, forthcoming) *Capital Punishment in America*, 3rd ed., Los Angeles: Roxbury.
- Possley, M. and Mills, S. (2001) 'DNA test rules out 4 inmates', *Chicago Tribune*, 14 November. Available at: <http://www.truthinjustice.org/chicago-dna.htm> (accessed 7 August 2006).
- Raghav, M., Ramseyer, J.M. and Rasmusen, E. (2005) *Prosecutors' Choices of Prosecution and Conviction Rates: Theory and Evidence*. Available at: <http://www.law.northwestern.edu/news/fall05/MLEA/EricRasmussenandRaghav-Prosecutors.pdf> (accessed 4 August 2007).
- Rauxloh, R. (2005) 'Goodies and baddies: the presentation of German police and criminals in east and west television drama', *German Law Journal*, No. 6. Available at: <http://www.germanlawjournal.com/article.php?id=607> (accessed 8 February 2007).
- Roane, K.R. (2005) 'The CSI effect', *U.S. News and World Report* (25 April). Available at: http://www.usnews.com/usnews/culture/articles/050425/25csi_2.htm (accessed 30 June 2006).
- Ruslander, H.W. 'Rus' (2006) *The Role of the Crime Scene Investigator*. Available at: <http://www.criminalistics.us/thumbnails.html> (accessed 7 August 2006).
- Saferstein, R. (2006) *Criminalistics: An Introduction to Forensic Science*, 9th ed., Upper Saddle River, NJ.: Prentice Hall.

- Saverio, F.R. and Pierre, M. (2001) 'Identification of gunshot residue: a critical review', *Science International*, 119(2), 195–211.
- Simmons, R. (2005) *Entire Election Law*, Ohio State University. Available at: <http://moritzlaw.osu.edu/electionlaw/faculty-fellows.php#simmons> (accessed 9 August 2006).
- Smalley, S. and Ranalli, R. (2006) 'Police to unveil CSI-style unit for evidence', *Boston Globe*, 22 January. Available at: http://www.boston.com/news/local/massachusetts/articles/2006/01/22/police_to_unveil_csi_style_unit_for_evidence/ (accessed 30 June 2006).
- Spohn, C., Beichner, D. and Davis-Frenzel, E. (2001) 'Prosecutorial justifications for sexual assault case rejection: guarding the "gateway to justice"', *Social Problems*, 48(2), 206–35.
- Sternberg, K.J., Lamb, M. and Davies, G.M. (2001) 'The memorandum of good practice: theory versus application', *Child Abuse and Neglect*, 25(5), 669–81.
- Stevens, D.J. (2004) 'Origins of police officer stress before and after 9/11', *Police Journal*, 77(2), 145–74.
- Stevens, D.J. (2006) 'Police training and management impact sexual assault conviction rates in Boston', *Police Journal*, 79(2), 125–51.
- Stevens, D.J. (2007) 'Police stress', *Encyclopedia of Psychology and Law*, London: Sage.
- Stevens, D.J. (2008) *Police Officer Stress: Origins and Resolutions*, Upper Saddle River, NJ: Prentice Hall.
- Toch, H. (2001) *Stress in Policing*, Washington, DC.: APA.
- US Courts (2006) *The Federal Judiciary*, Washington, DC.: US Department of Justice. Available at: <http://www.uscourts.gov/caseload2005/front/mar05toc.pdf> (accessed 3 August 2006).
- Walker, S. (2001) *Sense and Nonsense About Crime and Drugs*, Belmont, CA.: Wadsworth Thomson.
- Wallace, B. (2003) 'San Francisco ranks last in convictions', *San Francisco Chronicle*. Available at: <http://sfgate.com/cgi-bin/article.cgi?file=/c/a/2003/10/17/MNGPO2DL831.DTL> (accessed 5 August 2007).
- Willing, R. (2004) 'CSI effect has juries wanting more evidence', *USA Today*, 5 August. Available at: http://www.usatoday.com/news/nation/2004-08-05-csi-effect_x.htm (accessed 25 June 2006).
- Wilson, D. (2006) 'Crime lab investigation', *The Guardian*, 14 September. Available at: <http://www.guardian.co.uk/comment/story/0,,1871878,00.html> (accessed 8 February 2007).

Date submitted: January 2007

Date accepted: March 2007