

Pace University

DigitalCommons@Pace

Pace Law Faculty Publications

School of Law

2003

Misuse of Scientific Evidence by Prosecutors

Bennett L. Gershman

Elisabeth Haub School of Law at Pace University

Follow this and additional works at: <https://digitalcommons.pace.edu/lawfaculty>



Part of the [Criminal Law Commons](#), [Criminal Procedure Commons](#), and the [Evidence Commons](#)

Recommended Citation

Bennett L. Gershman, *Misuse of Scientific Evidence by Prosecutors*, 28 Okla. City U. L. Rev. 17 (2003), <http://digitalcommons.pace.edu/lawfaculty/125/>.

This Article is brought to you for free and open access by the School of Law at DigitalCommons@Pace. It has been accepted for inclusion in Pace Law Faculty Publications by an authorized administrator of DigitalCommons@Pace. For more information, please contact dheller2@law.pace.edu.

MISUSE OF SCIENTIFIC EVIDENCE BY PROSECUTORS

BENNETT L. GERSHMAN*

I. INTRODUCTION

The prosecutor's misuse of scientific evidence to charge and convict has not been sufficiently examined. Courts and commentators critiquing abuses of scientific evidence in criminal cases rarely focus on the prosecutor's role in the process. Issues typically discussed are the questionable nature of the evidence, the controversial manner in which the evidence was acquired and tested, whether the expert arrived at her conclusions in a scientifically reliable manner, and whether the expert's courtroom testimony was false or misleading. The prosecutor's control over and manipulation of the scientific evidence to shape the fact-finder's evaluation of the facts and to persuade the fact-finder of the defendant's guilt usually escapes scrutiny.

One well known exception is the case of *Miller v. Pate*,¹ a prosecution for the brutal sexual attack and murder of an eight-year-old girl. The United States Supreme Court condemned as a violation of due process the Illinois prosecutor's conduct in introducing proof and arguing to the jury that a pair of men's under-shorts, allegedly worn by the defendant and found near the crime scene, were stained with the victim's blood. The prosecutor elicited this proof through the testimony of a chemist from the State Bureau of Crime Identification, and then argued emphatically to the jury:

Those shorts were found in the Van Buren Flats, with blood. What type of blood? Not 'O' blood as the defendant has, but 'A'-type 'A'. . . . And if you will recall, it has never been contradicted the blood type of Janice May was blood type 'A' positive. Blood type 'A.' Blood type 'A' on these shorts. It

* Professor of Law, Pace Law School; New York University School of Law, J.D.; Princeton University, B.A.

1. 386 U.S. 1 (1967).

wasn't 'O' type as the defendant has. It is 'A' type, what the little girl had.²

However, at a habeas corpus hearing more than ten years later, a chemical microanalyst testified that the stains on the shorts were not blood, but paint, and that the trial prosecutor, although he knew this, consistently and repeatedly misrepresented the shorts as "a garment heavily stained with blood."³

Miller highlights an overarching precept in criminal litigation: the prosecutor dominates the system, has exclusive control of the evidence, and decides by himself how that evidence will be used.⁴ If a prosecutor uses the evidence responsibly, the verdict is trusted and the public's confidence in the adjudicative process is enhanced. If a prosecutor uses the evidence irresponsibly, as in *Miller*, the verdict is suspect, and the public's confidence in the adjudicative process is eroded. Clearly, if a prosecutor bent on winning at all costs is able to manipulate technical and seemingly objective "scientific" evidence, how much more likely is it that the prosecutor will be able to misuse more subjective and easily manipulated non-scientific evidence such as confessions to police, eyewitness identifications, and the testimony of informants, accomplices, and jailhouse "snitches?"

Concern over a prosecutor's misuse of scientific evidence is underscored by the recent documentation of wrongful convictions, particularly in death penalty cases, and heightened public awareness that the justice system errs, often with tragic results.⁵ Many, if not most, of

2. *Id.* at 4.

3. *Id.* at 6 ("The record of the petitioner's trial reflects the prosecution's consistent and repeated misrepresentation that People's Exhibit 3 was, indeed, 'a garment heavily stained with blood.'").

4. See YALE KAMISAR, ET AL., MODERN CRIMINAL PROCEDURE 1178 (10th ed. 2002) (describing prosecutor's domination of the criminal justice system, including investigative manpower of police, investigative legal authority of grand jury and grand jury's subpoena power, early arrival on scene by police when evidence is fresh, and natural inclination of witnesses to cooperate with police and refuse to cooperate with defense).

5. See JIM DWYER, ET AL., ACTUAL INNOCENCE (2000) (providing a compendium of anecdotal accounts and legal and social science scholarship of miscarriages of justice in American criminal trials); JAMES LIEBMAN, ET AL., A BROKEN SYSTEM: ERROR RATES IN CAPITAL CASES, 1973-1995, at 5 (2000) (conducting a massive study of every capital case in the U.S. between 1973-1995 documenting that the overall error rate in capital punishment system is sixty-eight percent, and that eighty-two percent of all capital judgments reversed on appeal [247 out of 301] were replaced on retrial with a sentence less than death, or no sentence at all); Richard C. Dieter *Innocence and the Death*

these wrongful convictions are attributable to scientific evidence presented by prosecutors as trustworthy, and relied on as such by juries, when in fact the evidence was erroneous or fraudulent.⁶ Prosecutors in many of these cases have concealed from the defense evidence that would have discredited the prosecutor's case,⁷ distorted evidence by eliciting from experts opinions that were either fraudulent or misleading,⁸ and subverted the fact-finding process by making arguments to the jury that were false, misleading, and inflammatory.⁹

A prosecutor's courtroom conduct is circumscribed by several legal and ethical constraints. A prosecuting attorney occupies two distinct but simultaneous roles in the criminal justice system—an adversarial role and a quasi-judicial role. A prosecutor in her adversarial role is the attorney for the government and may vigorously seek to convict persons charged with crimes. A prosecutor in her quasi-judicial role, however, has a different mission, namely, a constitutional and ethical duty not merely to win a conviction, but also to seek justice.¹⁰ The prosecutor's role as a “minister of justice” includes preeminently a duty to seek the truth.¹¹ The duty to seek the truth derives from several sources: first, the

Penalty, Death Penalty Information Center, at <http://www.deathpenaltyinfo.org> (July 1997) (listing 107 exonerated inmates released from Death Row since 1973).

6. See Stanley Feldman, et al., *Model Prevention and Remedy of Erroneous Convictions Act*, 33 ARIZ. ST. L.J. 665, 698 (2002) (claiming that forensic evidence that is fraudulent or erroneous “has been found to be one of the major causes, and perhaps the leading cause, of erroneous convictions of innocent persons.”); DWYER ET AL., *supra* note 5, at 263 (false and erroneous forensic evidence, including microscopic hair comparisons, serology inclusions, and other forensic inclusions, the leading cause of wrongful convictions).

7. See *infra* notes 16-56 and accompanying text.

8. See *infra* notes 57-106 and accompanying text.

9. See *infra* notes 107-127 and accompanying text.

10. *Berger v. United States*, 295 U.S. 78, 88 (1935) (“[The prosecutor’s] interest, therefore, in a criminal prosecution is not that it shall win a case, but that justice shall be done.”). See also MODEL RULES OF PROF’L. CONDUCT R. 3.8, cmt. 1 (1993) [hereinafter MODEL RULES] (“A prosecutor has the responsibility of a minister of justice and not simply that of an advocate.”); MODEL CODE OF PROF’L. RESPONSIBILITY EC 7-13 (1981) [hereinafter MODEL CODE] (“The responsibility of a public prosecutor differs from that of the usual advocate; his duty is to seek justice, not merely to convict.”); ABA STANDARDS FOR CRIMINAL JUSTICE: PROSECUTION FUNCTION 2D DEF. FUNCTION § 3-1.2(c), *The Prosecution Function*, standard 3-1.2 (c) (Am. Bar Ass’n 3d ed. 1993) [hereinafter ABA PROSECUTION STANDARDS] (“The duty of the prosecutor is to seek justice, not merely to convict.”); NAT’L PROSECUTION STANDARDS, § 1.1 (2d ed. 1991) (“The primary responsibility of prosecution is to see that justice is accomplished.”).

11. See *Giles v. Maryland*, 386 U.S. 66, 98 (1967) (“The State’s obligation is not to convict, but to see that, so far as possible, truth emerges”) (Fortas, J., concurring);

prosecutor's obligation under due process not to use false evidence or to suppress evidence materially favorable to the defendant;¹² second, the prosecutor's ethical obligation to have confidence in the truth of the evidence before bringing criminal charges;¹³ third, the prosecutor's virtual monopoly of the evidence and domination of the fact-finding process;¹⁴ and fourth, the prosecutor's unique power to affect the evaluation of the facts by the fact-finder who views the prosecutor as an expert who can be trusted to use the facts responsibly.¹⁵

Thompson v. Calderon, 120 F.3d 1045, 1058 (9th Cir. 1997); United States v. Duke, 50 F.3d 571, 578 n.4 (8th Cir. 1994) (prosecutor has "duty to serve and facilitate the truth-finding function of the courts"); Davis v. Zant, 36 F.3d 1538, 1548 n.15 (11th Cir. 1994) ("prosecutors have a special duty of integrity in their arguments"); United States v. Kojayan, 8 F.3d 1315, 1323 (9th Cir. 1993) ("lawyers representing the government in criminal cases serve truth and justice first"); United States v. Myerson, 18 F.3d 153, 162 n.10 (2d Cir. 1994) ("the prosecutor has a special duty not to mislead") (quoting United States v. Universita, 298 F.2d 365, 367 (2d Cir. 1962)); Walker v. City of New York, 974 F.2d 293, 301 (2d Cir. 1992) (prosecutor has "duty not to lie"). See also Bennett L. Gershman, *The Prosecutor's Duty to Truth*, 14 GEO. J. LEGAL ETHICS 309 (2001).

12. See *infra* notes 19-24 and accompanying text.

13. See MODEL RULES, *supra* note 10, at R. 3.8(a) ("The prosecutor is a criminal case shall refrain from prosecuting a charge that the prosecutor knows is not supported by probable cause"); MODEL CODE, *supra* note 10, at DR 7-103(A) ("A public prosecutor or other government lawyer shall not institute or cause to be instituted criminal charges when he or she knows or it is obvious that the charges are not supported by probable cause."); ABA PROSECUTION STANDARDS, *supra* note 10, § 3-3.9(a) ("A prosecutor should not institute, or cause to be instituted, or permit the continued pendency of criminal charges when the prosecutor knows that the charges are not supported by probable cause.").

14. See KAMISAR, ET AL., *supra* note 4 and accompanying text.

15. See United States v. Young, 470 U.S. 1, 18-19 (1985) ("prosecutor's opinion carries with it the imprimatur of the Government and may induce the jury to trust the Government's judgment rather than its own view of the evidence"); Berger, 295 U.S. at 88.

It is fair to say that the average jury, in a greater or less degree, has confidence that these obligations [to serve justice], which so plainly rest upon the prosecuting attorney, will be faithfully observed. Consequently, improper suggestions, insinuations and, especially, assertions of personal knowledge are apt to carry much weight against the accused when they should properly carry none.

Id.

The prosecutor is cloaked with the authority of the United States Government; he stands before the jury as the community's representative. His remarks are those, not simply of an advocate, but rather of a federal official duty-bound to see that justice is done [I]t may be difficult for [the jury] to ignore his views, however biased and baseless they may in fact be.

United States v. Modica, 663 F.2d 1173, 1178-79 (2d Cir. 1981).

The following sections focus on the various ways that prosecutors misuse scientific evidence. The opportunity for misconduct is present in each of three principal stages of a trial: (1) pre-trial proceedings involving disclosure and discovery of scientific evidence, (2) questioning scientific forensic experts and introducing into evidence scientific exhibits, and (3) closing argument to the jury.

II. NONDISCLOSURE OF SCIENTIFIC EVIDENCE

One of the principal techniques employed by prosecutors to obstruct accurate fact-finding is to conceal, or disclose too late for effective use, evidence that legally and ethically is required to be disclosed.¹⁶ The prosecutor's suppression of evidence is one of the principal causes of wrongful convictions.¹⁷ Rules regulating disclosure apply generally to all types of evidence. However, disclosure obligations are especially important with respect to scientific evidence. Whereas other types of evidence such as a defendant's confession, an eyewitness's identification, or an accomplice's testimony are familiar modes of proof and readily capable of being discredited by a skilled defense attorney, scientific evidence, by contrast, is often highly technical and complex, even to an experienced defense attorney. Special rules are necessary with respect to the scientific data, expert reports, and the expert's prospective testimony. Scientific evidence usually requires extensive pre-trial investigation, analysis, and testing, typically by an expert hired by the defense. Moreover, because of early access to crime scenes and superior investigative and forensic resources, prosecutors usually have exclusive knowledge and control of the scientific evidence; thus, they can determine the extent and timing of disclosure.¹⁸

16. See Richard A. Rosen, *Disciplinary Sanctions Against Prosecutors for Brady Violations: A Paper Tiger*, 65 N.C. L. REV. 693, 694 (1987) (“[w]henver a prosecutor suppresses exculpatory evidence or presents false evidence, these actions cast doubt on the integrity of our legal system and the accuracy of the determinations of guilt and punishment”).

17. See LIEBMAN et al., *supra* note 5, at 5 (noting that prosecutorial suppression of evidence accounted for sixteen percent to nineteen percent of reversible errors); Ken Armstrong & Maurice Possley, *Trial & Error: How Prosecutors Sacrifice Justice to Win*, CHIC. TRIB., Jan. 10, 1999, at 3 (reporting that convictions in 381 homicide cases nationwide have been reversed because prosecutors concealed evidence suggesting the defendants' innocence or presented evidence they knew to be false).

18. See KAMISAR, ET AL., *supra* note 4 and accompanying text.

Given the complex nature of scientific evidence and the acknowledged adversarial imbalance between prosecution and defense,¹⁹ discovery statutes, as well as ethics rules, require a prosecutor to disclose to the defense well in advance of trial test results, reports, and statements of scientific forensic experts that the prosecutor intends to use as evidence or that are relevant to pre-trial preparation by the defense.²⁰ A prosecutor also has a statutory and ethical duty to furnish the defense with samples of the scientific evidence to allow the defense to conduct independent tests.²¹ In addition, the prosecutor has an ethical duty to comply with these discovery requirements in a timely manner to allow sufficient time for pre-trial preparation by the defense.²² Apart from discovery that is regulated by statutes, a prosecutor also has a constitutional and ethical duty to disclose to the defense favorable evidence that is material to guilt,²³ or tends to negate guilt.²⁴

Violations by a prosecutor of these disclosure obligations can result in a "trial by ambush."²⁵ Violations include the suppression of scientific evidence that the prosecutor believes will, if disclosed, harm his chances for a conviction;²⁶ nondisclosure of evidence that the prosecutor believes will, if disclosed, impeach the credibility of his expert;²⁷ and nondisclosure or untimely disclosure of scientific evidence that is

19. See Abraham S. Goldstein, *The State and the Accused: Balance of Advantage in Criminal Procedure*, 69 YALE L. J. 1149 (1960).

20. See, e.g., FED. R. CRIM. P. 16(a)(1)(D); ABA STANDARDS FOR CRIMINAL JUSTICE: DISCOVERY AND TRIAL BY JURY § 11-2.1(iv) (3d ed. 1996) [hereinafter ABA DISCOVERY STANDARDS].

21. See, e.g., FED. R. CRIM. P. 16(a)(1)(C); ABA DISCOVERY STANDARDS, *supra* note 20, § 11-2.1(v).

22. See ABA DISCOVERY STANDARDS, *supra* note 20, § 11-4.1(a).

23. *Brady v. Maryland*, 373 U.S. 83, 87 (1963) ("suppression by the prosecution of evidence favorable to an accused upon request violates due process where the evidence is material either to guilt or punishment, irrespective of the good faith or bad faith of the prosecution").

24. See MODEL RULES, *supra* note 10, at R. 3.8(d); MODEL CODE, *supra* note 10, at EC 7-13(3); ABA PROSECUTION STANDARDS, *supra* note 10, § 3-3.11.

25. *Miller v. State*, 809 P.2d 1317, 1320 (Okla. Crim. App. 1991) (forensic chemist's untimely and incomplete disclosure of critical piece of evidence resulted in "trial by ambush"); *McCarty v. State*, 765 P.2d 1215, 1218 (Okla. Crim. App. 1988) (forensic chemist's untimely disclosure of an "incomplete," "inaccurate," and "misleading" report resulted in a "trial by ambush").

26. See *Brown v. Wainwright*, 785 F.2d 1457 (11th Cir. 1986) (ballistics evidence); *United States ex rel. Almeida v. Baldi*, 195 F.2d 815 (3d Cir. 1952) (ballistics evidence); *Barbee v. Warden, Md. Penitentiary*, 331 F.2d 842 (4th Cir. 1964) (ballistics report).

27. See *Schledwitz v. United States*, 169 F.3d 1003 (6th Cir. 1999).

statutorily and judicially required to be disclosed.²⁸ Two cases from Oklahoma illustrate the prosecutor's violation of these requirements. In *Mitchell v. Gibson*,²⁹ the Court of Appeals for the Tenth Circuit vacated a death sentence imposed by an Oklahoma jury, finding that the defendant's right to due process was violated by the prosecutor's failure to disclose evidence showing that the testimony of the prosecution's forensic chemist, Joyce Gilchrist, was false. The victim had been beaten and sexually assaulted. Gilchrist, employed by the Oklahoma City Police Department, testified that she found sperm on swabs taken from the victim that were consistent with the defendant's sperm. She also testified that blood, semen, and sperm found on the sheet in which the victim's body had been transported from the crime scene were consistent with the defendant's, as were semen stains on the victim's panties.³⁰

Gilchrist's testimony, according to the federal district judge who reviewed the defendant's habeas corpus petition, was "without question, untrue."³¹ During the habeas corpus hearing, held more than ten years after the trial, the defense learned for the first time about hand-written notes taken by Gilchrist during telephone conversations with an FBI agent, to whom samples had been sent for further scientific testing. After conducting two DNA probes, the FBI agent reported to Gilchrist that none of the semen matched the defendant's and further alerted Gilchrist that one of her own tests, in fact, excluded the defendant. The prosecutor nevertheless concealed from the defense the test results developed by the FBI, as well as the notes taken by Gilchrist indicating that the defendant had been excluded by the FBI's DNA tests. The prosecutor's "blatant withholding of unquestionably exculpatory evidence," according to the federal court, is "absolutely indefensible."³² Moreover, the prosecutor compounded this misconduct by "labor[ing] extensively at trial to obscure the true DNA test results and to highlight Gilchrist's test results."³³

The second case involves the prosecution of Jeffrey Pierce, who was convicted by an Oklahoma jury in 1986 of rape and sodomy and sentenced to fifty-four years in prison.³⁴ Pierce had a clean record, alibi

28. See *Miller*, 809 P.2d at 1317; *Pierce v. State*, 786 P.2d 1255 (Okla. Crim. App. 1990); *McCarty*, 765 P.2d at 1215.

29. 262 F.3d 1036 (10th Cir. 2001).

30. *Id.* at 1063.

31. *Id.* at 1060.

32. *Id.*

33. *Id.* at 1064.

34. *Pierce v. State*, 786 P.2d 1255, 1255 (Okla. Crim. App. 1990).

witnesses, and character references. The eyewitness identification by the victim was weak.³⁵ The testimony of the police chemist, again Joyce Gilchrist, provided evidence crucial to Pierce's conviction. Gilchrist testified that she microscopically identified pubic hairs from the victim's pubic hair combings and on the victim's skirt, as well as head hairs on items submitted by the victim, and that the hairs were "consistent" with Pierce's, and, indeed, "positively" identified him.³⁶ The prosecutor bolstered Gilchrist's testimony by eliciting from her the highly improper comment that "in the years during which she had been involved with hair analysis, she had never seen hair from different people that were microscopically similar in all characteristics."³⁷

Pierce was innocent, as independent DNA tests conducted by the FBI fifteen years later would prove.³⁸ According to the FBI report, prepared following official allegations of misconduct by Gilchrist, the hair associations used by Gilchrist to convict Pierce, and the conclusions she reached, were erroneous.³⁹ Pierce was released in 2001 after spending fifteen years in prison. The decision by the Oklahoma Court of Criminal Appeals ten years earlier upholding Pierce's conviction, in retrospect, seems sadly misguided. The court rejected several defense claims involving disclosure violations by the prosecutor relating to Gilchrist's testimony. First, the court found that the prosecutor and Gilchrist violated a court order to send the scientific evidence to a laboratory for independent testing by defense experts.⁴⁰ The crucial hair evidence was not sent out for testing, Gilchrist claimed, because she did not think the laboratory designated by the defense tested hair. This was not the first time that Gilchrist had deliberately violated a judge's discovery order.⁴¹

35. *Id.* at 1258-59. During the investigation, the victim identified two different people as looking similar to the attacker. *Id.* at 1258 n.6. In addition, after a police detective showed the victim "better photographs" of other suspects, "she still thought it resembled the [other] suspect a lot." *Id.* at 1259.

36. *Under the Microscope*, at <http://www.cbsnews.com> (July 24, 2002).

37. *Pierce*, 786 P.2d at 1265. See also DAVID L. FAIGMAN, ET AL., SCIENCE IN THE LAW – FORENSIC SCIENCE ISSUES 16-17 (2002) (by invoking "years of experience," expert witness reinforces opinion and prevents effective cross-examination).

38. Paul Duggan, *Oklahoma Reviews 3,000 Convictions; Police Chemist's Work on Cases, Including 11 That Led to Executions, Is Questioned*, WASH. POST, May 9, 2001, at A2.

39. See U.S. DEPARTMENT OF JUSTICE, FEDERAL BUREAU OF INVESTIGATION, *Summary of Case Reviews of Forensic Chemist, Joyce Gilchrist, Oklahoma City Police Laboratory* at 3 (April 4, 2001).

40. *Pierce*, 786 P.2d at 1261-62.

41. See *Miller v. State*, 809 P.2d 1317 (Okla. Crim. App. 1991); *McCarty v. State*,

The discovery violation in *Pierce v. State*, although clear error, was not reversible error, according to the court, because the defense was found to be partly to blame for failing to notify the prosecutor when it learned that the order had been violated.⁴² The hair evidence—the most critical evidence in the case—was never subjected to independent review.

Second, Gilchrist's reports on bodily fluids recovered from the victim contained only raw data. Her reports did not contain the specific conclusions about which she would testify at trial, for example, that the rapist belonged to blood group "H" and was a non-secretor, an opinion that supported Pierce.⁴³ In fact, the same Oklahoma appeals court had reversed an earlier conviction involving the same allegation, i.e., that Gilchrist's report contained insufficient information as to her findings and conclusions.⁴⁴ In reversing that earlier case, the appellate court found Gilchrist's report was "at best incomplete, and at worst inaccurate and misleading."⁴⁵ In *Pierce*, however, the court found that Gilchrist's inclusion of the raw data only was adequate compliance with discovery. The Court observed, "Although justice is certainly better served when a defendant is provided with the most detailed information possible," nothing more than was provided in this case should be "judicially required."⁴⁶ Given Gilchrist's earlier disclosure violation, however, the court's conclusion that the limited amount of information she disclosed satisfied the prosecutor's discovery obligation is especially troubling. A prosecutor's incomplete, untimely, and total failure to comply with discovery obligations is a familiar problem in criminal litigation and is one that too often is overlooked by courts. For many prosecutors, the modus operandi of pre-trial practice is to disclose as little and as late as possible.⁴⁷ *Pierce* merely highlights this unfortunate practice in a trial that produced a tragic result.

Related to a prosecutor's constitutional and ethical disclosure duty is the duty of a prosecutor to preserve scientific evidence from loss or destruction. Clearly, absent an affirmative duty to preserve evidence, the

765 P.2d 1215 (Okla. Crim. App. 1988).

42. *Pierce*, 786 P.2d at 1261.

43. *See id.*

44. *McCarty*, 765 P.2d at 1217-18.

45. *Id.* at 1218.

46. *Pierce*, 786 P.2d at 1262-63.

47. *See* Ellen Yaroshfsky, *Cooperation with Federal Prosecutors: Experiences of Truth Telling and Embellishment*, 68 *FORDHAM L. REV.* 917, 961 (1999) (describing practice of prosecutors in limiting compliance with discovery requirements by finding safe ways to avoid disclosure).

disclosure duty can easily be circumvented by suppression of evidence through destruction rather than mere failure to reveal. And given the critical role of scientific evidence in exonerating innocent persons, it is imperative that prosecutors preserve such evidence, at least for the duration of a defendant's incarceration.⁴⁸ Some laboratories apparently routinely destroy evidence prematurely.⁴⁹ Whether a remedy exists for such routine destruction is unclear. Indeed, because of the speculative nature of unpreserved evidence, the United States Supreme Court has held that destruction of evidence that might be useful to a defendant violates due process only if the defendant can show bad faith on the part of the prosecutor or the police.⁵⁰ Although proving bad faith is extremely difficult, it is at least arguable that a laboratory that routinely destroys evidence prematurely as a matter of office policy engages in bad faith conduct.

It should be emphasized, if it is not already apparent, that a prosecutor is vicariously responsible for the misconduct of other officials working on the case. Thus, a prosecutor's disclaimer of responsibility for the careless and irresponsible conduct of a forensic laboratory, and for the fraudulent and incompetent conduct of his scientific expert, is legally unavailing. A prosecutor is constitutionally obligated under due process to ascertain whether officials or agents working on the case, such as police officers and forensic investigators, have engaged in conduct that impairs the integrity of the evidence, or are concealing evidence that might be favorable to the defendant.⁵¹ Regardless of a prosecutor's legal responsibility for the misconduct of his agents, a prosecutor's claim of ignorance of the misconduct often is plainly incredible. Documented cases of open and notorious misconduct by forensic laboratories and of rogue experts giving fraudulent testimony strongly suggest that many

48. See *California v. Trombetta*, 467 U.S. 479, 488-89 (1984) (constitutional duty to preserve evidence "limited to evidence that might be expected to play significant role in the suspect's defense").

49. See Memorandum from Bryon Boshell to Oklahoma City Police Dep't., *Serology/DNA Concerns*, Jan. 16, 2001 [hereinafter Boshell] (describing conditions in Oklahoma City Police Department's serology/DNA laboratory and reporting that "rape evidence was systematically being destroyed after only two years, long before the statute of limitations had expired;" Gilchrist "stated she had a letter from District Attorney Bob Macy authorizing two-year destruction;" Gilchrist also stated in an interview that "Deputy Chief Wilhelm authorized the two-year destruction policy.").

50. *Arizona v. Youngblood*, 488 U.S. 51, 58 (1988).

51. See *Kyles v. Whitley*, 514 U.S. 419, 436-38 (1995); *Giglio v. United States*, 405 U.S. 150, 154 (1972).

prosecutors are fully aware that the laboratory and the expert have been engaging in a long-standing practice and pattern of misconduct.⁵²

For example, a recent report by the Oklahoma City Police Department contains a scathing criticism of the chaotic and dishonest work of the Police Department's forensic laboratory over a period of many years and particularly, again, the misconduct of Gilchrist.⁵³ The report describes many instances of missing evidence, flawed operating and safety procedures, contamination of evidence, premature destruction of evidence, lack of peer review or other validation procedures, storage problems, and inadequate procedures for transmitting evidence to and from the district attorney's office.⁵⁴ The report also notes several instances of non-disclosure of evidence, improper forensic testimony, and criticism of Gilchrist's work by forensic scientific peer groups.⁵⁵

Given these mostly uncontested allegations of misconduct by Gilchrist and the Oklahoma police laboratory that were ongoing for many years, and the numerous court decisions expressly critical of Gilchrist's work, it is inconceivable that a district attorney's office that routinely used and relied on Gilchrist to win convictions was unaware of her systematic and pervasive misconduct. Ignorance is never a legal excuse when a person deliberately avoids learning about facts and circumstances that are readily discoverable because he wishes to remain ignorant.⁵⁶ The well-known criminal law doctrine known as "willful blindness" should apply equally to a prosecutor who regularly uses a scientific expert who is notorious for incompetence and dishonesty. Paradoxically, not only were the Oklahoma City prosecutors and police not critical of Gilchrist's work, they praised her work. She was awarded the Police Department's "Employee of the Year,"⁵⁷ and was given an honorary citation by the Police Department and a commendation from

52. *See, e.g.*, In re Investigation of W. Va. State Police Crime Lab., 438 S.E.2d 501, 503-04 (1993) (investigative report of misconduct in the West Virginia State Police Crime Laboratory describes serologist Fred Zain's "long history of falsifying evidence in criminal prosecutions," his longstanding "pattern and practice of misconduct," criticism of his work by Accreditation Board of the American Society of Crime Laboratory Directors, and the fact that "Zain's supervisors may have ignored or concealed complaints of his misconduct").

53. *See* Boshell, *supra* note 49.

54. *See id.*

55. *See id.*

56. *See* KAMISAR, ET AL., *supra* note 4, at 232.

57. *Under the Microscope*, *supra* note 36.

the District Attorney for her “skillful work in the careful analysis of forensic evidence” in the Jeffrey Pierce case.⁵⁸

Finally, nondisclosure, or incomplete or untimely disclosure, is often aggravated by the inability of a defendant to challenge effectively the scientific evidence that the prosecutor presents to the jury. Imbalance in the adversarial process between prosecution and defense is exacerbated by an indigent defendant’s inability to retain his own scientific expert. A responsible commitment to adversarial justice reasonably requires a prosecutor to support, or at least not to oppose, an indigent defendant’s request for expert assistance, particularly when scientific evidence will play a significant role in his trial and any resulting error found harmless on appeal. Given the speculative and imprecise nature of many types of scientific evidence, it is untenable for prosecutors to maintain, as they have done, that cross-examination by defense counsel is an adequate substitute for a defense expert.⁵⁹

III. COURTROOM PRESENTATION OF SCIENTIFIC EVIDENCE

A prosecutor’s courtroom conduct is hedged by various constitutional and ethical proscriptions. A prosecutor is forbidden to present false,⁶⁰ misleading,⁶¹ inflammatory,⁶² or inadmissible evidence.⁶³

58. *Id.*

59. *See, e.g.,* Williamson v. State, 812 P.2d 384, 395-96 (Okla. Crim. App. 1991). *But see* Johnson v. Gibson, 169 F.3d 1239, 1246 (10th Cir. 1999) (denial of expert assistance to rebut testimony of Gilchrist regarding hair, fiber, and semen samples did not result in fundamentally unfair trial).

60. *See* Giglio v. United States, 405 U.S. 150 (1972) (false testimony about promise of leniency by key witness); Miller v. Pate, 386 U.S. 1 (1967) (false evidence that shorts linked to defendant stained with blood); ABA PROSECUTION STANDARDS, *supra* note 10, § 3-5.6(a) (“prosecutor should not knowingly offer false evidence”). *See also* BENNETT L. GERSHMAN, PROSECUTORIAL MISCONDUCT § 10:27 (2d ed. 2002).

61. *See* Doyle v. Ohio, 426 U.S. 610 (1976) (violation of due process to elicit defendant’s silence following arrest to infer guilt); United States v. Kojayan, 8 F.3d 1315 (9th Cir. 1993) (prosecutor falsely suggests that key figure could not be called as witness); United States v. Myerson, 18 F.3d 153, 162 n.10 (2d Cir. 1994) (“the prosecutor has a special duty not to mislead”) (quoting United States v. Universita, 298 F.2d 365, 367 (2d Cir. 1962)). *See also* GERSHMAN, *supra* note 60, at § 10:2 (character assassination), § 10:13 (misuse of defendant’s silence), § 10:20 (asking questions without factual basis), § 10:21 (misusing polygraph evidence).

62. *See* United States v. Garcia, 986 F.2d 1135 (7th Cir. 1993) (prosecutor permits containers containing marijuana to remain open and emit odor of marijuana during defendant’s case-in-chief despite defendant’s request to close them); People v. Blue, 724 N.E.2d 920 (Ill. 2000) (prosecutor displays before jury on a mannequin the bloodied and brain-splattered uniform of murdered police officer); ABA PROSECUTION STANDARDS,

A prosecutor may not mislead the jury or misstate the facts.⁶⁴ A prosecutor may not bolster her witness's credibility.⁶⁵ These general prohibitions apply with added force when a prosecutor presents the testimony of a scientific expert because the jury ordinarily views such experts with heightened respect and gives considerable weight to their opinions. Familiar types of misconduct by prosecutors include eliciting fraudulent expert testimony, eliciting erroneous and prejudicial conclusions without any factual basis, eliciting testimony that appears to be based on a valid scientific theory but is merely the expert's speculation and conjecture, attempting to bolster the expert's credibility by overstating and misusing the witness's background and experience, and giving personal assurances to the jury that the witness is credible and reliable.⁶⁶

A prosecutor starts with several distinct advantages when she puts her scientific expert on the stand. First, in contrast with other types of witnesses, the expert usually is viewed by the jury with an "aura of special reliability and trustworthiness."⁶⁷ Second, the expert typically possesses impressive credentials, which the prosecutor meticulously elicits and that reinforce the jury's confidence in the witness's opinion. Third, the expert usually is adept at testifying, and communicates her theory and conclusions articulately, persuasively, and in language that lay jurors can understand. Fourth, the expert's conclusions almost always interlock with other evidence in the case and corroborate the prosecution's theory of guilt. The expert, more than any other witness

supra note 10, § 3-5.6 (c) ("a prosecutor should not permit any tangible evidence to be displayed in the view of the judge or jury which would tend to prejudice fair consideration . . . of such evidence"). See also GERSHMAN, *supra* note 60, at § 10:33.

63. See ABA PROSECUTION STANDARDS, *supra* note 10, § 3-5.6(b) ("a prosecutor should not knowingly . . . offer inadmissible evidence, ask legally objectionable questions, or make other impermissible comments or arguments in presence of the judge or jury). See also GERSHMAN, *supra* note 60, at §10:19.

64. GERSHMAN, *supra* note 60, at §11:27.

65. *Id.* at §10:25.

66. Scientific witnesses typically testify under either of two different standards. Under the *Frye* standard, an expert must be able to establish that the scientific principle has "gained general acceptance in the particular field in which it belongs." See *Frye v. United States*, 293 F. 1013, 1014 (D.C. Cir. 1923). Under the *Daubert* standard, an expert must be able to demonstrate that the scientific evidence is reliable, *i.e.*, that the reasoning or methodology underlying the expert's testimony is scientifically valid, and that the reasoning or methodology properly applies to the facts of the given case. See *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 592-93 (1993). See also PAUL C. GIANNELLI, ET AL., UNDERSTANDING EVIDENCE 300-03 (2003).

67. *United States v. Amaral*, 488 F.2d 1148, 1152 (9th Cir. 1973).

who testifies in a U.S. courtroom, possesses the greatest capacity to mislead the jury. In tandem with a prosecutor who zealously seeks a conviction, the expert often single-handedly can secure that conviction.

It is well known that prosecutors, deliberately or unwittingly, have introduced fraudulent and erroneous scientific evidence. Such evidence has included faked fingerprints planted at the crime scene or placed on evidence linked to the defendant,⁶⁸ faked autopsies in death penalty cases,⁶⁹ fabricated breathalyzer readings in intoxicated driving cases,⁷⁰ and perjured testimony by experts making hair and blood comparisons.⁷¹ Prosecutors have also presented as trustworthy the testimony of scientific experts that contained false, exaggerated, and erroneous conclusions that lacked any scientific basis. The records of contemporary criminal trials are replete with instances of so-called "junk science" finding its way into courtrooms, and championed by prosecutors to win convictions.⁷² Some of these scientific experts are infamous: Fred Zain, a serologist;⁷³ Ralph Erdmann, a pathologist;⁷⁴ Michael West, a forensic dentist;⁷⁵ and Louise Robbins, a foot expert.⁷⁶ Other forensic scientific renegades include Joyce Gilchrist,⁷⁷ Joan Wood,⁷⁸ Arnold Melnikoff,⁷⁹ and Elliot Gross.⁸⁰

The relationship between the prosecutor and her expert witness has not been adequately studied. Because of the secretive nature of pre-trial preparation, the extent to which a prosecutor and her expert cooperate in

68. See *Former State Trooper Explains Ways He Fabricated Evidence*, N.Y. TIMES, Apr. 16, 1993, at B5.

69. See Robert Suro, *Ripples of a Pathologist's Misconduct In Graves and Courts of West Texas*, N.Y. TIMES, Nov. 22, 1992, at 22.

70. See *State v. Gookins*, 637 A.2d 1255 (N.J. 1994).

71. See *In re Investigation of W. Va. State Police Crime Lab.*, 438 S.E.2d 501 (W. Va. 1993).

72. See Paul C. Giannelli, *The Abuse of Scientific Evidence in Criminal Cases: The Need for Independent Crime Laboratories*, 4 VA. J. SOC. POL'Y & L. 439 (1997) (accounts of widespread abuses by forensic scientific experts).

73. *Id.* at 442-49.

74. *Id.* at 449-53.

75. *Id.* at 453-57.

76. *Id.* at 457-62.

77. See *supra* notes 29-47 and accompanying text.

78. See *A Shocking Blunder Leads to False Accusation*, TAMPA TRIB., May 3, 2002, at 2.

79. See Adam Liptak, *States to Review Lab Work of Expert Who Erred on ID*, N.Y. TIMES, Dec. 19, 2002, at A24.

80. See Andrew Jacobs & Marc Santora, *New Report in Wife's Death Clears Former Police Officer*, N.Y. TIMES, Dec. 5, 2002, at B1. See also *Gross v. N. Y. Times Co. et al.*, 623 N.E.2d 1163 (N.Y. 1993).

shaping, polishing, and even manufacturing the witness's testimony is virtually impossible to prove.⁸¹ Given the symbiotic nature of the relationship, however, it is almost certain that scripting and coaching occur. To be sure, ethical rules admonish prosecutors to respect the independence of the expert and avoid attempting to manipulate the expert's opinion.⁸² Properly trained forensic scientists are ethically required to remain independent and avoid being manipulated to give opinions that are not truthful and lack scientific validity.⁸³ It is intuitively obvious, however, that the relationship between some prosecutors and their experts is mutually reinforcing not in the service of truth but of obtaining convictions. According to an influential treatise on forensic science, "clients," and this includes prosecutors, "want good science and the truth if it will help their case. If good science and the truth will not help their case, they will willingly settle for poor science and something less than the absolute truth."⁸⁴ It is commonly known that many forensic experts display a pro-prosecution bias, particularly, but not always, by experts employed by law enforcement agencies.⁸⁵ Many of these experts are notorious for manufacturing testimony to fit the prosecutor's theory of guilt.⁸⁶ By the same token, prosecutors routinely seek out experts who will support the prosecution's theory and reject experts who might display more independence and refuse to provide the prosecutor with the opinion he wants.⁸⁷ According to the former District Attorney of Oklahoma County, "An expert who won't give you an opinion is not a whole lot of value to you."⁸⁸

81. See Bennett L. Gershman, *Witness Coaching By Prosecutors*, 23 CARDOZO L. REV. 829 (2002).

82. See ABA PROSECUTION STANDARDS, *supra* note 10, § 3-3.3 ("a prosecutor should respect the independence of the expert and should not seek to dictate the formation of the expert's opinion on the subject").

83. See FAIGMAN ET AL., *supra* note 37, at 98 (suggesting that normative ideal for experts is to present that field's knowledge and not distorted version to serve narrow partisan purpose).

84. *Id.* at 4.

85. Giannelli, *supra* note 72, at 441 ("Too many experts in the criminal justice system manifest a police-prosecution bias, a willingness to shade or distort opinions to support the state's case.").

86. *Id.* (describing the conduct of some of the most infamous so-called "experts").

87. *Id.* at 441, 448 (noting that "too many prosecutors seek out such experts") (prosecutors in West Virginia sought out Fred Zain, a serologist widely discredited for his long history of falsifying evidence, even after he left the state to obtain a position in another state, because West Virginia prosecutors believed that West Virginia serologists could not reach the "right" results).

88. *McCarty v. State*, 765 P.2d 1215, 1219 n.1 (Okla. Crim. App. 1988) (District

Cases abound of prosecutors eliciting erroneous and blatantly unscientific opinions. For example, testimony of hair comparisons by Arnold Melnikoff, a forensic scientist and former director of Montana's state crime laboratory, led to the conviction of Jimmy Ray Bromgard in 1987 for rape. Bromgard was innocent, cleared by DNA evidence after spending fifteen years in jail.⁸⁹ Although hair comparison is recognized as one of the most "miserable" types of forensic evidence,⁹⁰ Melnikoff testified at Bromgard's trial that head and pubic hairs found at the scene of the rape were indistinguishable from those of the defendant. Melnikoff testified that the chances that either set of hairs found at the scene were not those of the defendant were 1 in 100. He then stated that since head and pubic hairs look different, "it's a multiplying effect, it would be 1 chance in 10,000."⁹¹ Melnikoff's 1 in 100 estimate, as any responsible prosecutor and scientist knows, is without any scientific basis. Melnikoff's further multiplying of probabilities was so ridiculous, and so beyond scientific capabilities, as to suggest that the witness, with the prosecutor's acquiescence and assistance, made a conscious effort to obtain a conviction based on manufactured testimony.

Similar examples reveal deliberate attempts by prosecutors to elicit opinions that any experienced prosecutor knows are erroneous, unscientific, and implausible. One expert, again Gilchrist, in response to the prosecutor's question whether she had an opinion as to whether the defendant was present during the commission of the crime, gave this astonishing reply: "[H]e [defendant] was in fact there."⁹² Notwithstanding the notorious weakness of hair comparison evidence,⁹³ prosecutors have elicited improper opinions that microscopic hair

Attorney, during interview with newspaper reporter, stated that he wanted experts to give opinion that defendant was "actually in fact [at scene of crime] and in contact with the victim").

89. Adam Liptak, *2 States to Review Lab Work of Expert Who Erred on ID*, N.Y. TIMES, Dec. 19, 2002, at A24.

90. See FAIGMAN ET AL., *supra* note 37, at 35. See also *infra* notes 125-28 and accompanying text.

91. Liptak, *supra* note 89.

92. See *McCarty v. State*, 765 P.2d 1215, 1218 (Okla. Crim. App. 1988) (according to the appellate court, "We find it inconceivable why Ms. Gilchrist would give such an improper opinion").

93. See FAIGMAN ET AL., *supra* note 37, at 35 ("hair is a miserable form of evidence"); DWYER ET AL., *supra* note 5, at 162 ("the weakness of [hair evidence] is well established [T]here was little difference between flipping a coin and getting a hair analyst to provide reliable results."). See also *infra* notes 125-128 and accompanying text.

comparisons from different people “were [never] microscopically similar in all characteristics,”⁹⁴ contained “unique characteristics” that the expert had never seen before,⁹⁵ and that hair comparisons proved that the defendants “were in contact with [the victim] prior to death.”⁹⁶ Prosecutors have elicited other incredible opinions from reckless and irresponsible experts, for example, that a knife blade “indeed and without doubt” caused the victim’s wounds,⁹⁷ and that the odds were “astronomical” that another person with the defendant’s foot features was at the crime scene.⁹⁸

Prosecutors compound such unsupportable and implausible opinions by various techniques that improperly bolster the expert’s credibility. One method is to falsely present the expert as a neutral witness when in fact the expert has worked closely with the prosecution and manifests an unmistakable pro-prosecution bias.⁹⁹ Another technique is to elicit an opinion that validates another witness’s truthfulness explicitly,¹⁰⁰ or suggests that the witness is a member of a class of persons who are trustworthy,¹⁰¹ or asserts that a victim has in fact been victimized.¹⁰² Another method is to mislead the jury by exaggerating or falsifying the expert’s credentials.¹⁰³ The prosecutor in *Pierce*, for example, elicited Gilchrist’s extensive qualifications, which included membership in the influential American Academy of Forensic Sciences (AAFS).¹⁰⁴ By parading before the jury these impressive qualifications, the prosecutor is able to reinforce the jury’s confidence in the expert’s testimony. But Gilchrist lied about her credentials, probably with the prosecutor’s knowledge. Her membership in the AAFS had been suspended. Nevertheless, according to the appellate court, Gilchrist’s testimony, “while potentially misleading, was harmless error in light of her other ample qualifications as an expert.”¹⁰⁵ However, as one commentator has

94. *Pierce v. State*, 786 P.2d 1255, 1265 (Okla. Crim. App. 1990).

95. *See Miller v. State*, 809 P.2d 1317, 1319 (Okla. Crim. App. 1991).

96. *Fox v. State*, 779 P.2d 562, 571 (Okla. Crim. App. 1989).

97. Giannelli, *supra* note 72, at 454.

98. *Id.* at 459.

99. *See Schledwitz v. United States*, 169 F.3d 1003 (6th Cir. 1999) (prosecutor violates due process by his “egregious” presentation of expert witness as neutral when in reality expert participated actively in investigation of defendant for several years).

100. *See GERSHMAN*, *supra* note 60, at § 10:32.50.

101. *See id.*

102. *See id.*

103. *See Giannelli*, *supra* note 72, at 468 n.175.

104. *See Pierce v. State*, 786 P.2d 1255, 1264 (Okla. Crim. App. 1990).

105. *Id.*

noted, "If people are willing to lie about something on which it is so easy to be caught, how common and how damaging to the fact finding process are misrepresentations about the substance of forensic science?"¹⁰⁶

Prosecutors use other techniques to bolster their experts' testimony, and at the same time insulate that testimony from being challenged effectively. One method is to elicit the expert's assertion directly, or to prepare the expert's answer to questions on cross-examination, that she is relying for her opinion on her "years of experience."¹⁰⁷ When the expert describes a situation as "unusual," "unique," or something that the expert "has never seen before," such statements have the capacity to immunize the witness against being refuted. The cross-examiner does not know what standard the witness is using, what other situations the witness has encountered, and whether the witness's assertion is contrived. Clearly, when an expert is asked by the prosecutor or defense counsel to explain the basis for her opinion, the witness's ability to invoke "years of experience" undermines the scientific basis for the opinion and thwarts responsible fact-finding.¹⁰⁸

Prosecutors, assisted by their experts, also inflict so-called "evidentiary harpoons" during the evidence process to unfairly prejudice the defendant. Evidentiary harpoons are gratuitous remarks by a witness that appear to have been deliberately planned to inflict harm. The remark may have been prearranged, or it may simply be a voluntary remark made by a biased witness "out of the clear blue sky." Expert witnesses are adept at inflicting such "harpoons" in response to careless, ill-prepared questions by defense counsel on cross-examination. Experts also slip such remarks into their direct testimonies. For example, when asked by a prosecutor for her opinion with respect to hair comparisons, the forensic expert, again Gilchrist, replied that scalp hair fragments from an "afro pick" found at the crime scene were microscopically consistent

106. Michael J. Saks, *Prevalence and Impact of Ethical Problems in Forensic Science*, 34 J. FORENSIC SCI. 772, 789 (1989).

107. See FAIGMAN ET AL., *supra* note 37, at 16-17.

108. *But see* Daubert v. Merrell Dow Pharm. Inc., 509 U.S. 579 (1993); Kumho Tire Co. v. Carmichael, 526 U.S. 137 (1999); General Electric Co. v. Joiner, 522 U.S. 136 (1997). The *Daubert* trilogy requires the expert to establish that their reasoning and methodology have a scientific basis. Presumably, requiring a valid scientific basis for an opinion would prevent an expert witness from utilizing his "years of experience" as the basis for his conclusions. However, assuming that the witness is able to establish preliminarily some scientific basis for his reasoning and methodology, the witness would then have the ability to almost completely confound the cross-examiner by alluding to his years of experience in testing and evaluating numerous similar cases.

with scalp hairs taken from the same defendant “in another case.”¹⁰⁹ Although this answer was a flagrant attempt to implicate the defendant in another crime, the Oklahoma Court of Criminal Appeals found no error. According to the court, “it ‘stretches the imagination’ to suppose the witness intended to prejudice the appellant by the uttering one time that the hair samples came from another case.”¹¹⁰

IV. ARGUMENT TO THE JURY

Closing argument to the jury is an opportunity for a prosecutor to assimilate and distill the proof in an orderly and logical fashion in order to persuade the jury of the defendant’s guilt beyond any reasonable doubt. Closing argument is also an opportunity for a prosecutor bent on winning at all costs, as in *Miller v. Pate*,¹¹¹ to “strike foul [blows].”¹¹² When courts criticize prosecutors for misconduct, they often are referring to the prosecutor’s unfair closing argument.¹¹³

As with other types of courtroom behavior, a prosecutor’s closing argument is circumscribed by various constitutional and ethical requirements. A prosecutor must not misstate the evidence or mislead the jury.¹¹⁴ A prosecutor must not express her personal belief in the truthfulness of her witnesses or the guilt of the defendant.¹¹⁵ A prosecutor must not make arguments that inflame the passions and prejudices of the jury.¹¹⁶ Moreover, a prosecutor, more than any other lawyer, must be especially careful to avoid misconduct because as a prosecutor well knows, her comments carry the imprimatur of the government and therefore carry greater weight with a jury that is more likely to respect the prosecutor’s judgment and have confidence in her

109. *Rogers v. State*, 721 P.2d 805, 808 (Okla. Crim. App. 1986).

110. *Id.*

111. 386 U.S. 1 (1967).

112. *See Berger v. United States*, 295 U.S. 78, 88 (1935).

113. *See GERSHMAN*, *supra* note 60, at § 11:1.

114. *Id.* at § 11:27; ABA PROSECUTION STANDARDS, *supra* note 10, § 3-5.8(a) (“prosecutor should not intentionally misstate the evidence or mislead the jury as to the inferences it may draw”).

115. *See GERSHMAN*, *supra* note 60, § 11:21; ABA PROSECUTION STANDARDS, *supra* note 10, § 3-5.8(b) (“The prosecutor should not express his or her personal belief or opinion as to the truth or falsity of any testimony or evidence or the guilt of the defendant.”).

116. *GERSHMAN*, *supra* note 60, § 11:2; ABA PROSECUTION STANDARDS, *supra* note 10, § 305.8(c) (“The prosecutor should not make arguments calculated to appeal to the prejudices of the jury”).

assertions.¹¹⁷ The prosecutor's standing with the jury may have an even greater impact when the prosecutor analyzes the scientific evidence. Because such evidence is technical and difficult for lay jurors to understand and evaluate, a prosecutor's discussion of such evidence provides a powerful opportunity to mislead and prejudice the jury.

A vivid example of a prosecutor's misconduct during closing argument occurred in the notorious "Central Park Jogger" case, in which five teenagers were convicted in 1990 of beating and raping a jogger in Central Park, New York.¹¹⁸ The evidence at trial consisted of videotaped confessions by each defendant, corroborated by scientific evidence establishing that hairs from the victim were found on one of the suspects. The convictions were vacated earlier this year after DNA tests showed that the hairs did not come from the victim, and that the defendants' confessions were false.¹¹⁹

Apart from the contested confessions, the only items of physical evidence offered by the prosecution that directly linked any of the teenagers to the crime were four strands of hair attributed to the victim and recovered from the clothing of two of the suspects.¹²⁰ A scientific expert testified for the prosecution that the hairs found on the suspects were "consistent with" and "similar to" hairs of the victim.¹²¹ However, in her closing argument to the jury, the prosecutor used a far different characterization of the hair evidence. The prosecutor asserted that the hair evidence found on defendant Kevin Richardson's underpants "*matched* the head hair of the victim."¹²² The prosecutor further argued that a second hair on the defendant's T-shirt "*matched*" the victim's pubic hair.¹²³ The prosecutor then vouched for the reliability of the contested confessions by asserting that the defendant "got those hairs when he was with" the victim. The prosecutor concluded, "And it was because he was touching her, because he came in contact with her and

117. See *supra* note 15 and accompanying text.

118. See *People v. Salaam*, 629 N.E.2d 371 (N.Y. 1993); *People v. Wise*, 612 N.Y.S.2d 117 (N.Y. App. 1994); *People v. Richardson*, 608 N.Y.S.2d 627 (N.Y. App. 1994); *People v. McCray*, 604 N.Y.S.2d 93 (N.Y. App. 1993).

119. *People v. Wise*, 752 N.Y.S.2d 837 (N.Y. Sup. Ct. 2002).

120. Jim Dwyer & Susan Saulny, *Hair Evidence in Jogger Case is Discredited*, N.Y. TIMES, Oct. 25, 2002, at B1.

121. *Id.*

122. *Id.* (emphasis added).

123. *Id.* (emphasis added).

with her clothes and when he was on top of her and around her, that's how he got her hair on his clothing."¹²⁴

Clearly, the pressure to win a high profile trial caused this experienced prosecutor to make a false and inflammatory argument. Experienced prosecutors are aware that microscopic hair comparisons are highly subjective and scientifically unreliable. Moreover, in view of subsequent published remarks made by her expert, the prosecutor in the Central Park Jogger case had to know of the general consensus in the scientific community against using the expression that hair "matches," and almost certainly was so informed by her expert witness.¹²⁵ To be sure, hair comparisons have produced among the worst results in proficiency tests of crime laboratories across the country.¹²⁶ Hair evidence has been a factor in about one-third of the 111 cases of wrongful convictions that have been reversed following DNA tests.¹²⁷ In fact, because hair comparison is so unreliable, some courts have even excluded hair comparison testimony entirely, concluding that such testimony is unduly speculative, and that the probative value is substantially outweighed by its prejudicial effect.¹²⁸

Prosecutors nevertheless employ this mischaracterization when arguing to the jury, often without interference by the trial judge. Even appellate courts are led astray by the prosecutors' mischaracterizations. In *Williamson v. State*,¹²⁹ as in the Central Park Jogger case, the expert's testimony that hairs were "microscopically consistent" elicited the prosecutor's closing argument: "There's a match."¹³⁰ Indeed, the Oklahoma Court of Criminal Appeals relied on the prosecutor's mischaracterization, stating in its opinion: "Hair evidence placed [defendant] at the decedent's apartment."¹³¹ Clearly, if trial and appellate

124. *Id.*

125. *See supra* notes 92-98 and accompanying text. *See also* Dwyer & Saulny, *supra* note 120 (Nicholas Petrarca, a scientific expert who testified for the prosecution at the "Jogger" trial, stated in a recent interview that "he was often pushed by lawyers to declare something was or was not a match, but that he has always resisted such pressure." "[I]t was a strict practice in the police laboratory to avoid declaring a match." "No one ever says 'match.'").

126. *See* DWYER ET AL., *supra* note 5, at 62-63.

127. *Id.* at 263. *See also* Dwyer & Saulny, *supra* note 120.

128. *See Williamson v. Reynolds*, 904 F. Supp. 1529, 1558 (E.D. Okla. 1995); *United States v. Hutching*, No. CR-92-32-S (E.D. Okla. 1993).

129. 812 P.2d 384 (Okla. Crim. App. 1991).

130. *Williamson*, 904 F. Supp. at 1557.

131. *Williamson*, 812 P.2d at 397. *See also* *People v. Richardson*, 608 N.Y.S.2d 627, 628 (N.Y. App. 1994) (court refers implicitly to the forensic hair evidence by stating that

courts as well as juries can be misled by a prosecutor's irresponsible closing argument, the integrity of the fact-finding process is even further compromised.

V. USING SCIENTIFIC EVIDENCE RESPONSIBLY

To protect the integrity of the criminal fact-finding process and the accuracy of determinations of guilt and punishment from fraudulent and erroneous scientific evidence, courts, legislatures, and prosecutors need to focus first on improving the quality and independence of scientific forensic laboratories; second, improving the quality and independence of scientific forensic experts; and third, improving the ethics and integrity of prosecutors in using scientific evidence responsibly in the service of truth rather than merely winning convictions. Several scientific forensic crime laboratories recently have been discredited for incompetence and dishonesty, including the FBI,¹³² Houston,¹³³ West Virginia,¹³⁴ Montana,¹³⁵ and Oklahoma City.¹³⁶ Contributing factors have included the absence of quality control procedures, poorly trained and unsupervised examiners, no systematic methods for laboratory accreditation, no systematic or rigorous blind proficiency testing, and no random external scientific audits. In addition, many of these laboratories are part of police agencies and invested with a police officer's mindset of solving crimes rather than a scientist's mindset of finding the truth.

Since prosecutors use the resulting evidence to charge and convict, and are responsible for the integrity of the proof, they should reasonably take the lead in supporting the creation of independent scientific forensic laboratories, separated from police agencies and police supervision, operated by civilian personnel, with a sufficient budget to provide up-to-date facilities for DNA testing, and the capacity to train forensic scientists in DNA testing and evaluation.¹³⁷ Such laboratories also

"there was substantial evidence that defendant was one of the youths responsible for nearly killing the victim").

132. See David Johnston, *Report Criticizes Scientific Testing at F.B.I. Crime Lab*, N.Y. TIMES, Apr. 16, 1997, at A6.

133. See Nick Madigan, *Houston's Troubled DNA Crime Lab Faces Growing Scrutiny*, N.Y. TIMES, Feb. 9, 2003, section 1 at 20.

134. See *In re Investigation of the W. Va. State Police Crime Lab.*, 438 S.E.2d 501 (W. Va. 1993).

135. See Liptak, *supra* note 89.

136. See Boshell, *supra* note 49 and accompanying text.

137. See REPORT, GOVERNOR'S COMMISSION ON CAPITAL PUNISHMENT, STATE OF ILL., at 51-63 (2002); Feldman, *supra* note 6, at 698-703.

should establish quality control procedures to monitor the integrity of methods and accuracy of results.

In addition, as many recent scandals amply show, the quality and independence of scientific forensic examiners need to be improved. Prosecutors, who rely on these experts as witnesses and who are legally responsible for their mistakes and misconduct, again should take the lead. Many scientific experts too often think of themselves as police officials rather than as scientists.¹³⁸ Even those scientific forensic examiners not affiliated with police agencies too often exaggerate or misstate their findings in order to support the prosecutor's theory. Some of these experts are in a position where they can manufacture evidence, and evidence suggests that some of them have done precisely that.¹³⁹ Courts also must be increasingly vigilant to exclude evidence that does not have a valid scientific basis and to preclude experts who exaggerate the value of their findings.¹⁴⁰

Finally, proper use of scientific evidence requires above all that prosecutors act responsibly in their dual roles as advocates to convict the guilty as well as ministers of justice to prevent the wrongful conviction of innocent persons.¹⁴¹ Sanctions to deter misconduct by prosecutors are severely limited. The only realistic sanction faced by a prosecutor who commits misconduct is the possibility of the conviction being reversed. However, as prosecutors well know, even the possibility of reversal is becoming increasingly remote due to the broad availability of conviction-preserving doctrines such as the harmless error rule and judicial and statutory limitations on habeas corpus review.¹⁴² Personal sanctions against a prosecutor for deliberate misconduct, such as civil liability and professional discipline, almost never happens.¹⁴³ The establishment of professional disciplinary commissions solely to oversee conduct by prosecutors, much like commissions that review conduct by judges, although a viable consideration, is unlikely.¹⁴⁴

There are other ways to improve the integrity of the fact-finding process. Trial and appellate courts should supervise more closely the

138. See Giannelli *supra* notes 72, 85-87 and accompanying text.

139. See Giannelli, *supra* note 72, at 442-62.

140. See, e.g., *Williamson v. Reynolds*, 904 F. Supp. 1529, 1558 (E.D. Okla. 1995).

141. See *supra* notes 10-15 and accompanying text.

142. See Bennett L. Gershman, *The Gate is Open But the Door is Locked—Habeas Corpus and Harmless Error*, 51 WASH. & LEE L. REV. 115 (1994).

143. See GERSHMAN, *supra* note 60, at §§ 14:12 -14:13.

144. See Bennett L. Gershman, *The New Prosecutors*, 53 U. PITT. L. REV. 393, 453-55 (1992).

prosecutor's conduct in pre-trial disclosure and discovery. There have been extensive reports of serious abuses by prosecutors in concealing from the defense favorable material evidence, and in violating discovery orders.¹⁴⁵ Nondisclosure of exculpatory and impeachment evidence may be the most serious obstacle to the ascertainment of truth in a criminal case.¹⁴⁶ Although statutes typically require timely discovery to the defense of scientific evidence, this mandate is easily evaded. Information is disclosed that contains insufficient data to assist the defense, or arrives too late for effective use.¹⁴⁷

Moreover, standards should be established that require prosecutors who use scientific evidence, particularly in capital cases, to be trained and supervised in their handling of such proof. Standards can be established by courts, legislatures, or even within prosecutors' offices by establishing protocols for using forensic experts and forensic evidence. Prosecutors' offices should develop office policies and incorporate these policies into office manuals.

Standards and protocols should also be established with respect to the preservation of scientific evidence. As noted above, too often such evidence is routinely destroyed.¹⁴⁸ In addition, prosecutors should be willing to examine post-conviction claims of innocence that might be established by DNA evidence.¹⁴⁹ Many prosecutors, by agreeing to new tests, demonstrate a commitment to truth and avoidance of a wrongful conviction.¹⁵⁰ However, too many prosecutors refuse to allow such tests. Courts and legislatures should enact rules requiring post-conviction DNA testing if prosecutors demonstrate an unwillingness to consider such proof.¹⁵¹

145. See, e.g., Ken Armstrong & Maurice Possley, *Trial & Error: How Prosecutors Sacrifice Justice To Win*, CHIC. TRIB., Jan. 10, 1999, at 3 (extensive study documenting convictions in 381 homicide cases nationwide that were reversed because prosecutors concealed evidence of defendants' innocence or knowingly presented false evidence).

146. See Bruce A. Green, *Why Should Prosecutors "Seek Justice"?*, 26 FORDHAM URB. L.J. 607, 619 (1999).

147. See *supra* notes 40-41 and accompanying text.

148. See Boshell, *supra* note 49 and accompanying text.

149. See Ross E. Milloy, *A Texas Prosecutor Who Seeks Evidence of Innocence*, N.Y. TIMES, Oct. 21, 2000, at A9.

150. See James Sterngold, *San Diego District Attorney Offering Free DNA Testing*, N.Y. TIMES, July 28, 2000, at A12. (The New York County District Attorney asked the court to vacate the convictions in the Central Park Jogger case after concluding that the convictions were based on false confessions.) See also *People v. Wise*, 752 N.Y.S.2d 837 (N.Y. Sup. 2002).

151. See S. Doc. No. 2073, 106th Cong. (2000) (proposed legislation that would

Finally, to meet his constitutional and ethical obligations in using scientific evidence, a responsible prosecutor should always be guided by three precepts.¹⁵² First, a prosecutor should examine the scientific evidence with a healthy skepticism developed through education, training, and experience. Second, a prosecutor should be willing to subject the evidence to rigorous testing and re-examination.¹⁵³ Third, a prosecutor should have the courage to decline prosecution if he entertains a reasonable doubt of the defendant's guilt.

VI. CONCLUSION

A prosecutor's use of scientific evidence occurs in every stage of the adjudicative process, including pre-trial disclosure and discovery, presentation of witnesses and evidence, and closing arguments to the jury. A prosecutor's misuse of scientific evidence may violate constitutional, statutory, and ethical rules governing the prosecutor's conduct. Moreover, given the technical and complex nature of forensic evidence, and the prosecutor's standing with the jury, the opportunity for a prosecutor bent on winning a conviction to misuse scientific evidence is considerable. Abuse occurs when a prosecutor suppresses or discloses too late for effective use relevant scientific evidence; elicits testimony from her scientific forensic expert that is fraudulent or erroneous; or improperly bolsters that testimony; or makes arguments to the jury that are false, misleading, or inflammatory.

Improving the integrity of scientific evidence requires establishing scientific forensic laboratories that are independent of law enforcement agencies and that maintain rigorous quality control procedures; improving the training and supervision of the experts who examine the evidence and testify in court; and requiring training, supervision, and protocols for prosecutors in the use of scientific evidence to ensure that the integrity of the fact-finding process is not tainted by fraudulent or erroneous scientific proof.

mandate free DNA testing on application of convicted defendant of any biological material in government's possession related to the prosecution).

152. See Gershman, *supra* note 11, at 342-51.

153. See Andrew Jacobs & Marc Santora, *New Report in Wife's Death Clears Former Police Officer*, N.Y. TIMES, Dec. 5, 2002, at B1 (prosecutor dismisses murder charges that were based initially on pathologist's erroneous conclusion after independent experts demonstrated that death was caused accidentally).