

Notes

Improving Forensic Science Through State Oversight*

In December 2002, operations at the Houston Police Department Crime Laboratory—one of the nation’s busiest forensic science laboratories—came to a screeching halt. What started a month earlier as a series of investigative reports by a local television station became the most significant laboratory scandal in the nation’s history. Amid news reports of analytical errors, misrepresented findings, and the wrongful conviction of Josiah Sutton for aggravated kidnapping and sexual assault—based on flawed conclusions about DNA evidence¹—the laboratory quickly suspended all DNA and toxicology analysis.² Shortly thereafter, the City of Houston hired a team of lawyers and forensic scientists to conduct an independent review of the laboratory.³ The investigation found the laboratory in shambles, with countless problems spanning across twenty-five years of operations. These problems included the fabrication of scientific results,⁴ a DNA section supervised by a leader without any experience performing DNA analysis,⁵ and a roof that allowed water to leak into the laboratory and the evidence storage facility for over six years, at one point contaminating evidence.⁶ Over the course of the investigation, the team reviewed forensic analyses performed in over 3,500 criminal cases.⁷ The investigation found that numerous sections of the laboratory had failed to meet generally accepted forensic science principles, “pos[ing] major risks of contributing to miscarriages of justice in extremely significant cases, including death penalty cases.”⁸

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1. MICHAEL R. BROMWICH, FINAL REPORT OF THE INDEPENDENT INVESTIGATOR FOR THE HOUSTON POLICE DEPARTMENT CRIME LABORATORY AND PROPERTY ROOM 54–57 (2007), available at <http://www.hpdlabinvestigation.org/reports/070613report.pdf>.

2. *Id.* at 54.

3. *Id.* at 1 (Executive Summary) (stating that the Houston Police Department commissioned an investigation into the crime lab’s activities). The investigative team included lawyers, forensic scientists, and statisticians. *Id.*

4. *Id.* at 153 n.212.

5. *Id.* at 186.

6. *Id.* at 32–33.

7. *Id.* at 3 (Executive Summary).

8. *Id.* at 4 (Executive Summary).

While the number of problems identified at the Houston crime lab represents an extreme, the reality is that similar problems have occurred throughout the country. Often, these problems have gone unrecognized due to a general lack of regulation of crime laboratories. This Note explores the role of state oversight in forensic science regulation and argues that stronger state-level oversight would help prevent situations like the Houston crime lab scandal. Part I describes the maladies that plague forensic science. Part II taps the power of the states within the framework of federalism and explains why state-level oversight is necessary to solve the problems. Part III describes the oversight mechanisms that states currently employ. While some states have established oversight institutions, most have not, and those that have can strengthen their oversight. Part IV then proposes a fortified model of state oversight, highlighting areas where current state efforts often fail. Finally, Part V concludes by arguing that state oversight is necessary even if pending federal legislation increases the role that the federal government plays in the regulation of forensic science.

I. The Current Forensic Science Framework

Given the popularity of television programs like *CSI: Crime Scene Investigation* and its spin-offs, most Americans have heard the term *forensic science*.⁹ But despite what its singular name implies, forensic science actually refers to a range of disciplines, each with its own practices and culture. These disciplines include toxicology, firearms, toolmarks, trace evidence, arson analysis, impression evidence, blood-pattern analysis, and medical death investigation, among numerous others.¹⁰ While professionals often perform analyses inside laboratories, police officers also perform forensic services, such as crime scene investigation and latent-fingerprint analysis, outside of the laboratory.¹¹ Of course, forensic science includes DNA analysis, a practice that has become a “model” forensic science discipline.¹² The strength of DNA analysis did not happen by chance; rather, “Congress allocated funding, [the National Academy of Sciences] issued reports, [the National Institute of Justice] distributed grants, attorneys filed motions, judges held hearings and legal and forensic scholars engaged in (often contentious) debates.”¹³ Unlike DNA analysis, which emerged from these so-called DNA wars of the 1990s as a strong, credible scientific practice, the

9. See generally N.J. Schweitzer & Michael J. Saks, *The CSI Effect: Popular Fiction About Forensic Science Affects the Public's Expectations About Real Forensic Science*, 47 JURIMETRICS J. 357 (2007) (reporting that the public's knowledge of forensic science from television shows like *CSI* may affect trials).

10. NAT'L INST. OF JUSTICE, STATUS AND NEEDS OF FORENSIC SCIENCE SERVICE PROVIDERS: A REPORT TO CONGRESS 2 (2006), available at <https://www.ncjrs.gov/pdffiles1/nij/213420.pdf>.

11. *Id.*

12. Erin Murphy, *What “Strengthening Forensic Science” Today Means for Tomorrow: DNA Exceptionalism and the 2009 NAS Report*, 9 L. PROBABILITY & RISK 7, 24 (2010).

13. *Id.*

other forensic science disciplines have historically avoided the spotlight,¹⁴ even though they comprise the overwhelming majority of crime-laboratory work.¹⁵ This Note focuses on how increasing state oversight of *all* forensic science disciplines—not just DNA analysis—can make them stronger.

Two core problems plague forensic science. First, questions of validity—whether forensic science truly measures real-world phenomena—threaten the foundation upon which disciplines are built. A landmark National Academy of Sciences report (NAS Report) on the state of non-DNA forensic science questioned whether underlying research supports many of the claims forensic scientists make in court.¹⁶ In other words, to what extent is there *science* in any given forensic science discipline?¹⁷ Because the criminal justice system routinely uses forensic science evidence and forensic experts,¹⁸ this question is significant. To address validity concerns, the NAS Report recommended the creation of a new federal agency that would “promote the development of forensic science into a mature field of multidisciplinary research and practice.”¹⁹ Among its activities, the agency would encourage “scholarly, competitive peer-reviewed research,”²⁰ including studies demonstrating the scientific validity of practices,²¹ and would oversee forensic science programs in higher education.²²

Second, questions of reliability—whether forensic results are accurate, assuming that the methods are valid—have already eroded the credibility of forensic science. Analyst errors, whether willful or negligent, have led to the dismissal of criminal convictions in many jurisdictions. While some of the instances of error have been attributed to “rogue” analysts,²³ systemic

14. *See id.* at 9 (explaining that, unlike DNA, the legitimacy of “traditional forensic disciplines that had long served as the backbone of scientific evidence in the courtroom . . . went largely ignored”).

15. *See* Paul C. Giannelli, *Wrongful Convictions and Forensic Science: The Need to Regulate Crime Labs*, 86 N.C. L. REV. 163, 210 (2007) (“DNA cases, however, make up only a small portion of crime lab work . . .”).

16. *See generally* NAT’L RESEARCH COUNCIL, NAT’L ACAD. OF SCIS., *STRENGTHENING FORENSIC SCIENCE IN THE UNITED STATES: A PATH FORWARD* (2009) [hereinafter *NAS REPORT*]. The report dedicates an entire chapter to analyzing validity concerns discipline-by-discipline. *See id.* at 127–82.

17. *See id.* at 87 (“The law’s greatest dilemma in its heavy reliance on forensic evidence, however, concerns the question of whether—and to what extent—there is *science* in any given ‘forensic science’ discipline.”).

18. *See, e.g.*, CAL. COMM’N ON THE FAIR ADMIN. OF JUSTICE, *FINAL REPORT* 58 (Gerald Uelmen ed., 2008) (“The presentation of forensic science evidence is often the turning point in a criminal trial.”).

19. *NAS REPORT*, *supra* note 16, at 81.

20. *Id.*

21. *Id.* at 190.

22. *Id.* at 82.

23. *See, e.g.*, Giannelli, *supra* note 15, at 174–82 (describing the repeated misconduct by Joyce Gilchrist, a forensic chemist in the Oklahoma City Police Department crime laboratory).

problems have caused many others.²⁴ These systemic problems are difficult to diagnose and to remedy. A particular analyst may be the culprit, but the cause may be a systemic issue such as lack of effective laboratory management or biases caused by the relationship between the laboratory and law enforcement.²⁵ The NAS Report recommended various measures to address reliability concerns. These recommendations included encouraging research on quantifiable measures of the reliability of analyses²⁶ and on human-observer bias and sources of human error;²⁷ developing best practices for professionals and laboratories;²⁸ mandating laboratory accreditation and certification of forensic science professionals;²⁹ and establishing a national code of ethics.³⁰ Controversially, the NAS Report also recommended removing laboratories from law enforcement control.³¹

Viewpoints differ on the merits of these concerns. The NAS Report elicited widespread reaction from scholars in the fields of forensic science and evidence, as well as from professional organizations.³² While academic commentators have endorsed most of the NAS Report's recommendations, many have questioned whether the recommendations are realistic.³³ Professional organizations representing differing interests agreed that forensic science is severely under-resourced but disagreed as to whether the NAS Report endorsed or criticized forensic science methods.³⁴ They also

24. See Jennifer L. Mnookin et al., *The Need for a Research Culture in the Forensic Sciences*, 58 UCLA L. REV. 725, 728 n.5 (2011) (listing "serious concerns" that arose at major laboratories across the country, including labs in Boston, Chicago, Houston, Los Angeles, New York, and San Francisco); Giannelli, *supra* note 15, at 172–208 (surveying failures by forensic science laboratories across the nation). Rogue analysts and systemic problems often merge. See, e.g., *id.* at 172–74 (describing prosecutors' reliance on rogue analyst Fred Zain, the chief serologist in the West Virginia State Police Crime Laboratory, because other "West Virginia serologists were incapable, in their view, of reaching the 'right' results").

25. See generally Paul C. Giannelli, *Independent Crime Laboratories: The Problem of Motivational and Cognitive Bias*, 2010 UTAH L. REV. 247, 250–57 (describing motivational bias and multiple forms of cognitive bias in forensic science laboratories).

26. NAS REPORT, *supra* note 16, at 190.

27. *Id.* at 191.

28. *Id.* at 81.

29. *Id.* at 215.

30. *Id.*

31. *Id.* at 183–84, 190–91.

32. See Kenneth E. Melson, *Embracing the Path Forward: The Journey to Justice Continues*, 36 NEW ENG. J. ON CRIM. & CIV. CONFINEMENT 197, 213–20 (2010) (surveying responses from stakeholders in the forensic science community).

33. See, e.g., D. Michael Risinger, *The NAS/NRC Report on Forensic Science: A Path Forward Fraught with Pitfalls*, 2010 UTAH L. REV. 225, 236–39 (doubting that political realities will permit the establishment of a new federal agency that oversees forensic science).

34. Murphy, *supra* note 12, at 23. For an example of an organization arguing that the NAS Report endorsed (rather than criticized) forensic science methods, see Nat'l Dist. Attorneys Ass'n, *NDAA Message to Prosecutors Regarding the National Academy of Sciences Forensic Science Report*, WIN INTERACTIVE, <http://www.wininteractive.com/NDAA/NAS.html>. The message stresses that "contrary to what some people are arguing, this report does not show that there are

disagreed about the practicality and necessity of the NAS Report's recommendations.³⁵ Some even accused the NAS of bias against law enforcement.³⁶ And while documented cases of analyst error or misconduct make it difficult to argue that the reliability concern is completely unwarranted, views differ on the extent of the problem and whether current protections such as accreditation can remedy it.³⁷

Unlike the NAS Report, courts have accepted most forensic science disciplines as valid and reliable. The well-documented legacy of *Daubert v. Merrell Dow Pharmaceuticals, Inc.*³⁸ and its progeny is the relaxed judicial scrutiny of forensic science experts in criminal cases, as compared to heightened scrutiny of scientific experts in civil cases.³⁹ Unlike in civil cases, where courts routinely exclude scientific expert evidence under the *Daubert* factors,⁴⁰ they often admit forensic science evidence in criminal cases without question under the same *Daubert* standard.⁴¹ And according to the NAS Report, even a change in "[j]udicial review, by itself, will not cure the infirmities of the forensic science community," no matter the gatekeeping standard.⁴² In a recent Confrontation Clause decision, the Supreme Court

problems with forensic science. . . . The science is valid, the science is good, and the science can be proven and replicated." *Id.*

35. Compare NAT'L DIST. ATT'YS ASS'N, RESOLUTION IN SUPPORT OF EFFORTS TO STRENGTHEN FORENSIC SCIENCE IN THE UNITED STATES 3 (2010), available at http://www.ndaa.org/pdf/NDAA_strengthen_forensic_science_resolution_4_10.pdf (opposing the creation of a new federal agency and questioning the effectiveness of removing crime laboratories from law enforcement or prosecutorial control), with NAT'L ASS'N OF CRIMINAL DEF. LAWYERS, PRINCIPLES AND RECOMMENDATIONS TO STRENGTHEN FORENSIC EVIDENCE AND ITS PRESENTATION IN THE COURTROOM 2 (2010), available at [http://www.nacdl.org/sl_docs.nsf/issues/crimelab_resources/\\$FILE/NACDLStrengtheningForensicAustin.pdf](http://www.nacdl.org/sl_docs.nsf/issues/crimelab_resources/$FILE/NACDLStrengtheningForensicAustin.pdf) (endorsing all of the NAS Report's recommendations).

36. Murphy, *supra* note 12, at 23.

37. See *infra* subpart III(B).

38. 509 U.S. 579 (1993).

39. See generally D. Michael Risinger, *Navigating Expert Reliability: Are Criminal Standards of Certainty Being Left on the Dock?*, 64 ALB. L. REV. 99 (2000) (finding that while civil defendants often win when challenging the reliability of plaintiffs' proffered expert evidence under *Daubert*, criminal defendants almost always lose when challenging the reliability of the prosecution's proffered expert evidence).

40. Though not an exhaustive list, courts generally look at whether a theory or technique has been tested, whether it has been subject to peer review and publication, the known or potential error rate, the existence and maintenance of standards controlling its operation, and whether it has been generally accepted by the relevant scientific community. *Daubert*, 509 U.S. at 593–94.

41. See Jane Campbell Moriarty, *Will History Be Servitude?: The NAS Report on Forensic Science and the Role of the Judiciary*, 2010 UTAH L. REV. 299, 315 ("In civil cases, courts seem quite up to the task of evaluating microbiology, teratology, and toxicology evidence Yet when it comes to evaluating the shortcomings of lip prints and handwriting, courts are unable to muster the most minimal grasp of why a standardless form of comparison might lack evidentiary reliability or trustworthiness.").

42. NAS REPORT, *supra* note 16, at 12; see also Peter J. Neufeld, *The (Near) Irrelevance of Daubert to Criminal Justice and Some Suggestions for Reform*, 95 AM. J. PUB. HEALTH S107, S110–11 (2005) (arguing that poorly funded defense counsel, unskilled defense counsel, inadequate

mentioned the possibility that forensic science evidence is unreliable due to analyst error or bias;⁴³ however, it does not appear that the nation's highest court will administer any top-down changes in the way trial courts handle admissibility questions. The Court's decision to cite the NAS Report may encourage defense counsel to try to use it in criminal cases to disqualify forensic scientists as unreliable expert witnesses under *Daubert*.⁴⁴ However, the success of such a strategy is unlikely.⁴⁵

Fragmentation by jurisdiction, laboratory, and discipline exacerbates the validity and reliability problems. First, forensic science has historically operated under the formal supervision of law enforcement within each jurisdiction but without any significant external regulation.⁴⁶ Funding often comes from different levels of government, and laboratories often perform analyses for law enforcement from neighboring or overlapping jurisdictions.⁴⁷ The large number of small laboratories⁴⁸ and laboratories that only perform limited types of analysis⁴⁹ further disaggregate forensic science. The rise of private laboratories adds to the fragmentation as well,⁵⁰ and any

funding for defense experts, and lack of effective discovery require reforms "upstream of the courthouse" rather than changes in judicial gatekeeping).

43. *Melendez-Diaz v. Massachusetts*, 129 S. Ct. 2527, 2536 (2009); see also *Bullcoming v. New Mexico*, 131 S. Ct. 2705, 2709–10 (2011) (relying on *Melendez-Diaz* and holding that the accused has the right to confront the analyst who either certified that a forensic analysis adhered to certain procedures or actually performed the forensic analysis in question).

44. Paul C. Giannelli, *The NRC Report and Its Implications for Criminal Litigation*, 50 JURIMETRICS J. 53, 55 (2009).

45. See *id.* ("It remains to be seen . . . how much impact the [NAS Report] will have and how soon that influence will be felt."); see also Moriarty, *supra* note 41, at 321–24 (surveying state and federal admissibility decisions since the publication of the NAS Report and concluding that no challenge "seeking to exclude forensic science evidence on reliability grounds has succeeded"). Since the *Daubert* decision in 1993, there have been several notable cases of exclusion of forensic science evidence. See Paul C. Giannelli, *Daubert and Forensic Science: The Pitfalls of Law Enforcement Control of Scientific Research*, 2011 U. ILL. L. REV. 53, 60–64 (surveying cases excluding handwriting analysis, fingerprint analysis, and firearms identification). In perhaps the most famous case, Judge Pollack first ruled that fingerprint experts could not testify that two samples actually matched, only to reverse himself on reconsideration. *United States v. Llera Plaza*, 179 F. Supp. 2d 492 (E.D. Pa. 2002), *vacated, motion granted on reconsideration*, 188 F. Supp. 2d 549, 551–52, 576 (E.D. Pa. 2002).

46. See generally Paul C. Giannelli, *Regulating Crime Laboratories: The Impact of DNA Evidence*, 15 J.L. & POL'Y 59 (2007) (surveying the regulation of crime laboratories since the establishment of the first laboratory in the 1920s).

47. See, e.g., CAL. CRIME LAB. REVIEW TASK FORCE, AN EXAMINATION OF FORENSIC SCIENCE IN CALIFORNIA 47 (2009) (discussing numerous funding structures used by California laboratories, including fee-for-service and annual-contract programs in which one jurisdiction provides forensic services for another).

48. In 2005, the median staff size at the 389 publicly funded laboratories was only sixteen. MATTHEW R. DUROSE, DEP'T OF JUSTICE, CENSUS OF PUBLICLY FUNDED FORENSIC CRIME LABORATORIES, 2005, at 2 & tbl.1 (2008).

49. The median number of services performed by publicly funded laboratories is only six. *Id.* at 3.

50. Roughly half of publicly funded laboratories outsource some forensic services to private laboratories. *Id.* at 7. However, few data exist on the number of for-profit forensic science laboratories. NAS REPORT, *supra* note 16, at 58.

reform proposals must include increased oversight of these laboratories. In short, the term *forensic science* encompasses a complex world of overlapping jurisdictions and laboratories. The result is an environment where it is difficult to determine which entity should be responsible for oversight.

Second, forensic science has historically subdivided itself by discipline, “marked by multiple types of practitioners with different levels of education and training and different professional cultures and standards for performance.”⁵¹ Disciplines have developed at different times and in different contexts. Some, such as fingerprint and firearm comparisons, developed as pragmatic solutions to help solve law enforcement needs, while others, such as DNA and blood-typing, developed in medicine or other scientific fields and later became useful to law enforcement.⁵² While professional associations organized by discipline have provided some leadership, they generally do not share standards or policies between organizations,⁵³ and this breakdown by discipline often contributes to “apprentice-type training and a guild-like structure of disciplines, which work against the goal of a single forensic science profession.”⁵⁴ Key federal agencies, such as the Federal Bureau of Investigation (FBI) and the National Institute of Justice (NIJ), have provided “modest leadership,” but neither has led calls for uniformity or scrutiny.⁵⁵ In fact, some discipline organizations, including Scientific Working Groups,⁵⁶ have refuted portions of the NAS Report addressing individualization, error-rate data, and the need for oversight.⁵⁷ The dichotomy between forensic science providers working in laboratories and providers working at crime scenes has also contributed to the fragmentation.⁵⁸ Depending on the jurisdiction and the type of evidence, forensic science may be performed by laboratory technicians, sworn law enforcement officers, or crime scene investigators.⁵⁹ Finally, even within disciplines, there are no formal entry mechanisms to the profession, such as

51. NAS REPORT, *supra* note 16, at 78.

52. DONALD E. SHELTON, FORENSIC SCIENCE IN COURT: CHALLENGES IN THE TWENTY-FIRST CENTURY 11 (2011).

53. NAS REPORT, *supra* note 16, at 78.

54. *Id.* at 15.

55. *Id.* at 78–79.

56. Scientific Working Groups (SWGs) and Technical Working Groups (TWGs) are organized by discipline and supported by the FBI and other federal agencies. *Scientific Working Groups*, FED. BUREAU OF INVESTIGATION, <http://www2.fbi.gov/hq/lab/html/swg.htm>.

57. See Jonathan J. Koehler, *Forensic Science Reform in the 21st Century: A Major Conference, a Blockbuster Report and Reasons To Be Pessimistic*, 9 L. PROBABILITY & RISK 1, 4–5 (2010) (describing organizations’ opposition to the NAS Report).

58. Cf. NAS REPORT, *supra* note 16, at 218 (contrasting crime scene investigators, who often lack college degrees above the associate level, with laboratory practitioners, who often have bachelor’s degrees).

59. See *supra* note 11 and accompanying text.

exams or licensure,⁶⁰ which leads to variations between providers within a single discipline.⁶¹

These core problems—questionable validity and questionable reliability, both augmented by a fragmented profession—have contributed to the ever-growing list of jurisdictions suffering from laboratory scandals.⁶² Exonerations due in part to postconviction discovery of improper forensic science are well documented.⁶³ And the mainstream media has repeatedly reported on significant laboratory scandals.⁶⁴ But all is not lost. In many jurisdictions, state-level oversight is minimal.⁶⁵ Government action can address many of the problems and usher forensic science into a new era of valid, reliable science.

II. State Oversight: An Ignored Resource

With attention concentrated on the NAS Report and possible federal legislation, commentators have ignored the role of state forensic science oversight.⁶⁶ This lack of focus on state oversight is striking. In the American system of federalism, criminal law is traditionally reserved to the states under the police or welfare power.⁶⁷ Since any unresolved problems affect state criminal justice systems at their core, state oversight should play a critical role in forensic science oversight. A postconviction exoneration or the

60. NAS REPORT, *supra* note 16, at 59–60.

61. *Cf. id.* at 201 (“Adherence to standards . . . improves consistency . . .”). While some disciplines have developed standards, others have not, “which contributes to questions about the validity of conclusions” and the reliability of results. *Id.*

62. *See supra* note 24.

63. Brandon L. Garrett & Peter J. Neufeld, *Invalid Forensic Science Testimony and Wrongful Convictions*, 95 VA. L. REV. 1, 14 (2009) (investigating the forensic science testimony in 137 cases where the convicted individual was later exonerated by DNA testing). It should be noted, however, that forensic science has also contributed to many exonerations through postconviction DNA testing. *See Facts on Post-Conviction DNA Exonerations*, INNOCENCE PROJECT, http://www.innocenceproject.org/Content/Facts_on_PostConviction_DNA_Exonerations.php (reporting that there have been 273 postconviction DNA exonerations in the United States).

64. *See, e.g.*, Adam Liptak & Ralph Blumenthal, *New Doubt Cast on Testing in Houston Police Crime Lab*, N.Y. TIMES, Aug. 5, 2004, at A19 (describing the Houston crime lab scandal); Editorial, *DAs On Board*, NEWS & OBSERVER (Raleigh, N.C.), Aug. 31, 2010, available at <http://www.newsobserver.com/2010/08/31/655855/das-on-board.html> (commenting on the ongoing investigation into the State Bureau of Investigation’s crime laboratory in North Carolina). *See generally* Joseph L. Peterson & Anna S. Leggett, *The Evolution of Forensic Science: Progress Amid the Pitfalls*, 36 STETSON L. REV. 621, 649–52 (2007) (surveying investigative journalism’s increasing role in exposing misconduct in laboratories).

65. *See infra* subpart III(A).

66. In this Note, I use the term *oversight* in the broadest sense possible. I do not mean mere supervision of a laboratory’s budget and hiring practices. Oversight includes policy making on issues that affect reliability, validity, laboratory structure, and accreditation, as well as investigations into allegations of negligence or misconduct. Furthermore, oversight is not limited to supervision by a regulatory body; it includes any state institution that has the potential to affect crime laboratory behavior. *See infra* Part III.

67. *See* U.S. CONST. amend. X (reserving to the states those powers not granted to the federal government).

discovery of a negligent technician puts the credibility of the state criminal justice system in question. The decisions of state legislatures and state executives—and not those of the United States Congress—determine a state’s forensic science policies, the structure of its laboratories, and changes to its regulatory scheme.⁶⁸

Although the body of federal criminal laws has ballooned in recent decades,⁶⁹ state and local law enforcement and prosecutors still “process the lion’s share of U.S. criminal offenders.”⁷⁰ While the federal government provides grants for laboratory operations,⁷¹ helps fund research,⁷² and influences state laboratories through its own laboratories and procedures,⁷³ the operation of state and local laboratories remains under the control of the state in which they are located. At the same time, formal federal regulation of non-DNA forensic science has lacked.⁷⁴ The spending power triggers the only current federal regulations.⁷⁵ The National Science Foundation and the National Institute of Standards and Technology have little experience with forensic science.⁷⁶ And only in response to the NAS Report did the White House form an advisory committee on forensic science.⁷⁷

68. See, e.g., MD. CODE ANN., HEALTH-GEN. § 17-2A-02 (LexisNexis 2009) (establishing oversight of forensic science laboratories in Maryland); R.I. GEN. LAWS §§ 12-1.2-1 to -7 (2002 & Supp. 2010) (creating the Rhode Island State Crime Laboratory).

69. See JAMES A. STRAZZELLA, AM. BAR ASS’N, *THE FEDERALIZATION OF CRIMINAL LAW* 7–12 (1998) (surveying the recent increase in federal criminal laws).

70. Wayne A. Logan, *Horizontal Federalism in an Age of Criminal Justice Interconnectedness*, 154 U. PA. L. REV. 257, 263 (2005).

71. Distributed through the Paul Coverdell Forensic Science Improvement Grants Program, these grants are a significant form of support but are only a small part of state and local laboratories’ total budgets. Compare OFFICE OF JUSTICE PROGRAMS, NAT’L INST. OF JUSTICE, FY2010 PAUL COVERDELL NATIONAL FORENSIC SCIENCE IMPROVEMENT ACT REPORT TO CONGRESS: FUNDING TABLE (2010), available at <http://www.nij.gov/nij/topics/forensics/lab-operations/capacity/nfsia/2010-funding-table.xls> (showing roughly \$33 million of federal funds awarded in fiscal year 2010), with DUROSE, *supra* note 48, at 2 tbl.3 (estimating a total budget of \$895 million for all state, county, and municipal laboratories in 2005). Still, laboratories in all fifty states received funding under the Coverdell program in fiscal year 2010. OFFICE OF JUSTICE PROGRAMS, *supra*.

72. NAS REPORT, *supra* note 16, at 71–75 (describing sources of research funding and providing examples of awards).

73. See generally, e.g., FBI, FBI LABORATORY 2007: SUPPORTING FBI OPERATIONS FOR 75 YEARS (2007), available at <http://www.fbi.gov/about-us/lab/lab-annual-report-2007/fbi-lab-report-2007-pdf> (describing FBI–state interaction by discipline, including how the FBI provides support and forensic analyses to state laboratories and teaches courses to state forensic scientists).

74. See Jennifer L. Mnookin, *The Courts, the NAS, and the Future of Forensic Science*, 75 BROOK. L. REV. 1209, 1237 (2010) (decrying the lack of any “significant federal initiative vis-à-vis forensic science” despite the “significant critique” presented in the NAS Report).

75. See *infra* notes 141–50 and accompanying text.

76. See NAS REPORT, *supra* note 16, at 79–80 (finding that the NSF and the NIST lack the experience and institutional capacity to establish an effective governance structure for forensic science).

77. NAT’L SCI. & TECH. COUNCIL, CHARTER OF THE SUBCOMMITTEE ON FORENSIC SCIENCE 1 (2009), available at http://www.forensicscience.gov/assets/pdfs/subcommittee_charter.pdf. Among other duties, the subcommittee will develop strategies to “enhanc[e] the validity and reliability of

The NAS Report charged the federal government with implementing its recommendations.⁷⁸ But, as mentioned above, this ignores the direct control that states have over their laboratories and criminal justice systems. Furthermore, federal reform requires uniformity and ignores the benefits of state experimentation.⁷⁹ It ignores geographic differences in values and the differences in the ways that states administer their systems of criminal justice and criminal investigation.⁸⁰ Finally, with the current political climate in Washington, federal reform may be difficult to pass. And even if it were to pass, it may reflect a compromise between differing interests rather than the most robust oversight possible.⁸¹

States, on the other hand, are well positioned to implement reforms, especially reforms that target reliability. States understand the structure of their own criminal justice systems and can experiment with new or nontraditional forms of oversight.⁸² They operate on a smaller scale and are more likely to act quickly, especially those states that have experienced embarrassing scandals.⁸³ When reforms are implemented, a local presence allows for better enforcement and ground-level monitoring. When reforms prove unsuccessful or require tweaking, states can make the necessary changes without undue delay.

Most importantly, state officials bear responsibility for the failures of the state's forensic science laboratories. State officials are accessible to those directly affected by reform, such as forensic scientists and state police, and to state citizens who support the criminal justice system by paying taxes and serving on juries. Local forensic scientists are likely to view reforms implemented from the state capital as more credible than those implemented by anonymous regulators in Washington, since the forensic science community within a state is more familiar with that state's government. Finally, professional regulation has been successful at the state level in other

the federal government's undertakings in forensic science" and to "help ensure that regional, state and local entities adopt best practices." *Id.* at 1.

78. This is understandable, since the federal government commissioned the study. But the NAS Report still failed to indicate ways in which state oversight could address the problems that the report identified.

79. Justice Brandeis articulated this concept in a celebrated quote: "It is one of the happy incidents of the federal system that a single courageous State may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country." *New State Ice Co. v. Liebmann*, 285 U.S. 262, 311 (1932) (Brandeis, J., dissenting).

80. See DAVID L. SHAPIRO, *FEDERALISM: A DIALOGUE* 86–87 (1995) (discussing regional variations in subculture and positing that particular types of reform may take root more easily in different areas).

81. See John F. Manning, *What Divides Textualists from Purposivists?*, 106 COLUM. L. REV. 70, 104 (2006) ("Legislators may compromise on a statute that does not fully address a perceived mischief, accepting half a loaf to facilitate a law's enactment.").

82. See SHAPIRO, *supra* note 80, at 87–88 (surveying successful instances of state experimentation in various regulatory contexts).

83. See, e.g., Giannelli, *supra* note 15, at 170 (explaining that scandals have prompted states to enact reforms).

contexts.⁸⁴ Here, as in other areas of professional regulation, each state could determine its own qualification standards and disciplinary rules.

III. A Range of Activities: Current State Oversight Mechanisms

Some states have established state-level oversight, but none have established it to the extent proposed by this Note. Determining the success of these oversight mechanisms is difficult, since controversies or errors can occur even with oversight in place.⁸⁵ And for the most part, these states have avoided questions concerning the validity of non-DNA forensic science. Efforts range from the establishment of boards overseeing forensic science laboratories⁸⁶ to the establishment of panels that investigate analyst negligence or misconduct alleged by members of the public.⁸⁷ While a few states have removed oversight from law enforcement control⁸⁸—thereby reducing the risk of unintended bias and conflicts of interest—the others have not. Similarly, some states have performed effective independent investigations into laboratory practices and have identified causes of error or negligence, rather than allowing law enforcement to conduct internal investigations.⁸⁹ But often, investigations have not been sufficiently independent to detect problems, recommend changes, or monitor implementation of recommendations.⁹⁰ Finally, in the few states that have implemented investigations of public complaints, questions remain as to whether these institutions, with their focus on the past, can provide effective oversight.

Before turning to a proposed model of state oversight, a description of the patchwork of current state oversight mechanisms is necessary. This Note's proposed model of state oversight captures the benefits of these actual institutions and attempts to eliminate their shortcomings.

A. *Do Nothing*

Many states lack any institutional oversight. In these states, tensions between stakeholders and a lack of political will have prevented the establishment of oversight mechanisms. The intention of this subpart is not to survey the states without oversight. Instead, an examination of a recent

84. See, e.g., Fred C. Zacharias, *Reform or Professional Responsibility as Usual: Whither the Institutions of Regulation and Discipline?*, 2003 U. ILL. L. REV. 1505, 1509 (observing that professional regulation of attorneys has historically been a state function).

85. See, e.g., JOSEPH FISCH, N.Y. OFFICE OF THE INSPECTOR GEN., REPORT OF INVESTIGATION OF THE TRACE EVIDENCE SECTION OF THE NEW YORK STATE POLICE FORENSIC INVESTIGATION CENTER 10–11 (2009) (investigating misconduct in the trace evidence section of a state laboratory that was accredited and subject to board oversight by the state).

86. See *infra* subpart III(C).

87. See *infra* subpart III(E).

88. See, e.g., MD. CODE ANN., HEALTH–GEN. § 17-2A-02 (LexisNexis 2009) (moving oversight to the Department of Health and Mental Hygiene).

89. See *infra* subpart III(D).

90. See *infra* note 150 and accompanying text.

effort to build oversight in California illustrates the barriers to implementation of state-level oversight.

The lack of oversight in California does not imply a lack of reflection on the matter. California has a history of task forces charged with studying crime laboratories within the state.⁹¹ The state legislature established the most recent one, the California Crime Laboratory Review Task Force (CA Task Force), to “make recommendations as to how best to configure, fund, and improve the delivery of state and local crime laboratory services in the future.”⁹²

In November 2009, the CA Task Force issued its final report, recommending that California “establish a statewide body to consider issues related to forensic science” and resolving to publish a supplemental report on the specifics of that recommendation within one year.⁹³ According to the CA Task Force, statewide oversight could improve the allocation of resources, increase efficiency, standardize terminology and the method of communicating findings, coordinate education and training, and investigate allegations of serious negligence and misconduct.⁹⁴ All members of the CA Task Force, however, did not agree on such a proposal. Some had “strong reservations,” arguing that a statewide body would micromanage local laboratory operations and issue arbitrary, inefficient rules.⁹⁵

The voices of these dissenting members ultimately prevailed in the summer of 2010, when the CA Task Force disbanded without publishing the supplemental report.⁹⁶ The members advanced various reasons for disbanding: they had fulfilled their legislative mandate, federal action would preempt state reform, state oversight would duplicate existing accreditation programs, outside regulation would consume the time of laboratory managers and result in decreased productivity, and other states’ approaches experienced only mild success.⁹⁷ The termination vote was controversial, especially because five of the six members voting to disband were laboratory managers.⁹⁸ Proponents of the task force remaining active argued that many of the reasons cited for termination conflicted with recommendations in the CA Task Force’s own report.⁹⁹

91. See CAL. CRIME LAB. REVIEW TASK FORCE, *supra* note 47, at 11–14 (describing three government-sponsored studies conducted in California between 1998 and 2004).

92. *Id.* at 1 (quoting CAL. PENAL CODE § 11062 (West 2011)).

93. *Id.* at 91.

94. *Id.* at 85–88.

95. *Id.* at 85.

96. Minutes, Cal. Crime Lab. Review Task Force 4 (June 3, 2010), available at http://ag.ca.gov/meetings/tf/pdf/TF_Minutes_060310.pdf.

97. *Id.* at 1–4.

98. Letter from William Thompson et al., Members, Cal. Crime Lab. Review Task Force (June 25, 2010), available at http://ag.ca.gov/meetings/tf/pdf/legislature_submit.pdf.

99. See *id.* (recalling that the CA Task Force concluded that accreditation alone was insufficient and arguing that federal initiatives would not address state needs).

California's failure to implement state-level oversight illustrates the role that competing voices play in forensic science oversight and the tension caused by the forced relationship of science and law. In this case, the failure to establish oversight may be due to the dominant voices of science and forensic science organizations.¹⁰⁰ Lawyers, analysts, laboratory managers, the police, and citizens likely agree that validity and reliability are crucial. But when voices diverge on how to achieve these goals, reform becomes difficult, especially if forensic science providers resist working with outsiders.¹⁰¹ Funding, too, likely contributes to the failures to establish oversight, particularly at a time when most crime laboratories are under-resourced.¹⁰² Many states, however, have established and funded oversight institutions, and this consistent oversight at least eliminates the financial inefficiencies that result from a patchwork of localized laboratory control, repeated statewide task-force studies, and ad hoc investigations.

B. Mandatory Accreditation

Most forensic science laboratories are accredited.¹⁰³ A few states require that an external organization accredit all public laboratories within the state,¹⁰⁴ but most do not. The American Society of Crime Laboratory Directors/Laboratory Accreditation Board (ASCLD/LAB) performs accreditation in almost all cases.¹⁰⁵ ASCLD/LAB is an independent, not-for-profit corporation; however, the American Society of Crime Laboratory Directors (ASCLD) created it, and the two bodies still work closely together.¹⁰⁶ There

100. *See id.* ("It is unfortunate that the membership of the Task Force was dominated by laboratory managers and representatives of organizations that operate crime laboratories.")

101. *See, e.g.,* Larry A. Hammond, *The Failure of Forensic Science Reform in Arizona*, 93 JUDICATURE 227, 228 (2010) (describing state crime laboratories in Arizona as "not enthusiastic" about outside involvement in oversight); Jennifer L. Mnookin, *supra* note 74, at 1210 (explaining that when academics have attempted to study questions of validity or reliability, "they have sometimes faced limited cooperation, or even downright resistance, from the forensic science community").

102. *See CAL. CRIME LAB. REVIEW TASK FORCE*, *supra* note 47, at 48 (noting that all California crime laboratories surveyed expressed a need for more predictable, stable funding); Hammond, *supra* note 101, at 229 (hypothesizing that Arizona's financial crisis and general lack of funding could be the reason for state inaction). *See generally* DUROSE, *supra* note 48, at 2-7 (describing laboratory funding and the high frequency of backlogged requests for service).

103. DUROSE, *supra* note 48, at 3 (reporting that 91% of state laboratories are accredited). While accreditation of state-level laboratories is the norm, accreditation of laboratories serving counties and cities occurs less frequently. *Id.* (reporting that 67% of county laboratories and 62% of municipal laboratories are accredited). This 2005 report provides the most recent data; rates may have increased in recent years.

104. *See, e.g.,* OKLA. STAT. ANN. tit. 74, § 150.37 (West Supp. 2011) ("[A]ll forensic laboratories . . . shall be ASCLD/LAB accredited.")

105. DUROSE, *supra* note 48, at 3 (reporting that 78% of all crime laboratories were accredited by ASCLD/LAB and another 3% were accredited by other bodies).

106. *History of the American Society of Crime Laboratory Directors Laboratory Accreditation Board (ASCLD/LAB)*, AM. SOC'Y CRIME LABORATORY DIRECTORS: LABORATORY ACCREDITATION BOARD, http://www.ascl-d-lab.org/about_us/history.html. That the organizations

are 387 crime laboratories accredited by ASCLD/LAB, including 193 state laboratories and 130 local laboratories.¹⁰⁷ Only three states lack ASCLD/LAB accredited laboratories.¹⁰⁸ Thus, the vast majority of public laboratories (especially statewide laboratories) are accredited, and given that only a minority of states requires accreditation, most accreditations occur voluntarily.

ASCLD/LAB has grown quickly since its establishment in 1981,¹⁰⁹ and the increase in the number of accredited laboratories is noteworthy.¹¹⁰ Accreditation ensures—at least nominally—that a laboratory “adheres to an established set of standards of quality and relies on acceptable practices within these requirements.”¹¹¹ But with the majority of large, public forensic science laboratories already accredited on a voluntary basis, state statutes requiring accreditation do little more than encourage a baseline level of quality assurance. As the NAS Report concludes, “Accreditation is just one aspect of an organization’s quality assurance program”¹¹² Whether ASCLD/LAB will continue to enjoy its monopoly on accreditation remains unknown, especially amidst reports of corruption and bias.¹¹³ In other words, ASCLD/LAB might not be as independent as it claims, as it is the only real accreditation option available to laboratories and it has close ties with laboratory directors.¹¹⁴ But more importantly, no matter what entity accredits

work “closely” may be an understatement. They occupy the same address in North Carolina, along with related consulting and lobbying groups. Joseph Neff & Mandy Locke, *Forensic Groups’ Ties Raise Concerns*, NEWS & OBSERVER (Raleigh, N.C.), Oct. 13, 2010, available at <http://www.newsobserver.com/2010/09/26/703376/forensic-groups-ties-raiseconcerns.html>. But see Giannelli, *supra* note 46, at 75 (arguing that criticism of the close ties between ASCLD, ASCLD/LAB, and crime laboratory directors is “overblown”).

107. *ASCLD/LAB Accredited Laboratories*, AM. SOC’Y CRIME LABORATORY DIRECTORS: LABORATORY ACCREDITATION BOARD, <http://www.ascl-d-lab.org/labstatus/accreditedlabs.html> (noting the total numbers as of September 12, 2011). The remaining accredited laboratories are federal, international, and private. *Id.*

108. *Id.* (Delaware, Rhode Island, and South Dakota).

109. See *History of the American Society of Crime Laboratory Directors Laboratory Accreditation Board (ASCLD/LAB)*, *supra* note 106 (describing the establishment of ASCLD/LAB and its growth as an accrediting board in the following years).

110. See, e.g., NAT’L INST. OF JUSTICE, *supra* note 10, at 24 (reporting in 2006 only 260 accredited laboratories and 9 states without any accredited laboratories). There are now 387 accredited laboratories. See *supra* note 107 and accompanying text.

111. NAS REPORT, *supra* note 16, at 195.

112. *Id.*

113. See Neff & Locke, *supra* note 106 (noting questions about ASCLD/LAB’s independence and that the legislature encouraged the State Bureau of Investigation to “shop for another accreditation group”). The current federal reform proposal requires that the federal government determine the standards and procedures for accreditation in consultation with “qualified professional organizations.” Criminal Justice and Forensic Science Reform Act of 2011, S. 132, 112th Cong. § 202(a)(1) (2011) (as referred to S. Comm. on the Judiciary, Jan. 25, 2011). It also permits the federal government to designate an outside organization to perform the actual accreditation of laboratories under government oversight and review. *Id.* § 203(a)(2)(A). ASCLD/LAB could qualify for this proposed role.

114. See *infra* notes 235, 237 and accompanying text.

laboratories, accreditation only addresses issues of compliance with existing scientific practices. It does not address the validity of the underlying science, identify cases of technician negligence or fraud, remedy past injustices, or necessarily advocate for the best possible laboratory practices. Nor does it reach activities that occur outside of the laboratory, such as field-testing.¹¹⁵ While ASCLD/LAB posits that “its continuously evolving accreditation program has been the single most important factor in improving the quality of forensic services provided to the criminal justice system nationwide,”¹¹⁶ the fact remains that accreditation failed to shield many laboratories from substantial misconduct, error, and ensuing scandals.¹¹⁷ Accreditation may help decrease the likelihood that violations will occur,¹¹⁸ but its failure to engage continuously with laboratories and to provide sufficient external monitoring disqualifies it as the sole source of oversight.¹¹⁹

C. Oversight Boards

A common form of state oversight is a board or committee comprised of various actors from within the criminal justice system and forensic science community. Many states utilize such boards; New York and Virginia, described in part below, provide illustrative examples.

The location of a board within state government varies by state. Often, the board is located within whichever state agency or department handles

115. According to some estimates, over half of forensic scientists do not work inside traditional laboratories and are outside the scope of accreditation. Risinger, *supra* note 33, at 241; *see also* NAS REPORT, *supra* note 16, at 200 (recognizing a “substantial gap” in accreditation since some disciplines are largely practiced outside of the laboratory).

116. Position Statement, Am. Soc’y of Crime Lab. Dirs.: Lab. Accreditation Bd., Position on Reporting of Blood Screening Tests in the 1980’s and 1990’s 2 (Feb. 18, 2011), available at http://asclcd-lab.org/statements/Position_Statement_Blood_Testing.pdf.

117. *See id.* at 1 (reporting that a laboratory accused of issuing “inaccurate” and “misleading” reports complied with ASCLD/LAB accreditation standards on every inspection during the time period in question).

118. *See* NAS REPORT, *supra* note 16, at 195 (“[A]ccreditation does not mean that accredited laboratories do not make mistakes . . . but rather, it means that the laboratory adheres to an established set of standards of quality and relies on acceptable practices within these requirements.”).

119. *See* Craig M. Cooley & Gabriel S. Oberfield, *Increasing Forensic Evidence’s Reliability and Minimizing Wrongful Convictions: Applying Daubert Isn’t the Only Problem*, 43 TULSA L. REV. 285, 376–78 (2007) (“[A] grant of accreditation is insufficient to provide external and independent oversight.”). *But see, e.g.,* JEFF RODZEN ET AL., CAL. ASS’N OF CRIMINALISTS & CAL. ASS’N OF CRIME LAB. DIRS., AB-1079 AND THE CALIFORNIA CRIME LABORATORY SYSTEM: STATEWIDE FORENSIC SCIENCE OVERSIGHT 4–5 (2010), available at <http://www.cacnews.org/policies/CACLD-CAC%20Oversight%20paper%20final%20072810.pdf> (arguing that accreditation and the nature of the criminal justice system provide sufficient oversight in California). Those in favor of an accreditation-only approach to oversight often exaggerate the oversight provided by the structure of the criminal justice system. *Compare id.* at 5 (“[T]he very nature of the criminal justice system provides its own informal, yet powerful, oversight of crime laboratories’ performance through the discovery process, review of crime laboratory work by defense experts, and court ‘gate-keeper’ decisions.”), with Neufeld, *supra* note 42, at S108–11 (questioning the role the criminal justice system and judicial gatekeeping can play in improving forensic science).

criminal investigations. In New York, for example, the Commission on Forensic Science and its DNA Subcommittee are located within the Office of Forensic Services, which in turn is located within the Division of Criminal Justice Services.¹²⁰ In Virginia, the Forensic Science Board is located within the Department of Forensic Science, a department within the Virginia state government.¹²¹ Maryland employs a novel approach, locating its oversight within the Department of Health and Mental Hygiene, the same state department charged with oversight of medical laboratories.¹²²

Enabling statutes often describe a board's duties. For example, the Forensic Science Board oversees all forensic science in Virginia and is charged with adopting regulations and reviewing budgetary decisions.¹²³ The board reviews, amends, and approves recommendations made by the Scientific Advisory Committee.¹²⁴ That committee, in turn, reviews laboratory operations and makes recommendations to the board concerning new scientific programs, improvements to existing programs, protocols for testing, and qualification standards for scientists within the Department of Forensic Science.¹²⁵ The committee also recommends to the board "a review process for the Department to use . . . where there has been an allegation of misidentification or other testing error made by the Department during its examination of evidence."¹²⁶

Some combination of forensic scientists, laboratory directors, law enforcement officials, prosecutors, and defense attorneys typically comprises the membership of a state oversight board. Appointment differs by state. In New York, for instance, the Governor appoints twelve of the fourteen members of the Commission on Forensic Science based upon the recommendation of various groups with an interest in forensic science oversight.¹²⁷ For example, one member of the commission must be a representative of a law enforcement agency, appointed upon the recommendation of the commissioner of Criminal Justice Services.¹²⁸ Among the representatives, two must

120. *About the Office of Forensic Services*, N.Y. DIVISION OF CRIM. JUST. SERVICES, <http://criminaljustice.state.ny.us/forensic/aboutofs.htm>.

121. *About DFS*, VA. DEPARTMENT OF FORENSIC SCI., <http://www.dfs.virginia.gov/about/index.cfm>. The Virginia General Assembly removed the Department of Forensic Science from law enforcement in response to several instances of misconduct and subsequent exonerations. Giannelli, *supra* note 15, at 194–95.

122. MD. CODE ANN., HEALTH–GEN. § 17-2A-12 (LexisNexis 2009) (establishing the Forensic Laboratory Advisory Committee, an advisor to the Secretary of the Department of Health and Mental Hygiene); *Forensic Laboratory Advisory Committee*, MD. ST. ARCHIVES (Mar. 21, 2011), <http://www.msa.md.gov/msa/mdmanual/26excom/html/15forensiclab.html>.

123. VA. CODE ANN. § 9.1-1110(A)(1), (4) (2006).

124. *Id.* § 9.1-1110(A)(7).

125. *Id.* § 9.1-1113(B).

126. *Id.* § 9.1-1113(C).

127. N.Y. EXEC. LAW § 995-a(1)(b), (2) (McKinney 1996).

128. *Id.* § 995-a(2)(e).

be scientists with experience in the areas of laboratory standards and quality assurance.¹²⁹

The number of states with boards has grown since New York became the first state to establish one in 1994.¹³⁰ Other states include Arizona,¹³¹ Minnesota,¹³² Missouri,¹³³ Montana,¹³⁴ New Mexico (DNA oversight only),¹³⁵ Rhode Island,¹³⁶ and Washington.¹³⁷

D. Independent Investigations

While accreditation and oversight boards seek to ensure the present and future quality of forensic science through policy making and enforcement of rules, state investigative entities examine allegations of negligence and misconduct in order to regulate laboratories. States take various approaches to investigation. Some authorize oversight boards to perform investigations themselves.¹³⁸ Other states delegate the role to an outside agency such as the Office of Inspector General, either via a state oversight board¹³⁹ or without that intermediate step.¹⁴⁰

129. *Id.* § 995-a(2)(d).

130. Giannelli, *supra* note 46, at 78.

131. Press Release, Office of Att’y Gen. Terry Goddard, Terry Goddard Appointing New Panel to Assist State Crime Labs (Nov. 20, 2007), available at http://www.azag.gov/press_releases/nov/2007/TGAppointsNewPanelToAssistStateCrimeLabs.pdf (discussing the creation of the Forensic Services Advisory Committee, located within the Attorney General’s office).

132. MINN. STAT. ANN. § 299C.156 (West 2007) (establishing the Forensic Laboratory Advisory Board, located within the Bureau of Criminal Apprehension, and in turn within the Department of Public Safety).

133. MO. ANN. STAT. § 650.059.1 (West Supp. 2011) (creating the Crime Laboratory Review Commission, located within the Department of Public Safety). The enabling statute envisions “independent review of any state or local Missouri crime laboratory receiving state-administered funding.” *Id.* However, the commission is located within a law enforcement agency, so its independence is questionable.

134. *Forensic Science Laboratory Advisory Board*, MONT. DEPARTMENT OF JUST., <http://www.doj.mt.gov/enforcement/crimelab/#advisoryboard> (discussing the Forensic Science Laboratory Advisory Board, located within the Department of Justice).

135. N.M. STAT. ANN. § 29-16-5 (Supp. 2004) (establishing the DNA Oversight Committee).

136. R.I. GEN. LAWS § 12-1-1-3 (2002) (creating the State Crime Laboratory Commission).

137. WASH. REV. CODE ANN. § 43.103.030 (West 2007) (establishing the Washington State Forensic Investigations Council).

138. *See, e.g., id.* (charging the Washington State Forensic Investigations Council with oversight of the state’s forensic pathology program). For an example of an investigation by an oversight board, see FORENSIC INVESTIGATIONS COUNCIL, REPORT ON THE WASHINGTON STATE TOXICOLOGY LABORATORY AND THE WASHINGTON STATE CRIME LABORATORY (2008), available at <http://www.corpus-delicti.com/ficinvestigativeteport04-17-08.pdf>.

139. *See, e.g., id.* (explaining that the New York State Commission on Forensic Science designated the State Inspector General to conduct an independent investigation).

140. *See, e.g.,* GREGORY W. SULLIVAN, OFFICE OF THE INSPECTOR GEN., REVIEW OF THE DNA TESTING OPERATIONS AND THE ASSOCIATED MANAGEMENT STRUCTURE OF THE EXECUTIVE OFFICE OF PUBLIC SAFETY AND SECURITY’S FORENSIC SERVICES GROUP 1 (2009), available at http://www.mass.gov/ig/publ/forensic_lab_rpt.pdf (explaining that the office investigated pursuant to the Massachusetts State Police Crime Laboratory’s designation under the Coverdell program).

The designation of investigative entities occurs in large part due to a requirement under the federal Paul Coverdell Forensic Sciences Improvement Grants program.¹⁴¹ In order to receive funds under the Coverdell program, a state must submit a certification to the U.S. Attorney General that it has a process in place “to conduct independent external investigations into allegations of serious negligence or misconduct substantially affecting the integrity of the forensic results.”¹⁴² In theory, the requirement of external investigations forces states to create a new state entity or delegate the function to an existing one. But in practice, the NIJ, which administers the Coverdell funds from within the Office of Justice Programs, has largely failed to enforce the requirement.¹⁴³ For example, of 223 grant applications received in fiscal year 2005, 80 provided the certification and the name of the government entity assigned the investigatory role, 87 did not provide the certification or provided incomplete certification, and 56 merely quoted the general terms of the Coverdell grant statute without providing the name of the governmental entity assigned the investigatory role.¹⁴⁴ Three years later, a subsequent investigation found that while the NIJ technically complied with the statute by gathering external investigation certifications from applicants, it still failed to ensure that the entities designated by applicants had the authority, capability, and independence required for effective external investigations.¹⁴⁵

The NIJ has responded to the reports by clarifying the certification requirements and providing examples in its 2010 grant application of how states could meet the requirement.¹⁴⁶ The application warns that an official who misrepresents the existence of a government agency to conduct independent investigations may be subject to criminal prosecution for false statements.¹⁴⁷ While the NIJ may withhold funding if a recipient fails to disclose the number of allegations of negligence or misconduct and the outcome of each investigation,¹⁴⁸ it remains unclear how tenaciously the NIJ enforces the requirement. As Congress considers forensic science reform, it is likely

141. 42 U.S.C. § 3797k(4) (2006).

142. *Id.*

143. OFFICE OF THE INSPECTOR GEN., U.S. DEP’T OF JUSTICE, REVIEW OF THE OFFICE OF JUSTICE PROGRAMS’ FORENSIC SCIENCE IMPROVEMENT GRANT PROGRAM 7–11 (2005), *available at* <http://www.justice.gov/oig/reports/OJP/e0602/final.pdf> (finding that the NIJ failed to provide enough guidance to applicants or to ensure compliance with the requirement that applicants designate an external investigator).

144. *Id.* at 10–11.

145. OFFICE OF THE INSPECTOR GEN., U.S. DEP’T OF JUSTICE, REVIEW OF THE OFFICE OF JUSTICE PROGRAMS’ PAUL COVERDELL FORENSIC SCIENCE IMPROVEMENT GRANTS PROGRAM 7 (2008), *available at* <http://www.justice.gov/oig/reports/OJP/e0801/final.pdf>.

146. NAT’L INST. OF JUSTICE, U.S. DEP’T OF JUSTICE, SOLICITATION: PAUL COVERDELL FORENSIC SCIENCE IMPROVEMENT GRANTS PROGRAM 5–8 (2010), *available at* <http://www.ncjrs.gov/pdffiles1/nij/sl000921.pdf>.

147. *Id.* at 5.

148. *Id.*

that enforcement will improve.¹⁴⁹ For now, the result of the requirement in many states is either continued ignorance of the requirement, reactive delegation of investigatory authority once allegations of misconduct arise, or delegation of investigatory authority to entities that are not sufficiently independent to execute proper oversight of investigations.¹⁵⁰

This is not to say that oversight via external investigations is a lost cause. Independent investigations do occur and often find significant evidence of misconduct.¹⁵¹ The subject matter of an investigation is often broad in scope, examining everything from the complete work product of an allegedly negligent technician to ineffective laboratory management. Investigations—when conducted by credible, external entities—are critical to forensic science oversight. They force the forensic science community to face allegations of misconduct,¹⁵² especially in cases where informal, internal investigations fail to identify and remedy problems.¹⁵³ When criminal convictions are involved, investigations assign accountability for miscarriages of justice and anticipate ways to prevent future problems. And the publication of reports brings attention to allegations of misconduct that

149. *See, e.g.*, Letter from Gabriel S. Oberfield, Research Analyst, Innocence Project, to Members of the Task Force to Conduct a Review of California's Crime Laboratory System 2–3 (Apr. 2, 2008), available at http://www.ag.ca.gov/meetings/tf/pdf/innocence_project_letter.pdf (“Enforcement of [the external investigation] requirement undoubtedly will be more robust in coming years, and the failure of California labs to comply with the provision could put Coverdell funding in jeopardy.”).

150. *See, e.g.*, CAL. COMM'N ON THE FAIR ADMIN. OF JUSTICE, *supra* note 18, at 62 (surveying California grant recipients and concluding that in “nearly every instance, the independent auditing entity described was the Internal Affairs Division of the County Sheriff's Office or Police Department involved”). The commission recommended that district attorneys in each county evaluate allegations of negligence or misconduct and conduct an independent investigation when necessary. *Id.* at 63. However, delegating “independent” authority to the state's district attorneys does not necessarily ensure independence. *See* Letter from Gabriel S. Oberfield to Members of the Task Force to Conduct a Review of California's Crime Laboratory System, *supra* note 149, at 5 (describing internal investigations as ineffective due to conflicts of interest and questioning whether a district attorney's office could ever provide independent, external oversight).

151. *See, e.g.*, BROMWICH, *supra* note 1, at 114–15, 150–51 (reporting significant and pervasive problems with the analysis and reporting of results in a large portion of serology and DNA cases in Houston's crime laboratory); FISCH, *supra* note 85, at 52–53 (reporting misconduct in the trace evidence section of the Forensic Investigation Center operated by the New York State Police); FORENSIC INVESTIGATIONS COUNCIL, *supra* note 138, at 10–11 (reporting that the Washington State Crime Laboratory's toxicology manager filed false certifications on tests that were conducted by another analyst).

152. *See, e.g.*, BROMWICH, *supra* note 1, at 186 (“The purpose of outside scrutiny is to shed light on a laboratory's practices, to focus attention on existing deficiencies and potential problems, and to broaden the perspective of laboratory analysts . . .”).

153. *See, e.g.*, FISCH, *supra* note 85, at 1 (recounting the flawed internal inquiry conducted by laboratory management that ignored valid complaints about the training and supervision of the guilty laboratory technician); *see also* Letter from Gabriel S. Oberfield to Members of the Task Force to Conduct a Review of California's Crime Laboratory System, *supra* note 149, at 4 (“We have yet to observe a local police department or crime laboratory internal affairs division conduct a crime lab investigation completely free from influence, if not supervision, by its upper laboratory management”). Internal investigations in Montana, Virginia, and New York all suffered from conflicts of interest. *Id.*

may have otherwise gone unnoticed. Although they can be time-consuming and costly, investigations provide an effective form of oversight, at least when employed in conjunction with oversight boards that can help implement and monitor the investigator's recommendations. To better perform their role, investigation entities must receive immediate notification when problems arise.¹⁵⁴ In addition to making findings about allegations of past misconduct, they must also communicate future-oriented recommendations. Many large-scale investigations in recent years have done so.¹⁵⁵ When independent investigations occur at the appropriate time, they are an important part of any framework of forensic science oversight.

E. Forensic Science Investigative Panels

The State of Texas has developed a unique version of the investigation framework in which a dedicated government entity receives public complaints and performs case-by-case investigations. Established in 2005, the Texas Forensic Science Commission (TFSC) investigates allegations of professional negligence or misconduct that would substantially impact the integrity of the results of a forensic analysis conducted by any accredited laboratory.¹⁵⁶ The results of an investigation must be made available to the public in a written report.¹⁵⁷ Investigation panels comprised of three of the nine commissioners conduct investigations.¹⁵⁸ These panels investigate public complaints that make it past the commission's vetting process.¹⁵⁹ They may also "contact . . . any governmental agency, individual, or entity" for assistance in the investigation.¹⁶⁰ Like oversight boards, membership on the TFSC is distributed amongst stakeholders. The Governor, Lieutenant Governor, and attorney general appoint the members of the commission.¹⁶¹ Seven members come from various scientific perspectives within the umbrella of forensic science.¹⁶² One member must be a prosecuting attorney

154. See FISCH, *supra* note 85, at 111–12 (recommending that the independent investigator should be "immediately notified" when allegations of misconduct arise).

155. See, e.g., *id.* (recommending technical review, independent investigations, and additional training in order to improve quality control in a forensic laboratory).

156. TEX. CODE CRIM. PROC. ANN. art. 38.01, §§ 1, 4(a)(3) (West Supp. 2010); *About Us*, TEX. FORENSIC SCI. COMMISSION, <http://www.fsc.state.tx.us/about.html>. In Texas, a forensic analysis or expert testimony relating to forensic evidence is only admissible in court if the crime laboratory conducting the analysis was accredited. TEX. CODE CRIM. PROC. ANN. art. 38.35(d)(1) (West Supp. 2010).

157. TEX. CODE CRIM. PROC. ANN. art. 38.01, § 4(b)(1) (West Supp. 2010). The TFSC recently published its first final report. See *generally* TEX. FORENSIC SCI. COMM'N, REPORT OF THE TEXAS FORENSIC SCIENCE COMMISSION: WILLINGHAM/WILLIS INVESTIGATION (2011), available at <http://www.fsc.state.tx.us/documents/FINAL.pdf>.

158. TEX. FORENSIC SCI. COMM'N, POLICIES AND PROCEDURES 8 (2011), available at http://www.fsc.state.tx.us/documents/D_PoliciesandProcedures042811.pdf.

159. *Id.* at 6–8 (describing the complaint-screening process).

160. *Id.* at 8.

161. TEX. CODE CRIM. PROC. ANN. art. 38.01, § 3(a) (West Supp. 2010).

162. See *id.* (listing the qualifications of individual members).

and another a defense attorney.¹⁶³ The Governor designates a member to serve as the presiding officer.¹⁶⁴

The TFSC has experienced major growing pains, including a controversy over the inquiry into the science used to convict Cameron Todd Willingham of arson.¹⁶⁵ Texas Attorney General Greg Abbott's narrow interpretation of the TFSC's enabling statute is cause for serious concern,¹⁶⁶ as is political interference that may threaten the integrity of the commission's procedures.¹⁶⁷ Critics argue that the Governor's appointment of an aggressive prosecutor as presiding officer created an imbalance in the commission's operation and stymied its role as a scientific investigator.¹⁶⁸ The TFSC also adds to the size of the government bureaucracy; other states have questioned whether the creation of such an entity is worth the cost, especially if the state believes that county district attorneys or the attorney general can provide proper investigations into individual allegations of misconduct.¹⁶⁹

163. *Id.* § 3(a)(1)(B)–(C).

164. *Id.* § 3(c).

165. *See, e.g.,* James C. McKinley, Jr., *Texas Governor Fires Chairman of Forensic Science Committee*, N.Y. TIMES, Oct. 1, 2009, at A24 (describing Governor Rick Perry's decision to replace the presiding officer of the commission two days before the commission was to hear evidence that Willingham, who had been executed by the state five years earlier, was innocent).

166. *See* Tex. Att'y Gen. Op. No. GA-0866 (2011), available at <https://www.oag.state.tx.us/opinions/opinions/50abbott/op/2011/html/ga-0866.htm> (prohibiting the TFSC from considering evidence that was tested or offered into evidence prior to September 1, 2005, and from considering fields of forensic analysis expressly excluded from the statutory definition of *forensic analysis*, including latent print examination, digital evidence, and alcohol breath testing). The opinion effectively ended the pending part of the Willingham investigation—whether there was negligence or misconduct committed by forensic scientists—and greatly limits the TFSC's ability to review older cases. *See* TEX. FORENSIC SCI. COMM'N, *supra* note 158, at 6 (explaining that a pending attorney general opinion precluded any findings on negligence in the Willingham case); Brandi Grissom, *New Head of Forensic Science Panel Takes on Arson Case*, TEX. TRIB. (July 22, 2011), <http://www.texastribune.org/texas-dept-criminal-justice/texas-forensic-science-commission/new-head-of-forensic-science-panel-takes-on-arson/> (explaining that the potential opinion would deny TFSC access to an “unknown number of inmates convicted based on so-called junk science”).

167. *See* McKinley, *supra* note 165 (quoting the co-director of the Innocence Project, who likened Governor Perry's actions to “Nixon firing Archibald Cox to avoid turning over the Watergate tapes”).

168. Rick Casey, Op-Ed., *Willingham: Scientists vs. Lawyers*, HOUS. CHRON., Jan. 9, 2011, at B1, available at <http://www.chron.com/dispatch/story.mpl/metropolitan/casey/7373600.html> (questioning whether a member serving simultaneously as presiding officer and prosecutor could effectively lead the “scientific” commission while also vigorously defending criminal convictions). The Texas State Senate was unwilling to reconfirm the prosecutor's appointment. Mike Ward, *Williamson Prosecutor Lacks Votes to Lead Panel*, AUSTIN AM.-STATESMAN, Mar. 10, 2011, at A1. Governor Perry subsequently appointed a medical examiner to chair the TFSC. *Forensic Panel Gets New Leader After Willingham Case*, HOUS. CHRON. (July 1, 2011), <http://www.chron.com/news/houston-texas/article/Forensic-panel-gets-new-leader-after-Willingham-2081564.php>. There is optimism that the commission can move past the political wrangling of its early years. *See* Grissom, *supra* note 166 (describing legislators' optimism that the new chairman “will move the commission past the political pressures that have beleaguered its work”).

169. *See, e.g.,* CAL. COMM'N ON THE FAIR ADMIN. OF JUSTICE, *supra* note 18, at 63 (determining that creating a new forensic science commission in California based on the TFSC model would be an unnecessary “new level of bureaucracy”). *But see* Letter from Gabriel S.

But it is too early to dismiss the TFSC as a failed experiment. First, TFSC investigations allow regulators to get a better picture of the maladies that plague forensic science. Second, the investigations represent a potential path to new evidence for those individuals who have been wrongfully convicted.¹⁷⁰ Third, unlike independent investigators and boards who usually conduct broad-brush investigations, the TFSC is at the public's disposal and solicits public complaints based on individual cases.¹⁷¹ Fourth, unlike outside investigators conducting ad hoc investigations, the TFSC represents a permanent institution dedicated to the oversight of forensic science. In other words, forensic science cannot get lost in the shuffle, and other agency duties cannot delay investigations. Finally, unlike outside investigators such as an inspector general, the majority of TFSC commissioners represent the forensic science community that they investigate. They have the experience, expertise, and credibility that may be required to perform accurate investigations and to make meaningful recommendations.¹⁷² In the coming years, the TFSC (and the legislators who draft future enabling acts) must expand the scope of its investigatory authority and implement procedures to use should the TFSC find negligence or misconduct in a forensic analysis. Does such a finding require further inquiry into all related cases? How should the courts handle findings of negligence or misconduct? These questions illustrate how the commission's seemingly narrow subject-matter jurisdiction still has broad implications.

F. Innocence Commissions

Unlike the TFSC, which investigates laboratory misconduct and negligence but does not engage directly with the courts, innocence commissions (ICs) investigate past forensic analyses in order to ensure a just criminal system.¹⁷³ Of course, an actual innocence claim may be based on a

Oberfield to Members of the Task Force to Conduct a Review of California's Crime Laboratory System, *supra* note 149, at 3 (suggesting that local investigations into misconduct or negligence would create more inefficiency as opposed to establishing new, statewide oversight).

170. It is important to note that when used in subsequent criminal proceedings, TFSC reports are not prima facie evidence of the information they contain. TEX. CODE CRIM. PROC. ANN. art. 38.01, § 4(e) (West Supp. 2010). Thus, the TFSC does not offer a direct remedy to the wrongfully convicted. Nothing, however, precludes a party in a subsequent proceeding from at least offering a report as evidence.

171. *Id.* § 4(a)(3) (authorizing the TFSC to investigate any allegation of professional negligence or misconduct); see also *Texas Forensic Science Commission Complaint Form: Individual*, TEX. FORENSIC SCI. COMMISSION, 1, 3 (2009), http://www.fsc.state.tx.us/documents/D_ComplaintForm.pdf (soliciting complaints from individuals and asking for the complainant's relationship to the defendant).

172. The TFSC also has discretionary authority to perform follow-up evaluations to review the implementation of its recommendations. TEX. CODE CRIM. PROC. ANN. art. 38.01, § 4(b)(2)(B)(i) (West Supp. 2010).

173. See, e.g., N.C. GEN. STAT. § 15A-1461 (Supp. 2010) (establishing an innocence commission as "an extraordinary procedure to investigate and determine credible claims of factual innocence").

number of causes, such as an improper eyewitness identification, an unreliable informant, or a false confession.¹⁷⁴ While the role that faulty forensic science plays in wrongful convictions is hard to quantify, a recent empirical study illustrates that it is significant.¹⁷⁵ The failure of the courts to exclude unreliable evidence under *Daubert* certainly augments the effect.¹⁷⁶

North Carolina is the only state to create an IC—it established the North Carolina Innocence Inquiry Commission (NCIIC) in 2006.¹⁷⁷ While other states have formed formal task forces to investigate the causes of wrongful conviction and recommend reforms to reduce the frequency of wrongful conviction,¹⁷⁸ these states have not granted any authority to review individual claims of actual innocence.¹⁷⁹ Like the TFSC, the NCIIC exemplifies state experimentation;¹⁸⁰ its success may have a large impact on other states' decisions to establish similar entities.¹⁸¹

The NCIIC has authority to hear claims of “factual innocence” brought by persons convicted of felony crimes in North Carolina state court.¹⁸² Eight commissioners serve on the NCIIC, including a superior court judge, a

174. See *The Causes of Wrongful Conviction*, INNOCENCE PROJECT, <http://www.innocenceproject.org/understand/> (listing eyewitness misidentification, improper forensic science, false confessions, and mistaken informants as among the most common causes of wrongful conviction).

175. See generally Garrett & Neufeld, *supra* note 63 (cataloging the forensic science testimony used in the convictions of 137 people who were later exonerated by postconviction DNA testing).

176. See *id.* at 97 (“[T]he adversary system cannot be depended upon as an adequate safeguard. . . . [J]udges did not remedy most errors brought to their attention.”); see also *supra* notes 38–45 and accompanying text.

177. *About Us*, N.C. INNOCENCE INQUIRY COMMISSION, <http://www.innocencecommission-nc.gov/about.html>; see also David Wolitz, *Innocence Commissions and the Future of Post-Conviction Review*, 52 ARIZ. L. REV. 1027, 1049–53 (2010) (describing the NCIIC in detail).

178. See, e.g., INNOCENCE COMM’N, MISSION STATEMENT, OBJECTIVES, AND OPERATING PROCEDURE 1 (2010), available at http://www.flcourts.org/gen_public/bin/Commission-Mission.rtf (describing the Florida Innocence Commission as “a collegial body” that “identif[ies] the common causes of wrongful convictions, and . . . recommend[s] procedures to decrease the possibility of these convictions in the future”).

179. See Wolitz, *supra* note 177, at 1046–47 (noting that several states have established commissions to “study the problem of post-conviction review” but that “none of them had the mandate to investigate individual cases”).

180. See *id.* at 1053 (“The NCIIC is the first commission of its kind in the United States, and almost every aspect—from its inception to its composition to its procedures—can be fairly debated.”).

181. See *id.* at 1033 (arguing that the NCIIC could reframe the discussion about wrongful convictions and recommending that the NCIIC serve as a model for other states).

182. N.C. GEN. STAT. §§ 15A-1460, 1466 (Supp. 2010). A claim of factual innocence is defined as

a claim on behalf of a living person convicted of a felony in the General Court of Justice of the State of North Carolina, asserting the complete innocence of any criminal responsibility for the felony for which the person was convicted and for any other reduced level of criminal responsibility relating to the crime, and for which there is some credible, verifiable evidence of innocence that has not previously been presented at trial or considered at a hearing granted through postconviction relief.

Id. § 15A-1460(1).

prosecutor, a criminal defense attorney, and a member of the public.¹⁸³ Like the TFSC, the NCIIC may investigate claims raised by any person.¹⁸⁴ Formal rules govern the inquiry,¹⁸⁵ and the commission may utilize any measure available in the Code of Civil Procedure including compelling the attendance of witnesses.¹⁸⁶ If a claim passes the vetting process, an inquiry begins.¹⁸⁷ If the NCIIC concludes that there is sufficient evidence to support a possible finding of factual innocence,¹⁸⁸ a three-judge panel hears the case in a contested hearing between the State and the convicted individual.¹⁸⁹ If all three judges find by clear and convincing evidence that the convicted individual is innocent, they must dismiss the charges.¹⁹⁰ A convicted individual may not appeal the NCIIC's vote or the panel's finding, but all other rights to postconviction relief remain available.¹⁹¹

In 2010, Gregory Taylor became the first person exonerated by the NCIIC after serving over sixteen years in prison for murder.¹⁹² The forensic analysis of a substance thought to be the victim's blood was a key issue in Taylor's exoneration.¹⁹³ After Taylor's car was found near the scene of the murder, the State Bureau of Investigation (SBI) analyzed a substance found on the fender.¹⁹⁴ Initial crime scene results identified the substance as blood, but subsequent tests at the laboratory returned negative results.¹⁹⁵ The SBI only reported the positive test to the prosecutors, and neither Taylor nor the jury learned of the subsequent negative results.¹⁹⁶ The negative tests remained undisclosed for almost two decades until the NCIIC inquiry revealed laboratory notes indicating that there were additional tests and

183. *Id.* § 15A-1463(a)(1)–(2), (4)–(5).

184. *Id.* § 15A-1467(a).

185. *See generally* N.C. INNOCENCE INQUIRY COMM'N, RULES AND PROCEDURES (2010), available at <http://www.innocencecommission-nc.gov/rules.html> (setting out rules and procedures "to serve as a guideline for all functions of the Commission").

186. N.C. GEN. STAT. § 15A-1467(d) (Supp. 2010).

187. N.C. INNOCENCE INQUIRY COMM'N, *supra* note 185, at 8.

188. N.C. GEN. STAT. § 15A-1468(c) (Supp. 2010).

189. *Id.* § 15A-1469(d).

190. *Id.* § 15A-1469(h); *see also Case Progression Flowchart*, N.C. INNOCENCE INQUIRY COMMISSION, <http://www.innocencecommission-nc.gov/chart.html> (diagramming the steps in an innocence inquiry).

191. N.C. GEN. STAT. § 15A-1470 (Supp. 2010).

192. Wolitz, *supra* note 177, at 1053 & n.196.

193. Mandy Locke, *In Taylor Case, Blood is the Issue*, NEWS & OBSERVER (Raleigh, N.C.), Feb. 11, 2010, available at <http://www.newsobserver.com/2010/02/11/332181/in-taylor-case-blood-is-the-issue.html>.

194. *Id.*

195. *Id.*

196. *Id.*

results.¹⁹⁷ Subsequent FBI investigations of the SBI laboratory revealed that improper forensic analysis was used in 230 cases.¹⁹⁸

The Taylor case illustrates the oversight potential of ICs. The three-judge panel exonerated Taylor and dismissed the conviction. But the events also catalyzed reviews of other convictions and an investigation into more than a decade's worth of questionable forensic science.¹⁹⁹ These events persuaded the North Carolina General Assembly to implement reforms at the SBI laboratory.²⁰⁰ Thus, the past-oriented approach of an IC has the potential to change present and future conditions in laboratories. And unlike oversight boards, which attempt to improve forensic science through policy making, ICs can simultaneously remedy cases of misconduct or negligence and free the innocent.

Many states will likely question how ICs fit within the framework of their existing judicial systems. ICs certainly do little to further policies promoting finality of decisions,²⁰¹ and they add another level of complexity to an already-complicated criminal appeals process.²⁰² While the Taylor case illustrates the oversight potential of ICs, the resulting reforms at the SBI laboratory may be the exception rather than the rule. Also, ICs target more than improper forensic science. Whether they have enough focus and expertise to provide meaningful forensic science oversight remains unknown.

With their focus on criminal convictions, ICs cannot be the sole form of forensic science oversight. But ICs bring public attention to the issues confronting forensic science and provide a direct way for convicted individuals and the public to engage in oversight. Like the TFSC, ICs regulate at a level that neither boards nor large-scale investigations reach. And in contrast to the TFSC and the numerous obstacles it encountered during its early years, the NCIIC's relative success may encourage other states to establish their own ICs.

197. *Id.*

198. Mandy Locke et al., *Scathing SBI Audit Says 230 Cases Tainted by Shoddy Investigations*, NEWS & OBSERVER (Raleigh, N.C.), Aug. 19, 2010, available at <http://www.newsobserver.com/2010/08/19/635632/scathing-sbi-audit-says-230-cases.html>.

199. *Id.*

200. Joseph Neff, *Perdue Signs Crime Lab Law*, NEWS & OBSERVER (Raleigh, N.C.) (Apr. 1, 2011), <http://www.newsobserver.com/2011/04/01/1096213/perdue-signs-crime-lab-law.html> (listing reforms that include mandating that the crime laboratory disclose all notes, data, and test results; creating an independent scientific advisory board; removing ASCLD/LAB as the sole accrediting authority for the laboratory; and changing the name of the laboratory from SBI Crime Laboratory to North Carolina Crime Laboratory). The North Carolina General Assembly is also considering additional reforms, such as removing the state forensic science laboratory from law enforcement control. *Id.*

201. *But see* Wolitz, *supra* note 177, at 1082 (arguing that the judicial system affords too much value to finality "at the price of too many miscarriages of justice").

202. *Id.* at 1081–82 (viewing ICs as a new remedy rather than a "fix" for habeas corpus and other postconviction procedures).

IV. What Is a State To Do? A Proposed Model

States should enact reforms that regulate at both the laboratory and individual-analyst levels. Oversight should be independent, transparent, and active. The entities charged with oversight should continually recommend reforms—rather than act as ad hoc task forces or infrequent investigators—and should monitor the implementation of reforms. No state currently employs such a strong system of oversight.

While the NAS Report's call for the removal of laboratories from law enforcement is infeasible and unlikely to receive political support,²⁰³ partial removal of law enforcement oversight could achieve many of the proposed benefits of complete removal, such as freeing forensic science from police management, separating funding streams, increasing the focus on scientific investigation, and fostering a scientific culture.²⁰⁴ At the same time, continuing to locate physical laboratories within police departments addresses the concerns of law enforcement and prosecutors²⁰⁵ and maintains the tradition of the "police laboratory." *Where* the laboratory technician arrives to perform her job likely plays less of a role in reliability than *who* determines how she conducts her analyses and *who* investigates allegations of misconduct or error.

A board comprised of diverse stakeholders—forensic scientists, laboratory directors, law enforcement personnel, prosecutors, defense attorneys, and judges—should monitor laboratory practices and implement strong policies to combat reliability issues.²⁰⁶ The majority of members should come from the scientific, rather than the legal, community. But this is not self-regulation; actors from outside of the laboratories and law enforcement organizations should also be involved.²⁰⁷ Unlike the majority of current state boards, the board must not be located within a law enforcement

203. See D. Michael Risinger et al., *The Daubert/Kumho Implications of Observer Effects in Forensic Science: Hidden Problems of Expectation and Suggestion*, 90 CALIF. L. REV. 1, 43 (2002) ("The establishment of freestanding government forensic laboratories . . . would require such a revolution in thinking and organization, and diminish so many established bureaucratic empires, that it would take a generation of patient lobbying to have a chance of success.").

204. See Letter from Gabriel S. Oberfield to Members of the Task Force to Conduct a Review of California's Crime Laboratory System, *supra* note 149, at 3 ("Uniting [examples of effective oversight] is a recognition that significant errors are more likely to be revealed by bodies that are distinctly separate from the employees or management of the labs they supervise."). *But see* Michael J. Saks et al., *Model Prevention and Remedy of Erroneous Convictions Act*, 33 ARIZ. ST. L.J. 665, 698–700 (2001) (proposing that the removal of both laboratories and oversight from law enforcement is necessary to emphasize the science in forensic science and free forensic science of police culture and police personnel).

205. See, e.g., NAT'L DIST. ATT'YS ASS'N, *supra* note 35, at 3 (arguing that organizational and geographical proximity lead to more effective criminal investigations).

206. See *supra* subpart III(C) (providing examples of the composition of similar existing boards).

207. See Giannelli, *supra* note 15, at 229 (arguing that it is "critical" that any oversight board include research scientists and the defense bar among its members).

agency.²⁰⁸ It may be located in its own independent department or within an existing entity such as the Department of Health.

The statute establishing the board should define terms such as *forensic science*, *forensic analysis*, and *forensic science provider* broadly in order to avoid gaps in oversight. For example, *forensic analysis* should mean any biological, medical, chemical, toxicologic, ballistic, or other expert examination or test performed on physical evidence, including DNA evidence, for the purposes of determining the connection of the evidence to a criminal action.²⁰⁹ A limited definition of *forensic science* currently constrains oversight in many jurisdictions, including for institutions such as the New York State Commission on Forensic Science²¹⁰ and for institutions in states requiring accreditation.²¹¹ State statutes also typically exclude private laboratories from oversight.²¹² Extending oversight to these laboratories and to forensic science in all contexts—including in disciplines performed outside of the traditional laboratory or by crime scene investigators—may be controversial²¹³ but is necessary in order to provide effective oversight.

The board should at least perform the following duties. It should familiarize itself with the literature on reliability and bias and mandate the most stringent quality-assurance and quality-control procedures possible, such as blind testing of evidence,²¹⁴ evidence lineups,²¹⁵ blind proficiency

208. See *supra* subpart III(C) (discussing independent oversight boards).

209. This definition is based on the one provided by the Texas Code of Criminal Procedure but eliminates all of the exceptions provided by the Code's definition. See TEX. CODE CRIM. PROC. ANN. art. 38.35(a)(4) (West Supp. 2010) (excluding tests such as latent-fingerprint examination and digital evidence from the definition of forensic analysis).

210. See N.Y. EXEC. LAW § 995(1) (McKinney Supp. 2011) (excluding latent-fingerprint analysis by a police agency from the definition of "forensic laboratory"). Disciplines such as fingerprint analysis, which are largely performed outside of the laboratory, are often outside of the scope of accreditation and other quality control mechanisms. See CAL. CRIME LAB. REVIEW TASK FORCE, *supra* note 47, at 82 (reporting that forensic units outside of crime laboratories do not participate in accreditation and that most fingerprinting takes place outside of crime laboratories).

211. See, e.g., OKLA. STAT. ANN. tit. 74, § 150.37(d) (West Supp. 2011) (requiring accreditation of public laboratories but creating exceptions for breath testing for alcohol, latent-fingerprint analysis, examination of digital evidence, and crime scene processing).

212. *Id.* § 150.37(A)(3), (D) (requiring accreditation only for public laboratories).

213. Opponents may argue that such broad oversight would interfere with the ability of police to investigate crimes. Such a debate is beyond the scope of this Note. However, the legal and scientific communities should examine the extent to which forensic science plays a role in investigations—even before the evidence arrives at a traditional laboratory.

214. Risinger et al., *supra* note 203, at 45–47. Blind testing involves limiting the amount of information that flows to the analyst from law enforcement, laboratory management, coworkers, and other sources. *Id.* at 45. It includes strategies such as formulating questions in the least suggestive way and limiting analyst access to only necessary information about the alleged crime. *Id.* at 45–46.

215. *Id.* at 47–50. Evidence lineups would combat the tendency to make "false positive errors" (since most evidence that enters the laboratory is inculpatory) by presenting "foils" for testing along with the actual specimen. *Id.*

testing,²¹⁶ certification of technicians,²¹⁷ and a code of ethics.²¹⁸ To ensure compliance with this requirement, the enabling statute should require that at least one member of the board has expertise in laboratory standards and quality assurance.²¹⁹ The board should require accreditation for all laboratories (including county and municipal laboratories)²²⁰ and periodically review whether the state's laboratories meet the most stringent accreditation standards available. The board should facilitate communication between stakeholders. It should also educate forensic science professionals, prosecutors, defense attorneys, and judges on the current capabilities and limitations of forensic science, as well as on future changes in technology, policies, or practices.²²¹ A lack of information should no longer play a role in a criminal trial or admissibility hearing. When possible, the board should limit the effects of fragmentation on forensic science by holding each discipline to the same standards and rules. Finally, the board should manage laboratory budgets and should communicate the needs of forensic science laboratories to the state legislature. For example, if the consolidation of smaller municipal and county laboratories would decrease transaction costs and the risk of error, the board and the legislature should pursue this option.²²²

Although its operations are independent from law enforcement, the board may be too tangled or familiar with the state's forensic science laboratories to conduct an independent, large-scale investigation. Thus, a separate entity, such as an inspector general, should conduct investigations

216. NAS REPORT, *supra* note 16, at 206–08. Proficiency testing involves verifying the results of an analyst or an entire laboratory. *Id.* at 206–07. In blind proficiency testing, the analyst does not know that the sample he is analyzing is a test rather than evidence from an actual criminal investigation. *Id.* at 207. While the majority of laboratories engage in proficiency testing, blind proficiency testing is not required and is only used by 26% of laboratories. *Id.* at 208.

217. *Id.* at 208–10. Unlike accreditation, which addresses the competence of an entire laboratory, certification focuses on the individual analyst. *Id.* at 208. The forensic science community generally supports certification but does not require it. *Id.* at 209; *see also* CAL. CRIME LAB. REVIEW TASK FORCE, *supra* note 47, at 45 (recommending that the state require certification of all analysts).

218. NAS REPORT, *supra* note 16, at 212, 214.

219. *See supra* note 129 and accompanying text.

220. *See supra* note 103 and accompanying text (noting that county and municipal laboratories are accredited less frequently than state laboratories).

221. The general lack of training and education appears to be widespread. For example, almost half of the criminal law judges in Texas responding to a survey receive no yearly forensic science training, and many judges have requested more training on reliability standards for the admission of scientific evidence. TEX. CRIMINAL JUSTICE INTEGRITY UNIT, 2009 ANNUAL REPORT OF ACTIVITIES 6 (2009), *available at* <http://www.cca.courts.state.tx.us/tcju/reports/TCJIU-2009-report.pdf>.

222. The Illinois State Police, for example, perform forensic science services for 1,200 local and county police agencies in all 102 Illinois counties, comprising 98% of the services it provides. NAS REPORT, *supra* note 16, at 57–58; *see also* CAL. CRIME LAB. REVIEW TASK FORCE, *supra* note 47, at 54–55 (recommending the regional consolidation of rarely used disciplines but noting that consolidation could increase inefficiencies when one piece of evidence requires multiple types of tests or when the distance to the regional laboratory is too great).

into any broad allegations of negligence or misconduct. While designating an independent investigator is required for recipients of Coverdell grants,²²³ not all laboratories receive funding on a consistent basis.²²⁴ Thus, a state-level requirement is necessary. The investigation entity should remember that issues may arise due to the actions of individual analysts or may be more systemic, such as when a laboratory policy allows for biases to infiltrate results.²²⁵ Of course, what begins as an investigation into a single analyst or single laboratory unit may grow into a larger investigation.

The board may request an investigation at any time, but the investigation entity should also be authorized to investigate *sua sponte*. This will further ensure that investigations are independent and proactive. Similarly, the district attorney's office or the attorney general's office should have authority to request an independent investigation if it discovers an allegation of error or misconduct within its jurisdiction, but it should not conduct the investigation internally,²²⁶ even if independent from the laboratory in question. The risk of bias is simply too high.

Finally, states should establish mechanisms to investigate specific claims of misconduct or error raised by the public, whether through an IC or a forensic science investigative panel similar to the TFSC. Since these investigations will require the same external perspective necessary for large-scale investigations, the investigation unit should not be housed within the oversight board. Each state must determine whether the unit should exist as a separate office (such as the TFSC and NCIIC) or as a department under the supervision of an inspector general. States must also determine whether the unit should provide a judicial remedy, as the NCIIC does.²²⁷ In this broad model, states could actually remedy injustices caused by faulty forensic science, but the focus on forensic science would be lost.²²⁸ In the narrower model, exemplified by the TFSC, the unit would remain a forensic science authority and would still hold laboratories accountable for mistakes, but would not engage directly with courts.²²⁹ These units would also provide a way to measure the success of oversight by examining the number of challenges and their success rates. If boards engage appropriately and on a consistent basis, challenges to evidence collected from the present onward

223. For a discussion of the overall grant program, see *supra* notes 141–50 and accompanying text.

224. See, e.g., CAL. COMM'N ON THE FAIR ADMIN. OF JUSTICE, *supra* note 18, at 62 (noting that not all laboratories receive Coverdell funds and therefore will not necessarily have investigatory oversight in place).

225. See *supra* notes 23–25 and accompanying text.

226. See *supra* note 150 and accompanying text (discussing the importance of independent investigations).

227. See *supra* subpart III(F).

228. See *supra* note 174 and accompanying text (noting that forensic science errors are not the only cause of wrongful convictions).

229. See *supra* note 170 and accompanying text (noting that the TFSC's narrower model does not provide a judicial remedy for the wrongfully convicted).

should decrease. By receiving public complaints, these units would be accessible to the public in a more visible way than boards or investigatory bodies.²³⁰ As discussed previously, these units would also have the potential to unearth systemic issues and catalyze reform.

Of course, these changes will not come without challenges. First, funding is an obvious concern at the state government level given the current economic climate. But an investment in oversight prevents the future cost of investigating questionable criminal convictions. And it is likely that some of the state budget currently funneled to law enforcement to administer forensic science laboratories can be redistributed to the proposed board. For states with existing but inactive boards, it will take a jump-start in funding to make the board independent of law enforcement and to have it operate at the appropriate level. An inactive board that exists only in name hurts forensic science in the long run, as it lulls citizens and legislators into a false sense of security about the quality of forensic science in the state. States must understand that the independent board, the broad-brush investigator, and the public-complaint unit regulate in different manners. To fund one without funding the others leaves a regulatory gap that could lead to a failure to prevent or remedy systemic issues.²³¹ For some states, the more pressing question is how to provide sufficient operational funding to the laboratories. With laboratories already lacking the resources to hire enough staff and purchase enough equipment to avoid backlogs,²³² it may be difficult to specifically appropriate funds for quality assurance and quality control without first addressing the need for additional staff and equipment.

Second, many legislators (and their constituents) are unaware of the reliability and validity concerns threatening forensic science.²³³ The popularity of television shows like *CSI* does not help.²³⁴ Someone must communicate to legislators the current threat to state criminal justice systems. Unfortunately, the forensic science community has so far failed to provide

230. Many states require state bodies like oversight boards to hold public meetings and publish meeting agendas and minutes. *See, e.g.*, CAL. GOV'T CODE § 11123 (West 2005); N.Y. PUB. OFF. LAW §§ 103–07 (McKinney 2008); TEX. GOV'T CODE ANN. § 551.002 (West 2004) (all creating open-meetings requirements for state boards). However, a body that investigates specific public complaints, such as the TFSC or the NCIIC, engages in a different way than one that merely allows the public to participate in open meetings.

231. *Cf.* FORENSIC LAB. ADVISORY BD., STATE OF MINN., LEGISLATIVE REPORT 1 (2011), available at <http://archive.leg.state.mn.us/docs/2011/mandated/110100.pdf> (advising the Minnesota State Legislature that the board “continues to lack the financial resources necessary to carry out its principal missions”).

232. *See supra* note 102 and accompanying text.

233. *See, e.g.*, *Strengthening Forensic Science in the United States: Hearing Before the S. Comm. on the Judiciary*, 111th Cong. 4 (2009) (statement of Sen. Jeff Sessions) (“But I don’t think we should suggest that those proven scientific principles that we’ve been using for decades are somehow uncertain . . .”).

234. *See, e.g.*, Mnookin, *supra* note 74, at 1209 (discussing the public’s misperception of forensic science’s accuracy, which stems largely from inaccurate depictions on television shows like *CSI*).

the necessary information.²³⁵ The increasing likelihood of federal reform may push state legislators that have thus far ignored these issues to consider them. But the rise of a strong voice from within the forensic science community would certainly help. Legislators are more likely to make changes if forensic science laboratories welcome them, or at the very least do not resist them.²³⁶ In many jurisdictions, forensic science organizations enjoy a power advantage, as many forensic scientists simultaneously wear two hats—directing professional organizations and managing state and local laboratories.²³⁷ Organization constituents should realize that their field will be stronger because of these changes and demand that their leadership pursue and support them. Perhaps more importantly, lobbying groups representing law enforcement and prosecutors should realize that blocking the establishment of oversight prevents forensic science from growing into a valid, reliable practice that will ultimately help capture criminals.²³⁸ These groups should view this proposed oversight model as an effective compromise; laboratories remain housed within law enforcement, but independent oversight ensures that practices are valid and reliable.

Third, the political will to support newly established oversight institutions must exist at the state government level. On the one hand, political actors must continue to nurture oversight institutions once they are established. As with an institution that lacks funding, a new entity without

235. In fact, the forensic science community has arguably misinformed legislators. *See, e.g.*, Letter from Dean Gialamas, President, Am. Soc’y of Crime Lab. Dirs., to Patrick J. Leahy, Chairman, Senate Comm. on the Judiciary 3 (Mar. 17, 2009), *available at* <http://www.asclcd.org/files/releases/090317%20ASCLD%20Letter%20to%20Congress%20FINAL.pdf> (“[A]lthough the validation documentation may not be readily available in or published in literature by some laboratories, the lack of that data does not mean the science is unreliable.”). While ASCLD officially recognized the NAS Report as “in-depth,” it did not endorse its call for a new federal agency or removal from crime laboratories from “parent” law enforcement agencies. *Id.* at 2–3. Instead, ASCLD viewed the core problem as a general need for “standardization in education, training and forensic science delivery” and for adequate, consistent funding. *Id.* at 1. ASCLD proposes mandatory accreditation as the key to oversight, since accreditation “provides confidence and assurance to a parent organization, its employees, the criminal justice community, and the public that the operation can meet the most comprehensive forensic quality management system requirements.” *Id.* at 2. Given the close ties between ASCLD and ASCLD/LAB, it is unsurprising that ASCLD proposes a prominent oversight role for ASCLD/LAB. *See supra* notes 106–19 and accompanying text.

236. *See* Neufeld, *supra* note 42, at S112 (“Most of the crime laboratories are resistant to any oversight.”).

237. It is difficult to quantify the link between crime laboratory directors and organizations that resist change. Anecdotally, it appears strong. *See, e.g.*, Minutes, Cal. Crime Lab. Review Task Force, *supra* note 96, at 3 (reporting that CA Task Force member Bob Jarzen, on behalf of the California Association of Crime Laboratory Directors, “opined” that any new, state-level oversight would be duplicative of ASCLD/LAB programs). Not surprisingly, Mr. Jarzen served on the Board of Directors of ASCLD. Robert Adolph Jarzen, Curriculum Vitae 5 (Dec. 27, 2007), *available at* http://ag.ca.gov/meetings/tf/pdf/TF_JARZEN.pdf. The fact that ASCLD recommends accreditation by their sister organization, ASCLD/LAB, as the solution to forensic science’s problems illustrates a similar conflict of interest. *See supra* note 235.

238. *See* Risinger, *supra* note 33, at 239 (describing the power of the law enforcement lobby on the national level).

political support is doomed to fail when it encounters obstacles. The TFSC experience is a cautionary tale of the difficulties of commencing operations.²³⁹ On the other hand, political support must not interfere with independent board oversight, large-scale investigations, ICs, or forensic science investigative panels. Again, the TFSC illustrates what happens when political “support” interferes with independent oversight.²⁴⁰

Finally, states must determine how the oversight units should interact and work together to provide effective oversight. The oversight board may need to help manage logistics and limit transaction costs. This is acceptable, but the investigatory units must still remain independent from the board’s sphere of influence. Because the board is likely to assume that it is providing effective oversight, it may be prone to blame individual analysts when problems arise, rather than investigate the systemic dangers lurking in the background.²⁴¹ In situations like this, it is imperative that independent investigation determines the scope of any problems. Deliberate, clear rules must define the jurisdiction of each institution so that “turf wars” do not occur. At the same time, the rules must be broad enough to avoid gaps—areas where no institution can claim jurisdiction. States that currently lack any of these oversight mechanisms may be unable to implement them all at once. Such states should prioritize the establishment of an independent oversight board and authorize an existing agency outside of law enforcement to conduct any necessary investigations.

V. Conclusion: State Oversight Is Needed Even If Federal Reforms Pass

To complicate matters, the extent of federal regulation of forensic science is fluid. Depending on one’s perspective, the proposed Criminal Justice and Forensic Science Reform Act (CJFSRA) could either drastically change the structure of forensic science practice or simply extend the status quo—prolonging the general gap in ground-level state oversight. While viewpoints differ on the potential of the proposed federal changes to remedy forensic science’s core problems, the fact remains that the portions of the legislation applicable to state laboratories—requiring accreditation, certification, the adoption of a code of ethics, etc.—are triggered only through the federal spending power.²⁴² While federal financial support of state forensic science is common through Coverdell grants, many

239. See *supra* note 166 and accompanying text.

240. See *supra* notes 165, 167 and accompanying text.

241. See William C. Thompson, *Beyond Bad Apples: Analyzing the Role of Forensic Science in Wrongful Convictions*, 37 Sw. U. L. REV. 1027, 1028 (2008) (“We tend to think that replacing the bad apples solves the underlying problem without considering why we have so many bad apples in the first place, why we find more bad apples in some environments than others, and why the apples repeatedly seem to go bad in the same familiar ways.”).

242. See Criminal Justice and Forensic Science Reform Act of 2011, S. 132, 112th Cong. § 201(a) (as referred to S. Comm. on the Judiciary, Jan. 25, 2011) (requiring accreditation only for laboratories receiving federal funding).

laboratories do not receive any federal funding, and states spend significantly more on forensic science operations than the federal government offers.²⁴³ Furthermore, states could always avoid any federal requirements by rejecting all federal funding. On the other hand, the establishment of a new federal office could strengthen the enforcement of any spending requirements. It could also encourage states to establish local oversight via top-down influence and induce state standards via the establishment of best practices in federal laboratories. Additionally, many of the federal reforms are directed at validity concerns, such as inducing basic research.²⁴⁴ In this regard, the federal legislation may address areas that state oversight cannot effectively target, such as coordination of nationwide research.

But more fundamentally, the entire framework of proposed federal regulation continues to ignore states' control of their own criminal justice systems—a cornerstone of America's system of federalism.²⁴⁵ Even if federal reforms impose additional obligations on laboratories that receive federal funds, states must still engage in local oversight beyond the requirements of the CJFSRA. While there are sections of the legislation dedicated to quality assurance and quality control, a requirement that states designate an independent investigator is noticeably lacking. Similarly, the CJFSRA imposes no obligation on states to establish state-level oversight boards. The legislation does not “nationalize” oversight of state forensic science laboratories—nor should it. Instead, decisions about the structure and location of laboratories within state government, the structure and location of oversight boards, budgetary priorities, and how to investigate allegations of systemic misconduct or individual errors would remain under state control. In short, to conclude that federal action eliminates the need for state oversight²⁴⁶ would ignore the fact that laboratories remain a part of state government and service state criminal justice systems. Additionally, proposed federal reforms will not solve the reliability problems that plague forensic science.

States must play a more active role in the oversight of forensic science. When news broke of the Houston crime lab scandal, a key question swirled: How could the police department have let the situation deteriorate to such a shocking level? While the independent investigation provided answers to this question in its report, this Note poses broader questions: Where was state-level oversight? How could it have prevented such a scandal? By establishing oversight boards outside of law enforcement, designating entities

243. See *supra* note 71 and accompanying text.

244. See S. 132, § 401 (“[T]he Board shall recommend to the Director a comprehensive strategy for fostering and improving peer-reviewed scientific research relating to the forensic science disciplines, including research addressing issues of accuracy, reliability, and validity in the forensic science disciplines.”).

245. See *supra* Part II.

246. See, e.g., Minutes, Cal. Crime Lab. Review Task Force, *supra* note 96, at 1 (“A key question is whether California can be more productive than the federal government on oversight issues.”).

to conduct independent investigations, and implementing review of public complaints through entities like the TFSC or NCIIC, states can prevent the repetition of the scandals that have plagued so many jurisdictions.

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