"I MESSED UP BAD": LESSONS ON THE CONFRONTATION CLAUSE FROM THE ANNIE DOOKHAN SCANDAL

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In September 2012, scandal broke at the Massachusetts state crime laboratory: Annie Dookhan, a chemist at the lab, was arrested for falsifying thousands of drug test results. Amazingly, her misconduct had gone undiscovered for nine years, despite the fact that she testified—and was cross-examined—in at least 150 trials. Tens of thousands of prosecutions were jeopardized, and scores of appeals filed. But beyond the immediate fallout, Dookhan's misconduct raises a bigger question: is cross-examination of laboratory analysts—a right conferred by the Supreme Court's 2009 decision in Melendez-Diaz v. Massachusetts—effective at discovering misconduct in forensic testing, or merely a hollow right for defendants that imposes substantial costs on prosecutors? This Article examines the Dookhan scandal, arguing that it showcases the shortcomings of Melendez-Diaz, and proposes a new rule favoring the retesting of forensic evidence over needless cross-examination.

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Introduction

Rogue. Wayward. Criminal. Those are just some of the words that the media used to describe Annie Dookhan, a former chemist at the Massachusetts state crime laboratory who has admitted to falsifying thousands of drug tests over a three-year period. Her own word choice in describing the crimes she committed—though woefully understated—was perhaps even more fitting: "I messed up bad."²

Annie Dookhan did indeed mess up bad. Charged with perjury and obstruction of justice, the allegations against Dookhan ranged from not properly calibrating equipment, to intentionally contaminating evidence in order to ensure a positive drug test.³ During her nine-year tenure at the Massachusetts State Drug Lab, Dookhan handled over 60,000 drug samples from at least 34,000 criminal cases.⁴ Although Dookhan has pleaded guilty and is now serving a three- to five-year prison sentence,⁵ her actions have potentially jeopardized convictions in all of these cases.

Many have wondered how such a massive fraud could have gone undetected for so long. The Massachusetts Department of Public Health laboratory

^{1.} Brian Ballou & Andrea Estes, Chemist Admitted Wrongdoing in Lab Scandal, BOSTON GLOBE, Sept. 26, 2012, http://www.bostonglobe.com/2012/09/26/chemist-annie-dookhan-lab-scandal-investigators-messed-bad/uORxid5JamieMK1 wumq2uO/story.html.

^{2.} Massachusetts: Chemist Admits Faking Drug Results, N.Y. TIMES, Sept. 27, 2012, http://www.nytimes.com/2012/09/27/us/massachusetts-chemist-admits-faking-drug-results.html.

^{3.} John R. Ellement et. al., State Chemist Accused of Mixing Drug Samples, BOSTON GLOBE, Sept. 13, 2012, http://www.bostonglobe.com/metro/2012/09/12/state-chemist-mixed-drugs-from-unrelated-cases-increased-weight-evidence-prosecutor-alleges/KiyNOzh7iSzbRUoRKXr0gL/story.html.

^{4.} Andrea Estes et al., *Drug Lab Chemist Accused of Lying*, BOSTON GLOBE, Sept. 26, 2012, http://www.bostonglobe.com/metro/2012/09/25/chemist-center-state-drug-lab-scandal-did-not-have-master-degree-she-claimed-umass-officials-say/dGyMOLgULvS4ag94f8pjLN/story.html.

^{5.} Milton J. Valencia & John R. Ellement, *Annie Dookhan Pleads Guilty in Drug Lab Scandal*, BOSTON GLOBE, Nov. 22, 2013, http://www.bostonglobe.com/metro/2013/11/22/annie-dookhan-former-state-chemist-who-mishandled-drug-evidence-agrees-plead-guilty/7UU3hfZUof4DFJGoNUfXGO/story.html.

in Jamaica Plain where Dookhan worked—shuttered in the wake of this scandal—used industry standard safeguards, yet supervisors did not catch Dookhan for years.⁶ Amazingly, Dookhan testified *approximately 150 times* in the three years before her arrest, and yet no one discovered her fraud.⁷ Despite repeated cross-examination, defense attorneys failed to uncover Dookhan's fraudulent tests.

Prosecutors and defense attorneys, however, are not the only people who ought to be worried—the Supreme Court should take notice of the Dookhan scandal as well. The very fact that Dookhan was testifying was a result of the Court's 2009 ruling in *Melendez-Diaz v. Massachusetts*. Building on its landmark Confrontation Clause ruling in *Crawford v. Washington*, the Court in *Melendez-Diaz* held that the Sixth Amendment required laboratory analysts who tested evidence to testify at trial; sworn affidavits would no longer suffice. Doomsday predictions for prosecutors were immediate, led by Justice Kennedy's dissenting opinion: "[T]he Court threatens to disrupt forensic investigations across the country and to put prosecutions nationwide at risk of dismissal Guilty defendants will go free, on the most technical grounds, as a direct result of today's decision, adding nothing to the truth-finding process."

To the majority in *Melendez-Diaz*, however, the holding served an important truth-seeking function and was a vindication of defendants' Sixth Amendment rights. While acknowledging that there might be "other ways—and in some cases better ways—to challenge or verify the results of a forensic test," Justice Scalia's majority opinion concluded that "the Constitution guarantees one way: confrontation." ¹⁰ Specifically, the *Melendez-Diaz* decision put its faith in the "crucible of cross-examination" as the way the Sixth Amendment "ensure[s] accurate forensic analysis." ¹¹

Unfortunately, the "crucible of cross-examination" failed to stop Annie Dookhan. This scandal highlights the critical shortcoming of the *Melendez-Diaz* line of cases, one that the Court itself implicitly acknowledged: "[The Confrontation Clause] commands, not that evidence be reliable, but that reliability be assessed in a particular manner." Because *Melendez-Diaz* and its progeny are founded on an unnecessarily narrow view of the Sixth Amendment's Confrontation Clause, this line of cases has—quite openly—embraced "a procedural rather than a substantive" method for ensuring reliability. ¹³ Although this rationale may work well for the

^{6.} Kay Lazar, *How a Chemist Circumvented Her Lab's Safeguards*, BOSTON GLOBE, Sept. 30, 2012, http://www.bostonglobe.com/lifestyle/health-wellness/2012/09/29/how-chemist-drug-lab-scandal-circumvented-safeguards/uR3jTdvw4sWe3gLj0m2GnO/story.html.

^{7.} Estes et al., supra note 4.

^{8.} Crawford v. Washington, 541 U.S. 36 (2004); Melendez-Diaz v. Massachusetts, 557 U.S. 305, 329 (2009).

^{9.} Melendez-Diaz, 557 U.S. at 340, 342 (Kennedy, J., dissenting).

^{10.} Id. at 318.

^{11.} Id. at 317-18.

^{12.} *Id.* at 317 (citing *Crawford*, 541 U.S. at 61-62).

^{13.} *Id.*

testimony of eyewitnesses, where "the jury is the lie detector," ¹⁴ the Dookhan scandal shows that cross-examination fails to root out many errors in scientific evidence, whether unintentional or malicious. Overall, the Dookhan scandal questions the Court's vision of the Confrontation Clause, and should prompt us all to reassess how best to achieve "the Clause's ultimate goal . . . to ensure reliability of evidence." ¹⁵

This Article proposes several solutions for rethinking the application of the Confrontation Clause to forensic testing, ¹⁶ ultimately concluding that given the "aura of infallibility" ¹⁷ with which many jurors perceive scientific evidence, effective confrontation demands access to independent retesting of evidence. To arrive at that conclusion, this Article proceeds in four parts. Part I examines the *Melendez-Diaz* line of cases, analyzing the current state of the law as of *Williams v. Illinois*. Then, Part II discusses the Dookhan scandal, drawing lessons from her case that highlight the shortcomings in the Court's Confrontation Clause jurisprudence. Part III turns to proposed legislative solutions, examining several possible reforms. Finally, Part IV offers a proposed holding for future forensic testing confrontation cases before the Supreme Court. This proposed rule is designed to incentivize defendants to challenge truly erroneous lab results, while preventing wasteful retesting and unnecessary testimony by technicians.

I. CONFRONTATION CLAUSE JURISPRUDENCE

A. Black Letter Law

Confrontation Clause jurisprudence on forensic evidence derives from the Court's 2004 decision in *Crawford v. Washington*. This landmark case upended the settled understanding ¹⁸ of the Confrontation Clause, and held that "testimonial"

^{14.} United States v. Scheffer, 523 U.S. 303, 313 (1998) (quoting United States v. Barnard, 490 F.2d 907, 912 (9th Cir. 1973)).

^{15.} Melendez-Diaz, 557 U.S. at 317 (citing Crawford, 541 U.S. at 61-62).

^{16.} Throughout this Article, I will refer to "forensic testing" and "forensic evidence" interchangeably. In certain contexts, these terms can have different meanings: markings on a shell casing from a firearm's ejector pin, for example, are truly "forensic evidence"; while narcotics are an example of traditional evidence that is subjected to "forensic testing." However, in professional usage, the National Academy of Sciences and the National Institute of Justice also use these terms interchangeably. See NAT'L ACAD. OF SCIS., STRENGTHENING FORENSIC SCIENCE IN THE UNITED STATES: A PATH FORWARD 1–3 (2009), available at https://www.ncjrs.gov/pdffiles1/nij/grants/228091.pdf; NAT'L INST. OF JUSTICE, STATUS AND NEEDS OF FORENSIC SCIENCE SERVICE PROVIDERS: A REPORT TO CONGRESS (March 2006), available at https://www.ncjrs.gov/pdffiles1/nij/213420.pdf. Moreover, the Supreme Court's rule from Melendez-Diaz applies equally to any evidence subjected to testing by an analyst. Thus I have grouped theses terms together in this Article and intend the widest possible meaning of "forensic testing" for the purposes of this Article.

^{17.} Scheffer, 523 U.S. at 314 (discussing polygraph evidence).

^{18.} See Ohio v. Roberts, 448 U.S. 56, 66 (1980) ("In sum, when a hearsay declarant is not present for cross-examination at trial, the Confrontation Clause normally requires a showing that he is unavailable. Even then, his statement is admissible only if it bears adequate 'indicia of reliability.' Reliability can be inferred without more in a case where the evidence falls within a firmly rooted hearsay exception. In other cases, the evidence must be excluded, at least absent a showing of particularized guarantees of trustworthiness.").

hearsay is inadmissible absent "a prior opportunity for cross-examination." ¹⁹ However, *Crawford* did not offer an all-inclusive definition of "testimonial," it only stated, "whatever else the term covers, it applies at a minimum to prior testimony at a preliminary hearing, before a grand jury, or at a former trial; and to police interrogations." ²⁰ The Court also clarified that business records were not testimonial. ²¹ Afterwards, the decision left many people—especially prosecutors and defense attorneys—guessing exactly how far this definition reached.

Five years later, *Melendez-Diaz v. Massachusetts* extended the *Crawford* rule to affidavits reporting the results of laboratory testing, holding that there was "little doubt" that such reports were also "testimonial" and thus required the government to bring the laboratory technician into court for cross-examination.²² While the majority considered the decision a "rather straightforward application of [the] holding in *Crawford*,"²³ the dissent found it "remarkable that the Court so confidently disregard[ed] a century of jurisprudence." ²⁴ Justice Kennedy's dissenting opinion predicted a parade of horribles, with guilty defendants set free, and prosecutorial confusion about who exactly would be required to testify about forensic tests: all analysts, all custodians, or just those with access to final results?²⁵

In Bullcoming v. New Mexico, the Court answered the question of who was required to testify. The State offered the testimony of a lab analyst, but not the specific analyst who actually tested the defendant's blood alcohol content (after an arrest for driving while intoxicated). ²⁶ The Court rejected this arrangement as inconsistent with Crawford and Melendez-Diaz, holding that such "surrogate testimony... does not meet the constitutional requirement. The accused's right is to be confronted with the analyst who made the certification."²⁷

The Court's 2012 decision in *Williams* is its most recent take on the Confrontation Clause and forensic testing. While the case technically addressed whether a forensic test report could be referenced during expert testimony (by a witness who did not perform the test),²⁸ it was largely an extended battle over the fate of *Melendez-Diaz*. Specifically, the three opinions in *Williams* (a plurality decision) sparred over the usefulness of cross-examination in assuring accurate forensic test results. In a dramatic opening to her dissenting opinion, Justice Kagan recounted "a mortifying error" that a laboratory technician realized she had made

^{19.} Crawford, 541 U.S. at 46 (holding that the declarant must also be "unavailable").

^{20.} Ia

^{21.} *Id.* at 56. The majority opinion concluded that statements in furtherance of a conspiracy were also nontestimonial, and thus admissible under *Crawford*. The sole "exception" that the Court, in dicta, seems to endorse, is for dying declarations, which were accepted at common law. *Id.* at 56 n.6.

^{22.} Melendez-Diaz v. Massachusetts, 557 U.S. 305, 310-11 (2009).

^{23.} Id. at 312.

^{24.} *Id.* at 330 (Kennedy, J., dissenting).

^{25.} *Id.* at 333–34 (Kennedy, J., dissenting).

^{26.} See Bullcoming v. New Mexico, 131 S. Ct. 2705, 2707–09 (2011).

^{27.} Id. at 2710 (emphasis added).

^{28.} See Williams v. Illinois, 132 S. Ct. 2221, 2228 (2012) (evaluating under Illinois Rule of Evidence 703, which is identical to Federal Rule of Evidence 703).

"after undergoing cross examination." ²⁹ The technician's error was indeed mortifying: by mixing up labels on lab samples, she incorrectly testified that the defendant was the source of semen in a rape case. However, as Justice Breyer's concurring opinion pointed out, the laboratory technician's error was not discovered in the "crucible of cross examination," but rather by the technician herself "reviewing the laboratory's notes" after she left the witness stand. ³⁰ Though certainly disturbing, this example was also the *only* such case the dissent discussed where cross-examination (possibly) ferreted out a laboratory error. Because it was only a plurality decision, ³¹ *Williams* does nothing to change the doctrine, but it does reveal the deep rift in opinions on the Court over the application of the Confrontation Clause to forensic test results. Even more importantly, it brought questions about reliability, the underlying purpose of the Confrontation Clause, back to the surface.

B. Underlying Rationales

1. The Majority

The problems with relying on cross-examination to uncover erroneous forensic testing (discussed below in Part II) are an inevitable result of the rationale underlying the *Melendez-Diaz* line of cases. Justice Scalia's majority opinion in *Melendez-Diaz* draws heavily from the originalist historical reasoning he advanced in *Crawford*, namely that the Confrontation Clause was designed to avoid the evils of civil-law *ex parte* examinations as evidence at trial, like those that unjustly condemned Sir Walter Raleigh to death in 1603. ³² While admitting that the Constitution's text alone does not lead to a clear answer about the meaning of the Confrontation Clause, ³³ the *Crawford* majority drew this conclusion from the Clause's history:

To be sure, the Clause's ultimate goal is to ensure reliability of evidence, but it is a procedural rather than a substantive guarantee. It commands, not that evidence be reliable, but that reliability be assessed in a particular manner: by testing in the *crucible of cross-examination*. The Clause thus reflects a judgment, not only about the

^{29.} *Id.* at 2264 (Kagan, J., dissenting) (citing State v. Kocak, Tr. in No. SCD110465 (Super. Ct. San Diego Cty., Cal., Nov. 17, 1995), pp. 3–4 ("I'm a little hysterical right now, but I think...the two names should be switched."), *available at* http://www.nlada.org/forensics/for_lib/Documents/1037341561.0/JohnIvanKocak.pdf).

^{30.} Williams, 132 S. Ct. at 2246 (Breyer, J., concurring).

^{31.} *Id.* at 2255 (Thomas, J., concurring in judgment) ("I reach this conclusion, however, solely because Cellmark's statements lacked the requisite 'formality and solemnity' to be considered 'testimonial' for purposes of the Confrontation Clause.").

^{32.} See Crawford v. Washington, 541 U.S. 36, 43–45 (2004). In 1603, Sir Walter Raleigh was accused of treason. At his trial, the only evidence of his guilt came from his (alleged) co-conspirator, who did not testify in person, but rather through a letter accusing Raleigh. Despite Raleigh's demand to "call my accuser before my face," the judges refused, and Raleigh was convicted and sentenced to death. One of those judges later recanted: "[T]he justice of England has never been so degraded and injured as by the condemnation of Sir Walter Raleigh." Id. at 44.

^{33.} *Id.* at 42.

desirability of reliable evidence (a point on which there could be little dissent), but about how reliability can best be determined.³⁴

In Melendez-Diaz, the Court invoked the same rationale. While conceding "there are other ways—and in some cases better ways—to challenge or verify the results of a forensic test,"³⁵ the Court placed its faith in the ability of "the crucible of cross examination" to elicit the truth:

While it is true, as the dissent notes, that an honest analyst will not alter his testimony when forced to confront the defendant, the same cannot be said of the fraudulent analyst. . . . Like the eyewitness who has fabricated his account to the police, the analyst who provides false results may, under oath in open court, reconsider his false testimony.³⁶

Unfortunately, as Part II will show, the Annie Dookhan scandal undermines this view of the Confrontation Clause.

2. The Dissent

Justice Kennedy's dissenting opinion in *Melendez-Diaz* is blunt, lambasting the majority's holding as "wooden," "formalistic and pointless," "divorced from any . . . common sense," and "a distortion of the criminal justice system." The dissent followed a pragmatic approach to the problem of forensic evidence under the Confrontation Clause, and seemed particularly worried about guilty defendants receiving windfalls from the majority's new rule. Noting that Melendez-Diaz never "dispute[d] the authenticity of the [drug] samples" in his trial, and merely made "a *pro forma* objection to admitting the results without in-court testimony," Justice Kennedy concludes: "Where, as here, the defendant does not even dispute the accuracy of the analyst's work, confrontation adds nothing." And if there were a problem with the testing itself, the solution to "errors in scientific tests," the dissent observed, is not cross-examination but "conducting a new test."

Despite its strong objections to the majority's holding, the dissent still accepts one of the (in my view, flawed) pillars of the majority's reasoning: the protection afforded by the Confrontation Clause extends only to cross-examination. Justice Kennedy implicitly concedes this point, stating that the "Confrontation Clause is not designed, and does not serve, to detect errors in scientific tests." Under this logic, because cross-examination (what the Confrontation Clause affords) will not detect errors (the very purpose of cross-examination) the Confrontation Clause has *no place* in the world of forensic testing—and thus Justice

^{34.} Id. at 61 (emphasis added).

^{35.} Melendez-Diaz v. Massachusetts, 557 U.S. 305, 318 (2009).

^{36.} *Id.* at 318–19 (emphasis added) (internal citations omitted).

^{37.} *Id.* at 337–38 (Kennedy, J., dissenting).

^{38.} *Id.* at 338.

^{39.} *Id.* at 340.

^{40.} *Id.* at 337.

^{41.} Id.

Kennedy concluded that the lab analysts may as well be left alone instead of being dragged in to testify.⁴²

The *Melendez-Diaz* dissent did not need to abandon the fight for the Confrontation Clause at this juncture. While Justice Kennedy was correct to point out the futility of cross-examination in nearly all forensic testing cases, I will argue in Part IV that the Confrontation Clause can be sensibly applied to forensic science in a manner that Justice Kennedy himself suggested: not by requiring analyst testimony, but by guaranteeing defendants a right to "conduct[] a new test" of evidence against them. ⁴³ The need for a new Confrontation Clause jurisprudence is apparent when considering the lessons of the Annie Dookhan scandal, analyzed below in Part II.

II. LABORATORY SCANDALS: THE ANNIE DOOKHAN DEBACLE

While the sheer scale of Annie Dookhan's fraud may be novel, scandals at crime laboratories unfortunately are nothing new. Before the Dookhan scandal, the most famous case of misconduct in forensic science involved the Federal Bureau of Investigation's renowned crime lab in the mid-1990s. 44 Whistleblower Frederic Whitehurst revealed a laboratory filled with prosecution-biased scientists, and outdated equipment and methods. 45 In the years following, more scandals hit the news: faulty fingerprint analysis convicted a Boston man of murdering a police officer in 1997; 46 Montana, West Virginia, and Oklahoma all overhauled crime labs after erroneous convictions in the early 2000s; and 280 boxes of previously untested forensic evidence from at least 8,000 cases were "found" in a Houston police lab in 2004, ranging from items of clothing to a human fetus. 47 The capstone of this period was a report about forensic science practices published by the National Academy of Sciences in 2009, documenting "serious problems" across a variety of testing disciplines. 48

Such unsettling news for forensic science has continued recently. In Nassau County, outside of New York City, the crime laboratory was shuttered in February 2011 following widespread procedural violations in drug testing.⁴⁹ These problems

^{42.} *Id.* at 338 ("The facts of this case illustrate the formalistic and pointless nature of the Court's reading of the Clause.").

^{43.} Id. at 337.

^{44.} Karen Zraick, *Drunken Driving Conviction Voided for Crime Lab Errors*, N.Y. TIMES, Mar. 7, 2011, http://www.nytimes.com/2011/03/08/nyregion/08nassau.html.

^{45.} See generally John F. Kelly & Phillip K. Wearne, Tainting Evidence: Inside the Scandals at the FBI Crime Lab (1998).

^{46.} *Id*.

^{47.} Maurice Possley, Steve Mills & Flynn McRoberts, *Scandal Touches Even Elite Labs*, Chi. Trib., Oct. 21, 2004, http://www.chicagotribune.com/news/watchdog/chi-041021forensics,0,1083342,full.story.

^{48.} NAT'L ACAD. OF SCIS., *supra* note 16, at xx. In addition to reporting quality control problems with valid scientific procedures, such as DNA testing, this report also questioned whether some forensic testing, like bloodstain pattern analysis, should be curtailed in its use. *Id.* at 177–79. This second question is an important one, but is beyond the scope of this Article.

^{49.} Zraick, supra note 44.

occurred despite the fact that New York State requires accreditation of all police labs by the American Society of Criminal Lab Directors Laboratory Accreditation Board ("ASCLD/LAB"). ⁵⁰ In 2012, the police lab in St. Paul, Minnesota came under scrutiny for poor testing practices and training, ⁵¹ while in Illinois, the Cook County Medical Examiner resigned after newspapers reported that the morgue was (literally) double-stacking bodies to cope with overcrowding. ⁵² Most recently, New York City's vaunted crime laboratory—praised for its efforts to identify the victims of the 9/11 attacks through DNA testing—has admitted to misplacing DNA evidence in over 800 rape cases. ⁵³

Unsettling though they are, none of these other scandals matches the sheer number of cases that Annie Dookhan falsified, or the rogue fashion in which she intentionally altered evidence.

A. Dookhan's Misconduct

"I screwed up big time. I messed up. I messed up bad." That is what chemist Annie Dookhan told police after being arrested for perjury and obstruction of justice. ⁵⁴ It was an understatement to say the least. Investigators initially focused on 1,141 potentially-jeopardized drug convictions, ⁵⁵ but defense attorneys and the American Civil Liberties Union ("ACLU") have now challenged more than 40,000 cases on which Dookhan worked during her nine-year tenure at the Massachusetts state laboratory. ⁵⁶

In 2003, shortly after graduating from the University of Massachusetts with a B.S. in Chemistry, Dookhan accepted a job as a "Chemist I" at the Massachusetts

^{50.} Marie Cusick, Scandals Call into Question Crime Labs' Oversight, NPR (Nov. 20, 2012), http://www.npr.org/2012/11/20/165579898/forensic-crime-lab-scandals-may-bedue-to-oversight.

^{51.} Hern Estrada, St. Paul Crime Lab Puts 350 Cases at Risk So Far, MINNEAPOLIS STAR TRIB., Aug. 1, 2012, http://www.startribune.com/local/south/164635746.html.

^{52.} Hal Dardick, *Preckwinkle Shakes up Cook County Medical Examiner's Office*, CHI. TRIB., June 20, 2012, http://articles.chicagotribune.com/2012-06-20/news/ct-met-cook-county-medical-examiner-0620-2-20120620_i_board-president-toni-preckwinkle-preckwinkle-aides-office.

^{53.} Joseph Goldstein, New York Examines Over 800 Rape Cases for Possible Mishandling of Evidence, N.Y. TIMES, Jan. 10, 2013, http://www.nytimes.com/2013/01/11/nyregion/new-york-reviewing-over-800-rape-cases-for-possible-mishandling-of-dna-evide nce.html. To date, however, it appears that all of the mistakes were false negatives, leaving many rapes unsolved, but not resulting in any wrongful convictions; defense advocates are challenging this portrayal. See Joseph Goldstein & Nina Bernstein, Ex-Technician Denies Faulty DNA Work, N.Y. TIMES, Jan. 11, 2013, http://www.nytimes.com/2013/01/12/ny region/former-lab-technician-denies-faulty-dna-work-in-rape-cases.html.

^{54.} Katharine Q. Seelye & Jess Bidgood, *Prison for a State Chemist Who Faked Drug Evidence*, N.Y. TIMES, Nov. 22, 2013, http://www.nytimes.com/2013/11/23/us/prison-for-state-chemist-who-faked-drug-evidence.html.

^{55.} Ellement et al., *supra* note 3.

^{56.} Milton J. Valencia, ACLU Demands Dismissal of All Dookhan-Related Cases, BOSTON GLOBE, Jan. 9, 2014, http://www.bostonglobe.com/metro/2014/01/09/aclu/FRgBDWIWMKy5og03mBQBRN/story.html.

Department of Public Health laboratory in Jamaica Plain.⁵⁷ In that role (also known as a "Primary Chemist"), Dookhan performed preliminary analysis on suspected drug samples arriving at the laboratory. After this basic analysis, which involved a "spot test" and a "microcrystalline test," a small amount of the sample was placed into test vials for further analysis. A "Chemist II" (or "Confirmatory Chemist") performs these subsequent tests, which involve mass spectronomy. ⁵⁸ After working in the laboratory for two years, Dookhan received a promotion to Chemist II, and was serving in that role during the time period that she falsified test results. ⁵⁹

Prosecutors believe that the bulk of Dookhan's misconduct involved "drylabbing" of initial drug screening tests. In drylabbing, a chemist simply guesses what drug a substance is, solely based on its appearance, instead of using laboratory tests. ⁶⁰ Although prosecutors are not entirely certain about her motives for drylabbing, Dookhan claims that she only cut corners in order to "get more work done" and "boost her performance record." ⁶¹ In these cases, however, Dookhan's initial tests were all sent to a second chemist for confirmation. ⁶²

More troubling than the drylabbing allegations, however, are claims that Dookhan forged her colleagues' initials on forms verifying her work, and even intentionally contaminated samples with drugs from other cases to ensure that they would test positive for narcotics, or to increase the weight of drugs, which could lead to longer sentences. ⁶³ (Prosecutors now believe that Dookhan never contaminated the main evidence samples, but only the test vials, thus leaving the original sample capable of being accurately retested. ⁶⁴) Dookhan's motivation for

- 57. Estes et al., supra note 4.
- 58. Brief for Defendant, Commonwealth of Massachusetts v. Charlton, 962 N.E.2d 203 (2012) (No. 10-P-1042), 2010 WL 3415978 at *13 (citing trial transcript at 168-75).
 - 59. Estes et al., supra note 4.
 - 60. Ellement et al., supra note 3.
 - 61. Lazar, supra note 6.
- 62. *Id.* The initial screening is merely to help the second analyst determine against what baseline drug to evaluate the sample. *Id.*
- 63. *Id.* Some samples that police believe to be narcotics can be "cutting" agents that dealers use to dilute the potency of drugs sold. These cutting agents are not themselves narcotics, but legal powdery substances like mild anesthetics or laxatives. *See generally World Drug Report 2009 Series: Afghanistan Identifies Cutting Agents for Heroin*, UNODC (June 22, 2009) http://www.unodc.org/unodc/en/frontpage/2009/June/afghanistan-identifies-cutting-agents-for-heroin.html.
- Guilty to Tampering with Evidence, Obstruction of Justice (Nov. 22, 2013), http://www.mass.gov/ago/news-and-updates/press-releases/2013/2013-11-22-dookhan-plea. html ("The investigation revealed that Dookhan tampered with evidence by altering the substances in the vials that were being tested at the lab. Investigators identified six specific instances where Dookhan tampered with the testing vials, five originating in Suffolk County and one in Bristol County. Investigators were able to retest samples to corroborate this because Dookhan only altered the substances while they were in the testing vials. She did not alter the original samples."); see also Andy Metzger, As State Faces Expensive Clean-Up, Dookhan Professes Innocence, Lowell Sun, Dec. 20, 2012, http://www.lowellsun.com/breakingnews/ci_22230663/dookan-be-arraigned-thursday#ixzz2O8ma8TZN (quoting Assistant Attorney General Anne Kaczmarek as stating in court: "Ms. Dookhan was not

these frauds is unclear. Although Dookhan has stated that "no prosecutors or police pressured her to alter drug tests on their behalf," her motives remain a mystery. One early lead was a string of flirtatious personal emails between Dookhan and a local prosecutor. Although investigators do not believe there was any wrongdoing, that prosecutor subsequently resigned.

Laboratory safeguards, of course, should have uncovered Dookhan's fraud. The state laboratory where she worked adhered to industry standard protocols, such as the testing of all samples by two chemists and the use of sign-out logs for evidence. Nonetheless, supervision at the laboratory appears to have been lax. Despite Dookhan's "unusually high output," and complaints from colleagues about her "shoddy work habits," supervisors did nothing for more than a year. Such complaints should have raised a red flag for any supervisor:

Dookhan was the most productive chemist in the lab, routinely testing more than 500 samples a month, while others tested between 50 and 150. But one co-worker told state police he never saw Dookhan in front of a microscope. A lab employee saw Dookhan weighing drug samples without doing a balance check on her scale.⁷⁰

It was not until June 2011 that Dookhan finally came under investigation, only after supervisors caught her removing 90 samples from the evidence vault without signing them out. ⁷¹ Had supervisors paid attention to the many suspicious details about Annie Dookhan, they likely could have uncovered her deception much sooner. Her outlandish claims and propensity for exaggeration—or, more precisely, flat out lying—included: claiming that she graduated *magna cum laude* from high school (which one cannot do), lying about her previous salary (she gave herself a 22% raise), telling colleagues that she completed a Ph.D. dissertation in Chemistry from Harvard in only two years while working full-time (Harvard does not offer two-year, part-time Ph.D. programs), and conferring on herself the (unearned and,

tampering with the actual drug sample. She was tampering with the testing vials. She was doing that, we believe, to make her original confirmation of the drugs match what the [mass spectrometer] objective test came back to").

^{65.} Scott Allen & Andrea Estes, *Prosecutor with Ties to Drug Lab Chemist Resigns*, BOSTON GLOBE, Oct. 17, 2012, http://www.bostonglobe.com/metro/2012/10/17/norfolk-prosecutor-with-ties-dookhan-resigns/nrFrlJwBNSTQy7a82cRlqI/story.html.

^{66.} *Id.*

^{67.} *Id.* The prosecutor was Assistant District Attorney George Papachristos, from the Norfolk County District Attorney's Office. Dookhan tested drugs for cases that he prosecuted, but never testified at any of his trials. *Id.*

^{68.} Lazar, supra note 6.

^{69.} *Id*

^{70.} Annie Dookhan, Chemist at Massachusetts Crime Lab, Arrested for Allegedly Mishandling Over 60,000 Samples, CBS NEWS (Sept. 28, 2012), http://www.cbsnews.com/8301-504083_162-57522579-504083/annie-dookhan-chemist-atmass-crime-lab-arrested-for-allegedly-mishandling-over-60000-samples.

^{71.} Estes et al., supra note 4. See also Milton J. Valencia, State says chemist at drug lab imperiled evidence, BOSTON GLOBE, Aug. 31, 2012, at A1.

for that matter, nonexistent) titles of "on-call supervisor for chemical and biological terrorism" and FBI "special agent of operations."⁷²

Although removed from performing new laboratory tests in 2011, Dookhan continued to testify in cases for months. 73 All told, Dookhan testified in at least 150 trials during this three-year period, 74 fully in compliance with the requirements of *Melendez-Diaz*, and yet not one defense attorney discovered her fraud using the "crucible of cross examination." 75 Nor did any defense attorney discover that she had been suspended from laboratory work, that she had exchanged personal emails with prosecutors, or even that she lied on her resumé by falsely claiming to have a Masters of Science in Chemistry. 76 Equally illuminating is that, nearly two years after this scandal first broke, there is not a single press account of a defense attorney who raised the issue of falsified lab results on appeal or demanded the retest of evidence *before* Dookhan's misconduct was made public. 77 Thousands of appeals have been filed since.

In December 2012, Dookhan herself was indicted in Massachusetts Superior Court on 27 counts of obstruction of justice, tampering with evidence, and perjury. Nearly a year later, in November 2013, Dookhan entered a guilty plea to all 27 counts, and received a prison sentence of 3–5 years, in excess of the state sentencing guideline of 1–3 years; prosecutors, however, had sought a 5–7-year term. 9

- 73. Estes et al., supra note 4.
- 74. *Id.*

- 76. Estes et al., supra note 4.
- 77. Although the Massachusetts Attorney General's Office has compiled a list of all cases where Dookhan may have tested evidence, that information has not been made public. Due to confidentiality restrictions, the list is only available to defense attorneys who represent clients convicted of drug offenses during the years where Annie Dookhan worked at the Massachusetts crime laboratory. See Mass. Dep't of Crim. Just. Info. Serv., Agreement of Non-Disclosure of CORI, http://www.massbar.org/media/1286464/non%20 disclosure%20form.pdf (last visited May 25, 2014). This understandable confidentiality restriction has, however, forced me to rely on (the absence of) press stories of defense attorneys' statements as support for this point.
- 78. Commonwealth v. Dookhan, No. BRCR2013-00009 (Mass. Super. Ct. Jan. 08, 2013). See also Andrea Estes & John R. Ellement, State Chemist Faces 24 More Charges in Lab Scandal, BOSTON GLOBE, Dec. 17, 2012, http://www.bostonglobe.com/metro/2012/12/17/annie-dookhan-indicted-counts-obstruction-justice-due-court-dec/SgtVlcusGXCYcCaMA7V4JJ/story.html.
 - 79. Coakley, supra note 64.

^{72.} Sally Jacobs, Annie Dookhan Pursued Renown Along a Path of Lies, BOSTON GLOBE, Feb. 3, 2013, http://www.bostonglobe.com/metro/2013/02/03/chasing-renown-path-paved-with-lies/Axw3AxwmD33lRwXatSvMCL/story.html; Andrea Estes, Indicted Drug Analyst Annie Dookhan's E-mails Reveal Her Close Personal Ties to Prosecutors, BOSTON GLOBE, Dec. 20, 2012, http://www.boston.com/news/local/massachusetts/2012/12/20/indict ed-drug-analyst-annie-dookhan-mails-reveal-her-close-personal-ties-prosecutors/A37GaatH LKfW1kphDjxLXJ/story.html.

^{75.} Melendez-Diaz v. Massachusetts, 557 U.S. 305, 317 (2009) (citing Crawford v. Washington, 541 U.S. 36, 61–62 (2004)).

B. Lessons from the Dookhan Scandal

By analyzing the cases on which Annie Dookhan worked, several lessons can be gleaned. Some are obvious: most criminal cases are resolved by plea agreements, and sending flirty emails to a drug lab chemist is bad for a prosecutor's job security. The Dookhan scandal, however, reveals three important lessons that should be acknowledged when devising solutions to prevent future wrongdoing. After discussing these three lessons below, I address possible reforms in Part III.

1. Cross-Examination Is Ineffective at Discovering Flawed Forensic Testing

Annie Dookhan took the stand approximately 150 times, yet not one defense attorney discovered her falsified lab work on cross-examination. 80 Although it is unclear from the record whether defense attorneys refused to stipulate to her testimony, or whether prosecutors in those cases wanted her to testify, it is clear that the Melendez-Diaz rule was being followed, but did not expose Dookhan's fraud. 81 Her 150-0 record on the witness stand upends one of the pillars of Melendez-Diaz—the belief that an "analyst who provides false results may, under oath in open court, reconsider his false testimony."82

How did Dookhan's lies go undetected? There are no reports of her being a particularly good liar; indeed, she appears to have confessed immediately to police. ⁸³ The more likely explanation is that jurors afford great deference to scientific testimony. The Supreme Court has acknowledged the potential danger of jurors perceiving an "aura of infallibility" about scientific evidence, and has banned certain kinds of testimony—such as polygraph tests—as a result. ⁸⁴ It may also be evidence of what some academics have called "the CSI Effect," whereby jurors "exaggerate the value of scientific evidence, viewing it as overly conclusive" because television crime shows have conditioned them to accept it as always true. ⁸⁵

^{80.} See supra text accompanying notes 68–70.

^{81.} Interestingly, this problem appears not to be limited to the United States, and has been observed in other common law adversarial systems that are also grappling with the problem of confronting forensic testing. A recent study in Australia—which retains the common-law right to confrontation—also concluded that cross-examination is rarely effective at rebutting even clearly flawed testimony by laboratory technicians and other scientific expert witnesses. See Gary Edmond & Mehera San Roque, The Cool Crucible: Forensic Science and the Frailty of the Criminal Trial, 24 Current Issues In Crim. Justice 51, 55–56 (2012), available at http://www.law.unsw.edu.au/sites/law.unsw.edu.au/files/docs/posts/cool_crucible.pdf; see also Gary Edmond, Impartiality, efficiency or reliability? A critical response to expert evidence law and procedure in Australia, 42 Aus. J. Forensic Sci. 83, (2010), available at http://njca.com.au/wp-content/uploads/2013/07/Gary-Edmond-Impartiality-efficiency-or-reliability-paper.pdf.

^{82.} Melendez-Diaz v. Massachusetts, 557 U.S. 305, 319 (2009) (internal citations omitted).

^{83.} Matt Stout, *Police Report: Colleagues Detail Chemist's 'Breakdown*,' BOSTON HERALD, Sept. 27, 2012, http://bostonherald.com/news_opinion/local_coverage/2012/09/police_report_colleagues_detail_chemist s breakdown.

^{84.} United States v. Scheffer, 523 U.S. 303, 314 (1998).

^{85.} Tom R. Tyler, Viewing CSI and the Threshold of Guilt: Managing Truth and Justice in Reality and Fiction, 115 YALE L.J. 1050, 1084 (2006). Tyler responds to other academics who claim that the "CSI Effect" makes jurors more likely to acquit because

Under this theory, jurors may see defense cross-examination as a futile attempt to muddy indisputable scientific facts. By this view, unless the defense calls its own expert to retest the evidence, any potential "CSI Effect" will accrue to the prosecution's benefit. Only a retest of the evidence—creating a battle of the scientific experts—would put the defendant's case on equal footing.

Even with retesting, false testimony about innocent defendants could still occur if the laboratory analyst mislabeled or contaminated the original sample—either accidentally or maliciously. While deeply troubling, the Dookhan scandal shows that cross-examination also failed to deter, or even discover, this kind of fraud. Although beyond the scope of this Article, it appears that the only solution for these types of cases is better laboratory supervision, training, and hiring.

2. The Dookhan Scandal Will Create a Windfall for Many Defendants

Although Dookhan's fraud has met universal condemnation, public opinion has differed over what the proper response should be. To many people, the defendants who will be released from prison because of the Dookhan scandal are guilty individuals who are receiving an undeserved windfall. 86 Others, including Massachusetts Attorney General Martha Coakley, have stressed that Dookhan's actions cannot be the basis of criminal convictions because they had "corrupted the integrity of the entire criminal justice system." To date, courts in Massachusetts have held 2,922 hearings for "Dookhan defendants" seeking dismissal of their cases; more than 600 defendants were released after their convictions were vacated. 88 Among those released, one defendant—promptly rearrested for possession of a stolen gun—was well aware of why he was set free, telling police: "I just got out thanks to Annie Dookhan. I love that lady."

Regardless of one's views on releasing "Dookhan defendants," an analysis of the publicly available cases on which Dookhan worked reveals a stark fact: before this scandal broke, not *one* defendant challenged the accuracy of Dookhan's drug tests on appeal. ⁹⁰ Of the 21 appellate cases (all of the cases available using public

television crime programs make them expect perfect cases—complete with ironclad scientific evidence—in real life. *Id. See also* United States v. Fields, 483 F.3d 313, 355 n.39 (5th Cir. 2007) (discussing "the CSI Effect"). On a comparative note, it appears that Australian jurists worried about the "CSI Effect" long before the television show arrived there. *See* Regina v Duke, (1979) 22 SASR 46, 48 (Austl.) (King, C.J.) (warning that jurors are "overawed by the scientific garb in which the evidence is presented and attach greater weight to it than it is capable of bearing.").

- 86. See, e.g., John R. Ellement, Man Freed in Drug-Lab Scandal is Arrested on Similar Charges, BOSTON GLOBE, Oct. 27, 2012, http://www.bostonglobe.com/metro/2012/10/26/man-freed-drug-lab-scandal-arrested-similar-chares/V1pyolPS9zMkVWLfh 4wyZJ/story.html.
- 87. Mark Arsenault et al., Former Drug Lab Chemist Arrested, Actions Detailed, BOSTON GLOBE, Sept. 28, 2012, http://www.bostonglobe.com/metro/2012/09/28/chemist-mass-state-drug-lab-scandal-facing-charges-she-falsified-reports-credentials/27kK2cb2foy SyFjUy3XFeP/story.html.
 - 88. Valencia & Ellement, supra note 5.
 - 89. Seelye & Bidgood, supra note 54.
- 90. A word about my methodology: As discussed in note 77, supra, the Massachusetts Attorney General's Office has created a database of cases where Dookhan

searches that were filed before this scandal became public in September 2012) in which Dookhan is specified as the chemist, not one challenges the drug tests themselves, or requests retesting of evidence as relief, despite the fact that these remedies are available under the Massachusetts Rules of Criminal Procedure. 91 Since the Dookhan scandal has hit the press, however, thousands of appeals have claimed that the drug tests were erroneous. 92 The decisions so far, from both the state's highest court and federal judges in the District of Massachusetts, have emphasized a desire to avoid windfalls to guilty defendants. 93

Now nearly two years after this scandal broke, investigators and defense attorneys have identified only *one* case where the defendant appears to have actually been innocent. 94 Jeffrey Banks (a.k.a. Jeffrey Solomon) was arrested and prosecuted for selling cocaine in 2011.95 Banks maintained that he was actually scamming his customers by selling fake narcotics; tests performed by Dookhan, however, showed that the substance was cocaine. 96 Banks eventually pleaded guilty, and never requested a retest of the evidence under the Massachusetts Rules of Criminal Procedure. 97 Since the Dookhan scandal broke, the Massachusetts State Police retested the sample, and determined it was not cocaine (or any other controlled

tested evidence, but has only allowed defense attorneys with clients affected by the Dookhan scandal to access that information. Due to confidentiality restrictions, the list of cases has not been made public. My original goal was to examine all of the Dookhan appeals that were filed after the scandal became public to see whether any of those defendants had previously challenged the reliability of her testing. Since Massachusetts' confidentiality restrictions made that impossible, I instead searched for all cases where Dookhan was named as the chemist before this scandal broke, which yielded the 24 appeals discussed in this Part. Unfortunately, trial court documents in Massachusetts are not available electronically.

- 91. See MASS. R. CRIM. P. 14(b)(2), 41 (2009) (allowing appointment of defense experts, who—presumably in cases like these—would conduct retesting). Justice Kennedy also points out this fact in his dissenting opinion in Melendez-Diaz v. Massachusetts, noting that the "petitioner made no effort, before or during trial, to mount a defense against the analysts' results. Petitioner could have challenged the tests' reliability by seeking discovery concerning the testing methods used or the qualifications of the laboratory analysts. . . . He did not do so." 557 U.S. 305, 338 (2009) (Kennedy, J., dissenting)
 - 92. Valencia & Ellement, supra note 5.
- 93. See, e.g., Commonwealth v. Scott, 5 N.E. 3d 530, 548-49 (Mass. 2014) ("We therefore remand the defendant's case for the judge to determine whether, in the totality of the circumstances, the defendant can demonstrate a reasonable probability that had he known of Dookhan's misconduct, he would not have admitted to sufficient facts and would have insisted on taking his chances at trial."); United States v. Wilkins, 943 F. Supp. 2d 248, 255 (D. Mass. 2013) ("Here, neither [defendant] makes a claim of actual innocence. Thus, any impeaching material regarding Dookhan's mishandling of the evidence in theirs or other cases would only be relevant at trial to the extent that it might be used to challenge the chain of custody of the drugs at issue, or possibly to impeach the efforts of the substitute chemist to repair the damage done by Dookhan. Neither of these purposes, as Ruiz makes clear, has any relevance to the validity of defendants' guilty pleas.").
- 94. Commonwealth v. Solomon, MICR2011-00114 (Mass. Sup. Ct. Jan. 26, 2012).
 - 95. *Id*.
 - 96. *Id*.
 - 97. Id.

substance). 98 Because this case did not go to trial, it is impossible to evaluate what value cross-examination would have had; retesting, however, ultimately exonerated him.

The absence of appeals on drug testing could, of course, be evidence of other factors at work, such as incompetent counsel. Alternatively—and more problematically—the lack of such appeals could also indicate a case where the defendant knowingly possessed drugs, but Dookhan fraudulently increased the reported weight to clear a statutory threshold for an increased sentence. Admittedly, this problem would not be one that retesting of evidence could solve, but cross-examination was nonetheless equally ineffective at stopping it.

3. The Dissenting Justices' Predictions About Increased Litigation Following Melendez-Diaz Were Correct

Justice Kennedy's opinion in *Melendez-Diaz* warned that the majority "misunderstands how criminal trials work," and that the decision would have farreaching consequences for criminal prosecutions. ⁹⁹ Specifically, the dissent predicted "zealous defense counsel will defend their clients" using the "formidable power" that the majority's decision granted them to demand that laboratory analysts testify at trial. ¹⁰⁰ Justice Kennedy further speculated that the confusion about who qualifies as an "analyst" under the majority's rule¹⁰¹ would only strengthen the hand of defense attorneys to object on merely "technical grounds," resulting in "a windfall to defendants." ¹⁰²

While Justice Kennedy's predictions in *Melendez-Diaz* focused on problems at trial, Justice Breyer's concurring opinion in *Williams* noted that the same kinds of pro forma objections would also arise on appeal. Specifically, Justice Breyer worried that because there was "no logical stopping place between requiring the prosecution to call as a witness one of the laboratory experts who worked on the matter and requiring the prosecution to call *all* of the laboratory experts who did so," logical stopping place between requiring the matter and requiring the prosecution to call *all* of the laboratory experts who did so," logical stopping place between requiring the matter and requiring the prosecution to call *all* of the laboratory experts who did so," logical stopping place between requiring the matter and requiring the prosecution to call *all* of the laboratory experts who did so," logical stopping place between requiring the matter and requiring the prosecution to call *all* of the laboratory experts who did so," logical stopping place between requiring the matter and requiring the prosecution to call *all* of the laboratory experts who did so," logical stopping place between requiring the prosecution to call all of the laboratory experts who did so," logical stopping place between requiring the prosecution to call all of the laboratory experts who did so," logical stopping place between requiring the prosecution to call all of the laboratory experts who worked on the matter and requiring the prosecution to call all of the laboratory experts who worked on the matter and requiring the prosecution to call all of the laboratory experts who worked on the matter and requiring the prosecution to call all of the laboratory experts who worked on the matter and requiring the prosecution to call all of the laboratory experts who worked on the laboratory experts who worked on the laboratory experts who worked on the laboratory experts who was all the laboratory experts.

An examination of the 21 "pre-scandal" appeals where Dookhan tested drug samples validates the predictions of both Justice Kennedy and Justice Breyer. 104 Among those cases, in every instance where the prosecution did not offer

^{98.} Estes & Ellement, supra note 78.

^{99.} Melendez-Diaz v. Massachussetts, 557 U.S. 305, 354 (2009) (Kennedy, J., dissenting).

^{100.} *Id.* at 353–55.

^{101.} Id. at 337-38.

^{102.} Id. at 342-43.

^{103.} Williams v. Illinois, 132 S. Ct. 2221, 2246 (2012) (Breyer, J., concurring).

United States v. Gurley, 860 F. Supp. 2d 95 (D. Mass. 2012); Commonwealth v. Charles, 923 N.E.2d 519 (Mass. 2010); Commonwealth v. Flores, 993 N.E.2d 751 (Mass. App. Ct. 2013); Commonwealth v. Neves, 999 N.E.2d 502 (Mass. App. Ct. 2013); Commonwealth v. Beatrice, 965 N.E.2d 226 (Mass. App. Ct. 2012); Commonwealth v. Charles, 961 N.E.2d 622 (Mass. App. Ct. 2012); Commonwealth v. Charlton, 962 N.E.2d 203 (Mass. App. Ct. 2012); Commonwealth v. Percy, 966 N.E.2d 866 (Mass. App. Ct. 2012); Commonwealth v. Hood, 957 N.E.2d 1131 (Mass. App. Ct. 2011); Commonwealth v. Howell, 940 N.E.2d 519 (Mass. App. Ct. 2011); Commonwealth v. Lopez, 957 N.E.2d 1131 (Mass.

the testimony of both chemists who tested the drugs in evidence, defense counsel appealed, citing *Melendez-Diaz*. ¹⁰⁵ Regardless of which chemist appeared—either the "primary" or "confirmatory" chemist—the defense briefs insisted on the importance of testimony from *both* chemists, and asserted the right to confront *all* analysts under *Melendez-Diaz*. Notably, however, none of these briefs challenged the actual forensic science, or requested retests; they only raised what Justice Kennedy's opinion called "technical grounds." ¹⁰⁶ Equally notable is that in the remainder of these 21 cases where defendants did not stipulate to the forensic reports, the prosecution called *both* laboratory technicians—producing the "onerous burden" that Justice Kennedy worried about when multiple analysts are involved in testing. ¹⁰⁷ Concededly, cases will remain where the defense will stipulate to forensic test results, or alternatively where the prosecution will want the chemist to testify in order to make the case more vivid for the jury. ¹⁰⁸ Nonetheless, the prosecution is bearing the burden of producing analysts for testimony in many cases where no truth-seeking function will be served.

III. PROPOSALS FOR REFORM

Reform proposals in the area of forensic testing must consider the lessons of the Annie Dookhan scandal, especially the ineffectiveness of cross-examination at exposing flawed scientific evidence. Although the danger of flawed forensic testing certainly exists—from either negligence or malice—steps can be taken to mitigate the risk. In this Subpart, I propose reforms both in the laboratories themselves and in the availability of retesting for criminal defendants.

App. Ct. 2011); Commonwealth v. Martinez, 958 N.E.2d 536 (Mass. App. Ct. 2011); Commonwealth v. Pierre, 958 N.E.2d 537 (Mass. App. Ct. 2011); Commonwealth v. Villoria-Tavares, 954 N.E.2d 591 (Mass. App. Ct. 2011); Commonwealth v. Contreras, 937 N.E.2d 72 (Mass. App. Ct. 2010); Brief for Appellant, Commonwealth v. Blue, No. 2012-P-0966 (Mass. App. Ct. Sept. 4, 2012), 2012 WL 4096005; Brief for Commonwealth, Commonwealth v. Pierre, No. 11-P-494 (Mass. App. Ct. Aug. 17, 2012), 2012 WL 3821965; Brief for Defendant, Commonwealth v. Valentin, No. 2012-P-104 (Mass. App. Ct. July, 2012), 2012 WL 3233185; Brief for Defendant, Commonwealth v. Santos, No. 12-P-31 (Mass. Ct. App. Jun. 15, 2012), 2012 WL 2563771; Brief for Commonwealth, Commonwealth v. Sylvester, No. 11-P-1615 (Mass. App. Ct. May 21, 2012), 2012 WL 2138194; Brief for Appellant, Commonwealth v. McLaughlin, No. 2011-P-0850 (Mass. App. Ct. App. 6, 2012), 2012 WL 1431205.

^{105.} E.g., Brief for Defendant-Appellant at 21–24, Commonwealth of Massachusetts v. Charlton, 962 N.E.2d 203 (2012) (No. 10-P-1042), 2010 WL 3415978.

^{106.} Melendez-Diaz v. Massachusetts, 557 U.S. 305, 342 (Kennedy, J., dissenting).

^{107.} Id. at 331.

^{108.} See Old Chief v. United States, 519 U.S. 172, 183 (1997). In Old Chief, the defendant was charged with being a felon in possession of a firearm. Although the defendant stipulated to the fact that he had a prior felony conviction, the prosecutor insisted on proving this fact by testimony at trial—including the specific prior felony: assault causing serious physical injury. The Supreme Court found the admission of that particular evidence unduly prejudicial and overturned the conviction, but nonetheless strongly supported the importance of "narrative integrity" to a prosecutor's case in general.

A. Laboratory Safeguards

Any effort to improve the reliability of forensic testing, and to prevent future Annie Dookhans, must start with additional safeguards in the laboratories themselves. Below is a list of reforms—many of which have been endorsed by the National Academy of Sciences ¹⁰⁹—that could be implemented by the labs themselves, or through legislative action:

- Independent accreditation: all forensic laboratories, and individual technicians, could be required to undergo accreditation by an independent association, such as the American Society of Criminal Lab Directors Laboratory Accreditation Board (ASCLD/LAB). 110 Outside accreditation would ensure uniform, high-quality national standards. This requirement for accreditation—of both labs *and* technicians—was one of the core recommendations of the National Academy of Science's 2009 report on improving forensic science. 111
- Unannounced inspections: legislators could require all crime laboratories—both government run and privately operated—to submit to unannounced visits by either government or private inspectors. Such inspections would ensure that accreditation standards are actually being met.
- Integrity testing: to monitor crime laboratories for incompetent or fraudulent work, "test" or "dummy" samples could periodically be sent to the lab for analysis. These random samples would be indistinguishable except for a control number known only to outside testers. For analysts suspected of misconduct, more elaborate integrity tests, e.g., undercover requests for "favorable" testing results, could be used, similar to what many police departments have implemented in their Internal Affairs units. 112

^{109.} See NAT'L ACAD. OF SCIS., supra note 16, at S-14-S-24.

^{110.} See Cusick, supra note 50. However, even the accreditors may need supervision according to Cusick. Her article notes criticism of the ASCLD's inspection procedures. According to one defense attorney who served as an advisor to the National Academy of Science: "When ASCLD[] comes to a laboratory for an inspection, it announces that they're coming. It's not a surprise inspection. Everybody gets a chance to clean up their act." Id.

^{111.} NAT'L ACAD. OF SCIS., supra note 16, at S-19.

^{112.} E.g., COMM'N TO COMBAT POLICE CORRUPTION, NYPD INTEGRITY TESTING PROGRAM (2000), available at http://www.nyc.gov/html/ccpc/assets/downloads/pdf/iab_integrity_testing_program_march2000.pdf. "An integrity test is a 'sting operation'—an artificial situation designed to test a subject officer's adherence to the law and Department guidelines. Undercover IAB officers create typical police encounter scenarios—involving, for example, narcotics or domestic violence—and then monitor the responding officer's behavior. IAB investigators also use surveillance equipment to monitor the subject officer and are careful not to restrict the subject's freedom to perform during the test." Id. at 1. Such integrity tests may be "random," or "targeted" to a particular officer who is suspected of wrongdoing. Id. at 3.

- Criminal penalties: in conjunction with integrity testing, legislators could increase prison sentences for analysts who tamper with evidence, and require that notices of such sentences be prominently displayed at all testing facilities. 113 Although experts dispute the value of longer prison sentences for some crimes, there is strong evidence that the deterrent value of prison is high for individuals in white-collar jobs like a laboratory analyst. 114
- Tighter evidence controls: additional safeguards could be devised for access to evidence vaults, and for logging which analysts have accessed samples for testing.
- Monitor analysts' workstations: entire tests could be recorded, with full disclosure to defense counsel. Although this requirement could be burdensome for testing procedures that use multiple pieces of equipment or workstations, for some tests it would be easy to implement, and would provide vivid evidence for prosecutors as well.
- Defendant access: allow access to state DNA databases (via the Combined DNA Index System) for defendants who wish to prove that crime scene evidence matches other felons in the database. This recommendation has also been endorsed by the National District Attorney's Association.

B. Retesting of Evidence

Although constrained by the current *Melendez-Diaz* rule, there nonetheless are criminal procedure reforms that would improve the accuracy of forensic testing and reduce the chance that defendants are convicted based on erroneous scientific evidence. Even without a change in doctrine from the Supreme Court, one major reform that legislators (or potentially individual prosecutors' offices¹¹⁶) could

^{113.} Support for longer prison terms appears to be present in Massachusetts, as seen in the disappointment expressed by State House Republican Leader Bradley H. Jones, Jr. about the length of Dookhan's sentence: "You walk away feeling this is really inadequate to what has happened, and the ramifications that it has had, and is going to have, on the criminal justice system Three to five years is not adequate." Valencia & Ellement, supra note 5.

^{114.} See Richard S. Frase, Punishment Purposes, 58 STAN. L. REV. 67, 80 (2005) ("[S]uch [white collar] offenders have many lawful alternatives and much to lose from being convicted, regardless of the penalty.").

^{115.} Ethan Bronner, Lawyers, Saying DNA Cleared Inmate, Pursue Access to Data, N.Y. TIMES, Jan. 3, 2013, http://www.nytimes.com/2013/01/04/us/lawyers-saying-dna-cleared-inmate-pursue-access-to-data.html.

^{116.} This reform role for prosecutors comports with both the letter and spirit of their professional responsibility obligations, as stated in the American Bar Association's Standards for Criminal Justice: "It is an important function of the prosecutor to seek to reform and improve the administration of criminal justice. When inadequacies or injustices in the substantive or procedural law come to the prosecutor's attention, he or she should stimulate efforts for remedial action." Am. Bar Assoc., ABA STANDARDS FOR CRIMINAL JUSTICE: PROSECUTION AND DEFENSE FUNCTION §3-1.2(d) (1993), available at

undertake is to institute a system to streamline retesting of evidence upon a defendant's request.¹¹⁷ If designed properly, such a reform could provide innocent defendants with vital exculpatory evidence, while incentivizing against frivolous use. Here is how such a "Retesting Program" could operate:

- When providing pretrial discovery to the defense, such as the existence of forensic evidence, results from testing, and the identity of expert witnesses, 119 the prosecution's discovery letter would also include information about the office's "Retesting Policy."
- For evidence that can be analyzed using nonconsumptive testing, i.e., where the test does not destroy the sample, or destroys only a negligible portion of it, samples would be made available for retesting by a neutral laboratory, which must be accredited by an independent association, such as the American Society of CLD/LAB, to avoid the proliferation of sham "defense-friendly" labs. 120
- If independent laboratories are not available in the area, or are prohibitively expensive, the government lab could perform the retest, provided that a different analyst was used, and integrity safeguards were in place. Such safeguards could include random submission of "test" samples not affiliated with any case to ensure the analysts' integrity.
- For evidence that requires consumptive testing, i.e., will be destroyed by the test itself, leaving no material for future testing, if possible, the defendant should be given notice and allowed to have an expert observe the test. 121 Alternatively, the procedure

http://www.americanbar.org/publications/criminal_justice_section_archive/crimjust_standar ds_pfunc_blk.html.

- 117. The American Bar Association, in the context solely of DNA testing, has created model rules to allow defendants access to retesting by an independent expert. See AM. BAR ASSOC., ABA STANDARDS FOR CRIMINAL JUSTICE: DNA EVIDENCE §4.2 ("Defense testing and retesting") (2007), available at http://www.americanbar.org/publication s/criminal justice section archive/crimjust standards_dnaevidence.html#4.2.
- 118. Reformers in Australia have called for a similar program, bemoaning the fact that only well-resourced defendants have access to independent retesting of evidence. See Edmond & San Roque, supra note 81, at 59.
 - 119. See, e.g., FED. R. CRIM. P. 16(a)(1); MASS. R. CRIM. P. 14(a) (2009).
- 120. An analogous problem has occurred with doctors who are known to be "friendly" to applicants for disability retirement benefits. In a recent case involving retirees from the Long Island Rail Road in New York, doctors were indicted for submitting false medical diagnoses so that patients could receive generous disability pensions. See, e.g., Doctor Tells U.S. Judge He Created Fake L.I.R.R. Injury Claims, N.Y. TIMES, Jan. 18, 2013, http://www.nytimes.com/2013/01/19/nyregion/doctor-admits-faking-disability-claims-for-lirr-workers.html.
- 121. This safeguard for consumptive testing is similar to the procedure recommended by the American Bar Association. See AM. BAR ASSOC., ABA STANDARDS FOR CRIMINAL JUSTICE: DNA EVIDENCE, supra note 116, at §3.4. Of course, in many cases,

could be recorded. If the defense seeks to conduct a consumptive test, an accredited government lab could carry it out with a defense expert observing the procedure.

- For indigent defendants, retests would be performed at the government's expense. Although indigent defendants can petition federal courts for appointment of defense expert witnesses at the government's expense, ¹²² and also under certain states' procedural rules, ¹²³ this proposed procedure would simplify the process by guaranteeing a free retest—subject to the important caveat in the final bullet point below.
- In order to apply for any of these retests (if done at the government's expense), defendants must execute a signed written agreement with prosecutors, after conferring with their attorney. The agreement would stipulate that the defendant requested a second forensic test, and that the prosecution could introduce this fact, i.e., that the defendant requested it, at trial.

Because of this final requirement, such a program would incentivize only innocent defendants to demand retests, thus assuring that government funds are not wasted on frivolous testing requests. Of course, while prosecutors must act fairly to all parties, avoiding wrongful convictions of actually innocent defendants is an ethical duty. Additionally, even if many defendants do not opt for such retesting, the mere existence of such a program could serve as another deterrent to misconduct by laboratory analysts.

Admittedly, this proposal does not resolve all potential problems, particularly in cases where the entire original sample was contaminated or mislabeled, by either negligence or malice. As the Annie Dookhan scandal unfortunately shows, however, cross-examination is also ill-suited to discover such misconduct. For these cases, the legislative reforms suggested above—especially accreditation and integrity testing for laboratories and law enforcement agencies—remain the best safeguard.

IV. RETHINKING CONFRONTATION CLAUSE JURISPRUDENCE

Prosecutors and legislators, of course, cannot reshape Confrontation Clause jurisprudence; any such reform must come from the Supreme Court in future cases on forensic testing. A pragmatic approach to ensuring reliable scientific testimony can already be seen in the opinions of Justice Kennedy in *Melendez-Diaz*, and Justice Breyer in *Williams*. In particular, Justice Breyer's opinion, after surveying a wide array of cases and expert literature, concluded that cross-examination "did not prevent admission of faulty evidence." ¹²⁴ The *Melendez-Diaz* jurisprudence,

consumptive tests may be done before a defendant is ever identified, making notice impossible—the reason for my qualifier "if possible."

^{122.} See Ake v. Oklahoma, 470 U.S. 68, 76–77, 86 (1985); see also Caldwell v. Mississippi, 472 U.S. 320, 323 n.1 (1985).

^{123.} See, e.g., CAL. EVID. CODE §§ 730–33; TENN. SUP. CT. R. 13.

^{124.} Williams v. Illinois, 132 S. Ct. 2221, 2250 (2012) (Breyer, J., concurring).

however, openly rejects a pragmatic approach to the issue of confronting scientific evidence, instead embracing "a procedural rather than a substantive" way of ensuring accuracy, grounded in Justice Scalia's view of the Sixth Amendment. ¹²⁵ In this final section, I critique this interpretation of the Confrontation Clause, arguing that even under a properly conceived originalist view, the *Melendez-Diaz* line of cases is incorrectly decided. Instead, the Court should take a pragmatic approach to interpreting the Sixth Amendment. I conclude by offering a proposed new rule for Confrontation Clause jurisprudence regarding forensic testing.

A. 18th Century Solutions to 21st Century Problems

The Court's opinion in Crawford, on which the Melendez-Diaz line of cases is based, supported its originalist holding with a wide range of historical sources, including the Framers, Blackstone, Shakespeare, and even St. Paul. 126 Luminaries though they all were, unfortunately none of these historical figures knew anything about forensic testing, much less how best to examine its reliability in court. This shortcoming leads to the critical flaw in the reasoning of Melendez-Diaz: merely because the Framers concluded that cross-examination was the best method of determining reliability in the accounts of eyewitnesses does not mean the Framers would consider it to be the best—or the only constitutionally guaranteed—method for verifying forensic test results, which did not even exist in their lifetimes. The Framers guaranteed a right of confrontation, but given that the Sixth Amendment scarcely received any attention in the debates in Congress over the Bill of Rights, ¹²⁷ there is "virtually no evidence of what the drafters of the Confrontation Clause intended it to mean."128 Nor does the text of the Sixth Amendment resolve this uncertainty: "In all criminal prosecutions, the accused shall enjoy the right . . . to be confronted with the witnesses against him "129 Thus, it is only a guess by the Court as to what form that confrontation must take when entirely new categories of evidence arise. Therefore, my dispute with Justice Scalia's reasoning is not about "[d]ispensing with confrontation" entirely, 130 but rather with the form that confrontation should take.

^{125.} Melendez-Diaz v. Massachusetts, 557 U.S. 305, 317–18 (2009) (citing Crawford v. Washington, 541 U.S. 36, 61–62 (2004)).

^{126.} E.g., Crawford, 541 U.S. at 61-62 (citing 3 WILLIAM BLACKSTONE, COMMENTARIES at 373) ("This open examination of witnesses . . . is much more conducive to the clearing up of truth."); Coy v. Iowa, 487 U.S. 1012, 1015-16 (1988) (Scalia, J.) (quoting Acts 25:16) ("It is not the manner of the Romans to deliver any man up to die before the accused has met his accusers face to face, and has been given a chance to defend himself against the charges."); id. (quoting Richard II, Act 1, sc. 1) ("Then call them to our presence—face to face, and frowning brow to brow, ourselves will hear the accuser and the accused freely speak").

^{127.} See The Congressional Register; or, History of the Proceedings and Debates of the First House of Representatives of the United States of America 2:228 (Aug. 17, 1789) (showing no discussion of the right of confrontation), available at https://archive.org/details/congressionalreg02unit.

^{128.} See White v. Illinois, 502 U.S. 346, 359 (1992) (Thomas, J., concurring in part and concurring in judgment).

^{129.} U.S. CONST., amend. VI.

^{130.} Crawford, 541 U.S. at 62.

Such reservations about Justice Scalia's reformulation of the Confrontation Clause were even present in *Crawford*, where Chief Justice Rehnquist warned of the far-reaching ramifications of the Court's new rule:

It is one thing to trace the right of confrontation back to the Roman Empire...[but it] is an odd conclusion indeed to think that the Framers created a cut-and-dried rule with respect to the admissibility of testimonial statements when the law during their own time was not fully settled.¹³¹

History need not be thrown out of the equation entirely, however. The historical example of copyists, cited by both the majority and dissent in *Melendez-Diaz*, ¹³² illustrates that a more pragmatic view of the Confrontation Clause could be acceptable, even to an originalist. Both opinions agree that during the Framers' era, courts accepted affidavits from copyists without live testimony. Such affidavits certified that copies of official records, such as marriage certificates that might be at issue in bigamy prosecutions, were accurate. While the two opinions spar over whether or not *accurate* work of eighteenth century copyists is analogous to modern day laboratory technicians, they both overlook the more important question: how would an eighteenth century defendant have challenged *erroneous* copies? Would an innocent eighteenth century defendant on trial for bigamy have opted for a blistering cross-examination about the copyists' spectacles, quills, and parchment? Of course not. He would demand that the *original* marriage certificate be produced.

Similarly, while a modern-day defendant might occasionally score points by cross-examining laboratory analysts—perhaps if they appeared disorganized or disheveled, or had an obvious conflict of interest—any meaningful confrontation is ultimately not with the analyst but with the evidence itself. Moreover, this secondary importance of the witness to the underlying test will only grow starker as forensic testing becomes more automated. Even with an originalist view, however, it is entirely plausible that if the Framers could have imagined that the ultimate "witness" mentioned in the Sixth Amendment would one day take the form of laboratory tests, they would have opted for the "centrifuge of retesting" instead of the "crucible of cross-examination."¹³³

^{131.} Id. at 73 (Rehnquist, C.J., concurring in judgment).

^{132.} Compare Melendez-Diaz v. Massachusetts, 557 U.S. 305, 322-23 (2009), with id. at 347-48 (Kennedy, J., dissenting).

^{133.} Various academics have suggested similar pragmatic readings of the Confrontation Clause. See, e.g., Andrea Roth, Book Review, 62 J. LEGAL EDUC. 377, 386 (2012) ("Rather, the answer should be for courts to recognize that the right of confrontation is not historically or logically limited to cross-examination and physical confrontation, but—as David Sklansky has suggested—encompasses 'the broader ability of an accused to test and to challenge the state's proof.""); David Alan Sklansky, Hearsay's Last Hurrah, 2009 SUP. CT. REV. 1, 66–67 ("The language and history of the Confrontation Clause suggest something else, as well: that the underlying value the Confrontation Clause sought to protect was not, first and foremost, the specifics of cross-examination but the broader ability of an accused to test and to challenge the state's proof. That is a value that runs deep in the Anglo-American legal tradition (and, as we have seen, in the Continental legal tradition). It is also a value that is plainly worth caring about.").

As *Melendez-Diaz* tells us, all "the Constitution guarantees" is "confrontation"; ¹³⁴ it is silent as to form. Indeed, such a pragmatic reading seems *more* faithful to the Framers themselves, many of whom were forward thinkers in the fields of science and technology. After all, among those in attendance at the Constitutional Convention were Benjamin Franklin, a prodigious inventor of items from bifocals to the lightning rod, ¹³⁵ and James Madison, author of Federalist No. 43 (discussing the need for the Constitution's Patent Clause), and about whom it was said, "all new inventions interested him." ¹³⁶ Thus, the issue is not with Originalism per se, but with the variant at work in *Melendez-Diaz*.

B. Where Does Forensic Testing Fit?

Having shown the impossibility of determining "what James Madison thought about" the value of cross-examination for twenty-first century scientific evidence, we can now turn to examine how forensic testing fits into the Confrontation Clause. Accepting the framework of *Crawford*, we know that confrontation applies to the "testimonial" statements of all "witnesses." However, expert testimony about forensic testing does not cleanly fit into either of these categories, suggesting that the *Melendez-Diaz* view of the Confrontation Clause fails to adapt sensibly to new technology.

1. Are Forensic Testing Reports "Testimonial"?

In some cases, reports of forensic testing certainly can be testimonial—that is, similar to an affidavit—as discussed by the Court in *Crawford*. ¹³⁹ For example, Annie Dookhan often received special requests from prosecutors to see if drug samples, identified by the name of the defendant, weighed more than a certain threshold weight, which was required for longer prison sentences. ¹⁴⁰ Any report produced in response to such a request clearly contemplated that it would be used to

^{134.} *Melendez-Diaz*, 557 U.S. at 318.

^{135.} Benjamin Franklin... In His Own Words, LIBRARY OF CONG., http://www.loc.gov/exhibits/treasures/franklin-scientist.html (last visited May 25, 2014).

^{136.} SYDNEY HOWARD GAY, JAMES MADISON 72 (1886). See also id. ("A small telescope, he [Madison] suggests, might be fitted on as a handle to a cane . . . Jefferson writes him [Madison] of a new invention, a pedometer; and he wants one for his own pocket.").

^{137.} Illustrating this challenge, and for a funny exchange on "what James Madison would have thought," see Justice Alito's comments to Justice Scalia at oral argument in *Brown v. Entertainment Merchants Association*, 131 S. Ct. 2729 (2011): "Well, I think what Justice Scalia wants to know is what James Madison thought about video games? [Laughter] Did he enjoy them?" *Brown*, 131 S. Ct. at 2729, Audio Recording of Oral Argument at 16:04, *available at* http://www.oyez.org/cases/2010-2019/2010/2010 08 1448.

^{138.} Crawford v. Washington, 541 U.S. 36, 53-54 (2004) ("[T]he Framers would not have allowed admission of testimonial statements of a witness who did not appear at trial unless he was unavailable to testify and the defendant had had a prior opportunity for cross-examination.").

^{139.} *Id.* at 51–52, 68.

^{140.} See Allen & Estes, supra note 72 (summarizing emails from a prosecutor stating that "he needed a marijuana sample to weigh at least 50 pounds so that he could charge the owners with drug trafficking").

prove guilt at trial, and thus could plausibly be deemed testimonial. ¹⁴¹ However, as Justice Breyer pointed out in his concurring opinion in *Williams*, ¹⁴² many forensic testing procedures will be carried out by analysts who do *not* know that its sole purpose is to incriminate a defendant in a criminal prosecution. Many DNA tests, for example, may involve samples from the victim rather than the perpetrator, or may be entirely noncriminal in nature, e.g., identifying victims in an accident or mass casualty scenario. Such tests are arguably not testimonial.

Moreover, the Court has accepted other types of hearsay that are testimonial in nature, without finding any Confrontation Clause violation. 143 Dying declarations—seemingly accepted on the basis of what Judge Posner has called "no firmer ground than judicial habit, in turn reflecting judicial incuriosity and reluctance to reconsider ancient dogmas"¹⁴⁴—as well as certain types of business records could conceivably run afoul of confrontation under Crawford. Yet the Court has carved out exceptions for both. 145 A dying declaration naming one's killer is clearly testimonial but remains admissible based on the eighteenth century belief that one would never commit perjury before meeting his maker; and certain business records, when requested specifically for trial, are as damning as any DNA testing report. In a bank fraud case, for example, 146 the victim of the fraud is the party producing the records specifically for use in a criminal prosecution—yet no Confrontation Clause violation is found, because Crawford unqualifiedly upheld a "business records" exception. (Justice Breyer also hints at this anomaly in Williams. 147) Yet, at the very least, the act of producing business records—especially where the institution producing those records is the victim— undoubtedly seems testimonial. While a defendant may cross-examine a document custodian in such cases, he or she will not cross-examine the person-or machine-who created the original record. Of course, if there were some serious allegation that the records were incorrect, the defendant would be able to confront other witnesses from the

^{141.} See Crawford, 541 U.S. at 51-52 (offering examples of "testimonial" statements).

^{142.} Williams v. Illinois, 132 S. Ct. 2221, 2250-51 (2012) (Breyer, J., concurring).

^{143.} See Crawford, 541 U.S. at 56 (exempting business records); id. at 56 n.6 ("If this [dying declarations] exception must be accepted on historical grounds, it is sui generis.").

^{144.} United States v. Boyce, 742 F.3d 792, 802 (7th Cir. 2014) (Posner, J., concurring) ("The Advisory Committee Notes go on to say that while the excited utterance exception has been criticized, 'it finds support in cases without number.' I find that less than reassuring. Like the exception for present sense impressions, the exception for excited utterances rests on no firmer ground than judicial habit, in turn reflecting judicial incuriosity and reluctance to reconsider ancient dogmas.").

^{145.} Supra note 143.

^{146.} See, e.g., United States v. Munoz-Franco, 487 F.3d 25, 38 (1st Cir. 2007) (upholding the use of business records against a Confrontation Clause challenge in a bank fraud prosecution).

^{147.} See Williams, 132 S. Ct. at 2252 (Breyer, J., concurring) ("Similarly, should the defendant demonstrate the existence of a motive to falsify, then the alternative safeguard of honesty would no longer exist and the Constitution would entitle the defendant to Confrontation Clause protection. Cf. 2 Wigmore, Evidence § 1527, at 1892 (in respect to the business records exception, 'there must have been no motive to misrepresent')").

victim bank—an approach that Justice Breyer argued in his concurrence in *Williams* should be applied to forensic testing as well. 148

I am not arguing that the business records exception to the hearsay rule and the Confrontation Clause should be abandoned; rather, I offer it as an example of how the Court has often applied a pragmatic analysis to what the Confrontation Clause allows. By creating a rigid rule that exalts procedure over substance, the Court's Melendez-Diaz decision is inviting lower courts to stretch the doctrine in order to avoid absurd results. This problem is already present in Courts of Appeals decisions on Confrontation Clause challenges to autopsy reports that were performed years before prosecution by a now-unavailable medical examiner. (Such issues arise with defendants who were not identified previously, or who fled from justice, causing years to pass before trial.) As discussed in the following paragraphs, although some courts have tried to distinguish autopsies because they are often performed for deaths that will not result in prosecution, i.e., deaths from natural causes or suicide, the more realistic reason that courts have avoided applying the literal dictates of *Melendez-Diaz* and its progeny to autopsy reports is because of the substantial injustice they would produce: a defendant kills his victim, evades justice for years, and then the Confrontation Clause protects him from prosecution because the analyst who performed the autopsy has since retired or passed away. Justice Breyer warned of this very result in his concurring opinion in Williams: "Is the Confrontation Clause effectively to function as a statute of limitations for murder?"149

After *Crawford*, every federal court considering autopsy reports found them nontestimonial, analogizing them to business records. However, following *Melendez-Diaz*, the outcome is uncertain. As Judge Boudin wrote in a 2011 opinion:

Abstractly, an autopsy report can be distinguished from, or assimilated to, the sworn documents in *Melendez-Diaz* and *Bullcoming*, and it is uncertain how the Court would resolve the question. We treated such reports as not covered by the Confrontation Clause [in] *United States v. De La Cruz* [514 F.3d 121 (1st Cir. 2008)]... but the law has continued to evolve and... now it is

^{148.} *See id.* at 2250–52 (Breyer, J., concurring).

^{149.} Id. at 2251. For ease of reading, I have omitted the (numerous) internal quotation marks from this quote. Justice Breyer is paraphrasing part of Justice Kennedy's dissent in Melendez-Diaz v. Massachusetts, 557 U.S. 305, 335 (2009) (Kennedy, J., dissenting) (quoting Comment, Toward a Definition of "Testimonial": How Autopsy Reports Do Not Embody the Qualities of a Testimonial Statement, 96 CAL. L.REV. 1093, 1094, 1115 (2008)).

^{150.} See, e.g., United States v. De La Cruz, 514 F.3d 121, 133 (1st Cir. 2008) (finding no Confrontation Clause violation because an "autopsy report is made in the ordinary course of business by a medical examiner who is required by law to memorialize what he or she saw and did during an autopsy"); United States v. Feliz, 467 F.3d 227, 236 (2d Cir. 2006) (holding that autopsy reports—even for a gruesome murder—are not testimonial and thus can be admitted as business records because "the Office of the Chief Medical Examiner of New York conducts thousands of routine autopsies every year, without regard to the likelihood of their use at trial").

uncertain whether, under its primary purpose test, the Supreme Court would classify autopsy reports as testimonial.¹⁵¹

Recent cases, showing that there is no clear consensus among federal and state courts, 152 have validated Judge Boudin's prediction. In United States v. Ignasiak, the Eleventh Circuit held that autopsy reports are testimonial hearsay barred by the Confrontation Clause, 153 while the Second Circuit has ruled that autopsy reports are nontestimonial, stressing two important factors in its holding: first, the independence from law enforcement of the medical examiner's office in question; and second, the fact that there was "no suggestion that [the medical examiner who performed the original autopsyl or anyone else involved in this autopsy process suspected that [the victim] had been murdered and that the medical examiner's report would be used at a criminal trial." Thus, it is unclear whether even the Second Circuit would reach the same outcome in a case where the cause of death was obviously homicide. Interestingly, the Second Circuit argued that its holding was not at odds with the Eleventh Circuit, distinguishing Ignasiak because the Florida Medical Examiner's Office at issue in that case was not independent from law enforcement. 155 That sounds like a distinction without a difference statements need not be made by law enforcement officials to be "testimonial" under Crawford—and an unsuccessful attempt to avoid the appearance of a circuit split. This pattern of "distinguishing away" a previous holding is, however, a common tactic for reining in the reach of a decision. 156

^{151.} Nardi v. Pepe, 662 F.3d 107, 111–12 (İst Cir. 2011).

While I focus on federal courts for simplicity, it is worth noting that state courts nationwide have also split on this issue. A recent habeas ruling in the District of Massachusetts collected cases on this question. See Hensley v. Roden, CIV.A. 10-12133-RWZ, 2013 WL 22081 at *5 n.3 (D. Mass. Jan. 2, 2013).

^{153.} United States v. Ignasiak, 667 F.3d 1217, 1231 (11th Cir. 2012) ("Applying the reasoning of *Crawford*, *Melendez–Diaz*, and *Bullcoming*, we conclude that the five autopsy reports admitted into evidence in conjunction with Dr. Minyard's testimony, where she did not personally observe or participate in those autopsies (and where no evidence was presented to show that the coroners who performed the autopsies were unavailable and the accused had a prior opportunity to cross-examine them), violated the Confrontation Clause.").

^{154.} United States v. James, 712 F.3d 79, 99 (2d Cir. 2013).

^{155.} Id. at 99 n.11.

^{156.} See, e.g., Howes v. Fields, 132 S. Ct. 1181, 1187 (2012) (explaining that Miranda warnings not required for an interrogation held in a jail when the prisoner was told he could return to his cell anytime); Berkemer v. McCarty, 468 U.S. 420, 439 (1984) (explaining that Miranda warnings are not required at a traffic stop, even though defendant made incriminating statements); New York v. Quarles, 467 U.S. 649, 651 (1984) (creating a "public safety exception" to Miranda); Oregon v. Mathiason, 429 U.S. 492, 499 (1977) (holding that Miranda warnings were not necessary for an interrogation at a police station because the defendant was told that he could leave). Some commentators argue that this "distinguishing away" eviscerates the rule. See, e.g., William T. Pizzi & Morris B. Hoffman, Taking Miranda's Pulse, 58 VAND. L. REV. 813, 814 (2005).

2. Who is the "Witness" Subject to Cross-Examination for a Forensic Testing Report?

Based on the Court's current doctrine, the answer to this question also is unclear. Here too, the business records exception example is relevant because of what it shows about the nature of the "witness" who is subject to confrontation. Part of the Court's comfort with the business records exception arguably comes from the fact that the "testimonial" part of a business record is often not offered by a human being at all, but by computers recording billions of transactions—such as bank records, phone records, and GPS data, just to name a few. Similarly, in forensic testing, while the analyst is of course a "witness" if they testify in court—and thus subject to cross-examination—in two very important ways, forensic analysts really are not "witnesses" within the historic meaning of the Confrontation Clause.

First, forensic testing is unlike the testimony of an eyewitness, which is the historic core of the Confrontation Clause. For eyewitness testimony—like the example of Sir Walter Raleigh's treason trial ¹⁵⁷—confrontation affords the defendant the ability to discredit the testimony against him by impeaching the witness's perception, memory, or honesty, for example. This version of confrontation accords with the definition of "witness" given in *Crawford*: one who "bears testimony" against the defendant. ¹⁵⁸ Such eyewitness testimony was the *only* kind of evidence that the Framers would have known. However, for forensic testing, the analogy to one who "bears witness" is not clear, as Justice Kennedy pointed out in his dissent in *Melendez-Diaz*: "Laboratory analysts are not 'witnesses against' the defendant as those words would have been understood at the framing." ¹⁵⁹

Of course, the defendant can cross-examine the analyst who testifies, but the damning evidence that a laboratory analyst provides is not solely the product of her perception, but largely the output of a machine. In an opinion predating *Melendez-Diaz*, Judge Easterbrook made a similar point, concluding, "a machine [is not] a 'witness against' anyone," because "how could one cross-examine a gas chromatograph?" ¹⁶⁰ In other contexts, the Supreme Court has also recognized that challenges to critical evidence need not come exclusively through cross-examination. In *Florida v. Harris*, a 2013 decision on the propriety of the use of dog sniffs for narcotics detection, the Court concluded: "A defendant, however, must have an opportunity to challenge such evidence of a dog's reliability, whether by cross-examining the testifying officer or by introducing his own fact or expert

^{157.} See, e.g., Crawford v. Washington, 541 U.S. 36, 44 (2004); Raleigh's Case, 2 How. St. Tr. 1, 15–16 (1603).

^{158.} Crawford, 541 U.S. at 51.

^{159.} Melendez-Diaz v. Massachusetts, 557 U.S. 305, 343 (2009) (Kennedy, J., dissenting).

^{160.} United States v. Moon, 512 F.3d 359, 362 (7th Cir. 2008) ("Nor is a machine a 'witness against' anyone. If the readings are 'statements' by a 'witness against' the defendants, then the machine must be the declarant. Yet how could one cross-examine a gas chromatograph? Producing spectrographs, ovens, and centrifuges in court would serve no one's interests.").

witnesses." ¹⁶¹ The Court should apply the same flexible approach to confrontation of laboratory analysts.

Second, even assuming that the analyst is a witness subject to confrontation, there remain numerous other people who make such testing possible, without whom there would be no evidence to test and thus no testimony to confront. If the Confrontation Clause requires cross-examination of the analyst who recounts a machine-readout then, logically, it should also require in-court testimony from every analyst in the laboratory who handled that sample, every technician who calibrated the equipment, and every law enforcement officer who collected and transported the evidence. Justice Breyer makes a similar point in *Williams*:

Once one abandons the traditional rule, there would seem often to be no logical stopping place between requiring the prosecution to call as a witness one of the laboratory experts who worked on the matter and requiring the prosecution to call *all* of the laboratory experts who did so. Experts—especially laboratory experts—regularly rely on the technical statements and results of other experts to form their own opinions. The reality of the matter is that the introduction of a laboratory report involves layer upon layer of technical statements (express or implied) made by one expert and relied upon by another. ¹⁶²

This argument is not mere semantics. If the Confrontation Clause is designed to allow for cross-examination of all witnesses bearing testimonial statements, then it needs to adjust to today's world of computer-produced statements that rely on the participation of potentially dozens of individuals. ¹⁶³ If a forensic test report is, in fact, "testimonial" for the purposes of Sixth Amendment analysis, then there is not just one "witness" who bears that testimony.

Like Justice Breyer, I do not believe that the best solution to this Confrontation Clause dilemma is to require the testimony of a dozen individuals to establish the validity of a single lab test. However, this logic highlights the flawed principle on which the *Melendez-Diaz* conception of confrontation rests, and shows the need for a pragmatic rule that stays true to the historical purpose of the Confrontation Clause.

C. Interpreting the Sixth Amendment: Lessons from Gideon

The previous Subpart highlights the impossibility of wedging forensic testing into the definitions of "testimonial" and "witness" from *Crawford* and *Melendez-Diaz*. Instead, a more pragmatic interpretation that focuses on the core values of the Confrontation Clause is necessary. Fortunately, the idea that the Sixth Amendment should be interpreted pragmatically to give meaning to the underlying right is not novel. The Court used this exact reasoning in its landmark decision in *Gideon v. Wainwright*, concluding that the Sixth Amendment's guarantee that "the accused shall enjoy the right to have . . . the Assistance of Counsel for his

^{161.} Florida v. Harris, 133 S. Ct. 1050, 1057 (2013) (emphasis added).

^{162.} Williams v. Illinois, 132 S. Ct. 2221, 2246 (2012) (Breyer, J., concurring).

^{163.} *Id.* at 2252, Appendix (Breyer, J., concurring). Justice Breyer notes that as many as 12 analysts may be required for a typical DNA test. *Id.*

defence"¹⁶⁴ "would be, in many cases, of little avail if it did not comprehend the right to" appointed counsel for indigent defendants. ¹⁶⁵ The Court bluntly acknowledged that innocent defendants could be convicted merely because they could not afford an attorney: "Without [assistance of counsel], though he be not guilty, he faces the danger of conviction because he does not know how to establish his innocence."¹⁶⁶ And clearly, according to Justice Black's opinion, the fact that the "government hires lawyers to prosecute and defendants who have the money hire lawyers to defend are the strongest indications of the wide-spread belief that lawyers in criminal courts are necessities, not luxuries."¹⁶⁷

Although the text of the Sixth Amendment does not call for access to attorneys for indigent defendants, the Court concluded that the right would be hollow otherwise. Substance trumped form for the Sixth Amendment's right to counsel in *Gideon*, and should be applied the same way for forensic testing. Therefore, a constitutional right of access to retesting of forensic evidence—free of charge for indigent defendants—is the Confrontation Clause equivalent of *Gideon*. While not limitless, as discussed below in Part IV.D, this right of access to retesting better fits the purpose of the Confrontation Clause because it addresses the underlying evils with which the Framers were concerned, and the problems—like Annie Dookhan—that we need to deal with today.

D. A New Rule

The Annie Dookhan scandal, like others cited by Justice Breyer's concurring opinion in *Williams*, ¹⁶⁸ reveals that cross-examination of laboratory analysts is ineffective at exposing flawed forensic testing. ¹⁶⁹ Thus, *Melendez-Diaz* confers a hollow confrontation right on defendants, while imposing substantial costs on prosecutors. Early academic studies on the effects of *Melendez-Diaz* have already documented the costs of that decision, namely, huge increases in defense subpoenas

^{164.} U.S. CONST. amend. VI.

^{165.} Gideon v. Wainwright, 372 U.S. 335, 345 (1963) (quoting Powell v. Alabama, 287 U.S. 45, 68–69 (1932).

^{166.} *Id.* (quoting *Powell*, 287 U.S. at 69).

^{167.} Id. at 344.

^{168.} See Williams, 132 S. Ct. at 2250 (2012) (Breyer, J., concurring) (citing Brandon L. Garrett & Peter J. Neufeld, Invalid Forensic Science Testimony and Wrongful Convictions, 95 VA. L. REV. 1, 2 (2009) (finding erroneous testimony by forensic analysts in 60% of the Innocence Project's wrongful conviction cases, concluding: "Unfortunately, the adversarial process largely failed to police this invalid testimony. Defense counsel rarely cross-examined analysts concerning invalid testimony, and rarely obtained expert witnesses of their own. In the few cases in which invalid forensic science was challenged, judges seldom provided relief")).

^{169.} This is not to say that cross-examination has no value for challenging the collection of forensic evidence, for example, as used by the defense in the murder trial of O.J. Simpson. See generally George Fisher, The O.J. Simpson Corpus, 49 STAN. L. REV. 971 (1997) (book review). Ironically, however, the Confrontation Clause—at least as far as Williams appears to indicate—would not guarantee cross-examination of every person who handled physical evidence in a defendant's case.

of laboratory technicians, and massive backlogs in the testing of forensic evidence (because technicians are in court testifying more frequently). 170

However, there is no reason for the Court to limit the Confrontation Clause's reach to cross-examination when what the defendant ultimately wants to "confront" is not the analyst, but the underlying evidence itself. Given jurors' expectations about, and deference to, scientific testimony, ¹⁷¹ the only meaningful way to confront forensic testing is with *more* forensic testing. This pragmatic view of the Confrontation Clause was enshrined in numerous decisions before *Crawford*, as Chief Justice Rehnquist pointed out: "Indeed, cross-examination is a tool used to flesh out the truth, not an empty procedure." ¹⁷² His opinion cited numerous cases proclaiming that confrontation is "essentially a functional right." ¹⁷³

In a future case on confrontation of forensic test results, the Court should hold that the Sixth Amendment guarantees a right to retesting of evidence, within the limits discussed below. Under such a holding, legislators could implement procedures like the "Retesting Policy" proposed above in Section III.B. And, while Fifth Amendment concerns might prevent the jury from hearing that the *defendant* requested the retest, 174 a similar statement, such as "to ensure accuracy, the judge ordered a second test of the evidence in this case," should deter frivolous retesting. This would save the state money, while not infringing on the defendant's privilege against self-incrimination. 175 A guilty defendant would not want jurors to hear that a second test, ordered by a neutral judge, confirmed the validity of the government's results. This holding would give defendants access to a critical confrontation right, which depending on the jurisdiction, is currently only available by judicial leave. 176

^{170.} E.g., Nicholas Klaiber, Confronting Reality: Surrogate Forensic Science Witnesses Under the Confrontation Clause, 97 VA. L. REV. 199, 233 n.195 (2011).

^{171.} See supra note 85 and accompanying text.

^{172.} Crawford v. Washington, 541 U.S. 36, 74 (2004) (Rehnquist, C.J., concurring in judgment).

^{173.} *Id.* (Rehnquist, C.J., concurring in judgment) (quoting Kentucky v. Stincer, 482 U.S. 730, 737 (1987) ("The right to cross-examination, protected by the Confrontation Clause, thus is essentially a 'functional' right designed to promote reliability in the truthfinding functions of a criminal trial."); Maryland v. Craig, 497 U.S. 836, 845 (1990) ("The central concern of the Confrontation Clause is to ensure the reliability of the evidence against a criminal defendant by subjecting it to rigorous testing in the context of an adversary proceeding before the trier of fact.").

^{174.} The fact that the defendant "asked" for the retest would likely be deemed "testimonial" and therefore privileged under the Fifth Amendment. See Schmerber v. California, 384 U.S. 757, 761 (1966) ("We hold that the [Fifth Amendment] privilege protects an accused only from being compelled to testify against himself, or otherwise provide the State with evidence of a testimonial or communicative nature.") (emphasis added). Under my earlier proposed legislative reforms, however, this concern would not be present, as the defendant could be required to waive this objection when requesting the retest.

^{175.} Even the majority in *Melendez-Diaz* claimed to be open to such pragmatic compromises, such as requiring defendants to assert Confrontation Clause claims about analysts' testimony before trial. Melendez-Diaz v. Massachusetts, 557 U.S. 305, 326–27 (2009). Virginia has already adopted a notice requirement. *See* Ben Conery, *States Scramble to Keep Techs in Labs, Out of Courts*, WASH. TIMES, Aug. 31, 2009, at A1.

^{176.} See, e.g., 18 U.S.C. § 3006A(e)(1); MASS. R. CRIM. P. 14(a)(2), 41.

This retesting proposal also most appropriately aligns incentives for defendants. Possible testing outcomes fall into one of four categories: true positive, false positive, true negative, or false negative. 177 We can disregard the two "negative" results, because in either case, a negative test result will preclude prosecution. A "true positive" test implies that the procedure was scientifically correct, but could have produced an incorrect result if the evidence was tampered with (either negligently or intentionally). Thus, a retest would not alter the outcome. A "false positive" test implies that the scientific procedure itself was performed incorrectly, thus allowing for a corrective retest. In both cases, a guilty defendant has no incentive to request a new procedure under the "Retesting Policy" outlined in Part III.B; in contrast, a guilty defendant does have an incentive to abuse the system under the Melendez-Diaz rule by demanding cross-examination of the analyst, and hoping he or she will not show up at trial, a result that Justice Kennedy warned of in Melendez-Diaz:

The analyst will not always make it to the courthouse in time. He or she may be ill; may be out of the country; may be unable to travel because of inclement weather; or may at that very moment be waiting outside some other courtroom for another defendant to exercise the right the Court invents today. . . . The result, in many cases, will be that the prosecution cannot meet its burden of proof, and the guilty defendant goes free on a technicality that, because it results in an acquittal, cannot be reviewed on appeal. The Court's holding is a windfall to defendants. 178

Innocent defendants, however, would have an incentive to request retesting of evidence. For "false positive" tests, a retest would exonerate the defendant; "true positive" results based on corrupted evidence, however, still pose a problem. Although retesting alone might not vindicate their innocence in such cases, these incentives are far closer to the optimal outcome than the result of *Melendez-Diaz*, and could be effectively addressed by the legislative reforms discussed in Part III.

Allowing access to retesting, however, is only the first step. Coupled with access to retesting must be a holding that cross-examination of the analyst is not automatically part of the Confrontation Clause right. However, cross-examination would be available if the defense "provide[s] good reason to doubt the laboratory's competence" or "demonstrate[s] the existence of a motive to falsify" by the analyst, as suggested by Justice Breyer's concurrence in Williams. 179

^{177.} Unreliable Research: Trouble at the Lab, ECONOMIST, Oct. 19, 2013, http://www.economist.com/news/briefing/21588057-scientists-think-science-self-correcting-alarming-degree-it-not-trouble.

^{178.} Melendez-Diaz, 557 U.S. at 342-43 (Kennedy, J., dissenting).

^{179.} See Williams v. Illinois, 132 S. Ct. 2221, 2252 (2012) (Breyer, J., concurring) ("Moreover, should the defendant provide good reason to doubt the laboratory's competence or the validity of its accreditation, then the alternative safeguard of reliability would no longer exist and the Constitution would entitle defendant to Confrontation Clause protection. Similarly, should the defendant demonstrate the existence of a motive to falsify, then the alternative safeguard of honesty would no longer exist and the Constitution would entitle the defendant to Confrontation Clause protection. Cf. 2 Wigmore, Evidence § 1527, at 1892 (in respect to the business records exception, 'there must have been no motive to misrepresent').

Some readers might wonder whether this exception threatens to swallow my entire proposed rule. Perhaps they might conclude that every defendant would opt for a "police frame-up" theory of the case. Even presuming that—after first exhausting the option for retesting—the defendant was able to make a minimum showing to raise this defense, research shows that such a strategy could easily backfire. Although it may have worked in the O.J. Simpson trial, where there was spectacular misconduct by the openly racist Los Angeles Police Department Detective Mark Fuhrman, ¹⁸⁰ a large amount of academic literature argues that juries routinely reject such "blame shifting" defenses, unless supported by serious evidence. ¹⁸¹ In essence, my proposed solution would require a "clear statement rule" for the defense: if retesting is not adequate, the defense can still cross-examine analysts, but only by fully committing to the necessity of such cross-examination as part of its case; innocent defendants will pursue such an option, while guilty defendants will be deterred from gamesmanship because of potential jury rejection of unsupported "blame-shifting."

CONCLUSION

To support the majority opinion in *Melendez-Diaz*, Justice Scalia also offered a pragmatic justification for why "the sky will not fall." After all, his opinion argued, nine states and the District of Columbia had already mandated confrontation of forensic analysts *before* the Supreme Court's decision in *Melendez-Diaz*, and yet "the criminal justice system has [not] ground to a halt." Support for a new retesting policy, however, can similarly be found by looking at other common law countries with a historic right of confrontation. As the problem of flawed forensic testing has been revealed in countries like Australia, policymakers and legislators there have supported reforms to provide access to retesting for criminal defendants, 183 proving that "the sky [really] will not fall" with such a solution.

Indeed, when actual innocence is on the line, the Court should not allow form to trump substance. The risk of error in forensic testing is real, but the value of cross-examination in confronting such error is vastly overstated by the Supreme

Thus, the defendant would remain free to show the absence or inadequacy of the alternative reliability/honesty safeguards, thereby rebutting the presumption and making the Confrontation Clause applicable.").

^{180.} See Fisher, supra note 169, at 993.

^{181.} See Stephen J. Schulhofer, The Trouble with Trials; the Trouble with Us, 105 YALE L.J. 825, 853 (1995) (discussing costs of "blame shifting" away from the defendant and onto victim or police as a defense strategy) ("[T]he symbiotic relationship between the blame game and the abuse excuse proves self-defeating and dysfunctional"); Richard J. Bonnie, Excusing and Punishing in Criminal Adjudication: A Reality Check, 5 CORNELL J.L. & PUB. POL'Y 1 (1995) ("[T]here is little, if any, evidence that the public at large is becoming more receptive to blame-shifting defenses. If anything, I detect a hardening public attitude, not a more forgiving one."). But cf. Abbe Smith, Defending Defending: The Case for Unmitigated Zeal on Behalf of People Who Do Terrible Things, 28 HOFSTRA L. REV. 925, 934 (2000) (evaluating "theories of defense that exploit racism, sexism, homophobia, or ethnic bias").

^{182.} Melendez-Diaz, 557 U.S. at 326 n.11 (2009).

^{183.} See Edmond, supra note 81; David Hamer, 21st Century Challenges in Evidence Law, 33 SYDNEY L. REV. 325, 325 (2011), available at http://sydney.edu.au/law/slr/slr_33/slr33_3/SLRv33no3Hamer.pdf; Edmond & San Roque, supra note 81.

Court's *Melendez-Diaz* line of cases, as laid bare by the Annie Dookhan scandal. Although legislators can institute some reforms, the solution ultimately rests with the Supreme Court. Instead of conferring a hollow confrontation right, the Court should hold that the Sixth Amendment protects a right to retesting of evidence, while allowing cross-examination of forensic analysts only on a showing that it will be important to the defense, not merely a technicality on which to avoid conviction.