OPINION
Commonwealth v. Joseph O'Dell: Truth and Justice or Confuse the Courts? The DNA Controversy

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I. INTRODUCTION

In criminal trials, advances in Deoxyribonucleic Acid (DNA) technology have been instrumental in convicting the guilty and exonerating the innocent. DNA technology in most states has advanced to meet the *Frye* standard of general acceptance in the scientific community.[1] Nevertheless, the testing procedures utilized are still being challenged on a case by case basis.[2] Due to the lack of uniformity in testing procedures and protocol, laboratories around the country are using their own procedures and techniques, coupled with independent criteria, for declaring a DNA match.[3] A report by the National Research Council [NRC] in April, 1992,

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1. *See* Frye v. United States, 293 F. 1013 (D.C. 1923). The *Frye* test has since been superseded by the *Daubert* standard. *See* Daubert v. Merrell Dow Pharamaceuticals, Inc., 509 U.S. 579 (1992) (establishing that Federal Rule of Evidence 702—which states: "[i]f scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise—supercedes the *Frye* "general acceptance" standard). A number of jurisdictions, however, still adhere to the *Frye* test. *See* Michael Kowalski, *Applying the "Two Schools of Thought" Doctrine to the Repressed Memory Controversy*, 19 J. LEGAL MED. 503, 504 (1998).

2. *See* Denise A. Filocoma, Comment, *Unravelling the DNA Controversy: People v. Wesley, A Step in the Right Direction*, 3 J.L. & POL'Y 537, 551-58 (1995).

3. *See* NATIONAL RESEARCH COUNCIL, DNA TECHNOLOGY IN FORENSIC

reflects the controversy in the scientific community.[4] The report criticized the use of monomorphic probes[5] to correct for a phenomenon known as "band shifting."[6]

This Commentary focuses on the controversy surrounding the execution of a death row inmate in Virginia. It uses a particular case to frame a general discussion of the potential complications of DNA technology, as well as its obvious advantages. Specifically, this Commentary addresses (1) the controversial method of correcting for band shifting in declaring DNA matches; (2) the exculpatory DNA evidence ignored by the courts, politicians, and prosecutors in *Commonwealth v. O'Dell*;[7] and (3) the potential abuse of DNA evidence by judges who misunderstand it and by politicians and prosecutors who misuse it.

II. BACKGROUND INFORMATION

A. Evolution of Science: From serology to DNA testing

Traditional serological technologies, such as the electrophoresis[8] tests

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SCIENCE 15 (1992) [hereinafter NRC].

4. *See id.* at 2. "The [NRC] was organized by the NAS [National Academy of Sciences] . . . a private, nonprofit society of distinguished scientists, as its principal agency to serve the public by furthering scientific knowledge and advising the government." Peter J. Neufeld, *Have You No Sense of Decency?*, J. CRIM. L. & CRIMINOLOGY 189, 194 n.18 (1993).

5. Monomorphic probes "detect constant-length [DNA] fragments that are always in the same position in all people." NRC, *supra* note 3, at 60. When used with the occurrence of "band shifting," monomorphic probes create a match from a previously "inconclusive" result. *See* Hayes v. Florida, 660 So.2d 257, 264 (1995) (citing NRC, *supra* note 3, at 60-61).

6. *See generally* NRC, *supra* note 3, at 60-61. Band shifting occurs when "DNA samples migrate at different speeds and yield shifted patterns . . . ." *Id.* at 54.

7. 364 S.E.2d 491 (1987) *vacated sub. nom.* O'Dell v. Thompson (E.D. Va. 1994), *overruled sub. nom.* O'Dell v. Netherland, 95 F.3d 1214 (4th Cir. 1995); *see also* O'Dell v. Netherland, 117 S.Ct. 1969 (1996).

8. *See* Michael R. Flaherty, Annotation, *Admissibility, in Criminal Cases, of Evidence of Electrophoresis of Dried Evidentiary Bloodstains*, 66 A.L.R. 4th 588 (1988). Serology testing, also referred to as electrophoresis testing, is described as:

> a scientific technique which has been used in [past] years to identify various components in human blood. Electrophoresis of blood involves the application of an electric current to the blood sample on a support medium, which causes components of the sample to migrate characteristically, thereby allowing identification of proteins and enzymes in the blood. While the proteins and enzymes identified are not unique for each individual's blood, the possible sources of the blood tested can be

conducted by the state's expert in the 1985 *O'Dell* trial, were only moderately reliable.[9] In contrast, DNA testing is more discriminating than traditional serology testing and thus more likely to clear wrongly accused persons.[10] Despite the reliability problems associated with serological testing, courts admitted the results after evaluating three factors.[11]

The three relevant factors in determining admissibility of serology tests are: "(1) experience and qualifications of expert witnesses; (2) adequacy of procedures performed to insure accurate results; and (3) opportunity for defendant to test sample independently."[12]

In *People v. Reilly*,[13] the court found that correct testing procedures were used in admitting serology results at trial.[14] The "court explained that controls or standards of samples of known types were screened beforehand, that tests were repeated when the amount of sample permitted, that a second analyst independently interpreted the testing medium, and that the results were photographed for future reference."[15] In *State v. Wingo*,[16] electrophoresis results were admissible because "the bloodstain samples were adequately preserved for the defendant's testing."[17] Samples were not preserved in the *O'Dell* case.

DNA testing has replaced the older, more conventional method of serology testing. A report by the Department of Justice reveals numerous cases in which DNA testing exonerated convicted offenders; "[s]ome of these cases involved defendants on death row."[18] Peter Neufeld and Barry Scheck stated in the report how often the wrong suspect is targeted:

> Every year since 1989, in about 25 percent of the sexual assault cases referred to the FBI where results could be obtained . . . the primary suspect has been excluded by forensic DNA testing . . . . The fact that these percentages have remained constant for 7 years, and that the National Institute of Justice's informal survey of private laboratories reveals a strikingly similar 26

> narrowed more precisely by identifying these components than they can be with other tests, such as the traditional ABO blood-typing test.

Id. at 591.

9. *See* NRC, *supra* note 3, at 88.

10. *See id.* "[F]orensic laboratories are *routinely* finding cases in which a suspect is included through conventional serology but later excluded through testing with DNA markers." *Id.* (emphasis added).

11. *See* Flaherty, *supra* note 8, at Part III.A. § 5-7, at 605-11.

12. *See id.* at 588.

13. 242 Cal. Rptr. 496 (1987).

14. *See id.* at 498.

15. *See* Flaherty, *supra* note 8, at 609 (discussing *Reilly*).

16. 1985 WL 17463 (Ohio App. 4 Dist.)

17. Flaherty, *supra* note 8, at 611 (discussing *Wingo*).

18. THE DEATH PENALTY INFORMATION CENTER, INNOCENCE AND THE DEATH PENALTY: THE INCREASING DANGER OF EXECUTING THE INNOCENT, at 27 [DEATH PENALTY INFORMATION CENTER].

> percent exclusion rate, strongly suggests . . . underlying systemic problems that generate erroneous accusations and convictions.[19]

"Current DNA technology is far more advanced than the technology available in 1986, at the time of [O'Dell's trial], or even in 1990, when LifeCodes performed DNA tests [for O'Dell]."[20]

B. Virginia's History of Science

At the time of O'Dell's arrest in 1985, the Virginia crime labs were using serology blood testing methods for its criminal cases.[21] It was not until 1989 that Virginia started to use DNA testing in its courtrooms.[22] It was the first state in our nation to use DNA fingerprinting to uphold a criminal conviction and execution.[23] To its credit, Virginia was the first state to develop DNA fingerprinting as a crime-fighting tool.[24]

Virginia has also been known to make mistakes. David Vasquez,[25] Walter Snyder,[26] Earl Washington,[27] Eddie Honacker,[28] and Troy Webb,[29] who were all wrongfully convicted in Virginia courtrooms, were exonerated based on DNA testing. The Commonwealth has also executed at least three individuals, Roger Coleman,[30] Dennis Stockton,[31] and Joseph

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19. *Id.*

20. Brief Amicus Curiae for Peitioner, Commonwealth v. O'Dell, at 3 (Va. 1997), Doc. No. 11,413 [hereinafter Amicus Brief]. Filed by Barry Scheck & Jane Siegel, Benjamin N. Cardozo School of Law, Innocence Project.

21. *See* Joe Jackson, *DNA Evidence on Trial Again in Virginia; In 1985, It was Used to Convict Joseph Roger O'Dell III. Now, His Lawyer's Argue that It Should Save Him*, VIRGINIAN-PILOT, Dec. 4, 1995 at A1.

22. *See* Alan Cooper, *Virginia Upholds DNA Testing in Capital Murder Case*, Nat'l L.J., Oct. 9, 1989, at 6. Virginia's Supreme Court upheld the conviction of Timothy Spencer based on DNA fingerprinting, who was executed on April 27, 1994. *See* Frank Green et al., *Spencer Killer of Four, is Executed*, RICH. TIMES-DISP., Apr. 28, 1994, at A1.

23. *See id.*

24. *See* Jackson, *supra* note 21, at A1.

25. *See* Lynn Waltz, *Beach Man Pardoned After DNA Test Proves Innocence; Man Goes Home with Governor's Promise to Help Find Him a Job*, VIRGINIAN-PILOT, Oct. 17, 1996, at A1.

26. *See id.*

27. *See* Eric M. Freedman, Editorial, *In Virginia, Innocent Man Stays in Prison*, N.Y. TIMES, Jan. 28, 1994, A26.

28. *See* Jean McNair, *Governor Sets Inmate Free*, DAILY PRESS (Williamsburg), Oct. 22, 1995, at A1.

29. *See* Waltz, *supra* note 25, at A1.

30. *See* Jeremy Campbell, *Killer Is Executed After Last Plea Fails*, EVENING STANDARD (London), May 21, 1992, at 6.

31. *See* Joe Jackson, *Stockton Dies by Injection; Supreme Court, Allen Unmoved by Appeals*, VIRGINIAN-PILOT, Sept. 28, 1995, at A1.

O'Dell,[32] despite possible innocence.

III. COMMONWEALTH V. O'DELL

A. Facts of the Case

Joseph O'Dell was arrested for the murder, rape, and sodomy of Helen Schartner on February 6, 1985. Based on circumstantial evidence—tire tracks similar to O'Dell's at the crime scene, bloodstains on his clothes which were "consistent" with the victim's, and an inmate who stated (but later recanted) that O'Dell confessed to the murder—O'Dell was convicted on September 10, 1986.

The facts leading up to his arrest began on the night prior to the murder for which O'Dell was convicted. O'Dell had been at the same bar as Helen Schartner, but he did not know her, meet her, nor was he ever seen with her.

O'Dell visited a number of night spots, ultimately ending up at the Brass Rail. It was there that O'Dell became embroiled in a fight with two individuals in the parking lot. A security guard testified to seeing the fight, in addition to seeing an individual standing with the manager in the parking lot, presumably O'Dell. As a result of the altercation, O'Dell's clothes were covered with blood. He went to the house in which he rented a room to pick up clean clothes. When he arrived at the house, he placed a bag containing his bloodied clothes in the garage. He mentioned the blood on the clothing to his girlfriend but afraid that she would report him to his parole officer, lied about the fight and said he had vomited blood.

O'Dell went to work the next day, while his girlfriend stayed home. She read about the murder in the newspaper. She later testified that her "intuition" told her to check O'Dell's clothing in the garage. Upon seeing the bloodstained clothes, she put them in a plastic bag and called the police.

The police responded to the girlfriend's call and took the bloody clothes to the crime lab for ABO typing of the blood. Based on the results of the bloodtyping, the police arrested O'Dell.

B. Procedural History

After proceeding *pro se* through a six week trial, after which he was convicted, O'Dell appealed to the Supreme Court of Virginia, which affirmed the judgment of the trial court. On April 1, 1988, The Virginia

32. *See* Frank Green, *Appeals Denied; O'Dell Executed*, RICH. TIMES-DISP., July 24, 1997, at A1.

Supreme Court decided an issue on rehearing, that was previously held to be procedurally barred. The court, however, affirmed the conviction, but left a viable issue open for appellate review. The United States Supreme Court denied O'Dell certiorari to hear the appeal.

O'Dell filed a Petition for a Writ of Habeas Corpus in the Circuit Court of Virginia Beach. The majority of his claims were dismissed without an evidentiary hearing, with the remainder of the claims dismissed after a limited evidentiary hearing on O'Dell's competency and forensic claims.

O'Dell appealed the dismissal of his state *habeas* petition. The Virginia Supreme Court dismissed the appeal since O'Dell was procedurally barred on all of his claims due to an error in the filing procedure. O'Dell, with no other alternatives, petitioned the United States Supreme Court for a Writ of Certiorari, which was denied. While the Court declined to hear his case, Justice Blackmun, along with Justices Stevens and O'Connor, issued a rare "statement" expressing concern over his procedural bar and urged the court to hear his federal claims.[33] Justice Blackmun stated that

> there are serious questions as to whether O'Dell committed the crime or was capable of representing himself—questions rendered all the more serious by the fact that O'Dell's life depends upon their answers. Because of the gross injustice that would result if an innocent man were sentenced to death, O'Dell's substantial federal claim's can, and should, receive careful consideration from the federal court with *habeas corpus* jurisdiction over the case.[34]

On July 23, 1992, O'Dell filed a Petition for a Writ of Habeas Corpus in the Federal District Court of Virginia. In light of the concerns expressed by the three U.S. Supreme Court Justices,[35] the court entertained O'Dell's actual innocence claim pertaining to the DNA evidence at the federal evidentiary hearing on August 2, 1994. "Although the DNA evidence did establish the 'fair probability' that, in light of all probative evidence available at the time of his federal evidentiary hearing, 'the trier of the facts would have entertained a reasonable doubt of his guilt,"' O'Dell, failed to meet the higher actual innocence standard and "failed to establish that 'no rational trier of fact could [find] proof of guilt beyond a reasonable

33. *See* Ruth Marcus, *Va. Death Row Case Rejected Amid Questions on Defendant's Guilt*, WASH. POST, Dec. 3, 1991, at A8.

34. *Id.*

35. Three Justices of the U.S. Supreme Court, upon review of the trial record, noted the wholly circumstantial evidence of the case against O'Dell, and stated in the case "[b]ecause I believe the evidence raises serious questions about whether petitioner was guilty of the charged crime or was capable of representing himself, I write to underscore the importance of affording petitioner meaningful federal *habeas* review." *See* O'Dell v. Netherland, 112 S.Ct. 618 (1991). Post-conviction DNA test results cast doubt upon his conviction.

doubt.'"[36] The District Court ruled favorably for O'Dell on a more technical issue and vacated his death sentence.

After O'Dell appealed to the Fourth Circuit Court of Appeals, on September 10, 1996, the court, sitting *en banc*, entered judgment reversing the District Court's order to the extent it granted *habeas* relief to O'Dell, and reinstated the death sentence. The court found that O'Dell's claim of actual innocence was "not even colorable."[37] In its ruling, the court misstated a number of facts that, in order to correct, required an entire appendix to the U.S. Supreme Court Petition.

On November 26, 1996, O'Dell appealed to the U.S. Supreme Court. The Court granted certiorari, but refused to hear argument on actual innocence. Even though the Court conceded that O'Dell's 1986 sentencing proceeding was plainly unconstitutional under a 1992 decision by the Court, in a 5-4 decision, it refused to apply the law retroactively to O'Dell. Justice Scalia, however, ignored the factual finding of the District Court in his dissent and misstated that the blood on O'Dell's jacket "matched" the victim.[38] This error illustrates how DNA results can be, and sometimes are, manipulated, misapplied, or misunderstood by the courts.

C. Efforts to Obtain DNA

After his conviction, O'Dell filed a motion for DNA testing to prove that the blood on his clothing was not the victim's blood. Citing the problems the court had with the scientific evidence at trial, the trial judge allowed post-conviction DNA testing for the first time in the history of Virginia.[39] The parties stipulated as to the areas of the clothing to be tested, in order to achieve a comfort level for comparison purposes to the original serology testing. The shirt had been tested three times using serology testing, and the stipulation was that the same spot would be tested using DNA technology. Additionally, O'Dell's jacket was tested in the same spot as had been tested previously for an equivalent comparison. As a result of the Commonwealth's refusal to preserve the evidence,[40] no other item could be tested due to the deteriorated state of the bloodstains, nor could the vaginal or anal swabs be tested using the RFLP method.[41]

36. O'Dell v. Thompson, No. 3:92CV480, slip op. at 32 n. 18 (E.D. Va. Sept. 6, 1994).

37. O'Dell v. Netherland, 95 F.3d 1214, 1218 (4th Cir. 1995).

38. *See* O'Dell v. Netherland, 117 S.Ct. 631 (1996).

39. *See Thompson*, No. 3:92CV480 at 23 (noting his concern regarding the reliability of the serological evidence); *see also* Jackson, *supra* note 21, at A1.

40. *See supra* Part II.A. (discussing procedures used in admitting serological tests).

41. *See* Letter from Michael Baird, Ph.D., Vice President of Labaraotry Opera-

Later, as time progressed and DNA technology advanced, PCR testing *could* be performed to yield results on the semen samples.[42] The courts and the Governor of Virginia, however, refused these tests.[43] The refusal of the state to allow additional DNA tests drew criticism from around the world.[44]

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tions at LifeCodes, Inc., to Allan Effron, Staff Attorney, Paul, Weiss, Rifkind, Wharton & Garrison, Counsel to O'Dell (Nov. 13, 1995) (on file with author).

42. *See* Amicus Brief, *supra* note 20, at 3. "There are two kinds of DNA tests that are widely used by the Federal Bureau of Investigation and other private and public DNA laboratories: the first method is RFLP; and the second is PCR." *Id.* at 3. RFLP testing is generally referred to as the Southern Blot Analysis and became widely used in laboratories in the late 1980's and early 1990's. *See id.* at 3-4. Although it is still used by many laboratories today, RFLP can be less effective than PCR testing "because it requires a relatively large amount of high molecular weight DNA to obtain results." *Id.* at 4. "PCR testing [ ] does not require as large or [a] well-preserved sample." *Id.* The controversial method to correct for band-shifting was used in obtaining "match" results in the *O'Dell* case. *See id.* RFLP continues to be a widely used method of DNA testing today. *See id.*

43. *See* Frank Green, *Execution of O'Dell Scheduled*, RICH. TIMES-DISP., July 22, 1997, at B1.

44. As a result of O'Dell's continued claim of innocence and his request for new DNA testing, his case drew international attention. *See* Frank Green, *Pope Seeks O'Dell Clemency*, RICH. TIMES-DISP., Dec. 14, 1996, at A1. The Italian and European Parliaments passed resolutions on his behalf criticizing the injustice of the Commonwealth's refusal to allow this newer, more precise DNA method. *See* Lisa Fine, *Further DNA Tests Sought: O'Dell's Lawyers Asked Allen, Court*, RICH. TIMES-DISP., July 4, 1997 at B4; *see also* Letters from Members of the European Parliament, including Spain, France, Austria, Germany, Great Britain, Netherlands, Italy, Finland, Ireland, and Belgium, to Governor George Allen of Virginia, July 1, 1997 (on file with author). An appeal to the Governor of Virginia to allow DNA tests before O'Dell was executed was signed by twenty-five members of the European Parliament, including Mr. David Martin, Vice President of the European Parliament. *See* Letters from Members of the European Parliament, including Spain, France, Austria, Germany, Great Britain, Netherlands, Italy, Finland, Ireland, and Belgium, to Governor George Allen of Virginia, July 1, 1997 (on file with author). Representatives of the European community flew to America for press conferences and meetings with the Governor of Virginia. *See* Laura LaFay, *Palermo Mayor Pleads for Life of Beach Slayer*, VIRGINIAN-PILOT July 22, 1997 at A1. Nevertheless, the courts and the Governor of Virginia refused to allow additional DNA testing, stating that the evidence of guilt was overwhelming and DNA testing would not be reliable on the aged samples. *See* Letter from Judge Frederick B. Lowe, Circuit Court of Virginia Beach, to Paul Weiss et al., Counsel to O'Dell, and the Attorney General's office, June 24, 1997 (on file with author) [hereinafter Lowe Letter]. This was a high profile case. The possibility of discovering that O'Dell was innocent was immense. With his innocence still in question, O'Dell was executed.

D. Post-Conviction DNA Testing

The judge's concerns were later validated by Dr. Scott Diehl, an Assistant Professor of Psychiatry and Human Genetics, and an accepted expert in electrophoretic testing.[45] Dr. Diehl testified that he was concerned about the reliability of the polymorphic enzyme tests performed by the Commonwealth expert [hereinafter the Expert].[46] Dr. Diehl testified that, not only did the lab notes fail to disclose when the analysis was performed, they also did not contain a signature indicating who had performed the work.[47] He stated that the materials disclosed a high test failure rate and that, because the lab notes were "incomprehensible," they were virtually impossible for outside review.[48] Based on the enzyme tests, the Expert concluded that the blood on O'Dell's shirt was consistent with the victim's blood, but not O'Dell's.[49] Dr. Diehl, however, "testified that the more reliable DNA test results, which established that the victim's blood did not match the blood on the shirt, 'validated' his concern about the reliability of the enzyme test results introduced at trial."[50]

As there was no evidence directly linking O'Dell to the crime, "[t]he Commonwealth's case rested heavily on the Expert's forensic analysis of the bloodstains" on O'Dell's clothing.[51] The test used by the Expert, "sometimes referred to as multisystem electrophoresis, is highly controversial and has been rejected by numerous courts as being of unproven reliability."[52] The tests performed by the Expert were without supervision.[53] Two months prior to her analysis of the bloodstains on O'Dell's clothes and blood, the Expert had just completed her training in the use of multisystem electrophoresis.[54] Despite pervasive errors in methodology, the Expert was permitted to testify at trial that the blood on O'Dell's clothes was consistent with that of the victim, but in reaching this conclusion never testified as to the procedures she used.

Although the blood evidence was crucial to his conviction and the testing method was controversial, the Commonwealth failed to preserve the evidence for re-testing by the defense. Additionally, the court denied a

45. *See* Thompson v. O'Dell, No. 3:92CV480, slip op. at 26 (E.D. Va. Sept. 6, 1994).
46. *See id.* at 26-27.
47. *See id.*
48. *See id.*
49. *See id.*
50. *See id.*
51. Petitioner's Writ of Habeas Corpus at 31, O'Dell v. Thompson (CL89-1475) (May 1989).
52. *Id.*
53. *See id.*
54. *See id.*

motion by O'Dell requesting a hearing to establish the reliability of the electrophoretic testing method used by the Expert. The court also ultimately denied O'Dell's motion to dismiss on the ground that the Commonwealth had not met its burden of showing that the scientific evidence was reliable. The serology results allowed into evidence were later contradicted by more advanced and more accurate post-conviction DNA tests. Nevertheless O'Dell was executed.

Despite O'Dell's death, in order to resolve the DNA controversy, efforts to perform additional DNA testing continued, with the defense team petitioning the court for the return of evidence. The difficulty in obtaining evidence post-conviction and post-execution is widespread, as "[p]rosecutors and state officials under political pressure to reduce crime, as well as those with a firm belief in finality, may feel induced to destroy evidence as soon as the appeals process is initially exhausted."[55] The additional difficulty in "convinc[ing] a partisan official who may be politically and professionally invested in the conviction" makes the motion unlikely to succeed.[56] In August, 1997 O'Dell's estate petitioned the Court for the return of evidence and was partially successful.[57]

IV. ANALYSIS

A. The Court's Misinterpretation of DNA in the O'Dell Case

On September 6, 1994, after lengthy testimony from scientific witnesses concerning DNA test results, Judge Spencer, of the District Court, concluded that the results revealed the blood on the shirt was exculpatory—as it could not have come from the victim—and the blood on the jacket was inconclusive. This contradicted the results of the conventional serology tests used at trial. Furthermore, the court found that the method used by LifeCodes in reporting its "match" of the blood on O'Dell's jacket to the victim's blood was not scientifically acceptable.

55. *Confronting the New Challenges of Scientific Evidence: DNA Evidence and the Criminal Defense*, 108 HARV. L. REV. 1557, 1575 (1995).

56. *Id.* at 1578.

57. As a result of an agreement between the Commonwealth and the author, the Court ordered the release of all of O'Dell's belongings except for the vaginal and anal swabs. As there was insufficient DNA remaining from LifeCodes' previous testing samples, the authors' subsequent attempt to achieve DNA results between O'Dell's clothes and the victims' blood was unsuccessful. Currently the defense team has petitioned the Virginia Supreme Court for the release of the vaginal and anal swabs to facilitate the necessary testing. The Commonwealth continues to resist these efforts.

In an *en banc* oral argument in the Fourth Circuit Court of Appeals, the Commonwealth ignored the prior finding of the District Court with regard to the DNA results and, at the end of their oral argument, so as to avoid any rebuttal, stated there was a DNA "match" in the case. O'Dell's attorneys responded in a motion to supplement oral argument, filed December 14, 1995.

In its motion, the defense argued first that the Commonwealth was wrong in its statement of the facts. Contrary to the Commonwealth's assertion that the clothing was selectively tested, LifeCodes examined all of the evidence and found tests could be performed only on the shirt and the jacket due to the degraded state of the blood.[58] Second, the defense argued that the Commonwealth misstated the conclusions of its own experts regarding their testimony concerning DNA results at both the Federal and State habeas hearings.[59]

Not only did the Court of Appeals misinterpret the DNA evidence, but it failed to understand and analyze issues addressed in Judge Spencer's evidentiary hearing. O'Dell's defense team believed that the Court of Appeals' entire interpretation of the blood evidence was incorrect. The court placed the weight of its decision on the Commonwealth's experts, not O'Dell's. This was in direct conflict with the factual finding of the District Court. The District Court found that O'Dell's expert *and* the Commonwealth's experts essentially agreed with the overall consensus of the NRC report in interpreting the band shifting results of the jacket as inconclusive.[60] The Fourth Circuit adhered to the Commonwealth's description of the NRC "as a committee issuing 'recommendations' not accepted by the scientific community generally," while, in fact, the NRC *is* the representative body of the scientific community.[61] This fact exemplifies the sort of disregard the Court of Appeals used in treating the factual findings in the case.

Finally, the Court of Appeals summarized the value of the DNA evidence by stating: "DNA testing is simply more discriminating than elec-

58. *See id.* at 1-2.

59. At the state hearing, the Commonwealth's attorney asked, regarding the DNA results: "If I understand your testimony correctly, what we have here is an exclusion and what you believe is a possible match, but can't be sure about it?" The Commonwealth's state crime lab expert, Richard Guerrieri answered, "No, sir you do have an exclusion. I would *not* say possible match, rather I would say my interpretation would be that that is inconclusive in my mind." Stenographic Transcript at 234, O'Dell v. Thompson, (CL89-1475) (Oct. 23, 1990) [hereinafter Oct. 23 Transcript]. At the federal hearing, the Commonwealth's expert reluctantly agreed.

60. *See* O'Dell v. Thompson, No. 3:92CV480, slip op. at 32 (Sept. 6, 1994).

61. O'Dell v. Netherland, 95 F.3d 1214, 1248 (4th Cir. 1995). *See also generally* NRC, *supra* note 3.

trophoretic testing: the latter limits a blood sample to a range of people . . . whereas the former can limit it to just one individual."[62] This summation ignored the DNA evidence O'Dell offered which contradicted the very testimony given by the Commonwealth's expert at trial. Although the state and the court discounted this as being just one stain on his shirt,[63] both failed to recognize it was the very same area tested at trial, later stipulated to and tested for DNA typing.[64] The limited understanding of DNA in the courtroom can lead to such faulty conclusions and avert the truth.

B. The Significance of Exculpatory DNA Evidence

Generally, where exculpatory DNA exists, new trials are granted.[65] Several cases have arisen throughout the country, but in Virginia it is rare.[66] In Virginia, when Earl Washington presented DNA evidence that proved he could not have raped the victim, he was offered a life sentence instead of the death penalty.[67] There was no opportunity for a new trial. Years later, when the courts were confronted with exculpatory DNA evidence in the *O'Dell* case, the courts suggested it did not matter.[68]

In *State v. Passino*,[69] a case similar to O'Dell's, a Vermont court '"excluded DNA evidence [that] showed [ ] two of the four bloodstains found on the defendant's pants did not match the blood of the victim; the other two were inconclusive.'"[70] Passino was then granted a new trial.[71] O'Dell's DNA testing also showed that the blood on his shirt did not match the victim's and the blood on his jacket was inconclusive[72]—he received a lethal injection. Virginia apparently puts little weight on evidence that contradicts evidence at trial. Although there are other cases where old blood samples were tested and used to exonerate a Virginia

62. *Netherland*, 95 F.3d at 1253.

63. *See id.* at 1254.

64. *See* Oct. 23, 1990 Transcript, *supra* note 59, at 175.

65. *See* Elizabeth V. Lafollette, Note, *State v. Hunt and Exculpatory DNA Evidence: When Is A New Trial Warranted?*, 74 N.C. L. REV. 1295, 1304-05 (1996).

66. *See* Joe Jackson, *Sentenced to Die Without Fair Trials*, VIRGINIAN-PILOT, June 26, 1994, at A1.

67. Eric Freedman, Editorial, *In Virginia, Innocent May Stays in Prison*, N.Y. TIMES, Jan. 28, 1994, at A26.

68. *See Netherland*, 95 F.3d at 1253-54.

69. 640 A.2d 547 (Vt.1994).

70. Lafollette, *supra* note 65, at 1309 (quoting *Passino*, 640 A.2d at 548).

71. *See Passino*, 640 A.2d at 552. *See also* Lafollette, *supra* note 66, at 1309.

72. *See generally* O'Dell v. Thompson, No. 3:92CV480 (E.D. Va. Sept. 6, 1994).

inmate,[73] the courts reasoned that such testing for O'Dell could not be reliably done because the blood samples could be too contaminated.[74]

In an amicus curiae brief filed on behalf of O'Dell, Barry Scheck strongly opposed the court's refusal to allow additional DNA testing for O'Dell.[75] Scheck stated "[i]t would certainly be tragic, and a travesty of justice, if these tests offered exculpatory evidence for O'Dell after his death."[76]

> Part of the Commonwealth's theory at trial was that the sperm found in the victim's vaginal and anal cavities was from the assailant and that it *matched* O'Dell. Further, the Fourth Circuit, in its recitation of inculpatory physical evidence, described at length the investigators' findings that the seminal fluid found in the victim was consistent with a mixture of O'Dell's and the victim's bodily fluids. [77]

Scheck noted that the court stated unequivocally that:

> '[E]ven more incriminating were the spermatozoa found in Schartner's genital swabs and in her genital scrapings. Those spermatozoa were . . . consistent with O'Dell's blood and enzyme types and not with Schartner's. *Thus, the spermatozoa, which could only have come from a man, matched perfectly the sperm cells of Joseph O'Dell, and the seminal fluid, which presumably came from the same man who produced the spermatozoa, was entirely consistent with the mixture of O'Dell's and Schartner's bodily fluids.'*[78]

In opposition to the courts' holding, Scheck noted, "[i]n light of the Court's reliance on the presumption that the spermatozoa came from O'Dell, he should have the opportunity to conduct testing, not previously available, which can definitively show that he was not the source of this spermatozoa."[79]

The court in *O'Dell* decided similarly to the court in *State v. Hunt*,[80] where "the majority opinion sen[t] a very strong message: New trials based on newly discovered DNA evidence are disfavored."[81] The message in Virginia is equally strong. In Virginia, where exculpatory DNA evidence is coupled with "inconclusive" DNA evidence, the state opts for execution over a new trial.

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73. *See generally* Waltz, *supra* note 25.
74. *See* Lowe Letter, *supra* note 44.
75. *See generally* Amicus Brief, *supra* note 20.
76. *Id.* at 7.
77. *Id.* at 5 (emphasis added).
78. *Id.* (citation omitted).
79. *Id.*
80. 457 S.E. 2d 276 (N.C. 1995).
81. *See* Lafollette, *supra* note 65, at 1311.

C. When DNA Testing Yields Unreliable Results: The Dangers of Correcting for Band Shifting DNA in to Obtain a "Match"

When O'Dell asked for DNA testing to prove his innocence, he was unaware of a method used at LifeCodes that corrected for band shifting. Although the method was only used at this singular lab, prosecutors have used it to defend their convictions in cases nationwide.[82] Years later, the NRC and the courts concurred that the method was both unreliable and inadmissible in court to prove a "match."[83]

Similar to the DNA finding in *O'Dell's* case, the court in *Hayes v. Florida*[84] found that DNA evidence previously admitted was inadmissible as a matter of law.[85] The DNA test performed in *Hayes* was inconclusive until the lab technician applied a band-shifting technique to produce a three-band match.[86] The same lab, LifeCodes, used the same method to produce a three-probe match in the *O'Dell* case.[87] The court in *Hayes* agreed with an expert for the defense who said that "a three-band match was not truly a 'match,' and that corrections made due to band-shifting were not accepted in the scientific community."[88] The NRC agreed and reported that, "[t]esting for band-shifting is easy, but correcting it is harder. . . ."[89] The court recognized that "[w]hen a major voice in the scientific community, such as the National Research Council, recommends that corrections made due to band-shifting be declared 'inconclusive,' we must conclude that the test . . . is unreliable."[90] The court's holding recognized that under the *Frye* test,[91] the methodology used by the technician at LifeCodes was not sufficient to establish a general acceptance in the scientific community.[92]

In an earlier case, *People v. Keene*,[93] a New York court concluded that "the practice of using monomorphic probes to correct for band shift [while

82. See People v. Keene 591 N.Y.S.2d 733, 740 (1992) (stating that "Lifecodes is the only forensic laboratory that employs monomorphic probes to correct for bandshift.").

83. *See id.*

84. 660 So.2d 257 (1995).

85. *See id.* at 263-64.

86. *See id.*

87. *See* Report from Joanne Sgueglia, Forensic Scientist at Lifecodes Corp., to Andy Sebok, Counsel to O'Dell, August 21, 1990 (on file with author) [hereinafter Sgueglia Report].

88. *Hayes*, 660 So.2d at 264.

89. *Id.* (quoting NRC, *supra* note 3, at 2).

90. *Id.* at 264.

91. *See supra* note 1 (discussing *Frye* Test).

92. *See Hayes*, 660 So.2d at 264-65.

93. 591 N.Y.S.2d 733 (1992).

conducting DNA testing] is [not] a generally accepted test among molecular geneticists."[94] The court gave substantial weight to the fact that "LifeCodes is the only forensic laboratory that employs monomorphic probes to correct for band shift."[95] As in the *O'Dell* case, "without using monomorphic probes, many of the bands would have been outside . . . [LifeCodes'] match window."[96] In *Keene*, Dr. D'Eustachio testified that "not enough material ha[d] been published about band shifting, let alone 'correcting' for band shift."[97] Accordingly, the *Keene* court found that as a result of LifeCodes failure to perform scientifically accepted testing methods, the results were unreliable.[98]

The same method of correcting for band shift was also found unreliable by another court.[99] In *Louisiana v. Quatrevingt*, the court noted that on a given sample the FBI uses four or five different probes.[100] In the *O'Dell* case, LifeCodes used only three.[101] The defendant in *Quatrevingt* acknowledged that DNA profiling and RFLP analysis are admissible, but argued that there was no scientifically accepted protocol to adjust the bands when LifeCodes attempted to correct for band shifting.[102] The court agreed, ruling that the DNA evidence was improperly admitted.[103]

D. The Confusion of DNA

1. Potential Abuses and the DNA Confusion in *O'Dell*.

The interpretation of DNA results are subject to potential abuse by state crime labs, experts, law enforcement, and prosecutors.[104] As in any expert testimony the threat exists for distorted or slanted opinions to enforce the state's case—leading prosecutors to seek out favorable expert testimony.[105] "Considering the professional relationship between crime

94. *Id.* at 740 (stating that "this court cannot find that the practice of using monomorphic probes to correct for band shift is a generally accepted test . . . .").

95. People v. Keene, 591 N.Y.S.2d 733, 740.

96. *Id.* at 738.

97. *Id.*

98. *See id.* at 740.

99. *See* State of Louisiana v. Quatrevingt, 670 So.2d 197, 206, *reh'g denied*, (Mar. 29, 1996); *cert. denied*, 117 S.Ct. 294 (1996).

100. *See id.* at 203.

101. *See* Sgueglia Report, *supra* note 87.

102. *See Quatrevingt*, 670 So.2d at 205.

103. *See id.* at 206

104. *See* Paul C. Gianelli, *The Abuse of Scientific Evidence in Criminal Cases: The Need for Independent Crime Laboratories*, 4 VA. J. SOC. POL'Y & L. 439, 441 (1997).

105. *See id.*

labs and police departments, pro-prosecution bias in forensic science is not surprising. In fact, seventy-nine percent of the labs are governed by the police, and most examine only evidence submitted by the prosecution team."[106] There is a direct correlation between the problems caused by using scientific evidence in criminal trials, and the fact that "the nation's crime laboratories are exempt from regulation and external review."[107] Molecular biologist Eric Lander noted that "'forensic science is virtually unregulated—with the paradoxical result that clinical laboratories must meet higher standards to be allowed to diagnose strep throat than forensic labs must meet to put a defendant on death row.'"[108]

The Court of Appeals in O'Dell, relying on the ambiguous DNA evidence, held that "[t]he only thing that O'Dell has demonstrated is that one of the many blood stains on his clothing did not come from either himself or Helen Schartner; that he also had someone else's blood on his shirt by no means shows that he did not murder Helen Schartner . . . ."[109] This statement revealed the court's acceptance of the state's interpretation, despite the reliable and persuasive defense evidence contained in the trial record. If the court had taken a closer look at the record it would have found that this same spot was found to be consistent with the victim's blood at trial. The state never suggested that the blood came from two different sources. Since the DNA results contradicted the main evidence at trial, they undermine the state's entire case because no other evidence was presented to link O'Dell to the crime. For fairness reasons, new DNA tests should have been performed to determine if other evidence, such as the semen, could have linked O'Dell to the murder.

In an editorial before O'Dell's execution, a Virginia lawyer expressed concern at the Commonwealth's denial of O'Dell's request for additional tests to "settle the issue."[110]

> O'Dell's lawyers have requested PCR [testing,] but the attorney general of Virginia, asserting that reasonable people cannot doubt O'Dell's guilt, is opposed to such a test—even one conducted by the state's own crime lab which routinely performs the same tests for current criminal investigations. [B]oth Governor Allen and the Virginia Supreme Court rejected O'Dell's plea that they order the test performed. *Apparently, the state of Virginia*

106. *Id.* at 470.

107. *Id.* at 474.

108. *Id.* (quoting Eric Lander, *DNA Fingerprinting on Trial*, 330 NATURE 501, 505 (1989)).

109. O'Dell v. Netherland, 95 F.3d 1214, 1254 (4th Cir. 1995).

110. *See* John C. Tucker, *A Look At . . . Executions; What's Wrong With Making Sure? Virginia Should Conduct One Last DNA Test Before It Takes Joseph O'Dell's Life*, WASH. POST, July 20, 1997 at C3.

does not want to know what the test might reveal.[111]

2. Why Virginia Opposed Additional DNA Testing and Responses to Those Reasons

The Attorney General's Office offered two reasons for denying O'Dell's request for additional DNA testing: 1) finality; and 2) that there was no doubt about guilt. Nonetheless, the courts seemed to be more concerned with the reliability issue than with finality when they denied O'Dell further DNA testing.[112]

This author believes that the focus should have been on protecting against the execution of an innocent person, rather than on finality—nothing is more final than death. The cost of such DNA testing would have been minimal, and would have been borne by O'Dell.[113] In view of the circumstantial evidence, the blood testing was the only direct evidence in an otherwise weak case, and the previous testing methods used in this particular case are either unreliable or highly discredited. Additionally, it would be in the interest of justice to have secured tests that were more accurate and dispositive of guilt or innocence. Finally, although the courts, applying limited knowledge of DNA analysis, were concerned about reliability, Barry Scheck attempted to correct the misunderstanding of DNA analysis in an amicus brief to the Virginia Supreme Court.[114] According to Scheck, the very test O'Dell offered to perform, PCR testing, could not only have been extremely reliable but also performed on very degraded and old blood samples.[115] Despite the courts' concern about contaminated samples, contamination can be determined only at the time of testing, not before.[116] Outweighed by the Commonwealth's finality and reliability arguments are the interest society places on protection of the innocent from execution. The minimal cost to the defense, and the likely outcome of a dispositive test result, which would not have delayed the execution if performed when O'Dell requested, should have provided the courts sufficient reason to allow further DNA testing.

E. The Politics of Misinterpreting DNA Results

Due to the complexities of DNA science, the public was unaware of the

111. *Id.* (emphasis added).
112. *See generally* Lowe Letter, *supra* note 44.
113. *See* Stephen Labaton, *DNA Fingerprinting Showdown Expected in Ohio*, N.Y. TIMES, June 22, 1990, at B5. The costs of such tests are minimal and range from four to five hundred dollars a test. *See id.*
114. *See generally* Amicus Brief, *supra* note 20.
115. *See id.* at 4.
116. *See id.* at 6.

correct interpretation of DNA in the *O'Dell* case and was mislead by Governor Allen's statement to the press.[117] The defense felt that the most egregious example of misrepresentation of DNA results occurred when the Governor of Virginia issued a press statement concerning DNA in the *O'Dell* case.[118] His statement, according to the defense, took advantage of the public's limited knowledge of DNA testing by seeking to exploit the results unfavorably to O'Dell. The general perception is that DNA results leave no room for error, and that the testing procedures are reliable; thus, the Governor's statement merely heightened these misconceptions.

The case of Earl Washington[119] reveals the kind of political play that enters the arena when executive clemency is considered.[120] Attorney General Stephen Rosenthal informed Washington's lawyers that his office would insist on DNA testing as part of his clemency request.[121] "Because the evidence was almost 11 years old and the sample from a vaginal swab was small . . . PCR, or polymerase chain reaction, was the best method."[122] Dr. Paul Ferrera, head of Virginia's crime lab, issued the report on the results:

> The report state[d] that neither Mr. Washington, the victim nor her husband 'individually or in combination can be the contributor(s) of the 1.1 allele detected on the vaginal swab.' If only those three individuals were involved . . . 'Washington is eliminated as a contributor.' But, the doctor add[ed]—and this [was] the source of the attorney general's claim the test [was] inconclusive—'If there's more than those three individuals involved, we can't go that far.'[123]

Dr. Ferrara provided an out for the Attorney General's office, even though it was never suggested that there was more than one perpetrator when Washington was sentenced to death.[124] Although he was eliminated as being the source of the sperm, in presenting the results to the governor and the public, "the attorney general stopped short of excluding Mr. Washington as the perpetrator and cast the results as inconclusive." [125] Washington's attorney's believed that the Attorney General had cast the results

117. *See* Letter from Mark Christie, Counsel to Governor Allen, to Robert Smith, Counsel to O'Dell, (July 11, 1997) (on file with author) [hereinafter Christie Letter].

118. *See id.*

119. *See* Washington v. Commonwealth, 323 S.E.2d 577 (1989).

120. *See* Marcia Coyle, *Innocence vs. Executions: More on Death Row are Using New Evidence*, Nat'l L.J. Dec. 27, 1993, at 1.

121. *See id.*

122. *Id.*

123. *Id.*

124. *See id.*

125. *Id.*

unfairly as inconclusive.[126] Barry Scheck found Mr. Rosenthal's reaction to the testing '"very troubling,"' and stated that '"Governor's [when faced with test results such as Washington's] should be giving pardons,"' not upholding the death sentence.[127]

In the *O'Dell* case, Dr. Ferrera was asked to "analyze" the DNA results that had already gone through a fact-finding process in the Eastern District Court of Virginia.[128] After examining the results, Dr. Ferrera conceded that the shirt revealed blood that could *not* have come from the victim.[129] Instead of stating the jacket yielded inconclusive results, Dr. Ferrara contradicted the experts of his own crime lab, the FBI, the NRC and the District Court by stating in his report that there was a DNA match.[130] The fact that the Governor closed the door on the question of O'Dell's innocence was most disturbing to O'Dell's counsel because he additionally relied upon the erroneous facts stated in the Fourth Circuit Court of Appeals' opinion.[131] The Governor relied heavily upon the fact that the sperm was a match for both O'Dell's blood and enzyme types, yet he refused to allow O'Dell to perform DNA tests on the sperm to prove it was not.[132]

Finally, O'Dell's lawyers pointed out that "[t]he only conclusion clearly stated in Dr. Ferrara's report is 'that Helen Shartner [sic] cannot be excluded as a possible contributor of the genetic material recovered from the blue jacket.' This is of course consistent with our and Dr. Guerrieri's [the Commonwealth's expert] view that the jacket sample is inconclusive."[133] The attempt to better educate the Governor concerning the correct interpretation of the DNA results apparently failed to correct the Governor's initial understanding of the DNA as stated in his July 11, 1997 letter to O'Dell's lawyers.[134] In that letter, which he wrote and issued to the press, he erroneously stated:

> The first DNA test, conducted in 1990, established a match at three genetic locations between the blood found on the victim, Helen Schartner, and blood found on Mr. O'Dell's jacket. The testing methods used in that test remain valid to this day . . . . Dr. Ferrara has also reported to this office that the form of DNA testing used in 1990 by LifeCodes . . . remains the most well-

126. *See* Coyle, *supra* note 120, at 1.
127. *Id.*
128. *See generally* Christie Letter, *supra* note 117
129. *See id.*
130. *See id.*
131. *See id.*
132. *See id.*
133. Letter from Robert Smith, Counsel to O'Dell, to Mark Christie, Counsel to Governor Allen (July 15, 1997) (on file with author).
134. *See* Christie Letter, *supra* note 117, at 1.

> established, validated and accepted form of DNA typing used in forensic science laboratories today.[135]

While RFLP tests remain valid DNA tests, an issue never disputed by the O'Dell team, correcting for band shifting is not part of a valid DNA test.[136] What Governor Allen very cleverly left out of his statement was that the underlying method of correcting for band shift is *not* reliable, and not even used by Virginia's own crime lab, the FBI or the scientific community. As the court recognized in *People v. Keene*,[137] "[w]hile the DNA principle and RFLP analysis are generally accepted in the scientific community, this Court cannot find that the practice of using monomorphic probes to correct for band shift is a generally accepted test . . . ." [138] Even LifeCodes no longer uses the procedure,[139] recognizing it is not accepted in the scientific community or the courtroom. This kind of deception is cause for concern among defense practitioners today; especially those who practice before the courts in Virginia.

V. CONCLUSION

Although O'Dell was put to death despite controversial DNA evidence, his case demonstrates how DNA testing can be misunderstood and misused by the courts, politicians and prosecutors. It emphasizes that while the evolution of DNA progresses, there is an increasing need to understand and challenge its results, in addition to highlighting the dangers of its abuse, both in an out of the courtroom. The *O'Dell* case reveals the backward application of science when DNA is misused and ignored as a powerful tool to resolve disputed results. It also demonstrates the need for the availability and preservation of DNA evidence for testing by the defense to ensure fairness in the judicial process. Finally, *O'Dell* illustrates the need for uniformity within the scientific community regarding DNA testing in order to ensure reliable techniques and accurate results.

In such a highly politicized environment, DNA evidence should be used as a tool for dispositive answers, not as a technique to manipulate the system. It is imperative that the doors to justice are not closed in the interests of protecting a verdict, finality, or preserving the public confidence in our criminal justice system. The basic values and fundamental principles of our judicial system demand a higher moral and ethical standard

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135. *Id.*

136. *See supra* notes 5-7 and accompanying text.

137. 591 N.Y.S.2d 733 (1992).

138. *Id.* at 740.

139. *See* Peter Finn, *The Code of Last Resort; A Convicted Killer Hoped Genetic Rests Would Clear Him. Instead, They Just Muddied The Waters*, WASH. POST, Dec. 16, 1996 at C1.

than pure textual application of the law. *O'Dell* was an example of procedure over substance. From the default of O'Dell's constitutional claims, to the denial of DNA testing, and finally to the United States Supreme Court, there was a refusal to protect O'Dell's constitutional rights.

This Commentary stands for the proposition that justice requires that we utilize advanced scientific technology to gain the truth concerning evidence that is contested, unreliable, or legitimately in question. Furthermore, when additional DNA testing contradicts evidence presented at trial, justice calls for either additional testing or a new trial. Joseph O'Dell should have been allowed DNA tests to prove his innocence, or confirm his guilt before he was executed. The integrity of the judicial process requires that all parties act under the guidance of law *and* morality. The law should be used as it was designed—as a tool for justice—not for keeping track of wins and losses. The taking of a life is never a game.