

# Strengths, Limitations, and Controversies of DNA Evidence.

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## I. Introduction

On a cold December morning in 2004, Brandon Moon felt the crisp air hit his face for the first time in seventeen years. He stood quietly, watching his breath float in the air while he cradled a cup of coffee. What he had known and maintained all along was correct; he was innocent.

Most twenty-six-year olds are focusing on their careers, thinking about marriage and family, and enjoying life. In January 1987, Brandon Moon was not. Prior to 1987, Moon was on top of the world: he was an honorably discharged Army veteran, a sophomore at the University of Texas, and living with his girlfriend, Sarah.<sup>1</sup> After graduation, Moon had hoped to become a “lifer” in the Air Force and fly fighter jets.<sup>2</sup> He had dreams and goals to fulfill. In December 1987, however, all this changed when a woman was sexual assaulted in her home and claimed that Moon was her attacker.<sup>3</sup> A man with a stocking mask and a gun forced her into her bedroom where she was raped.<sup>4</sup> After the attack, the victim drove to a local store where she asked an employee to call the police.<sup>5</sup> She was subsequently taken to the hospital

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<sup>1</sup> Barbara Novovitch, *Free After 17 Years for a Rape That He Did Not Commit*, PHOENIX COPWATCH, [http://members.tripod.com/phoenix\\_copwatch/mud/police-news/cw1122.htm](http://members.tripod.com/phoenix_copwatch/mud/police-news/cw1122.htm).

<sup>2</sup> *Id.*

<sup>3</sup> The Innocence Project, *Brandon Moon*, at [http://www.innocenceproject.org/case/display\\_profile.php?id=162](http://www.innocenceproject.org/case/display_profile.php?id=162).

<sup>4</sup> *Id.*

<sup>5</sup> *Id.*

and examined. The victim's physician observed sperm on slides prepared from the vaginal washings.<sup>6</sup>

The day after the attack, the victim was shown a photographic array that included Moon's picture. She told police that Moon looked like the perpetrator but that she could not be sure.<sup>7</sup> Later that day, police obtained a warrant and arrested Moon. The next day, the victim viewed a lineup and identified Moon as the rapist after all the subjects were required to put on hats similar to the one worn by the perpetrator.<sup>8</sup>

After trial by jury, Moon was convicted of rape and sentenced to seventy-five years in prison.<sup>9</sup> Instead of flying fighter jets, Moon sat in prison for the next seventeen years teaching himself the law and the science of deoxyribonucleic acid (hereinafter "DNA") evidence because he knew that he had to fight for his innocence. As a result of his rape conviction, Moon lost his friends, his girlfriend, and his dreams. While Moon's friends were going on dates, buying homes, and getting promotions, Moon wilted away in prison: youthful innocence robbed from him.

After his conviction, Moon filed motions to have the DNA testing of the semen samples. In 1989, Moon's motion for DNA testing was granted and the results conclusively excluded him as the source of the semen.<sup>10</sup> Though Moon was excluded as the perpetrator, the sample was never compared against samples from the victim's husband or her son.<sup>11</sup> Moon petitioned the courts to allow additional testing on the collected samples, but the court denied his request citing the laboratory's inability to determine if any other male DNA was found.<sup>12</sup> Moon continued to proclaim his innocence, but it was not until 2001 that Moon found new

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<sup>6</sup> *Id.*

<sup>7</sup> *Id.*

<sup>8</sup> *Id.*

<sup>9</sup> *Id.*

<sup>10</sup> *Id.*

<sup>11</sup> *Id.*

<sup>12</sup> *Id.*

hope.<sup>13</sup> That year, the El Paso Public Defender was appointed to represent Moon.<sup>14</sup> With the help of his attorney, the court required additional DNA testing.<sup>15</sup> The results excluded Moon as the contributor on all samples.<sup>16</sup> The laboratory found two new male profiles, one located on the comforter where the assault took place and one located in the victim's bathroom.<sup>17</sup> Both samples contained a mixture of the victim's DNA and that of an unknown male.<sup>18</sup> In 2004, the victim's ex-husband was located and consented to a DNA test which confirmed that he was the contributor of the semen located on the victim's comforter.<sup>19</sup> Further review of the results in 2004 indicated that the victim's son was not a contributor to the samples.<sup>20</sup> That left the profile on the robe, a profile that factually could not have been left by Moon.<sup>21</sup>

In December 2004, Brandon Moon was exonerated and released from prison after the DNA tests proved his innocence. Brandon Moon was the 154<sup>th</sup> post-conviction DNA exoneration in the United States.<sup>22</sup> As of October 2006, 183 men and women have been released from prison after their wrongful conviction.<sup>23</sup>

The benefits emerging from the introduction of DNA related technologies into the criminal justice system are highly regarded by the courts.<sup>24</sup> Even so, there are still lingering problems concerning the fairness and reliability of

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<sup>13</sup> *Id.*

<sup>14</sup> Truth In Justice, *DNA Tests Free Man Who Served 17 Years for Rape*, <http://www.truthinjustice.org/moon.htm>.

<sup>15</sup> *Id.*

<sup>16</sup> The Innocence Project, *supra*, note 3.

<sup>17</sup> *Id.*

<sup>18</sup> *Id.*

<sup>19</sup> *Id.*

<sup>20</sup> *Id.*

<sup>21</sup> *Id.*

<sup>22</sup> Novovitch, *supra* note 1.

<sup>23</sup> The Innocence Project, *supra* note 3.

<sup>24</sup> Jason Borenstein, *DNA in the Legal System: The Benefits are Clear, The Problems Aren't Always*, 3 CARDOZO PUB. L. POL'Y & ETHICS J. 847 (2006).

DNA evidence in criminal proceedings.<sup>25</sup> One possible way to overcome some of the disadvantages of DNA evidence may be the expansion of DNA databases to include samples from all arrestees. Theoretically, the more DNA data entered into the database increases the accuracy and probability of matches between crime scene DNA and the offender/arrestee. This theory has already been successfully proven in Britain.

This article explores the benefits of DNA evidence as well as the evidentiary problems associated with DNA. Part II discusses the history, development, and the emergence of DNA in the criminal justice system. Part III analyzes the significance of DNA evidence and its impact on recent cases. Part IV describes the disadvantages of DNA evidence in terms of efficiency, risks, human error, and its impact on jurors.

## II. DNA Evidence and the Law

### A. Background Information

Because DNA evidence is versatile and powerful, its impact on the criminal justice system is significant. In fact, DNA evidence has a variety of applications. For instance, in 1987, Colin Pitchfork was the first person to be convicted of murder through the use of genetic fingerprinting.<sup>26</sup> Thus, DNA evidence convicts as well as exonerates.

In another dramatic example, in 1983 and 1986 two fifteen-year-old schoolgirls were raped and murdered in Narborough, England.<sup>27</sup> The prime suspect was Richard Buckland, a young kitchen porter, who confessed to the murder of one of the schoolgirls.<sup>28</sup> Both attacks were conducted in the same manner and semen samples revealed

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<sup>25</sup> *Id.* at 847.

<sup>26</sup> Forensic Science Services, *Colin Pitchfork: First Murder Conviction on DNA Evidence Also Clears The Prime Suspect*, [http://www.forensic.gov.uk/forensic\\_t/inside/news/list\\_casefiles.php?case=1](http://www.forensic.gov.uk/forensic_t/inside/news/list_casefiles.php?case=1).

<sup>27</sup> *Id.*

<sup>28</sup> *Id.*

that type A blood was found on both of the girls—a blood and an enzyme profile that only matches ten percent of males.<sup>29</sup> Not convinced of Buckland’s confession, police officials contacted Dr. Alec Jeffreys who had developed a method for creating DNA profiles. Dr. Jeffreys, Dr. Peter Gill, and Dr. Dave Werrett of the Forensic Science Service published the first paper on applying DNA profiling to forensic science.<sup>30</sup> In 1985, they also demonstrated that DNA could be obtained from crime scenes.<sup>31</sup> Using this methodology, Dr. Jeffreys quickly confirmed that the profile of the murderer and Buckland did not match.<sup>32</sup> Buckland who was already serving time for the rape, made history by becoming the first person to be exonerated by DNA profiling.<sup>33</sup> After the exoneration, there were no identifiable suspects. Consequently, Leicestershire police officials undertook a project where 5,000 men were asked to volunteer blood or saliva samples.<sup>34</sup> The perpetrator almost escaped by having a friend donate blood in his name but was unsuccessful when his friend was overheard talking about the switch.<sup>35</sup> Ultimately, the perpetrator was arrested when his fingerprint sample matched the sample at the scene.<sup>36</sup>

The use of DNA evidence in the criminal justice system has been regarded by scholars as “probably the greatest forensic advancement since the advent of fingerprinting.”<sup>37</sup> DNA analysis is a powerful tool because each person’s DNA

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<sup>29</sup> National DNA Data Bank, *The Birth of DNA Evidence*, [http://www.nddb-bndg.org/cases/collin\\_e.htm](http://www.nddb-bndg.org/cases/collin_e.htm).

<sup>30</sup> Forensic Science Services, *supra* note 27.

<sup>31</sup> *Id.*

<sup>32</sup> *Id.*

<sup>33</sup> National DNA, *supra* note 29.

<sup>34</sup> Forensic Science Services, *supra* note 30.

<sup>35</sup> *Id.*

<sup>36</sup> *Id.*

<sup>37</sup> Aaron P. Stevens, *Arresting Crime: Expanding the Scope of DNA Databases in America*, 79 TEX. L. REV. 921, 922 (2001) (quoting *DNA Links Convict to 21-Year-Old Slaying; Evidence Likened to “The Finger of God,”* THE RECORD (N.J.), Mar. 14, 2000, at A5, available at 2000 WL 15804065 (quoting Jeanine Pirro, Westchester District Attorney)).

is unique.<sup>38</sup> Every cell in the human body contains DNA.<sup>39</sup> Ninety-nine percent of human DNA is the same in everyone; it is only that one percent that makes one individual's DNA different from the DNA of other individuals.<sup>40</sup> When DNA testing first emerged, a sample the size of a dime was required for DNA analysis, but that has changed.<sup>41</sup> Today, scientists can multiply the DNA from tiny amounts of evidence, such as saliva from a cigarette butt.<sup>42</sup> In one case, DNA analysis of a single hair found deep in the victim's throat was the critical piece of evidence used in a capital murder conviction.<sup>43</sup> This approach is helpful if there are only minimal amounts of DNA evidence found at the scene.<sup>44</sup> DNA is present in blood, hair, saliva, and semen, and can be found on postage stamps and areas around the mouth opening on ski masks.<sup>45</sup>

For example, in *Brewer v. Mississippi*, Kennedy Brewer was sentenced to death row for the murder of his ex-girlfriend's three-year-old daughter.<sup>46</sup> Dr. West, a general dentist practicing in Mississippi, was the state's forensic orthodontist. West opined that Brewer's teeth inflicted the bite marks located on the girl's body.<sup>47</sup> West based his conclusion on several tests he performed, including a direct comparison test that revealed that none of the dental impressions from the individuals tested matched the bite marks on the three-year-old's body except Brewer's.<sup>48</sup> West also observed a chip in Brewer's front tooth and that his

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<sup>38</sup> President's DNA Initiative, *Advancing Justice Through DNA Technology*, <http://www.dna.gov/basics/analysis>.

<sup>39</sup> *Id.*

<sup>40</sup> Genetic Science Learning Center, *Can DNA Demand a Verdict?*, <http://learn.genetics.utah.edu/features/forensics>.

<sup>41</sup> *Id.*

<sup>42</sup> *Id.*

<sup>43</sup> National Institute of Justice, *What Every Law Enforcement Officer Should Know About DNA Evidence*, <http://www.ojp.usdoj.gov/nij/pubs-sum/000614.htm>.

<sup>44</sup> *Id.*

<sup>45</sup> Genetic Science Learning Center, *supra* note 40.

<sup>46</sup> *Brewer v. Mississippi*, 725 So.2d 106, 108 (1998).

<sup>47</sup> *Id.* at 116.

<sup>48</sup> *Id.*

upper teeth were much sharper than his lower teeth.<sup>49</sup> These unique characteristics were consistent with the marks left on the girl.<sup>50</sup> However, despite the results from this evidentiary technique, exculpatory DNA evidence was later found which conclusively exonerated Brewer. The *Brewer* case demonstrates that DNA collected from a crime scene can prove actual innocence in cases even where other seemingly reliable evidence is substantial.<sup>51</sup>

Additionally, unidentified remains found at a crime scene can be analyzed by comparing these remains through relatives' DNA.<sup>52</sup> This technique was used extensively in the identification of 911 victims.

#### B. The History of DNA Databases

In 1995, Britain established the first national criminal DNA database.<sup>53</sup> This database allows British police to retain DNA evidence of "anyone suspected of, charged with, reported for, or convicted of a recordable offense."<sup>54</sup> Since 1995, British police have collected over three million samples. Its fully automatic profiling system allows it to process and store more than 40,000 samples per month.<sup>55</sup>

DNA computerized databases are becoming an important tool in the criminal justice system. These databases consist of computer generated genetic profiles developed from DNA samples.<sup>56</sup> DNA databases allow police officials to search for matches with unidentified samples that are taken from a crime scene. In 1998, the DNA Identification Act authorized

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<sup>49</sup> *Id.*

<sup>50</sup> *Id.*

<sup>51</sup> Eunyoung Theresa Oh, *Innocence After "Guilt": Post-conviction DNA Relief for Innocents Who Pled Guilty*, 55 SYRACUSE L. REV. 161, 171 (2004).

<sup>52</sup> President's DNA Initiative, *supra* note 38.

<sup>53</sup> Stevens, *supra* note 37 at 944.

<sup>54</sup> Amy Norton, *DNA Databases: The New Dragnet*, THE SCIENTIST, Volume 19, Issue 7, Page 50, April 11, 2005.

<sup>55</sup> *Id.*

<sup>56</sup> Stevens, *supra* note 37 at 922.

the Federal Bureau of Investigation to establish the Combined DNA Index System [hereinafter “CODIS”].<sup>57</sup> This national DNA database pools federal and state data from convicted criminals.<sup>58</sup> As of October 2006, CODIS contained DNA samples from approximately 2.9 million convicted criminals.<sup>59</sup> Currently, all fifty states have passed laws authorizing criminal databases.<sup>60</sup>

### C. DNA Admissibility Standards

In a perfect world, uniform evidentiary standards would exist for determining the weight and admissibility of DNA evidence. Unfortunately, the courts have struggled to resolve these issues. Before a court can determine how much weight and legal significance to apply to DNA evidence, DNA evidence must pass the baseline test of relevancy.<sup>61</sup> Relevant evidence is defined by the Federal Rules of Evidence as “evidence having any tendency to make the existence of any fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence.”<sup>62</sup> Once a court determines that the DNA evidence is relevant, there are two different legal standards that courts apply in determining the admissibility of DNA evidence, the *Frye* standard and the *Daubert* standard.<sup>63</sup>

The original test for admissibility of DNA was developed in *Frye v. United States*.<sup>64</sup> *Frye v. United States* held that to be admissible, scientific evidence must be “sufficiently

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<sup>57</sup> *Id.*

<sup>58</sup> *Id.*

<sup>59</sup> Richard Willing, *FBI Adds Uses For Its DNA Databases*, [http://www.usatoday.com/news/nation/2006-05-30-dna-database\\_x.htm](http://www.usatoday.com/news/nation/2006-05-30-dna-database_x.htm).

<sup>60</sup> See S. Axelrad, *Survey of State DNA Database Statutes 2005*, THE AMERICAN SOCIETY OF LAW, MEDICINE & ETHICS, [http://www.aslme.org/dna\\_04/grid/statute\\_grid\\_4\\_5\\_2006.htm](http://www.aslme.org/dna_04/grid/statute_grid_4_5_2006.htm). (Oct. 18, 2006).

<sup>61</sup> Kenneth Chesbro, *Taking Daubert's Focus Seriously: The Methodology/Conclusion Section*, 15 CARDOZO PUB. L. REV. 1745 (1994).

<sup>62</sup> FED. R. EVID. 401

<sup>63</sup> Alison Puri, *An International DNA Database: Balancing Hope, Privacy, and Scientific Error*, 24 B.C. INT'L & COMP. L. REV. 341 (2001).

<sup>64</sup> *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923).



established to have gained general acceptance in the particular field in which it belongs.<sup>65</sup> After the development of this standard, federal and state courts attempted to apply it to scientific evidentiary standards; however, many problems arose. Courts struggled with the *Frye* standard because the inquiry did not focus on the reliability of the particular piece of evidence; instead the *Frye* test focused upon the general reliability of the scientific test as a whole, which was found to be difficult to apply.<sup>66</sup>

In fact, the *Frye* test led to a range of practical evidentiary problems. For instance, it is unclear what evidence is needed to show that an expert's claims are "generally accepted" within an expert community. Further, it can be difficult to identify the appropriate expert community.<sup>67</sup>

Also, the courts became concerned with the reliability of the *Frye* standard because the standard unfairly discredited new tests and principles.<sup>68</sup> Thus, courts concluded that a new test was in order to ensure admissibility of reliable scientific evidence.

In 1993, the Supreme Court developed such a test in *Daubert v. Merrell Dow Pharmaceuticals*.<sup>69</sup> In *Daubert*, the Supreme Court concluded that in order for scientific evidence to be admissible it must be shown to be scientifically valid and relevant to at least one issue in the case.<sup>70</sup> The Supreme Court offered numerous factors to aid district judges in making such determinations. Some of these factors include whether the technique has been or can be tested, whether the technique has been subjected to peer review or publication, its known or potential rate of error, whether the technique is generally accepted in the community, and whether the

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<sup>65</sup> *Id.* at 1014.

<sup>66</sup> Puri, *supra* note 63.

<sup>67</sup> Jason Borenstein, *Science Philosophy, and the Courts*, 13 ST. THOMAS L. REV. 979, 985 (2001).

<sup>68</sup> Puri, *supra* note 63.

<sup>69</sup> *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993).

<sup>70</sup> Puri, *supra* note 63.

technique was created independently of litigation.<sup>71</sup> It has been suggested by legal scholars that the *Daubert* test still allows courts to consider the *Frye* standard because the “generally accepted” prong is one of many factors—instead of the sole factor in the analysis.<sup>72</sup>

Opposing theorists assert “by replacing *Frye* with *Daubert*, the Court traded one set of problems for another.”<sup>73</sup> Basically, the above argument is rooted in the notion that a published article or study does not mean that its claims are well-supported.<sup>74</sup> In recent years, it has become difficult to determine the value of a published article mainly due to the internet.<sup>75</sup> Also, reliance on peer review and error rates can be problematic because the members of most peer reviews lack the time to examine each article thoroughly, and judges might not know that which may be an acceptable error rate in a particular field.<sup>76</sup>

Additionally, the standards of admissibility have varied from state to state due to differing state evidence laws. Each court interprets cases differently and because of this, state courts have yet to identify a singular method concerning DNA weight and admissibility. In *State v. Traylor*,<sup>77</sup> the defendant argued that the type of DNA test used in his case was not reliable. The Minnesota Supreme Court disagreed and held that the particular DNA-testing procedure was generally accepted in the community.<sup>78</sup> But since there are so many DNA-testing procedures used, courts not only have to determine whether the test is accepted, but whether the tests are reliable as well.<sup>79</sup>

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<sup>71</sup> *Id.*

<sup>72</sup> *Id.*

<sup>73</sup> Borenstein, *supra* note 67, at 992 (quoting Jay Kesan, *An Autopsy of Scientific Evidence in a Post- Daubert World*, 84 GEO. L.J. 1985, 2040 (1996).

<sup>74</sup> *Id.* at 993-94.

<sup>75</sup> *Id.* at 994.

<sup>76</sup> *Id.*

<sup>77</sup> *State v. Traylor*, 656 N.W.2d 885 (Minn. 2003).

<sup>78</sup> Borenstein, *supra* note 24, at 853.

<sup>79</sup> *Id.* at 853.

Dr. Tim O'Connor of Austin Peay State University in Fort Campbell, Kentucky, reported that as of 2004, thirteen states remained committed to the *Frye* standard while eleven states have adopted the *Daubert* standard. Interestingly, twelve states apply their own standards known as the *Frye-plus* standard.<sup>80</sup> Generally, the *Frye-plus* standard is essentially a balancing approach where the courts balance materiality with prejudicial effect.<sup>81</sup>

### III. The Functional Utility of DNA Evidence

#### A. Actual Innocence Standards

Despite its powerful evidentiary impact on the criminal justice system, DNA evidence is only found in a small fraction of crime scenes.<sup>82</sup> If DNA evidence is available, it has the ability to prove actual innocence in cases where the defendant was wrongly convicted; however, the defendant must convince a court to rehear the case.<sup>83</sup> In order for a convicted defendant to have his or her case reheard on newly discovered evidence, the defendant must meet either the *Herrera*<sup>84</sup> standard or the *Schlup*<sup>85</sup> standard. In *Herrera v. Collins*,<sup>86</sup> the Supreme Court held that it would only hear claims of innocence when the defendant “supplements his

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<sup>80</sup> Tim O'Connor, *Admissibility of Scientific Evidence Under Daubert*, <http://faculty.ncwc.edu/toconnor/425/425lect02.htm>.

<sup>81</sup> *Id.* The following states follow the *Frye* standard: Alaska, Arizona, California, Colorado, Florida, Illinois, Kansas, Maryland, Michigan, Nebraska, New York, Pennsylvania, and Washington. The following states follow the *Daubert* standard: Connecticut, Indiana, Kentucky, Louisiana, Massachusetts, Missouri, New Mexico, Oklahoma, South Dakota, Texas, and West Virginia. The following states follow the *Frye-plus* standard: Arkansas, Delaware, Georgia, Iowa, Minnesota, Montana, North Carolina, Oregon, Utah, Vermont, and Wyoming.

<sup>82</sup> Eric Freedman, *Earl Washington's Ordeal*, 29 HOFSTRA L. REV. 1089, 1108 (2001).

<sup>83</sup> Oh, *supra* note 51, at 171.

<sup>84</sup> *Herrera v. Collins*, 506 U.S. 390 (1993).

<sup>85</sup> *Schlup v. Delo*, 513 U.S. 298 (1995).

<sup>86</sup> *Herrera*, *supra* note 84.

independent constitutional claim with a colorable showing of factual innocence.”<sup>87</sup> Most courts are likely to find that DNA evidence meets this requirement because it “maintains its evidentiary significance over extended periods of time, but also increases in probative value as technological advances and growing databases amplify the ability to identify perpetrators and eliminate suspects.”<sup>88</sup> In *Herrera*, the Court’s strict standard was rooted in concern that “there is no guarantee that the guilty or innocence determination would be any more exact” in a second trial.<sup>89</sup>

In *Schlup v. Delo*, the Supreme Court ruled on another standard of actual innocence.<sup>90</sup> The *Schlup* standard is a lower standard as compared to the *Herrera* standard.<sup>91</sup> There, the Court held that if a convicted defendant introduces new and reliable evidence that would show that no reasonable juror would have found him or her guilty, he or she can pass through a procedural “gateway.”<sup>92</sup> This “gateway” allows the convicted defendant to avoid technicalities that could prevent him or her from making his or her claim of actual innocence. To do this, the defendant must present evidence that raises “sufficient doubt about his guilt to justify the conclusion that his execution would be a miscarriage of justice.”<sup>93</sup>

#### B. DNA Can Prove Actual Innocence

In the recent Supreme Court case, *House v. Bell*,<sup>94</sup> the Court held that the defendant had met the *Schlup* standard for

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<sup>87</sup> Oh, *supra* note 51, at 176 (quoting *Kuhlmann v. Wilson*, 477 U.S. 436, 454 (1986)).

<sup>88</sup> Oh, *supra* note 51, at 177 (quoting J. Brent Alldredge, *Federal Habeas Corpus and Postconviction Claims of Actual Innocence Based on DNA Evidence*, 56 SMU L. REV. 1005, 1005 (2003)).

<sup>89</sup> *Id.* at 177 (quoting *Herrera v. Collins*, 506 U.S. 390, 403 (1993)).

<sup>90</sup> *Schlup*, *supra* note 85.

<sup>91</sup> *Id.*

<sup>92</sup> Cornell Law School, Legal Information Institute, *House v. Bell* 04-8990, <http://www.law.cornell.edu/supct/cert/04-8990.htm>.

<sup>93</sup> *Schlup*, *supra* note 85, at 316.

<sup>94</sup> *House v. Bell*, 126 S.Ct. 2064 (2006).

actual innocence.<sup>95</sup> The Court remanded the defendant's case to have the new evidence presented to the lower court.<sup>96</sup> In that case, a Tennessee jury convicted the defendant, Paul House, of murder and sentenced him to death.<sup>97</sup> The jury relied on the state's evidence, which showed that semen taken from the victim's nightgown matched House's DNA.<sup>98</sup> The jury also relied on the state's evidence that the pair of jeans House wore on the night of the murder contained blood that matched the victim.<sup>99</sup> The Tennessee Supreme Court affirmed the decision concluding that the evidence while only circumstantial provided strong support for the verdict.<sup>100</sup>

When the case reached the United States Supreme Court, House presented new and reliable evidence that showed that semen found on the victim's clothing did not match his sample.<sup>101</sup> The DNA found on the victim's clothing in fact belonged to the victim's husband, not House.<sup>102</sup> Likewise, the blood found on House's jeans did not come directly from the victim but was instead splattered on the jeans while in the custody of the crime laboratory from vials of the blood taken at the autopsy.<sup>103</sup> This case was the first case where the Supreme Court ruled in favor of an inmate on an actual innocence claim based on newly discovered DNA evidence.<sup>104</sup> Though the ruling did not overturn House's conviction, it showed that House's new evidence, the DNA

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<sup>95</sup> *Id.*

<sup>96</sup> Oyez, *House v. Bell*,

<http://www.oyez.com/oyez/resource/case/2022>.

<sup>97</sup> House, *supra* note 94 at 2074-75.

<sup>98</sup> *Id.* at 2072.

<sup>99</sup> *Id.*

<sup>100</sup> *Id.* at 2075.

<sup>101</sup> *Id.* at 2078-79.

<sup>102</sup> Bonna de la Cruz, *Justices' DNA Ruling May Affect Tennessee Cases: Death Row Inmates Can Cite Evidence for New Hearings*, <http://www.tennessean.com>.

<sup>103</sup> *Id.*

<sup>104</sup> *Id.*

evidence, was sufficiently compelling to meet the more stringent standard of actual innocence under *Schlup*.<sup>105</sup>

### C. The Innocence Project and the Robert Clark Case

In 1992 two civil attorneys, Peter Neufeld and Barry Sheck, created the Innocence Project, which is housed at the Benjamin N. Cardozo School of Law in New York, New York.<sup>106</sup> The Project handles cases where post-conviction DNA evidence testing yields conclusive proof of innocence.<sup>107</sup> The Innocence Project is viewed as “the forerunner in the field of wrongful convictions.”<sup>108</sup> The Innocence Project took on Robert Clark’s case last year after Clark contacted the Innocence Project asking for help. In 2005, Clark was exonerated after serving twenty-five years in prison when the victim’s vaginal slide was submitted to the lab and revealed that the sperm recovered in the victim’s rape kit did not come from Clark.<sup>109</sup> The case involved the beating and rape of a woman who was kidnapped from the parking lot of a restaurant on a summer night.<sup>110</sup> One week later, Clark was spotted in the women’s car and thereafter, arrested.<sup>111</sup> Clark asserted that he received the car from a friend. The jury did not believe Clark and convicted him, relying on the victim’s positive identification in a line-up.<sup>112</sup>

Subsequent to Clark’s imprisonment, the Innocence Project immediately requested that the District Attorney’s Office conduct a search for the male profile in the CODIS

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<sup>105</sup> Oyez, *supra* note 96.

<sup>106</sup> The Innocence Project, <http://www.innocenceproject.org/about/>.

<sup>107</sup> *Id.*

<sup>108</sup> *Id.*

<sup>109</sup> The Innocence Project: Robert Clark, [http://www.innocenceproject.org/case/display\\_profile.php?id=167](http://www.innocenceproject.org/case/display_profile.php?id=167).

<sup>110</sup> *Id.*

<sup>111</sup> David Markiewicz, *Exonerated After Twenty-Five Years, Freedom Tastes Good*, THE ATLANTA JOURNAL-CONSTITUTION, June 04, 2004, at <http://www.nlada.org/DMS/Documents/1149524691.59/0604metclark.htm>.

<sup>112</sup> *Id.*

and the state convicted offender databases.<sup>113</sup> Soon after, authorities determined that the DNA in the database matched the profile of Floyd Antonio Arnold, a well-known felon.<sup>114</sup> Authorities later confirmed that the real perpetrator of the crime was Floyd Antonio Arnold.

#### D. Earl Washington Case

Peter Neufeld of the Innocence Project called the case of Earl Washington “one of the extraordinary cases in the country because everything that could go wrong, did go wrong.”<sup>115</sup> Earl Washington, a mentally challenged black man, was convicted of rape and murder in 1982.<sup>116</sup> Washington was sentenced to death and just days before his execution, was released because of DNA evidence.<sup>117</sup> Critics of the conviction argued that police officials took advantage of Washington because he possessed an IQ of 69 when he confessed to the crime.<sup>118</sup> Because of his condition, Washington liked to please other people.<sup>119</sup> On many occasions, when Washington was told the correct answer to a question, he would later repeat it, regardless of whether he understood or not.<sup>120</sup> Washington’s confession reflected these characteristics.<sup>121</sup> Other major factors in Washington’s case

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<sup>113</sup> The Innocence Project :Robert Clark, *supra* note 109.

<sup>114</sup> *Id.*

<sup>115</sup> Inside Out Documentaries, *Testing DNA and the Death Penalty with Anthony Brooks, Fatal Flaws: The Case of Earl Washington*, <http://www.insideout.org/documentaries/dna/thestories3.asp>.

<sup>116</sup> *Id.*

<sup>117</sup> Virginia Harabin, *Earl Washington Jr. Wins His Freedom: Virginia Forced to Admit His Innocence After Years on Death Row*, THE NEW ABOLITIONIST, <http://www.nodeathpenalty.org/newab019/earlWashington.htm>.

<sup>118</sup> *Id.*

<sup>119</sup> Freedman, *supra* note 82, at 1105 (in the words John N. Follansbee M.D., who examined Mr. Washington at the request of defense counsel, “[i]t was my impression that if on the evening of the execution the electric chair were to fail to function, he would agree to assist in its repair”).

<sup>120</sup> *Id.* at 1105.

<sup>121</sup> *Id.* at 1105-06.

were ineffective counsel, issues of race and politics, and an inadequate post-conviction review.<sup>122</sup> In 1993, the Court of Appeals of Virginia ruled that Washington's confession would stand. The court reasoned that even though Washington was denied his Sixth Amendment constitutional right to effective assistance of counsel because defense counsel failed to introduce exculpatory biological evidence, the result was harmless.<sup>123</sup>

At this desperate point the parties agreed to DNA testing on the biological evidence. The DNA test revealed that the semen did not match Washington's DNA.<sup>124</sup> But despite the new evidence, Washington was faced with a new challenge. Under Virginia law,<sup>125</sup> a defendant only has twenty-one days after sentencing to present new evidence.<sup>126</sup> With this new evidence presented just days before Washington's scheduled execution, Governor Wilder changed Washington's status to life imprisonment.<sup>127</sup> Washington remained in prison for six more years until Governor Gilmore granted Washington a complete pardon for the capital murder conviction in 2000.<sup>128</sup>

#### E. The Superiority of DNA Evidence

In a nationwide poll conducted by CBS in May 1998, it found that more people put faith in DNA evidence than any other evidence—even eyewitness testimony.<sup>129</sup> The poll also revealed that if physical and eyewitness evidence were in conflict, nearly three out of four people said they would

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<sup>122</sup> *Id.* at 1104-08.

<sup>123</sup> The Innocence Project: Earl Washington, [http://www.innocenceproject.org/case/search\\_profiles.php](http://www.innocenceproject.org/case/search_profiles.php).

<sup>124</sup> *Id.*

<sup>125</sup> VA.CODE ANN. §19.2-270.5 (1990) (in 2001 Virginia carved out an exception to the 21-Day Rule for DNA Evidence, see VA.CODE ANN. §19.2-270.4:1 (2001), VA.CODE ANN. §19.2-327.1 (2001)).

<sup>126</sup> Inside Out Documentaries, *supra* note 115.

<sup>127</sup> The Innocence Project: Earl Washington, *supra* note 123.

<sup>128</sup> *Id.*

<sup>129</sup> See CBSNews.com, Associated Press, *CBS Poll: What to Believe*, at <http://www.cbsnews.com/stories/1998/07/07/48hours/main13347.shtm>.



believe the physical evidence over eyewitness testimony.<sup>130</sup> Thus, the increased use of DNA lessens the need for other evidence such as eyewitness identification.<sup>131</sup> In fact, experts agree that it is often mistaken eyewitness identification that puts innocent people in prison.<sup>132</sup> For instance, in 1985 Kirk Noble Bloodsworth was convicted of the murder and sexual assault of a nine-year-old girl and was sentenced to death. At trial, the jury relied on the testimony of five eyewitnesses that had seen Bloodsworth with the nine-year-old victim.<sup>133</sup> After serving nine years in prison, Bloodsworth was exonerated through DNA testing in 1993.<sup>134</sup> Mistaken eyewitness testimony also accounts for the conviction and incarceration of Ronald Cotton for ten years. In 1987, Cotton was convicted of raping two women.<sup>135</sup> The prosecution based its case on eyewitness identification, specifically that Cotton was chosen from a photo array and a line-up.<sup>136</sup>

Various scientific journals, such as *Psychology, Public Policy, and Law* have shown the risk of unreliable eyewitness identification.<sup>137</sup> False identification is influenced by various methods used in constructing and conducting lineups and photo arrays.<sup>138</sup> It was only because testable DNA evidence

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<sup>130</sup> *Id.*

<sup>131</sup> Martha Lawson, 9 WM & MARY BILL RTS. J. 645, 661 (2001).

<sup>132</sup> Amy Sinatra, *It's Him-Or is it? Mistaken Identity Can Land Innocent People in Jail*, THE EYEWITNESS CONSORTIUM, <http://eyewitnessconsortium.utep.edu/Documents/Sinatra.pdf#search='Amy%20Sinatra%20eyewitness%20identification>.

<sup>133</sup> Timothy Eckley, *Law Versus Science and the Problem of Eyewitness Identification*, JUDICATURE, January-February 2006, at 230.

<sup>134</sup> *Id.*

<sup>135</sup> What Jennifer Saw: Examining Eyewitness Errors in Crimes and How DNA Evidence is Setting the Innocent Free, Robert Cotton, at <http://www.pbs.org/wgbh/pages/frontline/shows/dna/cotton/summary.htm>

<sup>136</sup> *Id.*

<sup>137</sup> Gary L. Wells, *Eyewitness Identification: Psychological research and legal policy on lineups*, PSYCHOLOGY, PUBLIC POLICY, AND LAW, December 1995, Volume 1, 765-791.

<sup>138</sup> *Id.* Gary Wells, Professor of Psychology at Iowa State University, believes that the legal system should impose four simple rules that would reduce false identifications: 1) eyewitnesses should be informed that the

was present at the scene that Cotton was subsequently exonerated from the crime.

The stories of Clyde Charles and John Davis also show the superiority of DNA evidence over eyewitness identification.<sup>139</sup> Clyde Charles was exonerated from a 1981 rape as a DNA test revealed that Charles' brother was the rapist. The brothers were not twins but shared similar facial features, which caused a family friend to misidentify a picture of one of the brothers at trial.<sup>140</sup>

Even "open and shut" cases of eyewitness identification have been proven to be incorrect due to DNA evidence.<sup>141</sup> In one instance, the victim in a rape case identified her ex-boyfriend as the man who put a pillow over her face and then violently raped her.<sup>142</sup> The victim was positive that she had gotten a clear view of her attacker.<sup>143</sup> The case looked straightforward for the prosecution because Davis had a history of abuse with the victim and his only defense was his mother's testimony that he had been at home sleeping at the time of the attack.<sup>144</sup> Subsequently, the DNA test revealed that Davis was innocent. The actual perpetrator was someone who resembled Davis.<sup>145</sup>

The benefits of DNA will continue to grow relative to developments in science and technology. The use of DNA evidence holds promise for all prospects in the criminal justice system.<sup>146</sup> It can help to convict the guilty and

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culprit might not be in the lineup, 2) the suspect should not stand out as a distinctive member of the lineup, 3) lineups should be administered by someone who does not know which person is the suspect, 4) witnesses should be asked how certain they are of their choice prior to allowing other information to contaminate their judgment. *Id.*

<sup>139</sup> Lawson, *supra* note 131, at 661.

<sup>140</sup> *Id.*

<sup>141</sup> *Id.*

<sup>142</sup> *Id.*

<sup>143</sup> Lawson, *supra* note 132, at 662.

<sup>144</sup> *Id.*

<sup>145</sup> *Id.*

<sup>146</sup> Sarah V. Hart, Director, National Institute of Justice, *Statement Before the Subcommittee on Crimes and Drugs* (May 14, 2002) (transcript available at National Institute of Justice, DNA Initiative, at <http://www.ojp.usdoj.gov/nij/speeches/dnatest.htm>).

exonerate the innocent.<sup>147</sup> Further, through the use of databases, DNA can help to resolve unsolved crimes. Maximizing the use of DNA evidence promotes fairness, confidence, and justice in the administration of laws.<sup>148</sup>

#### IV. The Pitfalls of DNA Evidence

Although DNA evidence is highly regarded as a key to solving cases, it should not be accepted as an infallible safeguard in protecting individuals. In most criminal cases, DNA evidence is not even left at the scene. According to *The Washington Times*, fewer than ten percent of the homicide cases in the Baltimore State's Attorney's Office involve fingerprint or DNA evidence.<sup>149</sup> This means that verdicts must be based on other evidence, such as confessions, murder weapons, and other forensic evidence.

##### A. Laboratory Errors

Even though some scholars view DNA evidence as infallible, the use of this evidence raises the same concerns as all other types of evidence.<sup>150</sup> When humans perform tests, there is always room for human error. The existence of human error regarding DNA evidence should not be overlooked. Under the DNA Identification Act, federal laboratories must meet certain specified standards for inclusion in the Combined DNA Index System.<sup>151</sup> CODIS allows DNA obtained from crime scenes to be matched against the profiles in the system.<sup>152</sup> Most states, however, do not employ these rigid standards as laboratory personal are

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<sup>147</sup> *Id.*

<sup>148</sup> *Id.*

<sup>149</sup> Associated Press, *Jurors Suffer the CSI Effect*, THE WASHINGTON TIMES, July 26, 2004, at <http://www.washingtontimes.com/metro/20040725-102647-1844r.htm>.

<sup>150</sup> Borenstein, *supra* note 24, at 855.

<sup>151</sup> Puri, *supra* note 63, at 366.

<sup>152</sup> Norton, *supra* note 59.

often in charge of testing procedures, which some people view as risky.<sup>153</sup> For example, a recent investigation examining the Houston Police Department's crime laboratory revealed a significant amount of quality issues including lack of training.<sup>154</sup> In 2003, Josiah Sutton was convicted of rape and sentenced to twenty-five years in prison because DNA tests performed by the Houston Police Department's crime lab showed he was the perpetrator.<sup>155</sup> The supposedly definitive lab report revealed that DNA "consistent with Sutton was detected on the vaginal swab taken from the victim and on semen found on the backseat of the car."<sup>156</sup> Two reporters received a tip from defense attorneys that there were problems in the police department's crime lab. These reporters decided to investigate. They dug up transcripts and lab reports and sent them to experts, including University of California criminology professor, William Thompson. Thompson found that [this case] was "the worst he had ever seen."<sup>157</sup> Thompson knew that Sutton was poorly represented:

I found consistent distortions of the statistical certainty of the DNA evidence. I found instances that looked like fudging of results, to fit the prosecution's theory of the case, and I found that the lab consistently failed to use appropriate scientific procedures.<sup>158</sup>

As a result of these improprieties, Sutton was eventually exonerated. Still, this serves as an important illustration that while DNA is a valuable tool the evidence that it produce is only as reliable as the lab performing the analysis.

Just two years later, an independent lab determined DNA work of the Houston Police crime lab, once again, was

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<sup>153</sup> *Id.*

<sup>154</sup> Borenstein, *supra* note 24, at 856.

<sup>155</sup> See CBSNews.com, Associated Press, *DNA testing: Foolproof?*, at <http://www.cbsnews.com/stories/2003/05/27/60II/main555723.shtml>.

<sup>156</sup> *Id.*

<sup>157</sup> *Id.*

<sup>158</sup> *Id.*

inaccurate.<sup>159</sup> The Houston Police Department crime lab initially concluded that blood found on Robert Lee Wallace matched the victim. In fact, the blood was later determined to be the defendant's own blood.<sup>160</sup>

Shortcomings were also uncovered in a Nevada crime lab in 2001.<sup>161</sup> A clerical error almost landed a wrongly accused man in prison for life.<sup>162</sup> Larazro Sotolusson's name was mistakenly placed on the DNA profile of another man by the police forensics lab.<sup>163</sup> Because of the error, Sotolusson was charged with two rapes, but the charges were later dismissed when the error was detected.<sup>164</sup> After the mix up, police wanted to implement numerous changes to DNA in their labs.<sup>165</sup> Most of the errors found in crime labs resulted from sloppy work, the most common problems involving cross-contamination by microscopic traces of unrelated evidence and scientists accidentally mixing their own DNA with the sample.<sup>166</sup> Such error could happen, for example, when scientists engage in conversations while handling a sample.<sup>167</sup>

In 2004, *The Seattle Post-Intelligencer* reported over twenty-three cases of contamination or error in major criminal investigations in the state of Washington.<sup>168</sup> One such case involved the rape of a child. In that case, a lab

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<sup>159</sup> Associated Press, *Houston Police DNA Test Found Inaccurate*, INFOWARS, at [http://www.infowars.com/articles/ps/houston\\_police\\_dna\\_test\\_found\\_inaccurate\\_hm](http://www.infowars.com/articles/ps/houston_police_dna_test_found_inaccurate_hm).

<sup>160</sup> *Id.*

<sup>161</sup> Glenn Puit, *Changes Proposed in DNA Handling*, LAS VEGAS REVIEW-JOURNAL, May 15, 2002, at [http://www.reviewjournal.com/lvrj\\_home/2002/May-15-Wed-2002/news/18751101.html](http://www.reviewjournal.com/lvrj_home/2002/May-15-Wed-2002/news/18751101.html).

<sup>162</sup> *Id.*

<sup>163</sup> *Id.*

<sup>164</sup> *Id.*

<sup>165</sup> *Id.*

<sup>166</sup> Associated Press, *DNA Testing Mistakes at the State Patrol Crime Labs*, SEATTLE POST-INTELLIGENCER, July 22, 2004, [http://seattlepi.nwsourc.com/local/183018\\_crimelabboxesweb22.html](http://seattlepi.nwsourc.com/local/183018_crimelabboxesweb22.html).

<sup>167</sup> *Id.*

<sup>168</sup> *Id.*

technician contaminated one of four vaginal swabs with semen from a positive control sample.<sup>169</sup> Because of the mistake, the defendant was offered a plea deal.<sup>170</sup> Similarly, a scientist in Indiana resigned after he was accused of not following DNA testing procedures.<sup>171</sup> Some critics worry that untrained lab technicians, low standards for laboratory personnel, and experts deliberately manipulating results in order to mislead a judge or jury, raises the potential for mistakes and false matches.<sup>172</sup> Overall, such errors are capable of being reduced by instituting procedural safeguards in DNA testing procedures.

#### B. The Arguments Against DNA Databases

Even though all fifty states have passed laws authorizing criminal databases, many scholars argue that mandatory DNA testing violates an accused's right to be free from unreasonable search and seizure.<sup>173</sup> Generally speaking, for a search to be reasonable, it must be conducted under the authority of a warrant issued by a neutral magistrate.<sup>174</sup> However, the Supreme Court has adopted numerous exceptions to the warrant requirement. Absent a warrant, searches and seizures have been held as reasonable in situations where obtaining a warrant was impracticable or where there was a "special need" beyond law enforcement's control.<sup>175</sup>

One of the first cases that examined DNA databases under the Fourth Amendment was *Jones v. Murray*.<sup>176</sup> In

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<sup>169</sup> *Id.*

<sup>170</sup> *Id.*

<sup>171</sup> Borenstein, *supra* note 24, at 856 (as cited from Ron Browning, *Mayor Fires Officials at County Crime Lab*, IND. LAW., May 19, 2004, at 4).

<sup>172</sup> Puri, *supra* note 63, at 366.

<sup>173</sup> See S. Axelrad, *Survey of State DNA Database Statutes 2005*, THE AMERICAN SOCIETY OF LAW, Medicine & Ethics, [http://www.aslme.org/dna\\_04/grid/statute\\_grid\\_4\\_5\\_2006.html](http://www.aslme.org/dna_04/grid/statute_grid_4_5_2006.html).

<sup>174</sup> *Id.*

<sup>175</sup> *Id.*

<sup>176</sup> *Jones v. Murray*, 962 F.2d 302 (1992).

*Jones v. Murray*,<sup>177</sup> several inmates challenged Virginia's state statutes<sup>178</sup> that created a DNA database and procedures used to extract DNA samples.<sup>179</sup> The inmates' primary argument was that the statutes, which authorized a search and seizure of their bodily fluid without suspicion that they had committed a crime, constituted an unreasonable search, and therefore, was unconstitutional under the Fourth Amendment.<sup>180</sup> Although the court agreed that the extraction of their bodily fluid was a search under the Fourth Amendment, it ultimately denied the inmates' appeal.<sup>181</sup> The court held that when someone is lawfully confined to prison there is no Fourth Amendment requirement of probable cause or individualized suspicion when officials conduct a search for the purpose of ascertaining identity.<sup>182</sup> Ultimately, the court held that the government's interest in preventing and detecting future crime outweighs a prisoner's minimal expectation of privacy.<sup>183</sup> A majority of courts have agreed that the taking of DNA constitutes a search, but they have continued to uphold the extraction because of the government's interest, and the fact a convicted felon has a diminished expectation of privacy.<sup>184</sup>

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<sup>177</sup> *Id.*

<sup>178</sup> VA. CODE ANN. §19.2-310.2

<sup>179</sup> *Jones*, *supra* note 172, at 305.

<sup>180</sup> *Id.*

<sup>181</sup> *Id.* at 307.

<sup>182</sup> *Id.*

<sup>183</sup> *Id.*

<sup>184</sup> See *State v. Olivas*, 856 P.2d 1076, 1086 (1993) (upholding the Washington DNA database over Fourth Amendment); *Valasquez v. Woods*, 329 F.3d 420, (5<sup>th</sup> Cir. 2003) (holding that the extraction of blood from a prisoner to collect a DNA sample implicates Fourth Amendment rights; however, collection of DNA from prisoners under the DNA Act is reasonable under the Fourth Amendment); See *Skinner v. Ry. Labor Executives Ass'n*, 489 U.S. 602, 616 (1989) ("We have long recognized that a compelled intrusion into the body for blood must be deemed a Fourth Amendment search."); See also Tania Simoncelli, *Dangerous Excursions: The Case Against Expanding Forensic DNA Database to Innocent Persons*, JOURNAL OF LAW, MEDICINE & ETHICS, Summer 2006, at 391.

Tania Simoncelli, a Science and Technology Fellow for the American Civil Liberties Union, disagrees with the constitutionality of laws governing DNA databases.<sup>185</sup> The very existence of DNA databases “turns the presumption of innocence on its head.”<sup>186</sup> She argues that DNA samples pose a number of privacy concerns. For example, DNA samples can provide information about family relationships, disease predisposition, and ancestry.<sup>187</sup> Only the state of Wisconsin requires lab officials to destroy each individual’s sample after a DNA profile is generated.<sup>188</sup> Twenty-nine states<sup>189</sup> require that DNA samples be retained and thirty-three states<sup>190</sup> allow DNA samples to be used for other uses such as medical research, humanitarian purposes, or identification of missing persons.<sup>191</sup> States such as Connecticut and Michigan have responded to privacy concerns by imposing penalties for the misuse of DNA.<sup>192</sup> However, cases have proven these penalties do not necessarily deter misuse.<sup>193</sup>

Simoncelli also argues that expansion of DNA databases will create overburdened crime laboratories, crime framing, unjustifiable costs, and unfairness.<sup>194</sup> She believes that if crime labs conducted DNA testing on every person who is arrested or indicted, it would be unconscionable because of

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<sup>185</sup> Simoncelli, *supra* note 184, at 390.

<sup>186</sup> *Id.*

<sup>187</sup> *Id.* at 392.

<sup>188</sup> *Id.*

<sup>189</sup> These states are: Alabama, Alaska, Arizona, California, Connecticut, Georgia, Iowa, Idaho, Kansas, Louisiana, Maine, Maryland, Massachusetts, Minnesota, Nebraska, New Jersey, New Mexico, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Dakota, Tennessee, Utah, Vermont, Washington, West Virginia.

<sup>190</sup> These states are: Alabama, Alaska, Arkansas, California, Delaware, Hawaii, Idaho, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Missouri, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, South Dakota, Texas, Vermont, Washington, Wyoming.

<sup>191</sup> *Id.*

<sup>192</sup> *Id.*

<sup>193</sup> *Id.*

<sup>194</sup> Simoncelli, *supra* note 184.



the current state of laboratory backlogs.<sup>195</sup> Because state and local government budgets have been shrinking, laboratories have been left with insufficient funding for hiring and training scientists.<sup>196</sup> To support her claim Simoncelli refers to a recent Massachusetts case. In that case, law enforcement officials had a DNA sample from a suspect in Christina Worthington's murder for over a year, but did not profile it because they were using their time and funding on testing local community members.<sup>197</sup>

Lastly, Simoncelli is concerned with "crime framing."<sup>198</sup> With the expansion of databanks, criminals might have a motive to plant DNA evidence to frame someone else for the crime.<sup>199</sup> In 1992, investigators in Canada accused Dr. John Schneeberger of sexual assault of his patients. Thereafter, officials took blood samples from him, but his DNA did not match the DNA taken from the crime scene.<sup>200</sup> Crime officials soon discovered that Schneeberger had surgically inserted into his arm a plastic tube filled with another's patient's blood so that the blood drawn was not his own and the DNA would not match the semen found on the victim.<sup>201</sup> Also, in 1999, Anthony Turner, a convicted rapist, smuggled a sample of his semen out of prison, concealed in a ketchup packet.<sup>202</sup> Subsequently, Turner's relatives paid a woman to use the sperm to stage a fake rape as a way of casting doubt on the DNA evidence that placed him in prison.<sup>203</sup>

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<sup>195</sup> *Id.* at 394.

<sup>196</sup> *Id.*

<sup>197</sup> *Id.*

<sup>198</sup> *Id.* at 393.

<sup>199</sup> *Id.* at 393.

<sup>200</sup> Associated Press, *Saskatchewan's Sexual Assault Doctor Now in South Africa*, CBC News, July 22, 2004, [http://www.cbc.ca/news/story/2004/07/21/schneebegeer\\_deport040721.html](http://www.cbc.ca/news/story/2004/07/21/schneebegeer_deport040721.html).

<sup>201</sup> *Id.*

<sup>202</sup> Peter Slevin, *Forensic Labs Swamped With DNA Testing: New Tool Vital In Identifying Criminals*, SAN FRANCISCO CHRONICLE, November 16, 2000, <http://www.sfgate.com/cgi-bin/article.cgi?file=/chronicle/archive/2000/11/16/MN118048.DTL>.

<sup>203</sup> *Id.*

So far, constitutional challenges of DNA databases have been unsuccessful, but the ethical and constitutional debate is likely to continue. Some scholars argue that the privacy debate over DNA databases “may be just a footnote to larger questions posed by the growing ability to read and interpret people’s genetic codes.”<sup>204</sup> DNA opens the door for many possibilities. In balancing the needs of law enforcement with inmates’ civil rights, the justice system must be sure that supporting DNA technology furthers the interests of justice, rather than blind adherence to “the technology to drive our policies.”<sup>205</sup>

### C. The CSI Effect

The “CSI effect” is a term that legal authorities and the media have construed to describe a supposed influence that watching the television show *CSI: Crime Scene Investigation* has on juror behavior.<sup>206</sup> Some have claimed that jurors who see forensic evidence presented on CSI raise their real-world expectations. This is a dangerous phenomenon because actual evidence may be flawed and uncertain. As a result of the CSI effect, jurors are more often to acquit defendants due to lack of DNA forensic evidence.<sup>207</sup> “According to media reports, the millions of people who watch the series develop unrealistic expectations about the type of evidence typically available during trials, which, in turn, increases the likelihood that they will have a reasonable doubt about a defendant’s guilt.”<sup>208</sup>

To understand the CSI effect, consider a typical plot, involving three hypothetical murder scenes: a college-aged couple found dead after a romantic evening, a middle-aged

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<sup>204</sup> Steven Irsay, *Cold Hits v. Civil Liberties: The Looming Debate Over Privacy and DNA Databases*, Court TV, April 24, 2003, [http://www.courtstv.com/news/forensics/dna\\_anniv/databases.html](http://www.courtstv.com/news/forensics/dna_anniv/databases.html).

<sup>205</sup> Simoncelli, *supra* note 185, at 396.

<sup>206</sup> Tom Tyler, *Viewing CSI and the Threshold of Guilt: Managing Truth and Justice in Reality and Fiction*, 115 YALE L.J. 1050, 1050 (2006).

<sup>207</sup> *Id.*

<sup>208</sup> *Id.* at 1052.

man found dead in a parking lot, and a man found dead in the middle of a crop circle. Within the hour, the CSI investigative team has determined that the couple was poisoned by a fellow student using carbon dioxide gas, the middle-aged man died of natural causes, and the man from the crop circle was scared to death after being tricked into thinking that he was being pushed out of a helicopter one thousand feet up in the air.<sup>209</sup> Every week, viewers see three crimes get processed, analyzed, and solved in under an hour, which is unrealistic.

The CSI effect can also alter juror's perceptions of the judicial system and the evidence that should be presented. For example, in 2004, a gang member from Illinois was acquitted for the rape of a teenager in a local park.<sup>210</sup> Although the prosecutor presented saliva on the victim's breast that matched the defendant's and other detailed testimony from the victim, the jury was unmoved.<sup>211</sup> Several jurors testified after the trial that they thought the police should have tested debris found on the victim to see if it matched soil from the park, which would have been unreasonable.<sup>212</sup> Another reason why the CSI effect is burdening police and prosecutors is that "DNA evidence is rarely culled from crime scenes and analyzed."<sup>213</sup> Blood is rarely found at a crime scene, whereas, other identifying evidence such as fingerprints and tool marks, are more commonly left at the scene.<sup>214</sup>

The latest example of the CSI effect is the Robert Blake case. On March 17, 2006, a jury acquitted Blake of the murder of Bonnie Lee Bakley.<sup>215</sup> After the trial, numerous jurors were quoted saying, "they couldn't put the gun in his

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<sup>209</sup> *Id.* at 1053.

<sup>210</sup> Kit Roane, *The CSI Effect*, U.S. NEWS & WORLD REPORT, April 25, 2005, <http://www.usnews.com/usnews/culture/articles/050425/25csi.htm>.

<sup>211</sup> *Id.*

<sup>212</sup> *Id.*

<sup>213</sup> *Id.*

<sup>214</sup> *Id.*

<sup>215</sup> Andrew Blankstein and Jean Guccione, *CSI Effect Hinted by Blake Jurors: Juries More Demanding of Evidence*, Pittsburgh Post-Gazette, March 20, 2005, <http://www.post-gazette.com/pg/pp/05079/473831.htm>.

hand,”<sup>216</sup> “there was no blood spatter,”<sup>217</sup> “there was not enough evidence,”<sup>218</sup> “I had reasonable doubt,”<sup>219</sup> and “I just expected so much more.”<sup>220</sup> The jurors wanted more; they wanted the “razzle-dazzle” of CSI.<sup>221</sup> As a result of this phenomenon, many juries tend to believe forensic experts and the evidence they provide.<sup>222</sup> As mentioned previously, the integrity of crime labs has come under attack for many reasons. Even if the data is accurate, different experts can make different interpretations of the same DNA sample.<sup>223</sup> More often than not, judges, prosecutors, and defense lawyers are not educated about forensic science to make an honest judgment of what they are told.<sup>224</sup>

Additionally, timing is inaccurately portrayed in television crime dramas. Unfortunately, DNA evidence does not take sixty minutes to test, and jurors are looking for quick results. Without quick results, jurors are often acquitting defendants based on lack of DNA evidence. In 2005, the State Police Crime Lab located in Sudbury, Massachusetts, reported that it was taking lab officials approximately fifteen months to test a DNA sample, which is twice as long as it should take.<sup>225</sup> Most labs in the United States are suffering from a backlog because of chronic understaffing and lack of funding. Lack of funds and staffing has also contributed to a huge backlog in the state of California, but the primary reason for its backlog is the 2004 enactment of Proposition

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<sup>216</sup> Associated Press, *The CSI Effect*, CBS News, March 21, 2005, <http://www.cbsnews.com/stories/2005/03/21/earlyshow/main681949.shtm> !?CMP=OTC-RSSFeed&source=RSS&attr=TheEarlyShow\_681949.

<sup>217</sup> *Id.*

<sup>218</sup> Blankstein, *supra* note 217.

<sup>219</sup> *Id.*

<sup>220</sup> *Id.*

<sup>221</sup> *Id.*

<sup>222</sup> Roane, *supra* note 212.

<sup>223</sup> *Id.*

<sup>224</sup> *Id.*

<sup>225</sup> Ralph Ranalli, *DNA Test Backlog Worsens in Massachusetts: DAs Blame New US Rule*, BOSTON GLOBE, April 23, 2005, [http://www.boston.com/news/local/articles/2005/04/23/dna\\_test\\_backlog\\_worsens\\_in\\_mass/](http://www.boston.com/news/local/articles/2005/04/23/dna_test_backlog_worsens_in_mass/).

69.<sup>226</sup> Proposition 69 requires DNA testing for all convicted felons, certain misdemeanor offenders, and those arrested for rape or murder. Although Proposition 69 is “the gold standard model for the world,” it is causing California to have a backlog of more than 287,000 samples, with 20,000 samples arriving each month.<sup>227</sup>

However, there is no direct research which proves that watching CSI has changed juror standards.<sup>228</sup> However, lack of research does not mean that the CSI effect is non-existent. The basic principle behind the CSI effect—that media depiction of law shape jurors’ judgments in real cases—is not a new one.<sup>229</sup> In 1989, researchers believed that the media distorted jurors’ reactions to real trials. Such shows as *The People’s Court* portrayed quick legal fixes and left real jurors frustrated by the length of actual trials.<sup>230</sup> The research studies, however, did not focus on the investigatory process of a crime; instead, focusing on trial procedures.<sup>231</sup>

Will this phenomenon last? Perhaps. The CSI effect has become an accepted reality. America is in love with forensics, “from the blood spatter and bone fragments of TV’s fictional crime scenes to the latest thrust and parry at the Michael Jackson trial.”<sup>232</sup> The popularity of these shows has led to unrealistic expectations for DNA evidence. DNA evidence only places suspects at the scene; it does not mean the suspect committed the crime.<sup>233</sup> Ultimately, as long as television programs such as CSI produce miracles in sixty minutes, jurors may be influenced by unrealistic perceptions

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<sup>226</sup> Associated Press, *Lack of Funds, Staffing Cause Backlog in California DNA Database*, SAN JOSE MERCURY NEWS, September 14, 2006.

<sup>227</sup> *Id.*

<sup>228</sup> Tyler, *supra* note 207, at 1054.

<sup>229</sup> *Id.* at 1055.

<sup>230</sup> *Id.*

<sup>231</sup> *Id.*

<sup>232</sup> Roane, *supra* note 212.

<sup>233</sup> Jaclyn O’Malley, *High-Tech Investigative Tool Helps*, RENO GAZETTE-JOURNAL, July 24, 2005, <http://www.rgj.com/news/printstory.php?id=104853>.

of DNA evidence and the criminal justice system. As such, it is important that steps be taken to control the impact of this phenomenon so as to ensure that DNA evidence receives the requisite deference that it is due.

#### V. Conclusion

DNA evidence has the power to exonerate innocent defendants, convict guilty defendants, and solve crimes that might otherwise remain unsolved. Because of its success, Brandon Moon, Earl Washington, and hundreds of other convicted defendants have received a second chance at living a free life. This is particularly important, as punishment of the innocent may be the worst of all social injustices. Further, DNA has proven its trustworthiness as a forensic tool for identifying evidence left at a crime scene. As the above survey reveals, however, the use of DNA evidence is not without some problems. Still, human error, laboratory concerns, and juror impact are outweighed by the government's interests and are viewed as minimal problems. Thankfully, many steps can be taken to reduce the impact and prevalence of such problems.

Given its advantages, it would be beneficial to adopt a DNA database that covers all arrestees and maximizes the functional utility of DNA evidence. For instance, in 1995 Britain adopted a database that allows British police to retain DNA evidence of anyone suspected of, charged with, reported for, or convicted of a recordable offense. Since its adoption, the British police have collected over three million samples from offenders.<sup>234</sup> This has proved to be a valuable tool in the fight against crime.

Notably, as it stands, state DNA databases usually contain DNA profiles taken from convicted felons only and in most cases, if the defendant is acquitted or the charges are dropped, the profile is expunged from the database and the sample is destroyed.<sup>235</sup> Recently, however, many states have been

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<sup>234</sup> Norton, *supra* note 59.

<sup>235</sup> Richard Willing, *More States May Hold DNA Profiles on Arrestees*, USA TODAY, May 1, 2006.

following a trend driven by families of victims of unsolved crimes to expand these databases.<sup>236</sup> One reason for the expansion of DNA databases is due in part to the Bush administration's DNA Initiative, which aims to provide one billion dollars over five years to help states expand their databases.<sup>237</sup> In 2006, New Mexico and Kansas enacted laws that require DNA testing for all people arrested for alleged felonies, even if there is no conviction.<sup>238</sup> Five states, California, Louisiana, Minnesota, Texas, and Virginia, already allow testing of all arrestees.<sup>239</sup>

Database expansion is not favored by public interest groups, such as the ACLU, but has been praised by Former United States Attorney General Janet Reno. A federal study conducted by a committee of the National Commission on the Future of DNA Evidence Commission in July 1999 concluded that DNA testing of arrestees is constitutional.<sup>240</sup> This is not surprising given that most DNA samples can be obtained with a simple mouth swab, which is less intrusive than performing a blood test or obtaining fingerprints. Ultimately, the government's interest in collecting the individual's sample, analyzing it, and storing it, outweighs the intrusion upon the individual. This is true as the sample can be used to solve cold cases, future crimes, and can free wrongly incarcerated individuals.<sup>241</sup>

Currently, state statutes vary on whether the DNA profile should be destroyed if the defendant is not found guilty.<sup>242</sup> States should be allowed to retain the sample in their database even if the defendant is found not guilty.

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<sup>236</sup> *Id.*

<sup>237</sup> Norton, *supra* note 59.

<sup>238</sup> Willing, *supra* note 236.

<sup>239</sup> *Id.*

<sup>240</sup> Michael Smith, *Legal Issues Working Group Report: Constitutional Analysis of Arrestee DNA Sampling, Remarks to the National Commission on the Future of DNA Evidence*, at <http://www.ojp.usdoj.gov/nij/topics/forensics/events/dnamt/trans6/trans-j.html>.

<sup>241</sup> Lawson, *supra* note 131, at 658.

<sup>242</sup> Stevens, *supra* note 37, at 953.

Safeguards should be implemented regarding who has access to the DNA databases and samples. If these safeguards are implemented, the potential for abuse is reduced greatly. Many privacy advocates argue that such a plan puts too much personal information in the governments' hands, but DNA experts have dismissed these concerns as a "misunderstanding of the DNA process."<sup>243</sup> Scientists often refer to the small sample taken for profiling as "junk DNA" because the sample taken does not contain valuable health or hereditary information.<sup>244</sup>

Ultimately, modern advances in science and technology have spawned a revolution in terms of DNA. In turn, this revolution has produced an invaluable tool in DNA evidence. DNA databases provide a crucial means with which to capitalize on this tool. At bottom, cold cases would be solved, innocent men and women would be free from jail, and police would be able to make more arrests if states were to augment their databases and maximize the utility of DNA evidence. In light of the cost benefit analysis, opponents of databases need to remember that DNA databases pose only a slight risk to privacy—a risk that is dwarfed by the functional utility of DNA evidence.

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<sup>243</sup> Irsay, *supra* note 205.

<sup>244</sup> *Id.*