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Punishing the Factually Innocent: DNA, Habeas Corpus and Justice

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INTRODUCTION

The introduction of DNA evidence and its acceptance as a forensic tool to identify the guilty and to exonerate the factually innocent has revealed that the innocent as well as the guilty are convicted and punished. Many judges, prosecutors, and police accept the premise that justice is not perfect and the conviction of factually innocent persons is inevitable as a necessary cost to ensure the safety of society. It is a combination of this attitude (let the innocent suffer) and the availability of biotechnology (that can conclusively prove innocence) which compels us to re-examine fundamental questions about our criminal justice system.

Is it lawful to execute a factually innocent person when that person has been convicted following a trial and appeals, and where there has been due process of law? Assuming that it is lawful to punish a factually innocent person, is it morally acceptable to do so? If a conviction of a factually innocent person is lawful, does that make it moral? Assuming that it is not morally acceptable to execute or imprison factually innocent people, to what extent should the criminal justice system accommodate steps to free and compensate the innocent prisoner? If the punishment of the factually innocent is tolerated as another example of how bad things can happen to good people, is

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this conclusive proof that the criminal justice system is absolutely divorced from morality? If the criminal justice system is divorced from morality on something as basic as punishing the guilty and exonerating the innocent, has it lost its moral authority and legitimacy?

This essay explains DNA evidence and how it is used to exonerate an innocent person. DNA is a valuable tool used by forensic scientists that can absolutely prove the innocence of a factually innocent prisoner and convict the truly guilty.² The rapid technological advances in DNA testing have now reached the point where suspects may be eliminated with confidence. Forensic DNA technology that conclusively eliminates a suspect is so reliable and credible that it persuasively meets the very high threshold of proof required by a court to free a factually innocent person.³

This essay asserts that it is unconstitutional to imprison or execute a factually innocent person. Injustice results when law is divorced from morality. Where there is a wrong, there must be a corresponding remedy. Until there is a comprehensive legal scheme specifically tailored to fix a flawed criminal justice system, *habeas corpus* in federal court should be available without limitation to any petitioner who asserts a claim of factual innocence. Fairness demands that a factually innocent person be allowed to bring a post-conviction habeas corpus application in federal court to advance a bare innocence claim on constitutional grounds where DNA evidence excludes that individual from being the perpetrator of the crime. Lack of a remedy, uniform procedure, state legislation, or limitation periods cannot stand in the way of justice and the right to life and liberty of an innocent person. Judges must never permit the continued imprisonment or execution of a factually innocent person. Otherwise, the administration of justice will be brought into disrepute.

At present, a *Brady*⁴ motion must ordinarily be filed to acquire access to sources of biological material for DNA testing. In some jurisdictions, prosecutors may be afraid to admit their mistakes and

² In Canada, David Milgaard was exonerated by the use of DNA and freed after 23 years in prison for a rape and murder he did not commit. He was awarded ten million dollars for his suffering. The same DNA evidence that exonerated Millgaard identified and convicted a career criminal, Larry Fisher, who escaped justice for 30 years and let an innocent man suffer so he could escape. ANNE BAYLIN, A CANADIAN TRAGEDY, at http://www.truthinjustice.org/canadian_tragedy.html (last visited Feb. 28, 2002).

³ *Herrera v. Collins*, 506 U.S. 390 (1993).

⁴ *Brady v. Maryland*, 373 U.S. 83 (1963).

withhold biological material from DNA testing. Prosecutors may refuse to turn over biological evidence for DNA testing, forcing defense lawyers to apply to the state and federal courts for relief. In Virginia, a federal appeals court in 2002 denied James Harvey access to biological material that was necessary for advanced DNA testing that may have proven his innocence.⁵ Denial of biological evidence violates the confrontation and compulsory process clauses of the Sixth Amendment, the opportunity to have access to the courts to obtain legal relief in violation of the First and Fourteenth amendments, and precludes any opportunity to apply for executive clemency on the basis of factual innocence.⁶ The Department of Justice encourages the resolution of DNA testing requests without the need for litigation.⁷ In the absence of a nationally available legal procedure to advance a claim of factual innocence supported by DNA evidence,⁸ justice must be done on a case-by-case basis.

In other cases, even after DNA testing has proven the innocence of a prisoner, prosecutors refuse to accept the results and rely upon other evidence that supports guilt, or they create a new theory of how the crime occurred (never before put to the judge and jury) to justify the continued punishment of an innocent person. In Pennsylvania, Bruce Godschalk's attorneys persuaded a federal district judge to rule that he had a constitutional right to post-conviction DNA testing.⁹ When the results of the DNA tests exonerated Godschalk, the District Attorney initially claimed the test results were somehow flawed (he could not say how) and refused to release Godschalk.¹⁰

⁵ *Harvey v. Horan*, 278 F.3d 370 (4th Cir. 2002).

⁶ Unfiled draft complaint, *Godschalk v. Killinger*. Author discussed with Professor David Rudovsky, Faculty of Law, University of Pennsylvania (Oct. 2000).

⁷ OFFICE OF JUSTICE PROGRAMS, U.S. DEP'T OF JUSTICE, NCJ 177626, POSTCONVICTION DNA TESTING: RECOMMENDATIONS FOR HANDLING REQUESTS, (Sept. 1999), available at <http://www.ncjrs.org/pdffiles1/nij/177626.pdf>.

⁸ There have been efforts in Congress to rectify the situation. Innocence Protection Act, H.R. 4167, 106th Cong., § 2 (2000). A competing, more conservative bill, has also been stalled in hearings. Criminal Justice Integrity and Law Enforcement Act, S. 3130, 106th Cong., § 2 (2000). The states of Illinois and New York have enacted legislation providing for post-conviction DNA testing. See 725 ILL. COMP. STAT. 5/116 (1998); N.Y. CRIM. PROC. LAW. § 440.30 (McKinney 1994). See also Gregory W. O'Reilly, *A Second Chance for Justice: Illinois' Post Trial Forensic Testing Law*, 81 JUDICATURE 114 (1997).

⁹ *Godschalk v. Montgomery County Dist. Attorney's Office*, 177 F. Supp. 2d 366 (E.D. Pa. 2001).

¹⁰ Sara Rimer, *Convict's DNA Sways Labs, Not a Determined Prosecutor*, N.Y. TIMES, Feb. 6, 2002, at A14. On February 14, 2002 the District Attorney, Bruce Castor, Jr., softened his position after more DNA testing and suggested to Judge S. Gerald Corso of the Common Pleas

Time is running out for the generation of prisoners still alive who were convicted prior to the availability of more sophisticated, precise, and reliable DNA tests.¹¹ With each passing day, there is a chance that potentially exculpatory biological evidence may deteriorate, become lost, or be willfully destroyed.¹² In the meantime, innocent persons languish in jail. In the United States, the finality of the death penalty brings urgency, as some who have now been exonerated by DNA evidence were once on death row.¹³ It is one thing to punish in error an innocent person; it is another to knowingly permit the legal execution or imprisonment of a person who is factually innocent.¹⁴

Exculpatory DNA evidence is responsible for much more than the post-conviction freeing of at least 73 innocent persons in North America – 67 in the United States and 6 in Canada.¹⁵ In 16 of these cases, DNA evidence has led to the identification of the real perpetrator.¹⁶ Moreover, the discovery of such evidence has exposed the fallibility of the criminal justice system and highlighted systemic problems in the investigation and prosecution of crimes. The presumption of innocence and the evidentiary standard of “proof beyond a reasonable doubt” do not tilt the balance in favor of acquitting the guilty so that innocent persons will not be convicted. Instead, the balance is in favor of conviction. Why?

Court that Godschalk be released. “I am not convinced that Bruce Godschalk is innocent. But I do not think there is sufficient evidence to convict him beyond a reasonable doubt, and in this business a tie goes to the defendant.” Castor has no plans to reopen the rape investigation. Sara Rimer, *DNA Testing in Rape Case Frees Prisoner After 15 Years*, N.Y. TIMES, Feb. 15, 2002, at A12.

¹¹ Prior to the late 1990's.

¹² In 1977, Texas inmate Kevin Bird was exonerated by DNA evidence after 12 years in prison. Afterwards, the state of Texas secured orders for the destruction of 50 rape kits in 50 rape cases, thereby eliminating any chance of proving innocence by DNA testing for those 50 persons still serving their sentences. *Innocence Protection Act of 2000: Hearing on S. 486 Before the Subcomm. on Post-Conviction DNA Testing, Senate Comm. on the Judiciary*, 106th Cong. (2000) (statement of Charlie Baird, former Judge of the Texas Court of Criminal Appeals).

¹³ For example, Kirk Bloodsworth of Baltimore, Maryland. U.S. DEPT OF JUSTICE, *Convicted by Juries, Exonerated by Science: Case Studies in the Use of DNA Evidence to Establish Innocence After Trial*, NCJ 161258, (1996), available at <http://www.ncjrs.org/pdffiles/dnaevid.pdf>.

¹⁴ “Of one thing, however, I am certain. Just as an execution without adequate safeguards is unacceptable, so too is an execution when the condemned prisoner can prove that he is innocent. The execution of a person who can show that he is innocent comes perilously close to simple murder.” *Herrera*, 506 U.S. at 446 (Blackmun, J., dissenting).

¹⁵ *Innocence Protection Act of 2000: Hearing on S. 486 Before the Subcomm. on Post-Conviction DNA Testing, Senate Comm. on the Judiciary*, 106th Cong. (2000) (statement of Professor Barry Scheck). Eight of these exonerated individuals had been sentenced to death.

¹⁶ *Id.*

Many serious problems occur during the investigation and prosecution of crimes. Examples include: coerced false confessions, unreliable eyewitness testimony, perjured testimony by prosecution witnesses including forensic experts, non-disclosure or suppression of evidence favorable to the defense, unfair use of a defendant's criminal record, "tunnel vision" by investigators and prosecutors who build a case around a theory (ignoring evidence that points to a different theory or suspect), incompetent defense attorneys, inadequate defense resources and funding, and public indifference.¹⁷ However, an examination of the systemic problems in the criminal justice system is beyond the scope of this essay. For our purposes, it is sufficient to identify some of them and to acknowledge that DNA evidence is only one piece of the puzzle to solve in the quest to punish only the guilty and to save the innocent from harm.

Prior to the advent of DNA evidence, factually innocent persons who were convicted and sentenced to death were typically executed.¹⁸ In Illinois, Governor George Ryan in January 2000 declared a moratorium on the use of the death penalty, because a flawed criminal justice system permits the execution of factually innocent persons.¹⁹ Governor Ryan's conscience and moral compass should be an example for others to follow. If more proof of the problem is needed, Professor James Liebman of Columbia University has provided it. In a study covering 1973-1995, he concluded the national American overall error-rate in the capital punishment system to be 68%.²⁰ If justice is

¹⁷ Many of these themes recur in various cases. CONVICTED BY JURIES, EXONERATED BY SCIENCE: CASE STUDIES IN THE USE OF DNA EVIDENCE TO ESTABLISH INNOCENCE AFTER TRIAL, *supra* note 13. See also Daniel Givelbar, *Meaningless Acquittals, Meaningful Convictions: Do We Reliably Acquit the Innocent?*, 49 RUTGERS L. REV. 1317, 1350-71 (1997).

¹⁸ *Innocence Protection Act of 2000: Hearing on H.R. 4167 Before the Subcomm. on Crime, House Comm. on the Judiciary*, 106th Cong. (2000) (statement of Gerald Kogan, former Florida Supreme Court Justice). See also Hugo Bedeau & Michael Radelet, *Miscarriages of Justice in Potentially Capital Cases*, 40 STAN. L. REV. 21 (1987); Stephen J. Markman & Paul G. Cassell, *Protecting the Innocent: A Response to the Bedau-Radelet Study*, 41 STAN. L. REV. 121 (1988); Hugo Adam Bedeau & Michael L. Radelet, *The Myth of Infallibility: A Reply to Markman & Cassell*, 41 STAN. L. REV. 161 (1988); Edwin M. Borchard, *Convicting the Innocent* (1932); Jerome Frank & Barbara Frank, *Not Guilty* (1957) (discussing false convictions of innocent people); Martin Yant, *Presumed Guilty: When Innocent People are Wrongfully Convicted* (Prometheus 1991).

¹⁹ "There is no margin for error when it comes to putting a person to death." *Innocence Protection Act of 2000: Hearing on H.R. 4167 Before the Subcomm. on Crime, House Comm. on the Judiciary*, 106th Cong. (2000) (statement of George Ryan, Illinois Governor).

²⁰ James S. Liebman et al., *Capital Attrition: Error Rates in Capital Cases, 1973-1995*, 78 TEX. L. REV. 1839 (2000).

served only 32% of the time, the use of DNA technology is needed not only to exonerate the truly innocent, but also to catch and punish the truly guilty.

I. THE SCIENCE OF MOLECULAR BIOLOGY – DNA

It is important to understand exactly what DNA is and its forensic application. Failure to appreciate the science and the technology will lead to misunderstandings and the rejection of exculpatory DNA evidence that proves innocence.

Human beings are living organisms composed of cells. A normal human cell has 23 pairs of chromosomes – one pair of sex chromosomes and 22 pairs of non-sex chromosomes, known as autosomes – for a total of 46. Each cell nucleus contains deoxyribonucleic acid, commonly known as DNA.²¹

DNA is the genetic material that determines our general human chemistry and our unique features that make us different from anyone else. Only identical twins share the same DNA.²² One way to think of DNA is as the “blueprint of life.”²³ The DNA that makes us human is identical in all members of the human race.²⁴ What make us different in our traits are locations in the DNA, which are highly variable.²⁵

By understanding how regions of DNA from a known individual may be analyzed and compared to DNA evidence of unknown origin linked to a crime, it is possible to eliminate a suspect when there is an inconsistency in the DNA profiles.²⁶ The forensic significance of DNA is that a person’s identity may or may not be linked to evidence from a crime.

²¹ THOMAS CURRAN, PARLIAMENTARY RESEARCH BRANCH, BP-443E, FORENSIC DNA ANALYSIS: TECHNOLOGY AND APPLICATION 4, available at <http://www.parl.gc.ca/information/library/PRBpubs/bp443-e.htm>.

²² *Id.* at 6.

²³ POSTCONVICTION DNA TESTING: RECOMMENDATIONS FOR HANDLING REQUESTS, *supra* note 7, at 21.

²⁴ *Id.*

²⁵ Richard A. Nakashima, *DNA Evidence in Criminal Trials: A Defense Attorney’s Primer*, 74 NEB. L. REV. 444, 446-47 (1995).

²⁶ Cynthia Bryant, *When One Man’s DNA is Another Man’s Exonerating Evidence: Compelling Consensual Sexual Partners of Rape Victims to Provide DNA Samples to Postconviction Petitioners*, 33 COLUM. J.L. & SOC. PROBS. 113, 118-20 (2000).

DNA is contained in all cells of our body that have a nucleus and is the same throughout²⁷ our white blood cells,²⁸ hair, skin, saliva, and sperm. We leave behind traces of our identity wherever we go, whatever we do, when we bleed, shed our hair, touch, blow our nose, sneeze, or engage in sexual activity. Similarly, when someone else is in contact with us, trace evidence of DNA may be deposited on us, or on things associated with us. In this manner, people can be linked together, or eliminated from being together.

What makes DNA especially useful in solving old crimes is that DNA is stable and does not change over time.²⁹ However, DNA is subject to degradation over time and under a variety of conditions: prolonged exposure to sunlight, elevated temperature, or digestion by microorganisms.³⁰

A DNA molecule looks like a ladder twisted into a spiral staircase.³¹ Scientists call this design a double helix structure.³² The sides of the ladder are built from a combination of alternating molecules of sugar and phosphate.³³ Think of millions of rungs of a ladder formed from pairs of chemicals anchored at each end called bases (or nucleotides) joined by a rung composed of hydrogen.³⁴ These “rungs,” or nucleotide bases, connect either adenine paired with thymine (AT or TA) or guanine paired with cytosine (GC or CG).³⁵ These four nucleotide bases may be thought of as the “genetic alphabet.”³⁶ These four

²⁷ POST-CONVICTION DNA TESTING: RECOMMENDATIONS FOR HANDLING REQUESTS, *supra* note 7, at 21; see also John Devlin, Comment, *Genetics and Justice: An Indigent's Right to DNA Expert Assistance*, 1998 U. CHI. LEGAL F. 395, 399-01.

²⁸ Mature human red blood cells do not have nuclei and for that reason do not contain DNA. CURRAN, *supra* note 21, at 9.

²⁹ POSTCONVICTION DNA TESTING: RECOMMENDATIONS FOR HANDLING REQUESTS, *supra* note 7, at 21.

³⁰ Nakashima, *supra* note 25, at 469.

³¹ *Id.* at 446.

³² Nobel prize-winning scientists J. D. Watson and F.H.C. Crick in 1953 published a paper announcing their discovery the DNA molecule was in the form of a double-stranded helical structure. J.D. Watson & F.H.C. Crick, *Molecular Structure of Nucleic Acids*, 171 NATURE 737 (1953); see also Randi B. Weiss et al., *The Use of Genetic Testing in the Courtroom*, 34 WAKE FOREST L. REV. 889, 892-93 (1999).

³³ Laurel Beeler & William R. Weibe, *DNA Identification Tests and the Courts*, 63 WASH. L. REV. 903, 910 (1988).

³⁴ *Id.*

³⁵ CURRAN, *supra* note 21, at 4.

³⁶ *Id.* at 5.

“building blocks,”³⁷ A, T, G and C operate as a Morse code to communicate information. Instead of dashes and dots, imagine a single string of DNA split lengthwise. This string of millions of bases joined in a row could form an imagined sequence like this: CCAACGT-TAAT. The opposite side will always correspond in a matching sequence: GGTTGCAATTA.³⁸

Adenine and guanine are purines; thymine and cytosine are pyrimidines.³⁹ A specific purine (A or G) will always align itself opposite a specific pyrimidine (T or C), on the complementary strand (side of the twisted ladder).⁴⁰ When bound by hydrogen in this way, the purine and the pyrimidine form a base pair.⁴¹ Scientists estimate there are about 3 billion base pairs in the human genome, which is the total genetic makeup of a human being.⁴²

The growth of a human organism occurs with cell division. Before cells divide, they replicate their DNA. Replication occurs when the two DNA strands split along the molecule's length and each strand is used as a template for one of the new and identical “daughter” molecules.⁴³ An enzyme called DNA polymerase travels along the DNA and generates the new strand.⁴⁴ Each new cell receives a complete copy of the genome.⁴⁵

The units of inheritance are called genes.⁴⁶ Human beings are believed to have between 50,000 – 100,000 genes.⁴⁷ These genes are in the chromosomal DNA in the cell nucleus.⁴⁸ These genes are in discrete regions of DNA.⁴⁹ Genes contain the information required to produce proteins.⁵⁰ Proteins describe a family of biological com-

³⁷ Donald E. Riley, *DNA Testing: An Introduction for Non-Scientists: An Illustrated Explanation*, SCI. TESTIMONY, ¶ 5 (1998), at <http://www.scientific.org/tutorials/articles/riley/riley.html>.

³⁸ Ryan McDonald, *Juries and Crime Labs: Correcting the Weak Links in the DNA Chain*, 24 AM. J.L. & MED. 345, 348 (1998).

³⁹ Weiss, *supra* note 32, at 892 (citing ARTHUR KORNBERG & TANIA BAKER, DNA REPLICATION 4-5 (2d. ed. 1992)).

⁴⁰ *Id.*

⁴¹ *Id.* (citing LORNE T. KIRBY, DNA FINGERPRINTING: AN INTRODUCTION 3-4 (1990)).

⁴² CURRAN, *supra* note 21, at 4.

⁴³ *Id.* at 5.

⁴⁴ Weiss, *supra* note 32, at 892-93.

⁴⁵ *Id.*

⁴⁶ *Id.* at 891.

⁴⁷ CURRAN, *supra* note 21, at 4.

⁴⁸ *Id.*

⁴⁹ Weiss, *supra* note 32, at 890.

⁵⁰ *Id.* at 893.

pounds that include enzymes, hormones, and immunoglobulins.⁵¹ Proteins themselves consist of repeating units of about twenty different kinds of amino acids.⁵² It is the nucleotide sequence in the DNA that assigns the order in which the amino acids appear in the proteins.⁵³ Each series of three nucleotides is called a codon.⁵⁴ A human gene may range in size from 1,500 – 2,000,000 nucleotides in length.⁵⁵

To date, scientists believe only a small fraction of the DNA molecule is essential to a gene.⁵⁶ About 95 % of our DNA has no known genetic function.⁵⁷ Yet it is this “junk DNA”⁵⁸ that is of use to the forensic scientist, since a forensic DNA profile does not mirror the genetic make-up of an individual.⁵⁹ The DNA “fingerprint”⁶⁰ is derived from information obtained from several pre-selected locations (individually called a locus, or in plural form, loci) from an individual’s DNA.⁶¹ In forensic DNA typing, up to 13 loci⁶² are compared between a suspect’s DNA profile and the crime scene DNA profile to see if they match. If even one of these comparisons did not match, then the suspect is absolutely excluded as the source of the unknown crime scene sample.⁶³

Forensic scientists do not use monomorphic loci, which are virtually identical in DNA sequence from human to human in expressing

⁵¹ *Id.*

⁵² *Id.*

⁵³ *Id.*

⁵⁴ *Id.*

⁵⁵ *Id.*

⁵⁶ CURRAN, *supra* note 21, at 5-6.

⁵⁷ *Id.* at 6.

⁵⁸ *Id.* Also called “flotsam and jetsam.” *Id.*

⁵⁹ *Id.*

⁶⁰ Also called “DNA profile” or “DNA typing.” These terms are interchangeably used. This article uses the term “DNA profile.”

⁶¹ Nakashima, *supra* note 25, at 446.

⁶² *Id.* A false positive may occur if not enough loci are profiled.

⁶³ “Unlike the use of DNA profiles to ‘include’ a suspect as a possible source of crime scene evidence, the use of DNA techniques to ‘exclude’ a suspect as the source of DNA evidence has not engendered controversy. Exclusion is uncontroversial because the determination is absolutely certain and does not require any information about the frequency of DNA types in the population.” Bryant, *supra* note 26, at 119-20. “While a positive forensic DNA match is persuasive evidence of a suspect’s association with a crime it is not absolute proof. There is always a chance, however slight, that the match might be a random one: it is impossible to prove a negative, and statistical probability cannot be ignored. Additional evidence and information is usually required to obtain a conviction. However, a negative forensic DNA match, referred to as an exclusion, is absolute.” CURRAN, *supra* note 21, at 26.

general common traits.⁶⁴ Rather, polymorphic loci, which have a very high degree of variability, have been chosen for forensic analysis.⁶⁵

I. THE TECHNOLOGY

Scientists have developed several ways to discover different types of genetic polymorphisms: Variable Number Tandem Repeats (VNTR); Restriction Fragment Length Polymorphisms (RFLP); Short Tandem Repeats (STR); and Polymerase Chain Reaction (PCR). By far the preferred technology, replacing all the others as the present world standard, is the PCR/STR technology.⁶⁶ As it has some basic similarities to the older RFLP technology, both will be discussed.

A. *Variable Number Tandem Repeats (Minisatellites)*

Base pairs sequences of DNA that have no known function (the junk DNA) are referred to as non-coding.⁶⁷ Non-coding DNA contains repeated base pairs arranged in tandem.⁶⁸ Due to the fact that the number of these repeated sequences varies among individuals, the total pattern is unique for each person (except for identical twins).⁶⁹ This molecular "fingerprint" is named "variable number tandem repeats."⁷⁰

When this DNA is extracted for DNA analysis, the DNA is cut into fragments by restriction enzymes (RE's).⁷¹ Co-operation between forensic laboratories has resulted in the selection of Hae III, a specific RE, for exclusive use to achieve uniform results and to facil-

⁶⁴ Nakashima, *supra* note 25, at 446-47.

⁶⁵ *Id.* Polymorphisms in repetitive DNA was discovered by Alec J. Jeffreys in 1985, whose findings were published in these articles: *Hypervariable 'minisatellite' Regions in Human Nature*, 314 NATURE 67 (1985); *Individual Specific 'Fingerprints' of Human DNA*, 316 NATURE 76 (1985). In 1987, the exculpatory use of forensic DNA (and the first use of DNA in a criminal investigation) began at the request of the English police investigating two rape-murders, who wanted to verify a suspect's confession, and found it to be false. Another person, Colin Pitchfork, was eventually found guilty of these crimes.

⁶⁶ DONNA BECHERER, THE USE OF STRs IN FORENSIC SCIENCE, (2000) at <http://artsci.wustl.edu/~jstader/becherer.html>; C. THOMAS CASKEY, KEYNOTE ADDRESS: NATIONAL CONFERENCE ON SCIENCE AND THE LAW: 1999 PROCEEDINGS, (U.S. Dept. of Justice, NCJ 179630, 2000).

⁶⁷ CURRAN, *supra* note 21, at 6.

⁶⁸ *Id.*

⁶⁹ *Id.*

⁷⁰ *Id.*

⁷¹ *Id.*

itate networking.⁷² From past experience, scientists know at which point a RE will cut the DNA.⁷³ This point, called a recognition sequence, occurs after a specific sequence of four, five, or six nucleotides.⁷⁴ The resulting fragments differ in length from individual to individual because the region between cutting locations may have a varying number of tandem repeats of nucleotide sequences.⁷⁵ In addition, the cutting sites along an individual's DNA may occur at different places along the DNA molecule⁷⁶ thus, the term variable number tandem repeats.

1. *Restriction Fragment Length Polymorphisms*

The first technology that was used in forensic DNA typing was RFLP,⁷⁷ which refers to the DNA fragments that result from the cutting action of the RE. RFLP's occur in different forms and in both the coding (genetic) and non-coding regions of DNA.⁷⁸

A typical RFLP analysis follows a uniform procedure, beginning with extraction of DNA from a biological sample.⁷⁹ The extracted DNA is then cut into fragments by "chemical scissors,"⁸⁰ using the enzyme Hae III.⁸¹ Next, the digested DNA fragments are sorted to size by a process known as agarose gel electrophoresis.⁸² The DNA passes through a jelly-like porous chemical substance and is then subject to a weak electric current which creates the migration of the DNA fragments that vary in speed by size and weight.⁸³ The fragments become arranged, separated by size.⁸⁴ The hydrogen bonds acting as the rungs of the ladder holding the DNA ladder together are dissolved when the gel is soaked in an alkali solution.⁸⁵ What are left behind are

⁷² *Id.* at 11.

⁷³ *Id.* at 6.

⁷⁴ *Id.*

⁷⁵ *Id.*

⁷⁶ *Id.*

⁷⁷ POSTCONVICTION DNA TESTING: RECOMMENDATIONS FOR HANDLING REQUESTS, *supra* note 7, at 26.

⁷⁸ CURRAN, *supra* note 21, at 7.

⁷⁹ McDonald, *supra* note 38, at 350.

⁸⁰ *Id.*

⁸¹ Other preferred enzymes include *HaeIII*, *HinfI* and *PstI*. POSTCONVICTION DNA TESTING: RECOMMENDATIONS FOR HANDLING REQUESTS, *supra* note 7, at 27.

⁸² CURRAN, *supra* note 21, at 11.

⁸³ McDonald, *supra* note 38, at 350.

⁸⁴ CURRAN, *supra* note 21, at 11.

⁸⁵ *Id.* The name for this process is "denaturing."

single stranded DNA fragments that are transferred from the unstable gel to the surface of a thin nylon membrane.⁸⁶ After this "Southern transfer,"⁸⁷ nucleic acid hybridization is induced, by utilizing radioactive isotopes, usually of phosphorus.⁸⁸ Called DNA probes, radioactively marked DNA strands containing known sequences pair and bind with their complementary single stranded DNA on the membrane.⁸⁹ Excess probes are then washed away leaving behind successfully hybrid DNA fragments⁹⁰ and the membrane is dried.⁹¹ The radioactivity permits the newly hybrid strands to be x-rayed onto film⁹² and the resulting autoradiograph,⁹³ is composed of readable alleles⁹⁴ that resemble the bands on a universal product code (UPC).⁹⁵ This entire process takes weeks to complete, resulting in a huge backlog of requests for analysis from police officers in the field.

A comparison of films of the analyzed crime scene specimen and the analyzed specimen of the individual claiming factual innocence will immediately reveal whether or not there are any differences in the patterns. If there is any difference, it is usually because of genetic variation between individuals.⁹⁶ In that case, the result must be the exoneration of the innocent individual.⁹⁷ Where there is a "match" at all points of comparison, the innocence claim of the prisoner falls on deaf ears.⁹⁸

The RFLP system is not perfect. An exclusionary result can be obtained that is a false negative. For example, assume that both the

⁸⁶ *Id.*

⁸⁷ *Id.* Scientist Edwin Southern developed this technique. Sometimes it is called "Southern blotting." *Id.*

⁸⁸ *Id.*

⁸⁹ Nakashima, *supra* note 25, at 448-49.

⁹⁰ *Id.*

⁹¹ *Id.*

⁹² *Id.*

⁹³ "The presence of one or more bands on the film, called an autoradiograph, indicates the probe has found and hybridized with a segment of the sample DNA." Beeler & Wiebe, *supra* note 33, at 914.

⁹⁴ One of any multiple variations of a gene or genetic marker.

⁹⁵ McDonald, *supra* note 38, at 350.

⁹⁶ As long as there is no false negative caused by contamination or human error.

⁹⁷ CURRAN, *supra* note 21, at 11.

⁹⁸ It is beyond the scope of this essay to deal with the issue of a "match," as that ends the innocence inquiry. For an example of a study in the calculations involved in what is a "match," see Jonathan J. Koehler, *Proving the Case: The Science of DNA: On Conveying the Probative Value of DNA Evidence: Frequencies, Likelihood Ratios, and Error Rates*, 67 U. COL. L. REV. 859 (1996).

known and the unknown samples of DNA are identical, but the migration of the DNA fragments differs so they are not aligned within the "match window."⁹⁹ This could have been caused by differences in the amount of DNA loaded, especially if ethidium bromide was used in the gel.¹⁰⁰ Inaccuracy by the technician in measuring DNA could have also adversely affected results.¹⁰¹ When the alleles in one lane are slightly shifted due to any one of these conditions, the result is called "band shifting."¹⁰²

To find out if band shifting has in fact occurred, sometimes a monomorphic probe is used on the same membrane and run as a control on monomorphic DNA fragments.¹⁰³ Other times, the RFLP analysis is done all over again. Sometimes this cannot be done because the crime scene sample was consumed in the first analysis. When band shifting is suspected, the usual practical solution is to declare an inconclusive or not matching result.¹⁰⁴

2. *Judicial Acceptance*

In 1989, when the use of forensic DNA was still in its infancy, the New York Supreme Court in *People v. Castro*¹⁰⁵ approved the exclusionary use of DNA using RFLP. The history of controversy that has plagued the ability of the prosecution to prove a "match" has been absent from the exclusionary use of DNA. In its 1992 report, the National Research Council endorsed the exclusionary use of DNA to exonerate the innocent on the basis of the reliability of DNA evidence.¹⁰⁶

The technology of DNA analysis advanced so quickly that the controversy over the reliability of the methods used for DNA analysis,

⁹⁹ "The FBI uses a match criterion of plus or minus two and a half percent. This means that, if the estimated sizes of the alleles in the suspect's DNA are within two and a half percent of the estimated sizes of the corresponding alleles in the crime scene DNA, they are considered to match." Nakashima, *supra* note 25, at 450.

¹⁰⁰ *Id.* at 466.

¹⁰¹ *Id.*

¹⁰² *Id.*

¹⁰³ *Id.* at 467.

¹⁰⁴ *Id.* The practice of band shifting has been subject to severe criticism and has been discredited. See Lori Urs, *Commonwealth v. Joseph O'Dell: Truth and Justice or Confuse the Courts? The DNA Controversy*, 25 NEW ENG. J. ON CRIM. & CIV. CONFINEMENT 311, 324-25 (1999).

¹⁰⁵ 545 N.Y.S.2d 985 (N.Y. Sup. Ct. 1989).

¹⁰⁶ NATIONAL ACADEMY OF SCIENCES, NATIONAL RESEARCH COUNCIL, DNA TECHNOLOGY IN FORENSIC SCIENCE (1992).

defining a match, estimating frequencies and population statistics, had largely diminished by the time the National Research Council published its second major report on DNA evidence in 1996.¹⁰⁷ Whether a court now relies on either the *Frye*¹⁰⁸ or *Daubert*¹⁰⁹ tests, the admissibility and reliability of DNA evidence in criminal proceedings is no longer in any doubt.¹¹⁰ Proficiency and uniform laboratory standards may still be a concern.¹¹¹

B. Short Tandem Repeats (Microsatellites)

Similar to VNTR's, STR's are very short, having a tandem repeat unit of three to four base pairs.¹¹² Using an STR fragment means all that is needed is one billionth of a gram (one nanogram) of DNA for analysis to be possible.¹¹³ This is a huge change from RFLP technology that needs much larger specimens for testing.¹¹⁴ A second advantage of STR protocols is that even very badly degraded and contaminated DNA may still be analyzed.¹¹⁵ These tiny degraded short tandem repeats may be analyzed after being increased in size by the technology of the polymerase chain reaction.¹¹⁶

3. Polymerase Chain Reaction

A polymerase is an enzyme that acts as a perfect photocopy machine,¹¹⁷ duplicating copies of a very short DNA fragment (about 100-2,000 base pairs)¹¹⁸ – the STR. The replication process continues as an exponential chain reaction from a mixture of the DNA to be

¹⁰⁷ NATIONAL ACADEMY OF SCIENCES, NATIONAL RESEARCH COUNCIL, DNA EVALUATION OF FORENSIC DNA EVIDENCE (1996).

¹⁰⁸ 293 F. 1013 (D.C. Cir. 1923).

¹⁰⁹ 509 U.S. 579 (1993).

¹¹⁰ McDonald, *supra* note 38, at 354.

¹¹¹ *Id.* at 354-56. For example, international co-operation to standardize techniques is ongoing between the FBI and the RCMP through The Technical Working Group on DNA Analytical Methods (TWIGDAM). The *Paul Coverdell National Forensic Sciences Improvement Act of 2000* was introduced on September 14, 2000, in the Senate as Bill S.3045 with the goals of gaining credibility and improving quality by updating, standardizing and clearing the massive backlogs in the police forensic laboratories in the United States.

¹¹² CURRAN, *supra* note 21 at 7.

¹¹³ *Id.* at 12.

¹¹⁴ *Id.*

¹¹⁵ *Id.*

¹¹⁶ *Id.* at 7.

¹¹⁷ *Id.*

¹¹⁸ Weiss, *supra* note 32, at 897-98.

analyzed, the four deoxynucleotides, two oligonucleotide primers and a thermostable polymerase.¹¹⁹ Millions of copies of a DNA sequence may then be produced, all in the matter of a few hours.¹²⁰ This DNA amplification is called PCR.¹²¹

A three-stage cycle is repeated about 25-30 times.¹²² The first stage divides the double stranded DNA segment into single strands by heating.¹²³ Next, the single stranded DNA segments to be amplified are targeted by primers of short small single-stranded DNA segments of about 15-30 nucleotides through hybridization.¹²⁴ These primers bind to their complementary regions on the DNA strand to be copied.¹²⁵ Finally, the enzyme polymerase is added and replication begins in an automated machine called a thermocycler.¹²⁶ Every PCR cycle is characterized by heating and cooling at timed intervals, with each cycle doubling the amount of synthesized DNA replicated.¹²⁷

Selected fragments of DNA are then isolated by gel electrophoresis, by being placed in a polyacrylamide gel matrix and migrate at different rates as a weak electric current is applied to sort the fragments by size.¹²⁸ A visual record may be made by autoradiography, by placing the gel in contact with x-ray film if a small amount of a radioactive nucleotide were included in the PCR mixture.¹²⁹

4. *Absolute Proof of Exclusion*

Computer automation is now the preferred method to analyze PCR/STR results.¹³⁰ Forensic laboratories utilize automated fluorescent detection of DNA fragments using DNA sequencers.¹³¹ During

¹¹⁹ *Id.* at 898.

¹²⁰ *Id.* at 899.

¹²¹ The Nobel Prize was awarded in 1993 to Dr. Kary Mullis, who developed the polymerase chain reaction in his work at Cetus Corporation in 1984. POSTCONVICTION DNA TESTING: RECOMMENDATIONS FOR HANDLING REQUESTS, *supra* note 7, at 27.

¹²² CURRAN, *supra* note 21, at 7.

¹²³ *Id.*

¹²⁴ Weiss, *supra* note 32, at 898-99.

¹²⁵ *Id.*

¹²⁶ *Id.*

¹²⁷ *Id.* at 899.

¹²⁸ *Id.*

¹²⁹ *Id.* at 900.

¹³⁰ For example, the Perkin-Elmer instrument can detect STR polymorphisms and unique variations in an STR repeat in an individual with exact precision. Automation increases output and productivity. CASKEY, *supra* note 66, at 18-19.

¹³¹ CURRAN, *supra* note 21, at 12.

the amplification phase, DNA fragments can be labeled simultaneously with different fluorescent tags.¹³² As the DNA fragments migrate through the gel, they pass by a laser window which "excites the fluorescent tag (fluorochrome) of the fragment and detects the specific enhanced light using an array of CCD's (charge coupled devices). DNA fragments are precisely sized . . . calibrated and entered into a digital computer base."¹³³

Analysis of STR sequences by PCR is the forensic investigator's first choice.¹³⁴ The reliability of this method to exclude a suspect is unquestionable.¹³⁵ A leading forensic scientist, Dr. Ron Fourney of the Royal Canadian Mounted Police notes:

[A] major characteristic of this detection method is the precision and accuracy afforded through the use of an internal sizing standard run in the same lane (of the gel) as each STR sample. The internal lane standard is recognized by the computer and used to generate a fragment size calibration curve, thereby providing an accurate quantitation of the amount of a fluorescent signal (from the tagged fragment) and a precision standard for evaluating any potential aberrant electrophoretic migration patterns. With the aid of the computer and precise digital sizing data, the forensic scientist evaluates each fragment with regards to match or nonmatch.¹³⁶

STR loci are highly polymorphic genetic markers.¹³⁷ The Federal Bureau of Investigation has selected 13 STR loci for comparative purposes between the unknown and known samples: CSF1P0; FGA; TH01; TPOX; vWA; D3S1358; D5S818; D7S820; D8S1179; D13S317;

¹³² Ron N. Fourney, *Forensic Reality and the Practical Experience of DNA Typing*, CANADIAN POLICE CHIEF MAGAZINE, 1996 at 50, *quoted in* CURRAN, *supra* note 21, at 12.

¹³³ *Id.*

¹³⁴ ANGEL CARRACEDO, DNA PROFILING 3 (Nov. 1999), *available at* <http://www.interpol.int/Public/Forensic/dna/conference/DNAProfiling01.asp>.

¹³⁵ STR analysis vastly reduces the chance of human error; it is degradation-insensitive, and is tremendously accurate in identity matching. It is superior to all other genetic matching techniques. CASKEY, *supra* note 66, at 18-19.

¹³⁶ Fourney, *supra* note 132, at 50, *quoted in* CURRAN, *supra* note 21, at 12.

¹³⁷ Bruce Budowle & Tamyra R. Moretti, *Genotype Profiles for Six Population Groups at the 13 CODIS Short Tandem Repeat Core Loci and Other PCR Based Loci*, 1 FORENSIC SCI. COMM., 3, ¶ 1 (July 1999), *available at* <http://www.fbi.gov/programs/lab/fsc/backissu/july1999/budowle.htm>.

D16S539; D18S51; and D21S11.¹³⁸ At these loci, an individual will either have or not have a given allele. When comparing DNA samples, a difference of a single allele will absolutely exclude a known individual from an evidence sample.¹³⁹ A match at all 13 loci is in the range of one in a trillion.¹⁴⁰ To prevent a miscarriage of justice, a test system must never use results from only one or just a few loci, because of the possibility an innocent person's DNA could match.¹⁴¹ The most accurate test is the one that has the most number of highly polymorphic loci in the system's protocol.

This highly reliable, precise, automated, computerized technology greatly reduces the risk of human error or manipulation.¹⁴² However, sample mix-ups are still possible. Any technology is only as effective as the people using it.¹⁴³

A negative forensic STR/PCR DNA test, where there is a single non-match, is absolute proof of exclusion.¹⁴⁴ This is the kind of persuasive evidence that should in every case exonerate a factually innocent individual.

C. Future Technology

New methodologies are being developed to increase the speed of analysis and to miniaturize the microarray technology utilizing microchips to make DNA technology portable.¹⁴⁵ Capillary electro-

¹³⁸ *Id.* Another option is to use a group of 10 loci, such as: HUMFIBRA/FGA; HUMVWFA; HUMTH01, D18S51; D21S11; D6S477; D8S1179; D16S539; D19S433; and amelogenine. CARRACEDO, *supra* note 134, at 4. The Interpol Working Party on DNA Profiling has adopted the European Standard Set of 7 loci: VWFA31/A; TH01; D21S11; FGA; D8S1179; D3S1358; D18S51; and amelgenin. *Id.* The Canadian RCMP selected 10 loci, making the estimated frequency of the average genetic profile in the Canadian population as one in 94 billion. Fourney, *supra* note 132, at 50, *quoted in* CURRAN, *supra* note 21, at 15.

¹³⁹ AUTOMATED DNA TYPING: METHOD OF THE FUTURE?, A SUMMARY OF A RESEARCH STUDY CONDUCTED BY HOLLY A. HAMMOND AND C. THOMAS CASKEY AT THE BAYLOR UNIVERSITY COLLEGE OF MEDICINE, NAT'L INST. OF JUSTICE (Feb. 1997), *available at* <http://www.ncjrs.org/pdffiles/13102-9.pdf>. Statistics released by the FBI showed that between 1988-1996, about 25% of all prime suspects in sexual assault cases under investigation where DNA results could be obtained were cleared by the use of DNA technology. Bryant, *supra* note 26, at 120; *see also* CURRAN, *supra* note 21, at 26.

¹⁴⁰ BECHERER, *supra* note 66, at 5.

¹⁴¹ POST-CONVICTION DNA TESTING: RECOMMENDATIONS FOR HANDLING REQUESTS, *supra* note 7, at 28.

¹⁴² CASKEY, *supra* note 66, at 17-18.

¹⁴³ CURRAN, *supra* note 21, at 26.

¹⁴⁴ *Id.*

¹⁴⁵ CARRACEDO, *supra* note 134, at 5.

phoresis and mass spectrometry represent new ways to analyze DNA.¹⁴⁶

The scope of forensic study has expanded from DNA to single nucleotide polymorphisms (SNP's) and mitochondrial DNA (mtDNA). Single nucleotide polymorphisms (SNP's), are usually bi-allelic single base pair alterations unique to individuals.¹⁴⁷ The information power of the STR is limited in comparison to the much more frequent variations of the SNP.¹⁴⁸

Inherited only from the mother, mtDNA will exactly match maternal family members, such as a brother, sister and mother.¹⁴⁹ It is now possible to develop an mtDNA and most times a complete DNA profile from the ridges of a partial fingerprint that was unidentifiable as a fingerprint.¹⁵⁰ Hair shafts and dried bones and teeth from skeletal remains may also provide mtDNA profiles.¹⁵¹

Probes that are specific to the male chromosome (Y) may be useful to isolate and exclude or identify individual male sources of DNA when a mixed profile results from the pooled DNA of several suspects (such as found on a vaginal swab in a case of alleged sexual assault).¹⁵²

Testing of animal and plant DNA found on objects linked to a suspect may exclude the suspect from ever being at the crime scene.¹⁵³

Begun in 1990, the Human Genome Project was an international venture that intended to discover, identify and sequence all the genes

¹⁴⁶ *Id.*

¹⁴⁷ CASKEY, *supra* note 66, at 17.

¹⁴⁸ *Id.*

¹⁴⁹ Alice R. Isenberg & Jodi M. Moore, *Mitochondrial Analysis at the FBI Laboratory*, 1 FORENSIC SCI. COMM., 1-2 (July 1999), available at <http://www.fbi.gov/programs/lab/fsc/backissu/july1999/dnatext.htm>. See also Lois Ann Tully, *Examination of the Use of Forensic DNA Typing from Two Perspectives: I. Mitochondrial DNA Heteroplasmy II. The Role of DNA Typing in Criminal Investigations* (1998) (unpublished Ph.D. dissertation) (on file with the University of Maryland).

¹⁵⁰ See generally Ronald A.H. Van Oorschot & Maxwell K. Jones, *DNA Fingerprints From Fingerprints*, 387 NATURE 767 (1997). In the 1999 murder re-trial of Michael Feeney, in Vancouver B.C. Canada, Dr. John Wayne, a forensic microbiologist in private practice in Hamilton Ontario Canada, testified it was possible to extract a DNA profile from a police fingerprint card. Though his testimony suggested that it is possible to obtain DNA from fingerprint cards, there was no evidence that this was done in Feeney's case. *R. v. Feeney*, No. CC98002, [1999] 1999 B.C.D. Crim. J. LEXIS 269, at *44-45. However, the implications of this in terms of a database already in the possession of the police is enormous.

¹⁵¹ POST-CONVICTION DNA TESTING: RECOMMENDATIONS FOR HANDLING REQUESTS, *supra* note 7, at 28.

¹⁵² *Id.* at 29-30.

¹⁵³ *Id.* at 30.

in the human body.¹⁵⁴ A side benefit from the Human Genome Project has been the development of new automated technologies.¹⁵⁵ Forensic DNA laboratories now have access to new technologies including robots and automated mass spectrometers.¹⁵⁶ Forensic DNA evidence has come a long way since 1987, when scientist Alec Jeffreys was first asked by the English police to see if human DNA “fingerprints” could be used to verify the identity of a suspect who confessed in a murder investigation.

III. THE LAW: HABEAS CORPUS

In *Herrera*, the Supreme Court left open the question “whether federal courts may entertain convincing claims of actual innocence.”¹⁵⁷ The majority led by Chief Justice Rehnquist and joined by Justices O’Connor, Scalia, and White, assumed for the sake of argument that a “truly persuasive demonstration of ‘actual innocence’ made after trial would render the execution of a defendant unconstitutional, and warrant federal habeas corpus relief if there were no state avenue open to process such a claim.”¹⁵⁸ However, “the threshold showing for such an assumed right would necessarily be extraordinarily high.”¹⁵⁹

Justices O’Connor and Kennedy, in a concurring judgment, found that “executing the innocent is inconsistent with the Constitution,”¹⁶⁰ and that “the execution of a legally and factually innocent person would be a constitutionally intolerable event.”¹⁶¹

Justice Scalia, joined by Justice Thomas, in a concurring judgment, decided: “[t]here is no basis in text, tradition, or even in contemporary practice (if that were enough) for finding in the Constitution a right to demand judicial consideration of newly discovered evidence of innocence brought forward after conviction.”¹⁶² They suggested if the standard of proof were ever met by a prisoner professing innocence, a grant of executive clemency by the state gov-

¹⁵⁴ See generally the homepage of The National Human Genome Research Institute: <http://www.nhgri.nih.gov>.

¹⁵⁵ VICTOR W. WEEDN & JOHN W. HICKS, U.S. DEPT. OF JUSTICE, *THE UNREALIZED POTENTIAL OF DNA TESTING*, 5 (1998).

¹⁵⁶ *Id.*

¹⁵⁷ *Herrera v. Collins*, 506 U.S. 390, 427 (1993).

¹⁵⁸ *Id.* at 417.

¹⁵⁹ *Id.*

¹⁶⁰ *Id.* at 419.

¹⁶¹ *Id.*

¹⁶² *Id.* at 427-428.

error would be the likely result: "With any luck, we shall avoid ever having to face this embarrassing question again, since it is improbable that evidence of innocence as convincing as today's opinion requires would fail to produce an executive pardon."¹⁶³

Justice White, concurring in the judgment, offered the opinion, that for a post-conviction claim of factual innocence to succeed, the "petitioner would at the very least be required to show that based on proffered newly discovered evidence and the entire record before the jury that convicted him, 'no rational trier of fact could [find] proof of guilt beyond a reasonable doubt.'"¹⁶⁴

In dissent, Justices Blackmun, Stevens and Souter, declared that it was "shocking to the conscience"¹⁶⁵ to execute a factually innocent person. The dissenting justices found that to execute a factually innocent person is a violation of the Eighth Amendment.¹⁶⁶ They also suggested it would be a similar violation to imprison an innocent person.¹⁶⁷ According to the dissenting justices, Eighth Amendment rights are not extinguished after conviction and continue after sentencing.¹⁶⁸ For there to be a lawful sentence in accordance with the Constitution, there must be a reliable determination of guilt.¹⁶⁹

The dissenting members of the Court also said that the execution of a factually innocent person would shock the conscience and violate substantive due process in the Due Process Clause under the Fifth and Fourteenth Amendments.¹⁷⁰ They went on to say, quoting from the dissent of Justice Harlan in *Poe v. Ullman*,¹⁷¹ referred to in *Planned Parenthood of Southeastern Pa. v. Casey*,¹⁷² that the full scope of liberty as guaranteed by the Due Process Clause was not definable or limited by text in the Constitution, but is a "rational continuum"¹⁷³ and includes freedom from arbitrary state measures. Executing an innocent person is the most flagrant example of an "arbitrary imposi-

¹⁶³ *Id.* at 428.

¹⁶⁴ *Id.* at 429.

¹⁶⁵ *Id.* at 430.

¹⁶⁶ *Id.* at 431.

¹⁶⁷ *Id.* at 432.

¹⁶⁸ *Id.*

¹⁶⁹ *Id.* at 434.

¹⁷⁰ *Id.* at 435-36; *see also* *Rochin v. California*, 342 U.S. 165 (1952); *Palko v. Connecticut*, 302 U.S. 319 (1937).

¹⁷¹ 367 U.S. 497.

¹⁷² 505 U.S. 833.

¹⁷³ *Herrera*, 506 U.S. at 436.

tion”¹⁷⁴ by the state from which there could never be recovery or compensation.¹⁷⁵

The dissenting justices characterized language cited by the majority from the case of *Townsend v. Sain*¹⁷⁶ as “distant dictum,”¹⁷⁷ as the Court had never been previously faced with the question of whether the execution of a factually innocent person violated the Constitution.¹⁷⁸ The troublesome quote was from the judgment of Chief Justice Warren in *Townsend*:

Where newly discovered evidence is alleged in a habeas application, evidence which could not reasonably have been presented to the state trier of facts, the federal court must grant an evidentiary hearing. Of course, such evidence must bear upon the constitutionality of the applicant’s detention; *the existence merely of newly discovered evidence relevant to the guilt of a state prisoner is not a ground for relief on federal habeas corpus.*¹⁷⁹

In contrast, the majority opinion in *Herrera* interpreted this passage as a rule limiting habeas corpus grounds to violations of the Constitution, viewing the issue of factual innocence as a question of fact, not reviewable by the Court.¹⁸⁰

The majority acknowledged: “[T]he central purpose of any system of criminal justice is to convict the guilty and free the innocent.”¹⁸¹ In addition: “A person when first charged with a crime is entitled to a presumption of innocence, and may insist that his guilt be established beyond a reasonable doubt.”¹⁸² However, “[o]nce a defendant has been afforded a fair trial and convicted of the offense for which he was charged, the presumption of innocence disappears.”¹⁸³ Unfortunately for the innocent person wrongfully convicted, the majority opinion appeared prepared to accept the sacrifice of an innocent person on a cost/benefit basis: “But we have also observed that

¹⁷⁴ *Id.* at 437.

¹⁷⁵ *Id.*

¹⁷⁶ 372 U.S. 293.

¹⁷⁷ *Herrera*, 506 U.S. at 437.

¹⁷⁸ *Id.*

¹⁷⁹ *Id.* at 400 (emphasis in original).

¹⁸⁰ *Id.*

¹⁸¹ *Id.* at 398 (citing *United States v. Nobles*, 422 U.S. 225, 230 (1975)).

¹⁸² *Id.* (citing *In re Winship*, 397 U.S. 358 (1970)).

¹⁸³ *Id.* at 399 (citing *Ross v. Moffitt*, 417 U.S. 600, 610 (1974)).

'due process does not require that every conceivable step be taken, at whatever cost, to eliminate the possibility of convicting an innocent person.'"¹⁸⁴

In its review of the Court's habeas jurisprudence, the majority noted the "equitable discretion[ary]" nature of the remedy.¹⁸⁵ A petitioner could have his federal constitutional claim heard on its merits on a "proper showing of actual innocence."¹⁸⁶ However, the Court warned that this "miscarriage of justice exception"¹⁸⁷ was not valid as a freestanding claim,¹⁸⁸ but was merely a "gateway"¹⁸⁹ to supplement a valid constitutional violation,¹⁹⁰ such as ineffective counsel at the trial below.

Executive clemency in the form of a "fail safe"¹⁹¹ discretionary pardon (an act of grace) was left open by the majority justices to any prisoner who was unable to succeed in his innocence claim before the courts.

The dissenting justices took issue on the subject of a pardon, making the point that a fundamental constitutional right must never be delegated to the executive branch of government, without a mechanism to judicially review a decision of life or death.¹⁹²

The government of the United States has been emphatically termed a government of laws, and not of men. It will certainly cease to deserve this high appellation, if the laws furnish no remedy for the violation of a vested legal right. If the exercise of a legal right turns on an 'act of grace,' then we no longer live under a government of laws.¹⁹³

The dissenting justices interpreted the *habeas* jurisprudence differently, holding that "substantive claims of actual innocence should be cognizable on federal habeas."¹⁹⁴ They stated: "In other words, even a prisoner who appears to have had a constitutionally perfect

¹⁸⁴ *Id.* (quoting *Patterson v. New York*, 432 U.S. 197, 208 (1977)).

¹⁸⁵ *Id.* at 404; see *Sawyer v. Whitely*, 505 U.S. 333 (1992).

¹⁸⁶ *Herrera*, 506 U.S. at 404.

¹⁸⁷ *Id.*

¹⁸⁸ *Id.* at 404-05.

¹⁸⁹ *Id.* at 404.

¹⁹⁰ *Id.* at 404-05; see also *Kuhlmann v. Wilson*, 477 U.S. 436, 454 (1986).

¹⁹¹ *Herrera*, 506 U.S. at 415.

¹⁹² *Id.* at 440.

¹⁹³ *Id.* (quoting *Marbury v. Madison*, 5 U.S. (1 Cranch) 137, 163 (1803)) (citation omitted).

¹⁹⁴ *Id.* at 439 (adopting the position of Friendly, J.); see also Henry J. Friendly, *Is Innocence Irrelevant? Collateral Attack on Criminal Judgments*, 38 U. CHI. L. REV. 142, 160 (1970).

trial 'retains a powerful and legitimate interest in obtaining his release from custody if he is innocent of the charge for which he was incarcerated.'"¹⁹⁵

Since the majority Justices left open in their judgment what standard was meant by "a truly persuasive demonstration" of innocence,¹⁹⁶ the dissenting Justices formulated the "probable innocence" test, establishing the following guidelines:

1. The prisoner must show that he is probably innocent.¹⁹⁷
2. The "new evidence of innocence may be discovered long after" the prisoner's conviction.¹⁹⁸
3. The actual innocence proceeding may constitute the last word on whether the prisoner may be freed.¹⁹⁹
4. A valid conviction or sentence should not be lightly set aside.²⁰⁰
5. Conviction after a constitutionally valid trial removes the prisoner's presumption of innocence.²⁰¹
6. Once the government has proved the defendant's guilt beyond a reasonable doubt, the onus of proof shifts to the prisoner in post-conviction proceedings to establish factual innocence.²⁰²
7. The court should take into consideration all the evidence, giving due regard to its reliability.²⁰³
8. The court should make a case-by-case determination about the reliability of the newly discovered evidence.²⁰⁴
9. The court must then weigh the evidence in favor of the prisoner against the evidence of his guilt.²⁰⁵
10. The stronger the evidence of guilt, the more persuasive must be the evidence of innocence.²⁰⁶

¹⁹⁵ *Herrera*, 506 U.S. at 438-39 (quoting *Kuhlmann*, 477 U.S. at 452).

¹⁹⁶ *Id.* at 441.

¹⁹⁷ *Id.* at 442.

¹⁹⁸ *Id.*

¹⁹⁹ *Id.* at 443.

²⁰⁰ *Id.*

²⁰¹ *Id.*

²⁰² *Id.*

²⁰³ *Id.*

²⁰⁴ *Id.*

²⁰⁵ *Id.*

²⁰⁶ *Id.* at 444.

11. The court in its discretion, to assist it in evaluating the reliability of the new evidence, may order discovery; discovery not being a matter of right.²⁰⁷
12. Witnesses from the trial would not be required to re-testify.²⁰⁸
13. Testimony may be heard by the court from any witness who made a statement in an affidavit.²⁰⁹
14. If a prisoner can show he is probably innocent, in light of all the evidence, then he has made a "truly persuasive demonstration."²¹⁰

Unfortunately for Herrera, evidence of his innocence advanced eight years after his trial and consisted of hearsay statements from his deceased brother who accepted responsibility for the murder.²¹¹ Herrera had previously confessed, was identified by two eyewitnesses, and faced a strong circumstantial case.²¹² His late claim of innocence was simply not credible.²¹³ Herrera offered no DNA evidence and he was executed.²¹⁴

The majority's test of a "truly persuasive demonstration" is satisfied by the exclusionary use of DNA profiling. At a minimum, a claim of federal habeas corpus is open under the narrow exception left open by the majority in *Herrera*. Nevertheless, the minority's opinion is more persuasive in the context of definitive answers on the question of factual innocence proven by DNA evidence. The purpose of a habeas application is not just to vacate an erroneous conviction that was made in good faith, but must include the freeing of a prisoner who is factually innocent and who is undeserving of being deprived of his liberty and his life.

Some members of the *Herrera* Court conceded that innocent people must suffer as part of the cost of an imperfect criminal justice system. This is disturbing. Justice Harlan in 1970 reminded us that "a fundamental value determination of our society [is] that it is far worse

²⁰⁷ *Id.*

²⁰⁸ *Id.*

²⁰⁹ *Id.*

²¹⁰ *Id.*

²¹¹ *Id.* at 417-18.

²¹² *Id.* at 418.

²¹³ *Id.* at 419 (O'Connor, J., concurring).

²¹⁴ *Herrera v. Collins*, 508 U.S. 902 (1993) (Blackmun, J. and Stevens, J., dissenting) (majority refusing to order a stay of execution).

to convict an innocent man than to let a guilty man go free.”²¹⁵ This value goes back to the maxim attributed to William Blackstone that it is “better that ten guilty persons escape than that one innocent suffer.”²¹⁶

“Innocent people have been executed,” concedes criminologist Larry Wollan, but “the value of the death penalty is its rightness vis-à-vis the wrongness of the crime, and that is so valuable that the possibility of the conviction of the innocent, though rare, has to be accepted.”²¹⁷ Toughness on crime has long been an American attribute, as so eloquently expressed by Judge Learned Hand in 1923 in denying a defendant’s motion for disclosure of a grand jury’s minutes:

Our dangers do not lie in too little tenderness to the accused. Our procedure has been always haunted by the ghost of the innocent man convicted. It is an unreal dream. What we need to fear is the archaic formalism and the watery sentiment that obstructs, delays, and defeats the prosecution of crime.²¹⁸

The “unreal dream” of Judge Learned Hand has proven to be a nightmare for Florida Judge Sharpe, who was outvoted by his brethren in a 1998 application attempting to release evidence for DNA testing, despite the procedural bar of a two-year limitation period for the introduction of new evidence:

In this case, however, there was no evidence or indication that Dedge’s DNA could be at the crime scene, unless he was guilty. And its absence could only mean he was not guilty. The relief sought in this case was not to vacate or set aside the conviction. Rather, it was to obtain the evidence for the purpose of testing it. . . . One of my worst nightmares as a judge, is and has been, that persons convicted and imprisoned in a “legal” proceeding, are in fact innocent. If there is a way to establish their true innocence on the basis of a highly accurate objective scientific test, like the PCR, in good conscience it should be permitted. This case calls out for such relief: the evidence of Dedge’s

²¹⁵ *In re Winship*, 397 U.S. 358, 372 (1970).

²¹⁶ Vivian Berger, *Herrera v. Collins: The Gateway of Innocence for Death-Sentenced Prisoners Leads Nowhere*, 35 WM. & MARY L. REV. 943, 954 (1994) (citing 4 WILLIAM BLACKSTONE, COMMENTARIES *352).

²¹⁷ Michael L. Radelet & Hugo Adam Bedau, *The Execution of the Innocent*, 61 LAW & CONTEMP. PROBS. 105, 124 (Autumn 1998).

²¹⁸ *United States v. Garsson*, 291 F. 646, 649 (S.D.N.Y. 1923).

guilt at trial was minimal; the PCR test had not been developed at the time of his trial. Even as this dissent is being written, admissibility of PCR tests in Florida courts is still being debated and the results of the tests, if successfully performed, will likely be absolutely conclusive of either his guilt or innocence. Not to do the testing consigns a possibly innocent man to spend the rest of his life in prison. I would reverse the order and direct release of the evidence for the purpose of DNA testing.²¹⁹

Following *Herrera*, courts have found creative ways to apply habeas corpus when confronted with a claim of factual innocence. Here is a sampling of judicial reasoning from two cases that did not involve new evidence of DNA. The first case is from Connecticut:

The petitioner's claim is instead that he is entitled by way of habeas corpus to a new trial because the evidence at his criminal trial was medically unreliable. That claim, however, is independent of and unrelated to any claim that his conviction was otherwise affected by some antecedent constitutional error that affected his trial. . . . The petitioner's claim is, as he states, one of "factual innocence." On the basis of Taff's testimony that the cause of death of the victim was not asphyxiation resulting from manual strangulation, but acute cocaine intoxication, the petitioner claims that he is the victim of a miscarriage of justice because "no crime was committed." . . . The foundational question is whether habeas corpus permits the granting of a new trial pursuant to a petitioner's claim of actual innocence, unadorned by an antecedent showing of a constitutional violation that affected the fairness of his criminal trial. We conclude that it does. We now hold, therefore, what we implied in *Jackson*, namely, that a substantial claim of actual innocence is cognizable by way of a petition for a writ of habeas corpus, even in the absence of proof by the petitioner of an antecedent constitutional violation that affected the result of his criminal trial. This holding is consistent with the mandate of § 52-470(a) that the habeas court "dispose of the case as law and justice require." Even the strong interest in the finality of judgments, and the state's interest in retrying a defendant with reasonably fresh evidence, does not require the continued imprisonment of one who is actually innocent. This holding is also consistent with our prior statements that

²¹⁹ *Dodge v. State*, 723 So. 2d 322, 324 (Fla. Dist. Ct. App. 1998).

habeas corpus is designed to remedy fundamental miscarriages of justice. The continued imprisonment of one who is actually innocent would constitute a miscarriage of justice.²²⁰

The second case is from Texas:

In *State ex rel. Holmes v. Court of Appeals*, 885 S.W.2d 3 (Tex. Crim. App. 1994), we accepted the proposition that the “execution of an innocent person would violate the Due Process Clause of the Fourteenth Amendment to the United States Constitution” and announced that this Court would begin to entertain postconviction applications for the writ of habeas corpus alleging actual innocence as an independent ground for relief. The instant cause comes to us on one such application. . . . Whether petitioner is viewed as challenging simply his death sentence or also his continued detention, he still is challenging the State’s right to punish him [T]he legitimacy of punishment is inextricably entwined with guilt. *Herrera*, 506 U.S. at 433-34, 113 S.Ct. at 878, 122 L.Ed.2d at 238 (Blackmun, J., dissenting). We think it clear from these excerpts that the incarceration of an innocent person is as much a violation of the Due Process Clause as is the execution of such a person. It follows that claims of actual innocence are cognizable by this Court in a postconviction habeas corpus proceeding whether the punishment assessed is death or confinement. In either case, such claims raise issues of federal constitutional magnitude.²²¹

The Supreme Court is reluctant to reverse its holding in *Herrera*. In *Schlup v. Delo*,²²² a case that did not involve the use of DNA evidence, the Supreme Court distinguished *Herrera*. The claim of innocence in *Schlup* rested on videotape evidence that corroborated Schlup’s alibi that he was somewhere else when the victim was murdered. Schlup also asserted he had ineffective counsel at trial, asserting constitutional error. In contrast, *Herrera*’s trial was free of constitutional errors. The Court declined to use its opportunity in *Schlup* to decide whether the execution of an innocent person was *per*

²²⁰ *Summerville v. Warden*, 641 A.2d 1356, 1368-69 (Conn. 1994) (citing *D’Amico v. Manson*, 476 A.2d 543 (Conn. 1984)).

²²¹ *Ex Parte Elizondo*, 947 S.W. 2d 202, 204-05 (Tex. Crim. App. 1996) (citing *State ex rel. Holmes v. Court of Appeals*, 885 S.W.2d 389, 397 (Tex. Crim. App. 1994); *Herrera v. Collins*, 506 U.S. 390, 433-34 (1993)).

²²² *Schlup v. Delo*, 513 U.S. 298, 313-16 (1995).

se unconstitutional.²²³ Schlup's claim was characterized as procedural. *Herrera* thus remains the leading case on this point and has remained the focus of much academic discussion.²²⁴

A. *Justice*

In the context of constitutional criminal procedure, in its development of the exclusionary rule, the Supreme Court validated its constitutional authority to refuse the admission of illegally obtained evidence on the theory that admitting this evidence would sanction unconstitutional police conduct and tarnish the integrity of the courts,²²⁵ thereby bringing the administration of justice into disrepute.²²⁶ Additionally, judicial integrity should not be compromised by permitting the continued imprisonment or execution of a factually innocent person – especially when DNA evidence can prove actual innocence. The question that ought to be asked is: could the administration of justice be brought into disrepute by the continued imprisonment or execution of a factually innocent person? If law is divorced from morality, the answer is no. But if law is imbued with moral values, the answer is a resounding yes.

The very legitimacy of the judicial system is at stake:

Newly discovered exculpatory DNA evidence and other types of emerging, highly reliable exonerative scientific evidence, however, do not raise these difficulties, and cases involving such evidence may provide the opportunity to call the Court's bluff. Unlike the affidavits in *Herrera*, exculpatory DNA evidence could not have been provided at the time of trial because the tests did not yet exist. Concerns to deter

²²³ James G. Clessuras, *Schlup v. Delo: Actual Innocence as Mere Gatekeeper*, 86 J. CRIM. L. & CRIMINOLOGY 1305, 1309 (1996).

²²⁴ Michael J. Muskat, Note, *Substantive Justice and State Interests in the Aftermath of Herrera v. Collins: Finding an Adequate Process for the Resolution of Bare Innocence Claims Through State Post-Conviction Remedies*, 75 TEX. L. REV. 131 (1996); Steven Wisotsky, *Miscarriages of Justice: Their Causes and Cures*, 9 ST. THOMAS L. REV. 547 (1997); Susan Bandes, *Simple Murder: A Comment on the Legality of Executing the Innocent*, 44 BUFF. L. REV. 501 (1996); Tara L. Swafford, Note, *Responding to Herrera v. Collins: Ensuring that Innocents Are Not Executed*, 45 CASE W. RES. L. REV. (1995); Arleen Anderson, *Responding to the Challenge of Actual Innocence Claims After Herrera v. Collins*, 71 TEMP. L. REV. 489 (1998).

²²⁵ *Mapp v. Ohio*, 367 U.S. 643 (1961).

²²⁶ In Canada, the Charter of Rights and Freedoms, part of the *Constitution Act, 1982*, in Section 24, has an exclusionary rule that in the French language text, states in part, "could bring the administration of justice into disrepute." See generally PETER W. HOGG, *CONSTITUTIONAL LAW OF CANADA* app. III (3d ed. 1992) (full text of Canada Constitution Act, 1982).

strategic behavior by defense lawyers and to encourage timely investigation are not apposite here. Moreover, evidence of this sort has an entirely different level of probity. In these cases, the new evidence is usually not competing evidence of the same type and weight as that presented at trial. The degree of certainty of innocence is so high that it is unlikely to be outweighed by any evidence in the record. Evidence that goes beyond the mere suggestion of innocence and demonstrably establishes innocence should form, by itself, a basis for habeas review of convictions and imprisonment. *Where the evidence palpably shows actual innocence, the legitimacy of the state is unequivocally and transparently at stake.*²²⁷

B. *The Right to Life and Liberty*

The supreme law of the United States is the Constitution, which guarantees the right to life and liberty and the right not to be deprived thereof without substantive due process of law.²²⁸ Any law that diminishes, impairs or rejects these fundamental constitutional values is subject to judicial review²²⁹ and may be struck down.

In cases where there is the death penalty, the right to life is obviously engaged. Where there is incarceration, the right to liberty is also engaged. These personal rights, the rights of life and liberty, are preferred rights of the individual, and any law that infringes upon these fundamental rights is subject to strict scrutiny.²³⁰ These are substantive rights that are incorporated into the Fifth, Eighth, Ninth and Fourteenth Amendments.

The Ninth Amendment to the Constitution provides that the listed enumerated rights in the Constitution are not exhaustive, and that those other unwritten constitutional rights retained by the people, shall continue. It states that “[t]he enumeration in the Constitution, of certain rights, shall not be construed to deny or disparage others retained by the people.”

The Constitution was not created in a vacuum. The English heritage of the common law, modified to fit local circumstances, was the root of the fundamental freedoms and liberties cherished by the early

²²⁷ *Developments in the Law: Confronting the New Challenges of Scientific Evidence*, 108 HARV. L. REV. 1481, 1581-82 (1995) (emphasis added).

²²⁸ U.S. CONST. amend. V; U.S. CONST. amend. XIV, § 1.

²²⁹ *Marbury v. Madison*, 5 U.S. (1 Cranch) 137 (1803).

²³⁰ BERNARD SCHWARTZ, A HISTORY OF THE SUPREME COURT 326-27 (1993).

colonial Americans.²³¹ The unwritten English constitution was understood to be self-evident. Was this unwritten constitution subsumed in the Ninth Amendment of the Bill of Rights by the newly independent Americans as part of the basic rights and freedoms enjoyed by citizens of the United States?²³²

The lawyers of early America, who had such a great influence in the writing and adoption of the Declaration of Independence, and the Constitution, were sophisticated and familiar with the leading legal philosophers of the day.²³³ The influence of Sir William Blackstone, author of *Commentaries On the Laws of England*, published between 1765 and 1769, cannot be underestimated. Before the creation of the Declaration of Independence, and the affirmation therein of the inalienable rights to life, liberty, and the pursuit of happiness, Blackstone had already articulated the constitutional right to life: "The right of personal security consists in a person's legal and uninterrupted enjoyment of life, his limbs, his body, his health, and his reputation. . . . Life is the immediate gift of God, a right inherent by nature in every individual."²³⁴

The right to life is paramount and inalienable. It is the supreme law of the land.²³⁵ It will always remain at the core of American constitutional rights. There is a hierarchy of preferred rights, for without the right to life, freedoms such as liberty and the pursuit of happiness are quite meaningless.

The re-imposition of the death penalty,²³⁶ the enactment of limitation periods to prevent the reopening of old cases,²³⁷ and restrictions upon the remedy of habeas corpus,²³⁸ suggest otherwise, especially in times of war and national crisis.

²³¹ KERMIT L. HALL, *THE MAGIC MIRROR* 17, 47 (1989).

²³² *Id.* at 71.

²³³ *Id.* at 45, 53.

²³⁴ 1 WILLIAM BLACKSTONE, *COMMENTARIES* *129.

²³⁵ U.S. CONST. amend. VI.

²³⁶ *Furman v. Georgia*, 408 U.S. 238 (1972).

²³⁷ *Dedge v. State*, 723 So. 2d 322 (Fla. Dist. Ct. App. 1998) (Sharpe, J., dissenting).

²³⁸ *E.g.*, Antiterrorism and Effective Death Penalty Act, Pub. L. No. 104-132, 110 Stat. 1214 (1996) (tightens up grounds for *habeas corpus* applications and accelerates legal process in capital sentences); 28 U.S.C. § 2244 (b)(2)(B) (1994) (limits second habeas applications to narrow grounds); 28 U.S.C. § 2254 (e)(2)(B) (1994) (narrows grounds to adduce fresh evidence on habeas applications); 28 U.S.C. § 2255 (1994) (imposes one year limitation period to contest constitutional validity of sentence).

The danger to the criminal justice system lies in the absolute divorce of law from morality. Any positive law that blinds judges to the truth and perpetuates injustice to the innocent is a threat to a society with a conscience.

Does someone who is factually innocent, have the right to prove his innocence in accordance with the Constitution, on a free standing claim of bare innocence? In this era of the death penalty, can the Constitution demand nothing less? In *Herrera*, Mr. Justice Blackmun was right when he quoted from *Casey*,²³⁹ to illustrate that the full scope of liberty was part of a continuum, not limited by the precise words of the Constitution. In the context of the robust debate over the execution of the factually innocent and the post-conviction use of exculpatory DNA evidence, the right to life, when joined with the right to liberty, makes the fullest and most powerful case to free the factually innocent.

CONCLUSION

When innocence is proven by scientifically reliable DNA evidence, a court should be compelled by law and morality to order the immediate release of the factually innocent to see that justice is done and to preserve the integrity of the courts. Biotechnology has earned its place to free the innocent and to convict the guilty. Statutory reform²⁴⁰ will be required if the courts choose not to use the existing models of constitutional jurisprudence to find creative ways to discover and apply constitutional law. Habeas corpus is the proper legal avenue to free the factually innocent. As guardians of the Constitution, the judiciary has the power, authority, and duty to see that justice is done.

When human pride and prejudice are set aside, law and science can and do work together to free the innocent, and to convict the guilty.²⁴¹ The entire criminal justice system needs reform when it

²³⁹ *Herrera v. Collins*, 506 U.S. 390, 436 (1993) (quoting *Planned Parenthood of Southeastern Pa. v. Casey*, 505 U.S. 833, 848 (1992)).

²⁴⁰ One suggestion has been to create an Innocence Commission. David Horan, *The Innocence Commission: An Independent Review Board for Wrongful Convictions*, 20 N. ILL. U. L. REV. 91, 99 (2000).

²⁴¹ With many thanks to Barry Scheck, Peter Neufeld, and others, including the dedicated students at the Innocence Project at the Cardozo School of Law, Yeshiva University, in New York City. http://www.cardozo.yu.edu/innocence_project (Innocence Project website); <http://www.aidwyc.org> (official web site of the Association in Defense of the Wrongfully Convicted, headquartered in Toronto, Ontario Canada); see also BARRY SCHECK ET AL., ACTUAL INNO-

comes to curing wrongful convictions.²⁴² Prosecutors who obstruct justice and discredit the results of DNA tests raise ethical questions about their own conduct.²⁴³ There should be a mandatory review of old cases where identity was in issue and innocence was always maintained. States should fund defense counsel so attorneys will be paid at reasonable rates and cover the costs of reasonable disbursements, including DNA testing. Limitation periods should be abolished so innocence may be proven any time when new scientific evidence becomes available with the miracle of biotechnology.²⁴⁴ Generous compensation must be paid to the factually innocent and their families who have suffered.

Imprisoning and executing the factually innocent brings the administration of justice into disrepute and violates the core values of the Constitution. There must be a national moratorium on the death penalty until it is possible to guarantee that only the factually guilty are ever executed.²⁴⁵ Law divorced from morality inevitably results in injustice.

CENCE (2000); Rudolph W. Giuliani, *DNA Testing Aids The Search For Truth*, 223 N.Y.L.J. 83 (2000); Ken Armstrong & Steve Mills, *Yet Another Death Row Inmate Cleared*, CHI. TRI., May 18, 1999, at 1; Melinda Penkava, Host: *Michael Charlton Discusses Efforts To Free His Client, Roy Criner, From Prison Three Years After DNA Tests Exonerated Him Of Rape And Murder* (National Public Radio broadcast, Aug. 19, 2000).

²⁴² Judge Kaufman's report on the case of Guy Paul Morin, *Commission on Proceedings Involving Guy Paul Morin*, at http://www.attorneygeneral.jus.gov.on.ca:80/html/MORIN/Kaufmanrpt/morin_ch1.pdf; see also Peter J. Neufeld, *Have You No Sense of Decency?*, 84 J. CRIM. L. & CRIMINOLOGY 189 (1993). Unfortunately, the pace of reform is far behind that of technology. Josephine L. Hart & Guilford M. Dudley, *Available Post-Trial Relief After a State Criminal Conviction When Newly Discovered Evidence Establishes "Actual Innocence,"* 22 U. ARK. LITTLE ROCK L. REV. 629 (2000).

²⁴³ *Jacobs v. Scott*, 513 U.S. 1067, 1067 (1995) (Stevens, J., & Ginsburg, J., dissenting) ("Moreover, for a sovereign State represented by the same lawyer to take flatly inconsistent positions in two different cases – and to insist on the imposition of the death penalty after repudiating the factual basis for that sentence – surely raises a serious question of prosecutorial misconduct. In my opinion, it would be fundamentally unfair to execute a person on the basis of a factual determination that the State has formally disavowed.").

²⁴⁴ Berger, *supra* note 216, at 949. See also Thomas B. Pfankuch, *DNA Evidence Not Open For All*, FLA. TIMES-UNION, July 31, 2000 at B1 (noting that Florida has no legal avenue open to permit DNA testing for an inmate who has maintained his innocence for the past 18 years).

²⁴⁵ On September 21, 2000, the National Death Penalty Moratorium Act of 2000 was introduced in Congress. National Death Penalty Moratorium Act, H.R. 5237, 106th Cong. § 2 (2000).

ADDENDUM: THE HUMAN FACE OF TRAGEDY

On June 20, 2000 Kirk Bloodsworth told what happened to him to the members of the Crime Subcommittee of the House Judiciary Committee of Congress. Here is his story:

MR. BLOODWORTH: I would like to thank the Committee for having me here today. It's been a long battle for me, 17 years' worth, and what I'm going to read today is a statement that I read before that has a profound effect on exactly how I feel and what happened to me.

Seven years ago, I was in a prison cell. I could not imagine at that time that I would be invited before you to share my experiences with you. I was in prison for a total of eight years, 11 months, and 19 days for a crime I didn't commit. I was released from prison on June 28, 1993 and have been free for more than six years, after new technology, DNA, that was not available at the time of my trial, proved that I was innocent for a crime of which I had been convicted.

Seventeen years ago, in 1984, I was a 23-year-old, newly married, former Marine. I had never been arrested for anything in my life. I had served four years in the Marine Corps and was honorably discharged. I was working full time. Although I had problems like many young men and persons that have, I hadn't envisioned this nightmare that I was about to enter into.

On July 25, 1984, Dawn Hamilton, an innocent, nine-year-old, little girl, was brutally raped and murdered in the woods near her home. I had never met Dawn or her family and knew nothing about the crime. However, I looked like a composite of the last man seen with Dawn. The police received an anonymous tip that I looked like the composite.

When the police interviewed me I told them I did not commit the crime and voluntarily allowed them to take a picture of me and also hair samples and so forth. Later, my picture was selected by witnesses. I was identified in a lineup by several witnesses as the man who was last seen with Dawn Hamilton.

From the moment of my arrest and from the time of my release I told anyone and everyone that I did not commit this crime. In my first trial several people, all of them strangers to me, identified me as the last man seen with the little girl. I had a full jury trial, at which I testified,

and my friends and family members testified, that I was with them during the time of the crime. The jury believed the eyewitnesses and did not believe us.

I was convicted, and after a sentencing hearing I was sentenced to death. One of the loneliest feelings I had ever had, when the judge sentenced me to death, is after he had pronounced the sentence the courtroom erupted in applause.

I was convicted and was sentenced to death. People in the courtroom erupted in applause and stared at me with feelings of glee. At that point, I started to realize that this was no longer a dream, that this was a reality, that it was a very real possibility I was going to die an innocent man.

At that point, at my second trial, the prosecution presented many of the same witnesses, and again I was convicted. I chose to be sentenced by a judge this time, and at the time I wrote this I had reviewed what he had said at the trial, and I would like to read it back to you. This is from my trial transcript.

And my attorney asked me, "Is there anything you would like to tell the judge before he passes sentence?" And I said, "Yes. I feel very sorry for what happened to the child and for the family and what they must be going through. There is no way in my conscience that I could kill a little girl or anybody, for that matter. I respect life and just couldn't do it, and I didn't. You've got the wrong man. And if you sentence me to death, Judge, there is no way down the road we can pull it back. I have no idea who killed the child. All I know is I didn't. When they close the doors on the gas chamber, that's it. You can't pull it back. And that's what's happened here. But you just can't bring me back, Judge. Once I am dead, that's it, like you can't bring back the little girl. I feel sorry for what happened to the child, but I'm not your killer, and if you kill me, we're never going to find out."

I do not know why the judge didn't sentence me to death in the second trial. Maybe my statement had some impact. I do not know. All I know, I was sentenced to two consecutive life sentences, and I would have died in prison saying I was innocent.

I remember when I first spoke to who is now the Honorable Judge Moring here in the District of Columbia, and he told me that since I was beyond my direct appeal, the chances of winning a new trial were

extremely small because the courts were no longer concerned with whether I was innocent or guilty. They assumed I was guilty, and I remember this statement shocking me. There I was in prison for something I didn't do, and it was hitting me that the courts would not be interested in whether I was innocent or guilty.

During his investigation Judge Moring had all of the evidence reexamined by a laboratory in California, Forensic Science Laboratory, run by Dr. Edward Blake. In 1984, they had no DNA that could measure this type of thing. It wasn't available at the time, and I simply had to wait until technology caught up with my case. The FBI also tested the evidence. As a result, the prosecution and the court agreed to dismiss the case and simply set me free.

Since I have been released many people have asked me what does it all mean. Could I have been executed? Does the fact that I was not executed and finally released mean that the system worked? Can I put this behind me?

I do not know all of the answers. Does the system work? In my mind, it doesn't. I had a lawyer that worked for me at the time, a very compassionate man that believed in me and saved my life. I was released after eight years, 11 months, and 19 days in prison, all of that time not knowing whether I would be executed or whether I would spend the rest of my life in prison.

My life has been taken from me and been destroyed. I was separated from my family and branded the worst thing possible: a child killer and rapist. I cannot put into words what it is like to live under these circumstances, but I'll try.

Did the system work? My family lived through this nightmare with me. My father spent his entire life savings. As a result, he cannot retire, and at 72, he must still work. My mother, whom I love, stood with me and right beside me, died five months before I was released. She never heard the results of the DNA test, but she knew her son, and she knew her son couldn't commit such a crime.

I am not a lawyer. I do not pretend to know all of the technical niceties and arguments about appeals. I do have a personal reaction, however. When I hear some people say that the system is fine but we need to speed it up, they are all guilty anyway, and we should not be concerned with all the technicalities or with the convicted or executed,

and even if that happens, that's the price we pay for democracy, bull, I say.

These statements and others like them stun me and sadden me. The people who make these statements were not with me during those nine years I was in prison. You see, when people say these things, they are not talking about a hypothetical person; they are talking about me. Despite all of the protections provided by the system, I would have been executed, saying that I was innocent and having nobody hear what I was saying.

I was going to spend the rest of my life in prison for something I did not do.

I was the person whose life was destroyed and who lost his family. I was not and am not a hypothetical person. I was just a regular person with hopes and dreams like everyone else, nothing special.

For seven years I have been free. It has been very confusing to me. Things have changed so much since I was last free. I'm still adjusting to this day to my freedom.

It is difficult not to become bitter about what I have missed. I'm having great difficulty putting my life back together, but I am trying with family and friends to make it happen.

However, I'm not the same person, and no one will be able to replace what I've lost. I am overwhelmed with words of support that I received from the people of Maryland and throughout the country, people who I don't even know come up to me and hug me and shake my head and tell me what happened to me made them think and change their minds.

I do not know why all these things happened to me. Maybe there is some reason for all of this. I believe maybe it's today.

This bill is very important. It addresses a lot of issues far and wide. The government and the systems of justice we have in this country are for the people. It's for the innocent man, not for the guilty man. We need competent attorneys. We can't have, you wouldn't drive a cab if you knew that the taxi driver was going to be asleep at the wheel.

Also, the people that have this happen to them need compensation. Meaningful compensation. To tell you the truth, \$100,000 isn't

enough. We need more, we need DNA testing, across the board look, and we need to stop executing people in this country now.

I do not know why all these things happened to me. There must be some reason these things happen to just ordinary people like us. If it happened to me, it can happen to you. It can happen to your child, your son, your daughter. It can happen to anybody.

Thank you.²⁴⁶

²⁴⁶ *Innocence Protection Act of 2000: Hearings on H.R. 4167 Before the Subcomm. on Crime of the House Judiciary Comm.*, 106th Cong. (2000) (statement of Kirk Bloodsworth).

