

**DNA DATABASES AND THE FOURTH  
AMENDMENT: THE TIME HAS COME TO  
REEXAMINE THE SPECIAL NEEDS  
EXCEPTION TO THE WARRANT  
REQUIREMENT AND THE PRIMARY  
PURPOSE TEST**

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## I. INTRODUCTION

If you were to poll law enforcement officers as to what has been the single most important advancement in the past twenty years in their profession, the response would almost certainly be the advent of computerized DNA databases.<sup>2</sup> Through a process known as a “cold hit,” police are able to identify suspects by matching DNA left at a crime scene to DNA profiles contained in a known offender database.<sup>3</sup> The use of searchable, computerized databases has become almost universal in assisting law enforcement solve crime and has become ingrained in American popular culture through its portrayal in television shows like CSI.<sup>4</sup>

There are several benefits to using forensic DNA databases in this manner. First, law enforcement can solve cold cases, which until registering a hit in the database, had remained unsolved.<sup>5</sup> Second, they can be used to rapidly and efficiently solve ongoing investigations without unnecessarily targeting innocent suspects.<sup>6</sup> Finally, they can be used to prevent injustice, freeing innocent persons who have been convicted of a crime they did not

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<sup>2</sup> Jonathan Kozlowski, *Technology is in the Eye of the Beholder: An Interview with Scott Barker*, L. ENFORCEMENT TECH., Oct. 1, 2006, available at [http://www.officer.com/print/Law-Enforcement-Technology/Technology-Is-In-the-Eye-of-the-Beholder/1\\$33492](http://www.officer.com/print/Law-Enforcement-Technology/Technology-Is-In-the-Eye-of-the-Beholder/1$33492). Responding to the question “What technological invention has been the most important enhancement to law enforcement?,” Mr. Barker, the Deputy Director of the Rural Law Enforcement Technology Center, stated that DNA, not computers in general, has been the biggest boon:

This is going to sound a little contradictory, but probably DNA analysis. Even though the computer has affected all facets of law enforcement, I think the most dramatic advancement has been in the DNA field. The investigative impact of utilizing today’s techniques on just a small piece of evidence collected years ago cannot be overemphasized.

*Id.*

<sup>3</sup> THE LAW REFORM COMM’N OF IR., THE ESTABLISHMENT OF A DNA DATABASE (LRC 78-2005), at 9, 17, 28 (Nov. 2005).

<sup>4</sup> DNA testing has become almost too ingrained. Some legal scholars have described a so-called “CSI effect” which has jurors both expecting and demanding that DNA or other physical evidence be presented in criminal cases. Dianna Botluk and Brittan Mitchell, *Getting a Grip on the ‘CSI Effect’: The National Clearinghouse for Science, Technology & the Law at Stetson University College of Law* (May 14, 2005), available at <http://www.llrx.com/features/csieffect.htm>.

<sup>5</sup> MAX M. HOUCK, FORENSIC SCIENCE: MODERN METHODS OF SOLVING CRIME 113 (2007); LAW REFORM COMM’N OF IR., *supra* note 3, at 9, 17.

<sup>6</sup> LAW REFORM COMM’N OF IR., *supra* note 3, at 9–10.

commit.<sup>7</sup>

Despite their many benefits, however, DNA databases are not without their detractors. Some claim that DNA databases are an inefficient use of resources because they are expensive to develop and maintain, with start-up costs often running into the millions of dollars.<sup>8</sup> Since DNA is collected from only a small percentage of crime scenes (and, as such, can be used to solve only a small fraction of the total number of crimes), critics contend that it would be a better use of resources to deploy more investigators rather than increasing the size of these databanks.<sup>9</sup>

Others charge that DNA databases are an unconstitutional invasion of privacy.<sup>10</sup> In order to create a large enough database to allow for a meaningful comparison of crime-scene DNA samples to the profiles of potential suspects, samples are taken from known offenders.<sup>11</sup> Convicted offenders, or in some cases felony arrestees, are compelled to provide DNA samples for input into the state and national databases for this purpose.<sup>12</sup> This DNA sampling is done without a warrant or individualized suspicion that the offenders' DNA will be linked to a particular crime.<sup>13</sup> Civil Libertarians have thus characterized the creation

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<sup>7</sup> Just looking at the first few weeks of 2008 in Colorado alone, the importance of DNA and forensic databases can be seen. First, a convicted murderer was set free after DNA test results established that someone else's skin cells were left on the victim's clothing the day she was killed. Kevin Vaughan, *Prosecutor Says DNA Discovery Should Set Masters Free*, ROCKY MOUNTAIN NEWS, Jan. 18, 2008, available at <http://www.rockymountainnews.com/news/2008/jan/18/special-prosecutor-recommend-freeing-tim-masters>.

Then, over a two-week span in January of 2008, Colorado experienced 25 cold hits from the state DNA database, establishing a record for that period of time. Those cold hits laid the groundwork for, among others, arrests in a ten-year-old rape and murder in Boulder, a 1976 killing of a high school student, and two sexual assault cases from 2004 and 2005. Kevin Vaughan, *Cracking Code vs. Crime: DNA Database Records 25 'Hits' in Two Weeks*, ROCKY MOUNTAIN NEWS, Feb. 2, 2008, available at <http://www.rockymountainnews.com/news/2008/feb/02/cracking-code-against-crime>.

<sup>8</sup> See Legislative Analyst's Office, *Proposition 69, DNA Samples. Collection. Database. Funding. Initiative Statute.*, July 2004, available at [http://www.lao.ca.gov/ballot/2004/69\\_11\\_2004.htm](http://www.lao.ca.gov/ballot/2004/69_11_2004.htm).

<sup>9</sup> See, e.g., Paul E. Tracy & Vincent Morgan, *Big Brother and His Science Kit: DNA Databases for 21<sup>st</sup> Century Crime Control?*, 90 J. CRIM. L. & CRIMINOLOGY 635, 654-55 (2000); Jenny Rushlow, *Rapid DNA Database Expansion and Disparate Minority Impact*, Gene-Watch.org, DNA Databases, <http://www.gene-watch.org/DNADatabases/RushlowPaper.html>.

<sup>10</sup> LAW REFORM COMM'N OF ILL., *supra* note 3, at 12, 28, 40.

<sup>11</sup> HOUCK, *supra* note 5, at 112.

<sup>12</sup> *Id.* at 111-12.

<sup>13</sup> D.H. Kaye, *The Constitutionality of DNA Sampling on Arrest*, 10 CORNELL

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of DNA databases as the computerized equivalent of an Orwellian Big Brother.<sup>14</sup> They support DNA testing only in limited circumstances—as an investigatory tool when supported by probable cause and a warrant or as a means for convicted offenders to prove their innocence.<sup>15</sup> Moreover, these critics allege that the state should not be able to indefinitely retain the DNA samples once collected because such permanent storage would substantially increase the risk that private medical information will be used for improper purposes.<sup>16</sup>

Although the United States Supreme Court has yet to issue an opinion on this topic, federal and state courts alike have largely downplayed these privacy concerns, almost universally upholding DNA databases against Fourth Amendment challenge.<sup>17</sup> While the outcomes have largely been the same, courts have differed as to the rationales for upholding their use.<sup>18</sup> Some courts have found that DNA databases serve a special need apart from ordinary law enforcement purposes.<sup>19</sup> Others have instead used a balancing test, relying on the fact that those subject to DNA testing have a reduced expectation of privacy in their identity.<sup>20</sup> Some commentators have criticized those courts which have relied on the special needs test as ignoring the Supreme Court's primary purpose test—a requirement that a suspicionless search scheme, when evaluated under the special needs doctrine, must have a primary, non-law enforcement purpose.<sup>21</sup> At the same

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J.L. & PUB. POL'Y, 455, 484 (2001).

<sup>14</sup> K. A. Taipale, *Data Mining and Domestic Security: Connecting the Dots to Make Sense of Data*, 5 COLUM. SCI. & TECH. L. REV. 1, 7 (2003).

<sup>15</sup> Tania Simoncelli, *Retreating Justice: Proposed Expansion of Federal DNA Database Threatens Civil Liberties*, GENE WATCH, Mar.–Apr. 2004, available at <http://www.gene-watch.org/genewatch/articles/17-2Simoncelli.html>.

<sup>16</sup> *Id.*

<sup>17</sup> See Lindsey Weiss, All in the Family: A Fourth Amendment Analysis of Familial Searching 2, 14 (2008) (unpublished article, University of Chicago), available at [http://works.bepress.com/lindsey\\_weiss/2/](http://works.bepress.com/lindsey_weiss/2/) (follow “Download the Paper” hyperlink); *United States v. Amerson*, 483 F.3d 73, 89 (2d Cir. 2007); *United States v. Sczubelek*, 402 F.3d 175, 186 (3d Cir. 2005); *People v. Adams*, 115 Cal. App. 4th 243, 259 (Cal. App. 2004).

<sup>18</sup> See generally Juliana C. Russo, *Fourth Amendment Challenges to DNA Databanks in State Courts*, American Society of Law, Medicine, and Ethics (June 2005), [http://www.aslme.org/dna\\_04/reports/russo\\_update.pdf](http://www.aslme.org/dna_04/reports/russo_update.pdf) (reporting on key state court cases challenging the constitutionality of DNA databases).

<sup>19</sup> See, e.g., *Nicholas v. Goord*, 430 F.3d 652, 667–68 (2d Cir. 2005).

<sup>20</sup> See, e.g., *United States v. Weikert*, 504 F.3d 1, 11 (1st Cir. 2007).

<sup>21</sup> Tracey Maclin, *Is Obtaining an Arrestee's DNA a Valid Special Needs Search Under the Fourth Amendment? What Should (and Will) the Supreme Court Do?*, 34 J.L. MED. & ETHICS 165, 181 (2006); David Winickoff, *The*

time, others have criticized those courts which have used a balancing test to review DNA-indexing laws for creating a standardless system of review, allowing for a virtually limitless expansion of suspicionless search schemes.<sup>22</sup>

This debate is at the heart of the controversy surrounding DNA databases. In my view, both criticisms are valid. The special needs test, as it exists in its current form, is not intended to authorize warrantless, suspicionless searches which would actively aid law enforcement investigations (although, as we will see, this is a corruption of its creator's original intent). Likewise, as DNA tests are expanded to cover a much broader class of persons than convicted felons (such as felony arrestees or conditional releases), the use of a balancing test becomes problematical. It should be applicable only to those who have an extremely reduced expectation of privacy.

Given that DNA databases do not conveniently fit into either of these categories, the real problem lies not with the creation of DNA databases themselves, but with the Supreme Court's analysis of suspicionless search schemes. The Court's doctrine in this area needs to be modified to allow for the proper analysis of DNA-indexing laws. The primary purpose test must be jettisoned in favor of something more workable such as a generally applicable special needs test or a biometric identification exception.

Regardless of the test used, courts have consistently found that the need for DNA databases far outweighs the minimal intrusion on privacy they may create.<sup>23</sup> This is so, because at the time they are collected, DNA profiles are not evidence, in and of themselves, of any criminal behavior. The profiles are simply warehoused until such time as they do become evidence, after a hit from a search of the database links an offender to a particular crime scene. As such, if evaluated under the proper standard, courts should uphold their use as a reasonable search under the

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*Constitutionality of Forensic DNA Databanks: 4<sup>th</sup> Amendment Issues*, American Society of Law, Medicine, and Ethics 9–10 (June 2005), available at [http://www.aslme.org/dna04/reports/winickoff\\_update.pdf](http://www.aslme.org/dna04/reports/winickoff_update.pdf).

<sup>22</sup> See, e.g., Jason Tarricone, Note, "An Ordinary Citizen Just Like Everyone Else": *The Indefinite Retention of Former Offenders' DNA*, 2 STAN. J. CIV. RTS. & CIV. LIBERTIES 209, 219 (2005); David J. Gottlieb, *Drug Testing, Collective Suspicion, and a Fourth Amendment Out of Balance: A Reply to Professor Howard*, 6 KAN. J.L. & PUB. POL'Y 27, 27–28 (1997).

<sup>23</sup> See, e.g., *United States v. Kincade*, 379 F.3d 813, 839 (9th Cir. 2004) (en banc), cert. denied, 544 U.S. 924 (2005).

Fourth Amendment.

This article is divided in five parts. Part II briefly examines the structure of DNA and explains the testing process as it is performed for forensic identification purposes. The section also details the creation of offender databases in the United States and how they are searched by law enforcement. Part III reviews the myths surrounding DNA databases, including the philosophical objections made to them. Part IV then explores the applicable Fourth Amendment law as it relates to the constitutionality of suspicionless search schemes generally. It then examines the current state of the law regarding DNA-indexing statutes and the legal basis for those court rulings. Finally, in part V, I make some recommendations for how suspicionless search regimes (including DNA-indexing laws) should be evaluated under the Fourth Amendment and how the testing process should be handled in the future.

## II. DNA IDENTIFICATION TESTING AND INDEXING THE RESULTS

### A. DNA Structure and Forensic Testing

Deoxyribonucleic Acid (DNA) is a large molecule present in the nucleus of every cell in the human body.<sup>24</sup> It is composed of a repeating sequence of one of four nitrogenous bases attached to a sugar (deoxyribose) and phosphate backbone.<sup>25</sup> The entire DNA molecule contains two interconnected strands interlinked in a double helical structure.<sup>26</sup> The two strands are linked together by bonds formed between the bases at each “rung” of the double helix.<sup>27</sup> The bases can form bonds only with their specific complement.<sup>28</sup> A full complement of human DNA contains over three billion base pairs which are spread out over the twenty-three pairs of chromosomes present in each cell.<sup>29</sup> Each pair of

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<sup>24</sup> LAW REFORM COMM'N OF IR., *supra* note 3, at 6.

<sup>25</sup> RICHARD SAFERSTEIN, CRIMINALISTICS 403–04 (Prentice Hall 1998). The four bases are adenine (A), guanine (G), thymine (T), and cytosine (C).

<sup>26</sup> *Id.* at 404.

<sup>27</sup> LAW REFORM COMM'N OF IR., *supra* note 3, at 6.

<sup>28</sup> *Id.*; The bases connect to each other as follows: Adenine-thymine; cytosine-guanine; guanine-cytosine; or thymine-adenine. Henry T. Greely et al., *Family Ties: The Use of DNA Offender Databases to Catch Offenders' Kin*, 34 J.L. MED. & ETHICS 248, 249 (2006).

<sup>29</sup> LAW REFORM COMM'N OF IR., *supra* note 3, at 6; *see also* Access Science, Forensic Mitochondrial DNA Analysis, <http://www.accessscience.com> (search

chromosomes varies in size, but the average is approximately 100 million base pairs.<sup>30</sup>

A gene, conversely, is a single unit of genetic material which determines the inheritance of particular traits and is made up, on average, of about 3,000 bases.<sup>31</sup> The sequence of the bases along given regions of a gene codes for the production of particular amino acids which are then used to synthesize proteins.<sup>32</sup> There are approximately 25-30,000 genes present in human DNA.<sup>33</sup> The complete human genome is composed of the entire set of genetic material on the DNA.<sup>34</sup> Thus, genes comprise only about 3% of the total base pairs on the DNA molecule. Much of the remainder of human DNA consists of non-coding regions which have little or no apparent biological function.<sup>35</sup>

The coding regions of human DNA are almost identical between individuals.<sup>36</sup> There are significant differences, however, in the sequence pattern between individuals in the non-coding regions. There are certain stretches of the DNA where the DNA replicating mechanism “stutters,” causing a different number of copies of certain repeated sequences of base pairs or “short tandem repeats” (STRs) to occur.<sup>37</sup> Each STR is composed of a repeating sequence of three to seven bases.<sup>38</sup> The entire length of the repeat is usually no longer than 400 base pairs.<sup>39</sup> About three percent of human DNA is composed of STRs.<sup>40</sup> The length of these STRs appears to have no apparent function, but

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“forensic mitochondrial DNA analysis”) (last visited May 25, 2009) (discussing composition of DNA).

<sup>30</sup> SAFERSTEIN, *supra* note 25, at 405–06.

<sup>31</sup> LAW REFORM COMM’N OF IR., *supra* note 3, at 6.

<sup>32</sup> SAFERSTEIN, *supra* note 25, at 406. Each amino acid is coded for by a sequence of three bases. For example, the amino acid alanine is coded for by the sequence C-G-T.

<sup>33</sup> Houck, *supra* note 5, at 105.

<sup>34</sup> LAW REFORM COMM’N OF IR., *supra* note 3, at 6.

<sup>35</sup> Greely et al., *supra* note 28, at 249.

<sup>36</sup> Genomics and Its Impact on Science and Society: The Human Genome Project and Beyond 3 (2003), available at [http://www.ornl.gov/sci/techresources/Human\\_Genome/publicat/primer2001/primer11.pdf](http://www.ornl.gov/sci/techresources/Human_Genome/publicat/primer2001/primer11.pdf).

<sup>37</sup> Greely et al., *supra* note 28, at 249.

<sup>38</sup> SAFERSTEIN, *supra* note 25, at 420.

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

<sup>40</sup> International Human Genome Sequencing Consortium, *Initial Sequencing and Analysis of the Human Genome*, 409 NATURE 860, 889 (2001), available at <http://www.nature.com/nature/journal/v409/n6822/pdf/409860a0.pdf>.

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can vary from person to person.<sup>41</sup> It is these variable regions, therefore, which are of interest to forensic scientists.

The number of regions targeted for DNA analysis varies from country to country. In the United States, thirteen STR regions are currently used for forensic identity analysis.<sup>42</sup> Each target area (locus) has a specific location on one of the chromosomes and is composed of two components (alleles)—one inherited from the mother and one from the father.<sup>43</sup> A person is said to be homozygous at a given locus if both alleles have the same length or number of repeated sequences.<sup>44</sup> Conversely, if the STRs are of different lengths at each allele, then the person is said to be heterozygous at that locus.<sup>45</sup>

For purposes of forensic identification, a DNA profile is generated which is a digital representation of the two alleles at each of the thirteen loci and which corresponds to the number of repeated units at each allele.<sup>46</sup> The DNA profile generated from the scene sample is then compared with known profiles in the offender databases.<sup>47</sup> If the same alleles are present at all thirteen loci, then the profiles are deemed to be a match.<sup>48</sup>

The next step is to determine the probability of two individuals having the same profile, assuming they are not identical twins. The analyst must determine how commonly occurring the

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<sup>41</sup> Greely et al., *supra* note 28, at 250. Thus, a person with four repeats at a particular locus is biologically no different than a person who has eleven.

<sup>42</sup> John M. Butler, *Genetics and Genomics of Core Short Tandem Repeat Loci Used in Human Identity Testing*, 51 J. FORENSIC SCI. 253, 253 (2006). See also, Bruce Budowle et al., *Source Attribution of a Forensic DNA Profile*, 2 FORENSIC SCI. COMM. (July 2000), available at <http://www.fbi.gov/hq/lab/fsc/backissu/july2000/source.htm>.

<sup>43</sup> Greely et al., *supra* note 28, at 250.

<sup>44</sup> *People v. Nelson*, 48 Cal. Rptr. 3d 399, 413 (Cal. App. 3d 2006).

<sup>45</sup> *Id.*

<sup>46</sup> LAW REFORM COMM'N OF IR., *supra* note 3, at 7. See also Greely et al., *supra* note 28, at 250. After identification and multiplication, the DNA STR fragments are injected into a capillary column and move through the column under the influence of an electrical current. The speed at which they move through the column is proportional to their length. A detector records the time it takes the various sized fragments to reach it. Thus, the number of repeated sequences can be determined for each allele. John M. Butler et al., *Forensic DNA Typing by Capillary Electrophoresis Using the ABI Prism 310 and 3100 Genetic Analyzers for STR Analysis*, 25 ELECTROPHORESIS 1397, 1398–400 (2004).

<sup>47</sup> LAW REFORM COMM'N OF IR., *supra* note 3, at 7.

<sup>48</sup> Compare *id.* at 8 and Greely et al., *supra* note 28, at 250 (in Ireland, genetic match is established when the same alleles are present at 10 loci. In the U.S., however, a set of thirteen alleles are tested to ascertain a match).

number of repeated sequences at each allele is in the population at a given locus.<sup>49</sup> From that data, a statistical estimate (random match probability) can then be generated as to the probability of another individual having the same combination of alleles at all thirteen loci.<sup>50</sup> Using the product rule, the probabilities of a given allele appearing at a given locus are then multiplied together for all twenty-six alleles.<sup>51</sup> Thus, while it might be fairly common for several individuals to match at one or two alleles, the probability of two individuals matching at all twenty-six is quite low. Estimates of two people having the same DNA profile at all thirteen loci are often less than one in one trillion.<sup>52</sup>

### *B. The Development of CODIS*

The United States has an interconnected series of computerized DNA databases known as CODIS (Combined DNA Indexing System).<sup>53</sup> It is a series of interlinked DNA databases, including the National DNA Index System (NDIS) operated by the FBI, state DNA indexes maintained by each state, and agency databases maintained by local crime laboratories.<sup>54</sup> NDIS primarily relies on the submission of offender profiles from individual states; less than ten percent of all felons are convicted

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<sup>49</sup> LAW REFORM COMM'N OF IR., *supra* note 3, at 8. Where the race of the suspect is known, the suspect's profile is compared to the relevant population subgroup (Caucasian, African American, etc.) and the random match probability (the probability that two people have the same DNA profile) for that subgroup is reported. If race is undetermined, the probabilities are computed for all the population subgroups. To determine this statistical estimate, a population index was created which contains the DNA profiles of anonymous donors from across the United States, representative of the major racial subgroups. See Bruce Budowle et al., *CODIS and PCR-Based Short Tandem Repeat Loci: Law Enforcement Tools*, at 74, <http://www.promega.com/geneticid/proc/eusymp2proc/17.pdf> (explaining the purpose and the information contained in population index).

<sup>50</sup> Budowle et al., *supra* note 42.

<sup>51</sup> *People v. Nelson*, 185 P.3d 49, 60 (Cal. 2008); see also *supra* Part II.A.

<sup>52</sup> Budowle et al., *supra* note 42, at 2. Depending on the rarity of the specific DNA profile and the particular racial subgroup of interest, the probabilities can range from one in a few trillion to one in a few sextillion (a number with 21 zeroes after it). *Id.*; see e.g., *Nelson*, 185 P.3d at 52 (evidence showed that the odds that a random person matching the profile of DNA evidence left at crime scene were one in 930 sextillion).

<sup>53</sup> U.S. Dep't of Justice Fed. Bureau of Justice, Combined DNA Index System Brochure, [http://www.fbi.gov/hq/lab/html/codisbrochure\\_text.htm](http://www.fbi.gov/hq/lab/html/codisbrochure_text.htm) (last visited May 25, 2009).

<sup>54</sup> *Id.*

of federal crimes.<sup>55</sup>

Several categories of DNA profiles are indexed in CODIS, including profiles of convicted offenders, persons who have been charged via indictment or information, samples recovered from crime scenes or unidentified human remains, and samples voluntarily contributed by relatives of missing persons.<sup>56</sup> Profiles obtained from persons who voluntarily submit to DNA tests solely for elimination purposes are not entered into the system, however.<sup>57</sup> All three tiers of CODIS contain offender and forensic crime scene indexes as well as the population database file.<sup>58</sup> The CODIS system allows federal, state, and local DNA laboratories to exchange and compare DNA profiles, link serial crimes by comparison of crime scene samples, and identify potential suspects by comparing crime scene evidence to known offender profiles.<sup>59</sup> Through March 2009, there were 6, 830,077 offender profiles in CODIS and just over 259,000 forensic profiles, an almost ten-fold increase since 2000.<sup>60</sup> It is estimated that while only 1,573 investigations were aided by CODIS searches in 2000, this figure had increased to 86,400 by March of 2009.<sup>61</sup>

The Federal DNA Act mandates that DNA profiles can be loaded into CODIS only if they are performed by accredited labs which meet or exceed quality assurance standards established by the FBI.<sup>62</sup> The Act also sets strict requirements on the permissible uses of DNA profiles and who may have access to them.<sup>63</sup> Samples and profiles may only be disclosed to criminal justice agencies for law enforcement identification purposes or to a criminal defendant (limited to only those samples and analyses performed in connection with that defendant's case).<sup>64</sup> DNA samples and analyses may also be released to individuals conducting research for identification or quality control purposes,

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<sup>55</sup> Greely et al., *supra* note 28, at 250–51.

<sup>56</sup> Combined DNA Index System Brochure, *supra* note 53.

<sup>57</sup> 42 U.S.C.A. § 14132(a)(1)(C) (West 2006).

<sup>58</sup> Budowle et al., *supra* note 49, at 74.

<sup>59</sup> *Id.* at 73.

<sup>60</sup> FBI, CODIS-NDIS Statistics, <http://www.fbi.gov/hq/lab/codis/clickmap.htm>; *see also* Combined DNA Index System Brochure, *supra* note 53.

<sup>61</sup> CODIS-NDIS Statistics, *supra* note 60; Combined DNA Index System Brochure, *supra* note 53.

<sup>62</sup> 42 U.S.C.A. § 14132(b)(1–2).

<sup>63</sup> § 14132(b)(3)(A–D).

<sup>64</sup> *Id.*

but only if all personal identification information is removed.<sup>65</sup> The Act also provides for expungement of DNA profiles where a qualifying conviction has been overturned or where a qualifying charge has been dismissed or resulted in an acquittal.<sup>66</sup>

### III. DEBUNKING THE MYTHS SURROUNDING DNA AND DNA DATABASES: OVERCOMING PHILOSOPHICAL OBJECTIONS

Before addressing the legal arguments both for and against DNA databases, I first wanted to address some of the philosophical objections made in opposition to them. Opponents have attacked DNA indexing laws on several grounds, including that they violate personal privacy; that the statistical calculations used to explain the significance of the results are not conservative enough; that DNA test results are treated as infallible; and that the proponents of DNA databases inflate their ability to solve crime.<sup>67</sup> When examined closely, each of these arguments has significant flaws.

#### *A. Violations of Privacy*

Opponents first assert that DNA indexing laws jeopardize a person's genetic privacy, alleging that these STR regions may have the capability to reveal personal medical information in the future, like the propensity for acquiring certain diseases.<sup>68</sup> However, not all noncoding DNA is alike. While some noncoding regions have been found to have biological significance, forensic STR regions have little functional purpose, and thus are not useful for mapping a person's physical or psychological makeup.<sup>69</sup>

Cole, meanwhile, makes the argument that even if STR regions have no biological functionality, they could still be associated with the presence of certain diseases or medical conditions, and thus serve as a screening test for such conditions.<sup>70</sup> This is

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<sup>65</sup> § 14132(b)(3)(D).

<sup>66</sup> § 14132(d)(1)(A)(i–ii).

<sup>67</sup> See, e.g., Tania Simoncelli & Sheldon Krinsky, *A New Era of DNA Collections: At What Cost to Civil Liberties?*, Issue Brief, American Constitution Society, 14–15, (Aug. 2007), available at <http://www.acslaw.org/node/5338>.

<sup>68</sup> E.g., Elizabeth E. Joh, *Reclaiming “Abandoned” DNA: The Fourth Amendment and Genetic Privacy*, 100 NW. U. L. REV. 857, 870 (2006).

<sup>69</sup> See D.H. Kaye, *Science Fiction and Shed DNA*, 101 NW. U. L. REV. 62, 64 (2006) (“[N]o forensic STR locus has been found to be predictive.”).

<sup>70</sup> Simon A. Cole, *Is the “Junk” DNA Designation Bunk?*, 102 NW. U. L. REV. 54, 56–57 (2007).

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highly unlikely as well, however. Given that diseases and traits are often influenced by multiple genes and that many medical conditions are relatively rare, any predictive value that STR regions might have would thus be greatly “diluted.”<sup>71</sup>

In addition, some critics assert that law enforcement officials will eventually want to test DNA for a person’s propensity for violence, substance addiction and the like.<sup>72</sup> They believe that there is no reason to assume that the biological samples, once in the hands of the government, will be safe from abuse since they are retained indefinitely.<sup>73</sup> This argument is a red herring. While theoretically possible, it is not likely to become reality on a number of levels. First, the time and cost involved in expanding the development of DNA profiles to cover the entire human genome, or even a significant portion of it, would be prohibitive. As discussed above, forensic DNA tests target only a tiny fraction of a person’s DNA.<sup>74</sup> Therefore, the government would have to profile the remainder of the offender’s DNA to generate this additional information. As a result, the time and expense required to conduct this additional testing would be astronomical. Given that states are already experiencing significant funding issues just to cover the cost of creating identity profiles for convicted offenders, it is unlikely that DNA testing will be expanded to cover additional areas.<sup>75</sup>

Moreover, as discussed above, most physical and psychological traits are too complex to be linked to one particular gene.<sup>76</sup> Traits such as height and weight are influenced by the cumulative effects of multiple genes and the person’s interaction

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<sup>71</sup> D.H. Kaye, *Please, Let’s Bury the Junk: The CODIS Loci and the Revelation of Private Information*, 102 NW. U. L. REV. 70, 76 (2007).

<sup>72</sup> See Simoncelli, *supra* note 15 (discussing the escalating potential for abuse when combining the expanding DNA profile database with increasing knowledge of behavior associated with genes); see also Guy Gugliotta, *Rush to Use of DNA Sampling Raises Questions About Privacy*, LOS ANGELES TIMES, Sept. 5, 1999, at A-12, available at <http://articles.latimes.com/1999/sep/05/news/mn-0764> (discussing the possibility of someday identifying those with a predisposition to certain behavior).

<sup>73</sup> See Simoncelli, *supra* note 15 (only one state requires the destruction of collected genetic samples, while twenty-nine actually require their retention); see also Gugliotta, *supra* note 72 (expressing fear at the possibility of abuse stemming from states failing to destroy biological samples).

<sup>74</sup> See *supra* Part II.A.

<sup>75</sup> See, e.g., NAT’L INST. OF JUSTICE, OFFICE OF JUSTICE PROGRAMS, U.S. DEP’T OF JUSTICE, Report To The Attorney General on Delays in Forensic DNA Analysis 2 (2003).

<sup>76</sup> See *supra* Part III.A.

with the environment.<sup>77</sup> As a result, DNA obtained from a single individual cannot provide an accurate physical description or act as a predictor for violence. Thus, Gregory LaBerge, Director of the Denver Crime Laboratory, believes critics are “making this [genetic privacy] argument for nothing because they don’t understand human genetics.”<sup>78</sup> Furthermore, even if it were technologically feasible, there would be little value to law enforcement to test all offender samples for the presence of certain genetic markers (such as those for violence or aggression).<sup>79</sup> What law enforcement would really be interested in is what type of physical or psychological profile is presented by the *crime scene* DNA sample such that a more complete profile of a suspect can be developed.

Even if the cost of such genetic testing were not an issue, federal law is. It prohibits government officials from testing offenders’ DNA samples for anything other than identity markers.<sup>80</sup> Strict penalties of up to one year in jail and a \$250,000 fine are provided for each offense for the unauthorized dissemination or use of a DNA sample or profile.<sup>81</sup> Despite this prohibition, some critics worry that law enforcement could still release the DNA profiles of offenders to third parties such as insurance companies.<sup>82</sup> In 2008, President Bush signed into law the Genetic Information Nondiscrimination Act, which forbids employers and insurance companies from denying employment, promotions or health coverage to persons whose genetic tests show that they have a predisposition to certain diseases or ailments.<sup>83</sup> Consequently, whatever minimal benefit might be

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<sup>77</sup> *Concepts and Terms in Genetic Research—A Primer*, ALCOHOL RESEARCH AND HEALTH, (2002), available at [http://www.findarticles.com/p/articles/mi\\_m0CXH/is\\_3\\_26/ai\\_106731230](http://www.findarticles.com/p/articles/mi_m0CXH/is_3_26/ai_106731230); Gudrun A. Brockmann et al., *Quantitative Trait Loci Affecting Body Weight and Fatness from a Mouse Line Selected for Extreme High Growth* (1998), available at <http://www.genetics.org/cgi/reprint/150/1/396.pdf>.

<sup>78</sup> Interview with Gregory LaBerge, Director of Denver Police Crime Laboratory (Dec. 14, 2007) (on file with author).

<sup>79</sup> Criminologists may see value in performing research on DNA profiles such that they could establish genetic markers which could predict propensity for violence or criminal behavior. However, even were such research to be conducted, federal law prohibits the dissemination of any personal identifying information from the offender DNA index. See 42 U.S.C.A. § 14132(b)(3).

<sup>80</sup> § 14132(b)(3)(D).

<sup>81</sup> § 14133(c)(2).

<sup>82</sup> CBS News, *DNA Dragnet*, CBS NEWS, Sept. 12, 2004, available at <http://www.cbsnews.com/stories/2004/09/10/60minutes/main642684.shtml>.

<sup>83</sup> CBS News, *Bush Signs Anti-Discrimination Bill*, CBS NEWS, May 21,

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gained from testing the entire genome of offenders is offset by the significant risk trying to achieve it.

*B. Statistical Arguments*

Critics also contend that criminalists have overstated the importance of DNA matches obtained from database searches obtained through CODIS. In particular, they allege that 1) use of the product rule overestimates the statistical probability of two random individuals having the same DNA profile (i.e., the chances that a second individual, distinct from the one identified in CODIS as matching the crime scene sample, has the same DNA profile); and 2) that a more conservative estimate of that probability should be used where a match to the crime scene sample is derived from a database.<sup>84</sup> A few statisticians have challenged the use of the product rule to estimate the random match probability (derived from simply multiplying the individual probabilities of finding a given STR length at each allele), asserting that it cannot be assumed that the occurrence of alleles at each loci are independent of one another.<sup>85</sup> Courts have uniformly accepted use of the product rule as a reliable method to calculate the rarity of a DNA profile, however.<sup>86</sup>

As to the second question, a more legitimate debate does exist (as it does in many other scientific disciplines) as to what method(s) of statistical analysis should be presented to the jury for determining the probability of obtaining a matching DNA profile from a database search. Four methods have been proposed as to how to report the statistical significance of such a match: 1) reporting the same random match probability obtained from use of the product rule (the rarity statistic); 2) using one set of loci to screen and identify a suspect and then using a different set to confirm the match (NRC I Recommendation); 3) reporting

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2008, available at <http://www.cbsnews.com/stories/2008/05/21/national/main4115862.shtml>; Genome.gov, *President Bush Signs the Genetic Information Nondiscrimination Act of 2008*, May 21, 2008, NAT'L INST. HEALTH, <http://www.genome.gov/27026050>.

<sup>84</sup> *People v. Barney*, 10 Cal. Rptr. 2d 731, 740–41 (Cal. App. 1992).

<sup>85</sup> Kevin Devlin, *Devlin's Angle: Damned Lies*, MATHEMATICAL ASS'N AM. ONLINE, Oct. 2006, [http://www.maa.org/devlin/devlin\\_10\\_06.html](http://www.maa.org/devlin/devlin_10_06.html). Where appropriate, scientists will often use a co-ancestry coefficient of .01 in calculating the random match probability via the product rule to account for lack of independence, however. See Budowle et al., *supra* note 42, at 2–3.

<sup>86</sup> *People v. Nelson*, 185 P.3d 49, 61 (Cal. 2008) (citing *People v. Soto*, 981 P.2d 958, 977 (Cal. 1999)).

the database match probability obtained from dividing the random match probability by the total number of profiles contained in the database used to obtain the match (NRC II recommendation); and 4) using a Bayesian formula to account for the fact that many other profiles have been eliminated as the source of the sample (Balding-Donnelly approach).<sup>87</sup> Each formulation seeks to answer a different question: the rarity statistic expresses how rare a genetic profile is in a given population; the NRC II recommendation expresses the probability of obtaining a cold hit from the search of a particular database; and the Balding-Donnelly formula expresses the probability that the person identified through a cold hit is the actual source of the DNA in light of the fact that a known quantity of suspects was eliminated through that search.<sup>88</sup>

Much of this debate centers around the first and third methods. The second method has been largely repudiated by the scientific community as the science of DNA testing and population genetics has improved.<sup>89</sup> The fourth method is rarely encountered as well, having been found to be unsuitable for use in explaining the significance of a DNA match to a jury.<sup>90</sup> Parties have urged courts to require that the database match probability (NRC II recommendation) be presented either in conjunction, with or in place of, the rarity or random match probability statistic.<sup>91</sup> Essentially, they want courts to adopt the National Resource Council's 1996 recommendation that the probability number needs to account for the probability of drawing a matching profile from the database due to random chance.<sup>92</sup>

Proponents of the database probability figure point to the findings of Kathryn Troyer, an analyst at the Arizona state crime

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<sup>87</sup> *Id.* at 62–63.

<sup>88</sup> *United States v. Jenkins*, 887 A.2d 1013, 1023 (D.C. 2005).

<sup>89</sup> *Nelson*, 185 P.3d at 62.

<sup>90</sup> *Jenkins*, 887 A.2d at 1025 n.19 (citing National Research Council, *The Evaluation of Forensic DNA Evidence*, 192–202 (1996)).

<sup>91</sup> See Mike Redmayne, *Rationality, Naturalism, and Evidence Law*, 2003 MICH. ST. L. REV. 849, 880 (stating that searching against a database is much more likely to produce a (false) match, and the probability of a true match should be reduced before presenting to a jury, therefore large database searches are more favorable for a defendant).

<sup>92</sup> It is unclear whether the NRC's recommendation advocates the presentation of both the rarity statistic and the database match probability or just the database match number. The DNA Advisory Board in 2000 found that the NRC report is best read to require presentation of both numbers. *Jenkins*, 887 A.2d at 1020.

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lab, for support. She searched the 65,000 DNA profiles contained in the Arizona DNA database against one another, looking for matches.<sup>93</sup> She discovered that 144 of the profiles matched at least 9 of 13 loci, despite the fact that the FBI estimates the probability of such a match at only one in 113 billion.<sup>94</sup> Troyer's findings are deceptive when used in the context of this debate, however. Instead of comparing one DNA profile in isolation to all others in the database (as is done in a forensic comparison), Troyer compared every profile to each other, resulting in some two billion comparisons.<sup>95</sup> Thus, it is not unexpected that some partial matches were discovered.

To help explain these statistical theories, an analogy can be drawn to the birthday game. The odds of one individual having the same birthday as a second individual chosen at random are about 1 in 365 (the random match probability).<sup>96</sup> However, now assume that we compare the birthdates of a class of 10 people to the first individual. The odds of finding a matching birthday are now about 1 in 36.5 (dividing by the number of people in the group to arrive at the database match probability). The odds become even greater (about 1 in 9) of finding two people with the same birthday when we simply ask whether two different people in the group have the same birthday.<sup>97</sup> This last example is essentially what Troyer did in her experiment, which helps explain why her findings are of limited value in the forensic context. Of course, the most significant of Troyer's findings is that *none* of the 65,000 profiles exactly matched one another, validating the implication of the FBI's rarity statistic that DNA profiles are essentially unique.

Many scientists have challenged the NRC recommendation as being too conservative. Budowle asserts that the NRC recommendation was not designed to supersede the random match probability estimate; rather, it was intended to address a different question as to the probability of finding a matching

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<sup>93</sup> Maura Dolan & Jason Felch, *The Verdict is Out on DNA Profiles*, LOS ANGELES TIMES, July 22, 2008, available at <http://articles.latimes.com/2008/jul/20/local/me-dna20>.

<sup>94</sup> *Id.* In Troyer's study, 122 profiles matched at 9 loci, 20 matched at 10 loci, and one matched at each of 11 and 12 loci. The latter two matches belonged to close relatives. *Id.*

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

<sup>96</sup> See *supra* Part III.B.

<sup>97</sup> Birthday Odds - Other People's Birthdays, <http://leaver.org/noca/birthday/other.html> (last visited Apr. 18, 2009).

DNA profile in the database.<sup>98</sup> He argues that providing this alternate version of the probability estimate would not be useful to the jury because it “grossly understates the value of the evidence when it is being considered in the context of the case.”<sup>99</sup>

Donnelly and Friedman looked at the NRC recommendation in a similar light. They assert that the NRC simply asked the wrong question.<sup>100</sup> They argue that instead of asking how the DNA evidence alters the probability that the database contains a profile which matches that of the crime scene sample, the scientist should rather ask how the evidence alters the probability that the person identified in the database search is the source of the crime scene sample.<sup>101</sup> Thus, they assert that the NRC’s modification would introduce improper evidence before the jury. Under the NRC’s formulation, the jury would hear testimony on the issue of “[h]ow probable is it that someone represented in the database was the source of the sample found at the crime scene[;]” a question, according to Donnelly and Friedman, not properly before the jury.<sup>102</sup> They concluded that the DNA expert should only advise the jury of the likelihood ratio; in other words, “how probable it is that the DNA evidence would arise if Matcher [the source of the matching offender profile] were the source of the sample as compared to how probable it is that the evidence would arise if he were not.”<sup>103</sup>

At least two courts have held that the rarity statistic is relevant and admissible where a suspect is first identified through a database search. In *United States v. Jenkins*, the D.C. Circuit Court noted that:

When dealing with DNA evidence, the most probative evidence for a factfinder is that which indicates whether or not the DNA obtained from a crime scene matches the DNA obtained from the suspect. The likelihood that the suspect is the actual source of the DNA is best expressed through the rarity of a particular profile. Thus, the rarity statistic is highly probative and will always be

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<sup>98</sup> BRUCE BUDOWLE ET AL., LABORATORY DIVISION OF THE FEDERAL BUREAU OF INVESTIGATIONS, CLARIFICATION OF STATISTICAL ISSUES RELATED TO THE OPERATION OF CODIS, at 9 <http://www.promega.com/geneticidproc/ussymp17proc/oralpresentations/budowle.pdf>.

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

<sup>100</sup> Peter Donnelly & Richard D. Friedman, *DNA Database Searches and the Legal Consumption of Scientific Evidence*, 97 MICH. L. REV. 931, 944 (1999).

<sup>101</sup> *Id.* at 957–58.

<sup>102</sup> *Id.* at 961 (emphasis omitted).

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

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relevant.<sup>104</sup>

Similarly, the California Supreme Court recently upheld the admissibility of the rarity statistic in *People v. Nelson*.<sup>105</sup> The court found that since the defendant, not the database, is on trial, “the question of how probable it is that the *defendant*, not the database, is the source of the crime scene DNA remains relevant.”<sup>106</sup>

In light of *Nelson*, the question still remains whether the database match probability is relevant. The court noted that its decision does not mean that the rarity statistic is the only statistic which is relevant and admissible in a cold hit case.<sup>107</sup> However, this statistic asks a question not before the jury, and therefore, in my mind, should not be presented. As the California Supreme Court stated, the defendant, not the database, is on trial. As such, the only relevant question is how likely is it that the defendant is the source of the crime scene sample, a question the database match probability does not answer. If the database match probability estimate were admitted, it could potentially inject confusion, not clarity, into the process.<sup>108</sup>

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<sup>104</sup> United States v. Jenkins, 887 A.2d 1013, 1025 (D.C. 2005).

<sup>105</sup> *People v. Nelson*, 185 P.3d 49, 52 (Cal. 2008).

<sup>106</sup> *Id.* at 66 (emphasis in original).

<sup>107</sup> *Id.* at 61. The *Nelson* court noted that it was unlikely that the database match probability would have been significant to the jury in that case since the rarity statistic was one in 930 sextillion (93 followed by 22 zeros) and the database match figure was one in five quintillion (five followed by 18 zeroes). The latter figure is derived by dividing the rarity figure by the number of profiles contained in the database—184,000. However, in cases where the odds were smaller and the size of the database larger, the court noted the database match probability might also be probative. *Id.* at 52, 63 n.1.

<sup>108</sup> The real problem with this statistic is determining where to draw the line for its admissibility. In some cases (where the DNA profile is extremely rare and the number of profiles in the database is relatively low), the statistic reports a number (like that in *Nelson*) which is not likely to influence the jury one way or the other since the odds reported by both are extremely low. However, where the random match probability is not nearly so large and the size of the database is larger, the database match probability presents an overly conservative estimate. For example, assume the probability of two people having the same DNA profile is one in a trillion and that there are five million profiles in the database. The NRC II recommendation would require dividing the two numbers, resulting in a final probability of one in 200,000. Or, take an even more extreme case. Suppose, due to degradation of the crime scene sample, that only five of the thirteen loci are identified and the resulting five loci are run through CODIS (a practice known as a partial match search). The random match probability would now only be approximately one in one million. Assuming the same number of profiles, the database match probability would

*C. DNA Database Searches Are Prone to Errors*

Critics also contend that because DNA test results are not infallible, cold hits from DNA databanks should not be treated as some sort of gold standard, serving as a substitute for other criminal investigation methods.<sup>109</sup> This argument again misses the mark. First, a hit in a DNA database is the start of the investigation process, not the end. As LaBerge puts it, “science points you to the person, but then investigation has to confirm it.”<sup>110</sup> In other words, while DNA puts the person at the crime scene, the police still have to establish motive, opportunity, and the like.

Furthermore, several layers of quality control are built into the system to prevent false positive identifications from occurring as a result of a database searches.<sup>111</sup> Once a match is identified, the lab which ran the initial offender profile must re-run that sample, and the lab which uploaded the forensic profile must confirm that match as well.<sup>112</sup> Thus, errors in identification are much less likely to occur from a cold hit as compared to those from a one-on-one comparison of the forensic sample to a known suspect.<sup>113</sup>

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now be five in one. Analyzing the numbers intuitively, however, one cannot help but conclude that the database match probabilities are far too low. In the first example, one would expect to find as many as 25 matches in CODIS (dividing five million by 200,000). In the second example, every profile in CODIS should theoretically match the crime scene sample. These numbers are of course nonsensical, since even in Troyer’s study, a partial match search should turn up only a few hundred matching profiles. Both the NRC II Report and the DNA Advisory Board recognized this anomaly which can be adjusted for by invoking Bayesian statistics to account for the prior probabilities associated with the size of the database. DNA Advisory Board, *Statistical and Population Genetics Issues Affecting the Evaluation of the Frequency of Occurrence of DNA Profiles Calculated From Pertinent Population Database(s)*, 2 FORENSIC SCI. COMM. 3 (2000), available at <http://www.fbi.gov/hq/lab/fsc/backissu/july2000/dnastat.htm>. As the DNA Advisory Board noted, however, these complicated calculations may not be “particularly helpful” to the jury in the context of a criminal trial. *Id.*

<sup>109</sup> Sheri Fink, *Reasonable Doubt: Questions About the Forensic Infallibility of DNA Emerge Even as Police Begin to Use It to Profile Suspect by Race*, DISCOVER, July 29, 2006, available at <http://discovermagazine.com/2006/jul/reasonable-doubt>.

<sup>110</sup> LaBerge, *supra* note 78.

<sup>111</sup> *Id.* LaBerge notes that it is very unlikely to contaminate the offender profile with DNA from the crime scene because the suspect’s profile is already in the database. Error could result, however, if the profile from the crime scene is not properly processed and the match identified in CODIS is thus erroneous.

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

<sup>113</sup> In one egregious case, the Houston crime lab was shut down for an

*D. DNA Databases are an Inefficient Use of Resources*

Finally, critics allege that DNA databanks are a waste of time and money.<sup>114</sup> The basis for this argument is that DNA is currently collected from only a small percentage of crime scenes.<sup>115</sup> Tracy and Morgan note that over 87% of the total number of crimes committed are property crimes as opposed to violent crimes, and that DNA evidence is found at such crime scenes only six to ten percent of the time.<sup>116</sup> Thus, they assert that DNA database mining will not be very successful for solving the vast majority of crimes because “it is highly unlikely that police departments have sufficient resources to look for such evidence . . . .”<sup>117</sup>

This does not account for the fact, however, that each criminal is often responsible for committing multiple property crimes over his lifetime and that by solving just one of these types of cases the police may solve several others as a result.<sup>118</sup> It is also important to note that the use of DNA databases helps the police solve murder and rape cases, some of the costliest and most invasive crimes. As a result, a substantial savings can be expected if a significant number of murder and rapes are prevented by the deterrent effect of DNA databases.<sup>119</sup>

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extended period in 2002 to review erroneous conclusions of criminalists which resulted from sloppy technique and contamination of samples. In particular, it was discovered that analysts often selectively interpreted the alleles found in crime scene samples to match those of identified suspects. Michael R. Bromwich, *Final Report of the Independent Investigator for the HPD Crime Lab and Property Room*, at 32, 39–40, June 13, 2007, available at <http://www.hpdlabinvestigation.org/reports/070613report.pdf>.

<sup>114</sup> See Diane Cardwell, *New York State Draws Nearer to Collecting DNA in All Crimes*, N.Y. TIMES, May 4, 2006, available at [http://www.nytimes.com/2006/05/04/nyregion/04dna.html?\\_r=1&oref=slogin](http://www.nytimes.com/2006/05/04/nyregion/04dna.html?_r=1&oref=slogin) (discussing how influx of genetic material would lead to inefficient use of resources).

<sup>115</sup> Tracy & Morgan, *supra* note 9, at 653.

<sup>116</sup> *Id.* at 647, 652–53.

<sup>117</sup> *Id.* at 654.

<sup>118</sup> For example, in a sixteen month period from 2006–07, Denver solved 40 burglary cases using DNA recovered from crime scenes. The burglars were estimated to have broken into 243 homes apiece. Kirk Mitchell, *DNA Solves Burglary Backlog: Federal Grant Running Out for Investigating Burglary Cases*, DENVER POST, June 18, 2007, available at [http://www.denverpost.com/search/ci\\_6165853](http://www.denverpost.com/search/ci_6165853).

<sup>119</sup> See Ray Wickenheiser, *The Business Case for Using Forensic DNA Technology to Solve and Prevent Crime*, 7 J. BIOLAW & BUS. 53 (2004), available at <http://www.dnaresource.com/documents/BusinessCaseforDNA.pdf>.

## IV. THE LEGAL JUSTIFICATION FOR DNA DATABASES

Next, it is necessary to address some of the legal issues surrounding the taking of DNA samples from convicted offenders and felony arrestees. After determining whether such a testing program constitutes a search, I discuss what method of analysis should be used to evaluate its validity. To do so, I will first examine the Supreme Court precedent involving suspicionless search schemes generally, and then examine some of the lower court decisions which pertain specifically to DNA databases.

*A. Is the Compelled Extraction of DNA from Offenders and Arrestees a Search?*

In determining the constitutionality of DNA databases, the first question that must be answered is whether the taking of blood or buccal swab samples<sup>120</sup> for the purposes of developing a DNA profile constitutes a search requiring any level of Fourth Amendment protection. Citizens have a right under the Fourth Amendment to be free from unreasonable searches and seizures where they have a legitimate expectation of privacy in the area to be searched. Public exposure of the object or thing to be searched, however, defeats the privacy interest and thus removes a particular investigative tool or tactic from Fourth Amendment protection.<sup>121</sup> For example, the Supreme Court has held that a person does not have a reasonable expectation of privacy in the sound of his voice:

The physical characteristics of a person's voice, its tone and manner, as opposed to the content of a specific conversation, are constantly exposed to the public. Like a man's facial characteristics, or handwriting, his voice is repeatedly produced for others to hear. No person can have a reasonable expectation that others will not know the sound of his voice, any more than he can reasonably expect that his face will be a mystery to the world.<sup>122</sup>

Courts have consistently held that fingerprints do not implicate Fourth Amendment concerns on similar grounds.<sup>123</sup> In

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<sup>120</sup> A buccal swab is a cotton-tipped applicator used to collect cheek cells from the inside of one's mouth, which is a good source of DNA. National Marrow Donor Program, *Questions & Answers About Buccal Swabs*, [http://www.lssu.edu/studentlife/documents/buccal\\_swab\\_qa\\_032306.pdf](http://www.lssu.edu/studentlife/documents/buccal_swab_qa_032306.pdf) (last visited May 25, 2009).

<sup>121</sup> *See, e.g.*, *United States v. Dionisio*, 410 U.S. 1, 13–14 (1973).

<sup>122</sup> *Id.* at 14.

<sup>123</sup> *See, e.g.*, *Napolitano v. United States*, 340 F.2d 313, 314 (1st Cir. 1965);

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holding that arrested persons do not have an expectation of privacy in their fingerprints, the Maine Supreme Court likened fingerprints to any other outward physical characteristics of a person:

Fingerprints are an unchanging physical characteristic. A person legally arrested and in custody can no more prevent the police from ascertaining the characteristics of the papillary ridges of his fingers or palms or feet than he can prevent the police from ascertaining the color of his eyes, the color of his hair, or the shape of his nose or any other patent physical characteristic. There is nothing in one's fingerprints which ought to be protected by probable cause or warrant requirements once he is custody agreeably to the Fourth Amendment of the Constitution.<sup>124</sup>

Thus, the only issue in such cases is whether the seizure of the person to accomplish the recording of the physical characteristic such as fingerprints is validly supported by probable cause.<sup>125</sup>

So what is the difference constitutionally, if any, between the taking of a person's fingerprints and analyzing a person's cells for a DNA identification profile? The answer lies in the method of extraction. A fingerprint is visible on the surface of the body and no invasive measures have to be taken to obtain it; on the other hand, with DNA, cells must be removed from the body through extraction of blood or cheek swab.<sup>126</sup> The Supreme Court has held that an intrusion below the body's surface to obtain information about a crime is a search.<sup>127</sup> It has also held that even the taking of fingernail scrapings from the body's surface is a search.<sup>128</sup> Kaye thus concludes that the Court could rely on

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United States v. Iacullo, 226 F.2d 788, 792–93 (7th Cir. 1955).

<sup>124</sup> State v. Inman, 301 A.2d 348, 355 (Me. 1973).

<sup>125</sup> See, e.g., Davis v. Mississippi, 394 U.S. 721, 721, 725 (1969) (holding that fingerprints obtained from a defendant during illegal detention not based on probable cause was constitutionally invalid).

<sup>126</sup> DNA is also contained in surface cells such as skin and hair. It is not unforeseeable that collection of DNA may soon be done simply by sampling sloughed skin cells from a fingertip. See Ray A. Wickenheiser, *Trace DNA: A Review, Discussion of Theory, and Application of the Transfer of Trace Quantities of DNA Through Skin Contact*, 47 J. FORENSIC SCI. 442, 442 (2004), available at [http://projects.nfstc.org/workshops/resources/literature/Amplification/32\\_Trace%20DNA\\_A%20Review,%20Discussion%20of%20Theory,%20and.pdf](http://projects.nfstc.org/workshops/resources/literature/Amplification/32_Trace%20DNA_A%20Review,%20Discussion%20of%20Theory,%20and.pdf) (discussing possible sources for DNA).

<sup>127</sup> See Skinner v. Ry. Labor Exec's. Ass'n, 489 U.S. 602, 616 (1989) (“[I]t is obvious that this physical intrusion, penetrating beneath the skin, infringes an expectation of privacy that society is prepared to recognize as reasonable.”).

<sup>128</sup> See Cupp v. Murphy, 412 U.S. 291, 295 (1973) (the taking of fingernail scrapings is a search because it goes beyond the recording of mere physical characteristics “constantly exposed to the public” and constitutes the “type of

these “dignitary interests” implicated by the physical invasion necessary to obtain a DNA sample as a “*bona fide* Fourth Amendment event.”<sup>129</sup>

DNA can also be retrieved from “slough[ed]” skin cells or other material shed naturally from the body, however.<sup>130</sup> If a method were perfected such that DNA samples could be collected from inmates and arrestees without intruding into the body’s interior, would DNA sampling cease to be a search? The answer would appear to be no. The Court has indicated that the ensuing chemical analysis of a biological sample is a “further invasion” of privacy since biological samples can reveal a “host of private medical facts” about an individual.<sup>131</sup> Professor Kaye considers this fact as the most persuasive reason to consider DNA sampling a search.<sup>132</sup>

However, would this still be the case if the DNA samples, which were taken from the body’s surface, were destroyed once the identification profile had been uploaded into the system? LaBerge notes that under these circumstances, DNA testing is equivalent to fingerprinting because it is limited to identification purposes only.<sup>133</sup> Kaye also believes that, under such circumstances, DNA sampling could cease to be a search.<sup>134</sup> Destruction of the DNA samples would raise other issues, though. As discussed in Part V, preservation of the samples serves several important interests, including quality control and allowing for the adoption of technological improvements.<sup>135</sup> Given the host of restrictions placed on the testing and distribution of DNA samples, however, the distinction between these two situations seems somewhat academic, regardless of whether the samples are destroyed or not.

An additional consideration in this context is whether DNA testing of convicted felons is a search, given the fact that such

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severe, though brief, intrusion upon cherished personal security”).

<sup>129</sup> D.H. Kaye, *Who needs Special Needs? On the Constitutionality of Collecting DNA and Other Biometric Data From Arrestees*, 34 J.L. MED. & ETHICS 188, 191 (2006).

<sup>130</sup> Rebecca Kanable, *DNA from Fingerprints?*, L. ENFORCEMENT TECH. July 2005, [http://www.officer.com/print/Law-Enforcement-Technology/DNA-from-Fingerprints/1\\$25197](http://www.officer.com/print/Law-Enforcement-Technology/DNA-from-Fingerprints/1$25197).

<sup>131</sup> *Skinner*, 489 U.S. at 616–17.

<sup>132</sup> Kaye, *supra* note 129, at 191.

<sup>133</sup> LaBerge, *supra* note 78.

<sup>134</sup> D.H. Kaye, *The Constitutionality of DNA Sampling on Arrest*, 10 CORNELL J.L. & PUB. POL’Y, 455, 482 (2001).

<sup>135</sup> See *infra* Part V.

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individuals lose many of their rights to privacy due to security and administrative concerns. Because prisoners do not lose all of their constitutional rights by reason of their confinement,<sup>136</sup> courts have universally held that the involuntary taking of DNA samples constitutes a search under the Fourth Amendment.<sup>137</sup>

*B. Does the Taking and Subsequent Retention of DNA Samples from Convicted Offenders and Arrestees Constitute an Unreasonable Search?*

1. Supreme Court precedent concerning suspicionless searches generally.

Before discussing how the Fourth Amendment applies to DNA databases, a discussion of the Supreme Court's approach to suspicionless searches in general is warranted. The Court has essentially grouped suspicionless searches into five categories: 1) administrative searches such as inspections or inventory searches; 2) exempted or secured areas such as borders and airports; 3) roadblocks; 4) searches justified by "special needs"; and 5) searches of persons with reduced expectations of privacy.<sup>138</sup> Unfortunately, the Court has failed to apply the above categories in a consistent manner to given searches, or apply a single test consistently across these categories.<sup>139</sup> This has confused lower courts as to which standard should be applied to a given situation and thus muddied the waters as to where DNA databases should fall under this rubric.<sup>140</sup> This has caused one commentator to term the Court's jurisprudence in this area a "quagmire."<sup>141</sup>

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<sup>136</sup> Bell v. Wolfish, 441 U.S. 520, 545 (1979).

<sup>137</sup> See, e.g., People v. Johnson, 139 Cal. App. 4th 135, 1158 (Cal. App. 2006); United States v. Kincade, 379 F.3d 813 (9th Cir. 2004); see also Vernonia Sch. Dist. 47J v. Acton, 515 U.S. 646 (1995).

<sup>138</sup> See Kincade, 379 F.3d at 822–24 (9th Cir. 2004) (listing three categories of suspicionless searches including borders, roadblocks, special needs and administrative); see also Samson v. California, 547 U.S. 843, 847 (2006) (holding that suspicionless searches of those with diminished expectations of privacy would not offend the Fourth Amendment).

<sup>139</sup> See *infra* Part IV.B.1.

<sup>140</sup> See Edwin J. Butterfoss, *A Suspicionless Search and Seizure Quagmire: The Supreme Court Revives the Pretext Doctrine and Creates Another Fine Fourth Amendment Mess*, 40 CREIGHTON L. REV. 419, 474 (2007) (explaining how the Supreme Court's inconsistent decisions in this area put lower courts and litigants in unsettled waters).

<sup>141</sup> *Id.* at 422.

For purposes of this discussion, I will skip administrative searches and exempted areas because they do not apply to DNA databases, except to mention *Camara v. Municipal Court*.<sup>142</sup> In *Camara*, the Court approved a suspicionless search scheme for the first time.<sup>143</sup> In order to evaluate the scheme for the inspection of private residences for building code violations, the Court developed a balancing test, weighing the government interests advanced by the search scheme against the “constitutionally protected interests of the private” person.<sup>144</sup> The Court found that balance favored the government so long as the inspector has the homeowner’s consent or a warrant.<sup>145</sup>

a. Roadblocks

In reviewing subsequent suspicionless search schemes, the Court derived much of its analysis from *Camara*. For example, the Court used this balancing test to approve immigration checkpoint stops in *United States v. Martinez-Fuerte*.<sup>146</sup> There, roadblocks had been set up away from the border at various checkpoints to detect illegal aliens entering the country.<sup>147</sup> Given the reduced expectation of privacy of drivers generally, and the relatively short duration of the stop, the Court found the intrusion on motorists to be minimal.<sup>148</sup> Conversely, it found the government had a legitimate interest and need for this type of stop, particularly since the government could not control a significant portion of illegal immigration from the use of fixed border checkpoints alone.<sup>149</sup>

Furthermore, the Court held that it was not necessary to obtain a warrant prior to setting up such a checkpoint.<sup>150</sup> It distinguished *Camara* on the ground that the search of private residences has traditionally required a warrant; whereas, the search of an automobile has not.<sup>151</sup> It noted that “[t]he degree of

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<sup>142</sup> 387 U.S. 523 (1967).

<sup>143</sup> *Id.* at 538.

<sup>144</sup> *Id.* at 534–35.

<sup>145</sup> *Id.* at 528–29, 534.

<sup>146</sup> 428 U.S. 543 (1976). Although the connection between roadblock stops and DNA-indexing statutes may not be readily apparent, the Court’s discussion of special needs is often intertwined with its checkpoint cases.

<sup>147</sup> *Id.* at 545.

<sup>148</sup> *Id.* at 561–62.

<sup>149</sup> *Id.* at 552, 562.

<sup>150</sup> *Id.* at 545.

<sup>151</sup> *United States v. Martinez-Fuerte*, 428 U.S. 543, 561.

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intrusion upon privacy that may be occasioned by a search of a house hardly can be compared with the minor interference with privacy resulting from the mere stop for questioning as to [nation of] residence.”<sup>152</sup>

Fifteen years later, the Court upheld sobriety checkpoints on similar grounds in *Michigan Dep’t of State Police v. Sitz*.<sup>153</sup> The Court held that the propriety of such checkpoints involves “balancing the state’s interest in preventing accidents caused by drunk drivers, the effectiveness of sobriety checkpoints in achieving that goal, and the level of intrusion on an individual’s privacy caused by the checkpoints.”<sup>154</sup> The Court found that the state had a significant interest in the checkpoints due to the gravity of the drunk driving problem and its interest in eradicating it.<sup>155</sup> In contrast, the Court found that the intrusion suffered by the motorist at such checkpoints is “slight.”<sup>156</sup> The Court also focused on the fact that officers lacked discretion on which vehicles to stop: “[h]ere, checkpoints are selected pursuant to the guidelines, and uniformed police officers stop every approaching vehicle. The intrusion resulting from the brief stop at the sobriety checkpoint is for constitutional purposes indistinguishable from the checkpoint stops we upheld in *Martinez-Fuerte*.”<sup>157</sup>

In contrast, the Court struck down random, suspicionless searches of automobiles for the purpose of conducting registration checks in *Delaware v. Prouse*.<sup>158</sup> The Court refused to approve suspicionless stops in this context because they

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<sup>152</sup> *Id.* at 565.

<sup>153</sup> 496 U.S. 444 (1990).

<sup>154</sup> *Id.* at 449 (1990) (quoting *Sitz v. Michigan Dep’t of State Police*, 429 N.W.2d 180, 182 (Mich. Ct. App. 1988)). Justice Brennan noted in dissent that such a balancing test should only be used where the seizure is “substantially less intrusive” than a typical arrest. *Id.* at 457 (Brennan, J., dissenting) (quoting *Dunaway v. New York*, 442 U.S. 200, 210 (1979)).

<sup>155</sup> *Id.* at 451. The dissenters disagreed with this contention. Justice Brennan argued that the state had failed to show a need for departing from the traditional individualized suspicion requirement. Unlike in *Martinez-Fuerte*, where the government had shown it was difficult to identify individual vehicles carrying illegal aliens, Justice Brennan felt no such showing had been made by the State of Michigan as it pertained to DUI stops. He felt that simply because it may have made it easier to detect drunk drivers by stopping every car was no reason to abandon the requirement of individualized suspicion. *Id.* at 458 (Brennan, J., dissenting).

<sup>156</sup> *Michigan Dep’t of State Police v. Sitz*, 496 U.S. 444, 451.

<sup>157</sup> *Id.* at 453.

<sup>158</sup> 440 U.S. 648 (1979).

involved the “kind of standardless and unconstrained discretion” which the Court had previously disapproved of, insisting that the discretion of the officer in the field be “circumscribed, at least to some extent.”<sup>159</sup> The Court also objected to these sorts of random stops because the potential for the subjective intrusion into the privacy of motorists is greater by generating concern and fear in the mind of motorists.<sup>160</sup> Conversely, in *Sitz*, it found that such subjective intrusions are lacking in fixed checkpoint stops because “the motorist can see that other vehicles are being stopped, he can see visible signs of the officers’ authority, and he is much less likely to be frightened or annoyed by the intrusion.”<sup>161</sup>

In these early checkpoint cases, the Court’s focus seems to have been mainly on the level of discretion afforded to the officer, not the ultimate purpose of the roadblock. It radically shifted its focus, however, in *Indianapolis v. Edmond*.<sup>162</sup> There, the Court struck down vehicle checkpoints designed to interdict illegal drugs.<sup>163</sup> Pursuant to written directives, the officers would stop a predetermined number of vehicles, look for signs of impairment, and walk around the exterior of the vehicles with a drug-sniffing dog.<sup>164</sup> The Court ruled the practice unconstitutional because the “primary purpose [of the checkpoint] was to detect evidence of ordinary criminal wrongdoing.”<sup>165</sup> The Court went on to state that “[w]e are particularly reluctant to recognize exceptions to the general rule of individualized suspicion where governmental authorities primarily pursue their general crime control ends.”<sup>166</sup>

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<sup>159</sup> *Id.* at 661. In a footnote, the Court tacitly approved fixed checkpoints to achieve the same purpose. *Id.* at 663 n.26.

<sup>160</sup> *Id.* at 656 (citing *United States v. Martinez-Fuerte*, 428 U.S. 543, 558 (1976)).

<sup>161</sup> *Sitz*, 496 U.S. at 453 (quoting *United States v. Ortiz*, 422 U.S. 891, 894–95 (1975)) (citations omitted). The Court noted that the fear and surprise it was referring to, however, did not include someone who had been drinking and feared being stopped at the checkpoint and arrested.

<sup>162</sup> 531 U.S. 32 (2000).

<sup>163</sup> *Id.* at 34, 48.

<sup>164</sup> *Id.* at 35.

<sup>165</sup> *Id.* at 38.

<sup>166</sup> *Id.* at 43. It seems something of a stretch to label checkpoints for drug interdiction as mere crime control, yet deem those designed to stop and arrest motorists for driving under the influence as protecting public safety. It can hardly be argued that drunken driving poses more of a threat to public safety than illegal drug use. The Court attempted to distinguish these two situations by focusing on the activity’s connection to driving, noting that drunk driving possesses an “immediate, vehicle-bound threat to life and limb . . . .”

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On its face, the checkpoint in *Edmond* seemed no different than those upheld in *Martinez-Fuerte* and *Sitz*. The officers in all three cases lacked the in-field discretion which could potentially lead to the indiscriminate stopping of motorists that the Court was so concerned about in *Prouse*. However, the Court distinguished *Martinez-Fuerte* and *Sitz* on the ground that those cases involved checkpoints directed at the needs of policing the border and promoting highway safety, respectively. It also rejected the argument that drug couriers are equally hard to detect on an individual basis as were the smugglers of illegal aliens in *Martinez-Fuerte*:

The problem with this argument is that the same logic prevails any time a vehicle is employed to conceal contraband or other evidence of a crime . . . . While the difficulty of examining each passing car was an important factor in validating the law enforcement technique employed in *Martinez-Fuerte*, this factor alone cannot justify a regime of suspicionless searches or seizures. Rather, we must look more closely at the nature of the public interests that such a regime is designed principally to serve.<sup>167</sup>

The Court further confused the issue in *Illinois v. Lidster*<sup>168</sup> by creating yet another distinction—this time between information-gathering law enforcement activities and those focused on general crime control. The checkpoint in *Lidster* was set up to gather information from drivers about a fatal hit-and-run accident that had occurred on the same stretch of highway the previous week.<sup>169</sup> The defendant was stopped and arrested for drunk driving after he nearly hit an officer while attempting to stop at the checkpoint.<sup>170</sup> The Court upheld the checkpoint even though its primary purpose was law-enforcement related.<sup>171</sup> Noting that all law enforcement purposes are not equivalent, it distinguished the stop on the ground that its focus was not, as it was in *Edmond*, to determine whether a vehicle's occupants were committing a crime, but to solicit help in apprehending other individuals.<sup>172</sup> The Court also reasoned that it would be

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Indianapolis v. Edmond, 531 U.S. 32, 43 (2000). This distinction fails to account for the equally serious problem of driving while under the influence of drugs, however.

<sup>167</sup> *Id.* at 43.

<sup>168</sup> 540 U.S. 419 (2004).

<sup>169</sup> *Id.* at 422.

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

<sup>171</sup> *Id.* at 428.

<sup>172</sup> *Id.* at 423.

“anomalous” to permit the police to stop and solicit the same information from pedestrians but prohibit them from seeking “similar voluntary cooperation from motorists.”<sup>173</sup>

The flaw in the Court’s approach in *Edmond* and *Lidster* is that it assumes searches for non law-enforcement purposes are less intrusive than those designed for law-enforcement purposes. The real evil inherent in checkpoint stops is that they corral everyone—innocent and guilty alike—under the bright light of law enforcement’s investigative powers, regardless of whether the stop is allegedly law-enforcement related or not. Butterfoss believes “[t]he crucial factor in the balancing test [should be] . . . whether safeguards other than a requirement of individual suspicion exist to protect the citizen.”<sup>174</sup> He suggests that the Court would have been “better served” to focus on the “privacy interest infringed upon by the government activity and whether the government scheme includes appropriate safeguards against arbitrary actions by government officials.”<sup>175</sup>

The problem with this analysis is that it provides no effective check on law enforcement. All roadblocks would end up being permissible under this test, regardless of their need or purpose, as long as the discretion of the officers is limited, which would almost always be the case. The *Edmond* decision signifies a recognition on the part of the Court that the balancing test approved in *Martinez-Fuerte* and *Sitz* has to have a limit. Unfortunately, the Court chose the wrong vehicle to achieve that end. It is not the fact that the primary purpose of the roadblock is law enforcement-related which offends the constitution. Rather, the real problem in *Edmond* was that the state failed to establish that ordinary crime control methods had failed to reduce the problem of illegal drug activity, and thus roadblocks were a necessary last resort.<sup>176</sup>

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<sup>173</sup> *Illinois v. Lidster*, 540 U.S. 419, 426 (2004). Justice Breyer’s characterization of participation in this checkpoint as “voluntary” seems disingenuous. All motorists were forced to stop at the checkpoint, regardless of whether they wanted to volunteer information or not.

<sup>174</sup> Butterfoss, *supra* note 140, at 439.

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

<sup>176</sup> This is the real distinguishing factor between the situation in *Martinez-Fuerte*, on the one hand, and that in *Sitz* and *Edmond* on the other. Unlike illegal immigration control, there is no evidence that drunk driving or illegal drug trafficking cannot be controlled through conventional law enforcement means. I propose that one additional step is required before the court can approve a roadblock—the state must demonstrate that it has some “special need” for using it, justifying the deviation from the probable cause and warrant

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## b. Special Needs

If the development of the doctrine surrounding checkpoints seems fractured, it is a model of judicial clarity in comparison to the development of the special needs doctrine. This exception to the probable cause requirement was first enunciated by Justice Blackmun in his concurrence in *New Jersey v. TLO*.<sup>177</sup> There, the Court approved the search of a high school student by a school official, supported only by reasonable suspicion.<sup>178</sup> Justice White, writing for the majority, employed the *Camara* balancing test, weighing the interests of the school against the invasion of privacy of the student.<sup>179</sup> Given the substantial interest of the school in maintaining order, the Court found the balance weighed in favor of the school. The Court cautioned that such a deviation from the general rule of probable cause is only appropriate “where the privacy interests implicated by the search are minimal and where ‘other safeguards’ are available ‘to assure that the individual’s reasonable expectation of privacy is not subject to the discretion of the official in the field.’”<sup>180</sup>

Justice Blackmun, however, believed that the balancing test should be used only where the Court is confronted with an “exceptional circumstance in which special needs, beyond the normal need for law enforcement, make the warrant and probable cause requirement impracticable.”<sup>181</sup> Justice Blackmun elaborated on this test in his subsequent dissent in *O’Connor v. Ortega*.<sup>182</sup> He chastised the Court for approving the search of a public employee’s office without first identifying a special need justifying the departure from the normal warrant and probable cause requirements:

In sum, only when the practical realities of a particular situation suggest that a government official cannot obtain a warrant based upon probable cause without sacrificing the ultimate goals to which a search would contribute, does this Court turn to a ‘balancing’ test to formulate a standard of reasonableness for this

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requirements. *See infra*, Part V.

<sup>177</sup> 469 U.S. 325, 351 (1985) (Blackmun, J., concurring).

<sup>178</sup> *Id.* at 347–48.

<sup>179</sup> *Id.* at 337.

<sup>180</sup> *Id.* at 342, n.8 (quoting *Delaware v. Prouse*, 440 U.S. 648, 654–55 (1979) (citation omitted)).

<sup>181</sup> *Id.* at 351 (Blackmun, J., concurring).

<sup>182</sup> *See O’Connor v. Ortega*, 480 U.S. 709, 732–48 (1987) (illustrating how the search of a public employee’s office supported by reasonable suspicion satisfied the special needs test).

context.<sup>183</sup>

Thus, Justice Blackmun believed that the Court should utilize a balancing test to “identify a standard of reasonableness, other than the traditional one” only after a special need has been identified.<sup>184</sup>

A few months later, a majority of the Court adopted the special needs test in *Griffin v. Wisconsin*.<sup>185</sup> The Court upheld the warrantless search of a probationer’s home supported by reasonable suspicion, finding that the supervision concerns inherent in the probation process constitute a special need.<sup>186</sup> It found that the probable cause and warrant requirements would “interfere to an appreciable degree” with the effective operation of the probation system.<sup>187</sup>

Justice Blackmun’s unfortunate choice of words in formulating the special needs test, “beyond the normal need for law enforcement,” soon came to be equated with non-law-enforcement related purposes<sup>188</sup>—something quite different from Justice Blackmun’s original intention. More importantly, the Court adopted Justice Blackmun’s special needs test, not as a prerequisite to engaging in a balancing test for review of *all* departures from the warrant and probable cause requirements, but as a sort of separate category, applicable to only a small subset of such cases, particularly those involving drug testing.

The Court extended the special needs doctrine in subsequent opinions to uphold the suspicionless drug testing of high school athletes, all participants in extracurricular, school activities, railroad employees after accidents, and Customs Service employees.<sup>189</sup> In rationalizing the departure from the warrant and probable cause requirements in those cases, the Court looked at, in part, the noncriminal nature of the suspicionless search

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<sup>183</sup> *Id.* at 741 (Blackmun, J., dissenting).

<sup>184</sup> *Id.* at 744, n.8.

<sup>185</sup> 483 U.S. 868, 873–75 (1987).

<sup>186</sup> *Id.* at 873–75. It should be noted that although the Court applied Justice Blackmun’s test, he dissented. While he believed that probation searches did qualify as a special need, he felt that the warrant requirement should still apply. *Id.* at 881–82.

<sup>187</sup> *Id.* at 876.

<sup>188</sup> *New Jersey v. T.L.O.*, 469 U.S. 325, 351; Jonathan Kravis, Comment, *A Better Interpretation of “Special Needs” Doctrine After Edmond & Ferguson*, 112 *YALE L.J.*, 2591, 2595 (2003).

<sup>189</sup> *See Vernonia Sch. Dist. 47J v. Acton*, 515 U.S. 646, 653, 657 (1995); *Skinner v. Ry. Labor Exec’s. Ass’n*, 489 U.S. 602, 602 (1989); *Nat’l Treasury Employees Union v. Von Raab*, 489 U.S. 656, 656–57 (1989).

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schemes.<sup>190</sup> For example, in *Skinner*, the Court upheld the suspicionless testing of railroad employees after the occurrence of an accident.<sup>191</sup> The Court noted that while the agency rule authorized the release of positive test results to law enforcement, the testing program should be assessed in light of its “obvious administrative purpose[,]” “[a]bsent a persuasive showing” that it was pretextual.<sup>192</sup> It held that the testing program qualified as a special need, emphasizing that the agency ordered toxicological tests “not to assist in the prosecution of the employees, but rather ‘to prevent accident and casualties in railroad operations that result from impairment of employees by alcohol or drugs.’”<sup>193</sup>

Much as it had just done in *Edmond* in the context of checkpoints, the Court coalesced these previous references of non law-enforcement related purposes into its new primary purpose test to evaluate special needs cases in *Ferguson v. Charleston*.<sup>194</sup> There, the city hospital ordered drug screens for all new mothers suspected of using cocaine during pregnancy.<sup>195</sup> Those who tested positive were directed to enter treatment.<sup>196</sup> If the mothers refused, the hospital officials reported the positive tests to local law enforcement.<sup>197</sup>

In analyzing a suspicionless search scheme under the special needs doctrine, the Court instructed that all the available evidence must be examined to determine the scheme’s “relevant primary purpose.”<sup>198</sup> The Court distinguished the drug-testing program at issue in *Ferguson* from others it had previously approved on the ground that the “special need” advanced to justify those programs was one “divorced from the State’s general interest in law enforcement.”<sup>199</sup> In contrast, the Court noted that the “central and indispensable” feature of policy at issue in *Ferguson* was the use of the threat of referral to law enforcement to “coerce” patients into drug treatment.<sup>200</sup>

Recognizing that law enforcement often serves some broader

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<sup>190</sup> *Vernonia Sch. Dist.*, 515 U.S. at 653–54; *Skinner*, 489 U.S. at 603; *Von Raab*, 489 U.S. at 656–57.

<sup>191</sup> *Skinner*, 489 U.S. at 633–34.

<sup>192</sup> *Id.* at 621, n.5.

<sup>193</sup> *Id.* at 620–21 (citing 49 C.F.R. § 219.1(a) (1987)).

<sup>194</sup> *Ferguson v. Charleston*, 532 U.S. 67, 69–70 (2001).

<sup>195</sup> *Id.* at 70.

<sup>196</sup> *Id.* at 72.

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

<sup>198</sup> *Id.* at 81.

<sup>199</sup> *Ferguson v. Charleston*, 532 U.S. 67, 79 (2001).

<sup>200</sup> *Id.* at 80.

social purpose, the Court distinguished the ultimate goal of the program (“get[ting] women . . . into substance abuse treatment”) from its immediate objectives (“generat[ing] evidence for law enforcement purposes”).<sup>201</sup> The Court reasoned that the focus has to remain on the scheme’s immediate objectives because “virtually any nonconsensual suspicionless search could be immunized under the special needs doctrine by defining the search solely in terms of its ultimate, rather than immediate, purpose.”<sup>202</sup> Finding that roadblock seizures were distinct from the more intrusive searches of the body or home at issue in *Ferguson*, the Court made clear that the objectionable nature of the primary purpose of the Charleston drug-testing scheme was different in kind from those at issue in *Sitz* and *Martinez-Fuerte* (which appeared to be suspiciously similar to one another).<sup>203</sup> It also noted that it had previously “explicitly distinguished the cases dealing with checkpoints from those dealing with ‘special needs.’”<sup>204</sup>

Justice Kennedy noted in his concurrence that the distinction drawn between ultimate and immediate purpose “lacks foundation” in prior precedent since the Court had evaluated the schemes at issue in *Skinner* and *Acton* based on their ultimate, not immediate purposes.<sup>205</sup> Because the immediate purpose of almost every search scheme is to obtain evidence of illegal activity in some fashion, he felt that the focus had to remain on the policy’s ultimate purpose.<sup>206</sup>

Justice Scalia, writing in dissent, was even less kind in his analysis of the majority’s position. Noting that the testing program was initiated at first by hospital officials without any law enforcement involvement, and thus served a valid, immediate medical purpose, Justice Scalia criticized the majority for invalidating an otherwise valid search regime simply because

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<sup>201</sup> *Id.* at 82–84.

<sup>202</sup> *Id.* at 84.

<sup>203</sup> *Id.* at 84 nn.21–22.

<sup>204</sup> *Ferguson v. Charleston*, 532 U.S. 67, 84 n. 21 (2001) (quoting *Michigan Dept. of State Police v. Sitz*, 496 U.S. 444, 450 (1990)). The Court drew this distinction despite the fact that the special needs test was never intended to be a distinct category of search, but merely a preliminary justification for departing from the warrant and probable cause requirements. Moreover, it did so without any explanation as to why the two types of cases should be treated differently.

<sup>205</sup> *Id.* at 86–87 (Kennedy, J., concurring).

<sup>206</sup> *Id.* at 87–88.

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a law enforcement purpose had been added to it at a later date.<sup>207</sup> He termed this result as “quite impossible since the special needs doctrine was specifically developed . . . to enable searches *by law enforcement officials* who, of course, have a law enforcement objective.”<sup>208</sup> Justice Scalia pointed to *Griffin* for support:

The Court suggests that if police involvement in this case was some way incidental and after-the-fact, that would make a difference in the outcome . . . . But in *Griffin*, even more than here, police were involved in the search from the very beginning; indeed, the initial tip about the gun came from a detective. Under the factors relied upon by the Court, the use of evidence approved in *Griffin* would have been permitted only if the parole officer had been untrained in chain-of-custody procedures, had not known the possibility a gun was present, and had been unaccompanied by police when he simply happened upon the weapon. Why any or all of these is constitutionally significant is baffling.<sup>209</sup>

Butterfoss criticizes the Court’s use of the primary purpose test in both *Edmond* and *Ferguson*, noting that the Court seemed to have “confused” the distinction between the ultimate and primary purposes of the search regimes.<sup>210</sup> Had the Court focused on the primary purposes of the search regimes in *Sitz*, *Martinez-Fuerte*, and *Edmond*, it would have recognized that “all three programs had the same purpose: attempting to generate evidence to make arrests in order to serve the ultimate purpose of battling a larger societal problem—highway safety, border security, or the drug epidemic.”<sup>211</sup>

Butterfoss concluded that had the Court stuck to its guns and rigorously applied the special needs test to all cases, without resort to the primary purpose test, the rules regarding suspicionless searches would have been significantly clarified:

If the restriction [applying the special needs test to all deviations from the warrant and probable cause requirements] had held, it would have brought some clarity to the debate over whether Fourth Amendment intrusions should be assessed utilizing the Warrant Clause or the balancing test. And to the extent that the only way to uphold suspicionless searches and seizures was through the balancing test, the special needs requirement also would have limited that category of searches. But ‘special needs’

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<sup>207</sup> *Id.* at 98–100 (Scalia, J., dissenting).

<sup>208</sup> *Id.* at 100 (emphasis in original).

<sup>209</sup> *Ferguson v. Charleston*, 532 U.S. 67, 101 (2001).

<sup>210</sup> Butterfoss, *supra* note 140, at 471.

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

eventually came to be treated as simply one of several types of searches with the “closely guarded category of constitutionally permissible suspicionless searches,” and was utilized not as a limit on applying the balancing test, but as a justification for excusing individual suspicion.<sup>212</sup>

Thus, in order to achieve such clarity and consistency, the Court must revert back to Justice Blackmun’s original interpretation of the special needs test and apply it to all suspicionless search cases, not just a small subset.

c. Back to the *Camara* balancing test

Perhaps, in part, due to dissatisfaction over some Court members’ application of the primary purpose test to special needs, a majority of the Court quickly abandoned it in cases involving searches of classes of persons with reduced expectations of privacy such as probationers and parolees. First, in *United States v. Knights*, and then in *Samson v. California*, the Court applied a balancing test, without first resorting to the special needs analysis, to review the propriety of the search in question.<sup>213</sup> This was a direct departure from *Griffin* where the Court had applied the special needs analysis in upholding the search of a probationer.<sup>214</sup>

In *Knights*, the Court held that a search of a probationer’s home supported by reasonable suspicion and performed without a warrant was valid.<sup>215</sup> The Court concluded that Knight’s expectation of privacy was significantly diminished, given his status as a probationer and the fact that his probation order clearly set out the search parameters during his term.<sup>216</sup> Conversely, it found that the government had legitimate interests in integrating probationers back into society and combating recidivism.<sup>217</sup> The Court found that probationers are more likely to reoffend, and as a result “probationers have even more of an incentive to conceal their criminal activities and quickly dispose of incriminating evidence than the ordinary

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<sup>212</sup> *Id.* at 449.

<sup>213</sup> 534 U.S. 112, 118–19 (2001) (quoting *Wyoming v. Houghton*, 526 U.S. 295, 300 (1999)); 547 U.S. 843, 848, 852 n.3 (2006) (*Griffin v. Wisconsin*, 483 U.S. 868, 875 (1987)).

<sup>214</sup> *Griffin*, 483 U.S. at 873–75.

<sup>215</sup> *Knights*, 534 U.S. at 118 (quoting *Ohio v. Robinette*, 519 U.S. 33, 39 (1996)).

<sup>216</sup> *Id.* at 119–20.

<sup>217</sup> *Id.* at 120–21 (citing *Griffin*, 483 U.S. at 880).

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criminal because probationers are aware that they may be subject to supervision and face revocation of probation.”<sup>218</sup> The Court thus concluded that searches performed on less than probable cause and without a warrant were reasonable under the circumstances.<sup>219</sup>

In *Samson*, the court answered a question left open in *Knights*—whether a person’s status as a parolee so diminishes or eliminates a releasee’s expectation of privacy as to justify a completely suspicionless search by a law enforcement officer.<sup>220</sup> There, a police officer, who knew of defendant’s parolee status, stopped him, believing that he had an outstanding parole warrant.<sup>221</sup> Although the officer confirmed that the defendant did not have an outstanding warrant, he searched his person and found a cigarette box containing methamphetamine.<sup>222</sup> In order to determine whether the search was reasonable, the Court applied a balancing test, weighing the “degree to which [the search] intrudes upon an individual’s privacy and, on the other, the degree to which it is needed for the promotion of legitimate governmental interests.”<sup>223</sup>

While stopping short of ruling that parolees are the equivalent of prisoners and thus have no rights, the Court noted that they have “fewer expectations of privacy than probationers, because parole is more akin to imprisonment than probation is to imprisonment.”<sup>224</sup> Given the multiple restrictions imposed on parolees and the fact that the defendant “was ‘unambiguously’ aware” that he was subject to suspicionless searches by a parole officer as a condition of his parole, the Court concluded that he did not have a legitimate expectation of privacy.<sup>225</sup> The Court declined to address whether the parole search conditions constituted a special need under *Griffin* because, “our holding under general Fourth Amendment principles renders such an examination unnecessary.”<sup>226</sup> The Court rejected the dissent’s

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<sup>218</sup> *Id.* at 120.

<sup>219</sup> *Id.* at 121 (citing *Terry v. Ohio*, 392 U.S. 1, 27 (1968); *United States v. Brignoni-Ponce*, 422 U.S. 873, 878 (1975); *Illinois v. McArthur*, 531 U.S. 326, 330 (2001)).

<sup>220</sup> *Samson v. California*, 547 U.S. 848, 857 (2006).

<sup>221</sup> *Id.* at 846.

<sup>222</sup> *Id.* at 846–47.

<sup>223</sup> *Id.* at 848 (quoting *Knights*, 534 U.S. at 119) (citation omitted).

<sup>224</sup> *Id.* at 850.

<sup>225</sup> *Samson v. California*, 547 U.S. 848, 852 (2006) (citing CAL. PENAL CODE § 3067(a) (West 2000); *Knights*, 534 U.S. at 119).

<sup>226</sup> *Id.* at 852 n.3. This, of course, is another way of saying, “we know the

argument that, in light of the fact that parolees have more liberty than prisoners, a search of a parolee must be supported by either individualized suspicion or some special need:

The touchstone of the Fourth Amendment is reasonableness, not individualized suspicion. Thus, while this Court's jurisprudence has often recognized that "to accommodate public and private interests some quantum of individualized suspicion is usually a prerequisite to a constitutional search or seizure," we have also recognized that the "Fourth Amendment imposes no irreducible requirement of such suspicion." Therefore, although this Court has only sanctioned suspicionless searches in limited circumstances, namely programmatic and special needs searches, we have never held that these are the only limited circumstances in which searches absent individualized suspicion could be "reasonable" under the Fourth Amendment.<sup>227</sup>

These two decisions seem to signal an end to the special needs analysis where the subject of the search has a reduced expectation of privacy, reverting back to Justice White's application of the balancing test from *T.L.O.*<sup>228</sup> Thus, rather than establishing a consistent, bright-line doctrine, the Court has adopted an ad hoc approach to evaluating suspicionless search regimes.<sup>229</sup> In doing so, it seems as though it has developed standards of review—not necessarily based on traditional methods of Fourth Amendment analysis—but on whether the Court agrees with the particular suspicionless search scheme in question.

## 2. What standard should be used to review the reasonableness of DNA-indexing laws: Special Needs or Totality of the Circumstances?

While the United States Supreme Court has not yet ruled on the issue, twelve Federal Circuit courts have heard challenges to DNA-indexing laws and all twelve have upheld their constitutionality. The Circuits have split, however, as to the legal rationale which should be used to do so. The Second,

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search will not satisfy the primary purpose test of *Ferguson*, and therefore, we choose not to apply it in this case."

<sup>227</sup> *Id.* at 855–56 n.4 (quoting *United States v. Martinez-Fuerte*, 428 U.S. 543, 560–61 (1976)).

<sup>228</sup> *New Jersey v. T.L.O.*, 469 U.S. 325, 337 (quoting *Camara v. Mun. Court of San Francisco*, 387 U.S. 523, 536–37 (1967)).

<sup>229</sup> *See id.* (citing *Camara*, 387 U.S. at 536–37) (stating that a balancing test must be used for reasonableness).

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Seventh, and Tenth Circuits have held such laws constitutional under a special needs analysis.<sup>230</sup> In contrast, the majority of circuits including the First, Third, Fourth, Eighth, Ninth, Eleventh and D.C. Circuits have upheld DNA-indexing laws under a totality of the circumstances balancing test.<sup>231</sup> The Sixth Circuit upheld the constitutionality of the federal DNA Act without electing a mode of analysis, finding it would satisfy both tests.<sup>232</sup> The United States Supreme Court's metamorphosis of the special needs test into the primary purpose test (and its subsequent backpedaling from the special needs test in *Knights* and *Samson*) is largely responsible for this split.<sup>233</sup>

a. Most circuits have applied a balancing test to DNA-indexing statutes.

Two cases, *United States v. Kincade* and *Nicholas v. Goord*, highlight this split.<sup>234</sup> In *Kincade*, the Ninth Circuit, sitting *en banc*, reviewed the constitutionality of the federal DNA Analysis Backlog Elimination Act of 2000 ("DNA Act") as it applied to a

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<sup>230</sup> *Nicholas v. Goord*, 430 F.3d 652, 666 (2005); *Green v. Berge*, 354 F.3d 675, 678 (7th Cir. 2004); *United States v. Kimler*, 335 F.3d 1132, 1146 (10th Cir. 2003). Several state courts have done so as well. *See, e.g.*, *State v. Martinez*, 78 P.3d 769, 774–75 (Kan. 2003) (concluding that because the "special need" requirement was met, the court then found it appropriate to apply the balancing test weighing the privacy interests and the State's interest); *Dial v. Vaughn*, 733 A.2d 1, 6 (Pa. Commw. Ct. 1999) (determining that a "special need" was established in the defendant's case justifying withdrawal of blood without suspicion or a warrant); *State v. Olivas*, 856 P.2d 1076, 1086 (Wash. 1993) (holding that applying special needs analysis to suspicionless searches is a "better reasoned approach").

<sup>231</sup> *United States v. Weikert*, 504 F.3d 1, 3 (1st Cir. 2007); *United States v. Sczubelek*, 402 F.3d 175, 184 (3d Cir. 2005); *Groceman v. U.S. Dep't. of Justice*, 354 F.3d 411, 413 (5th Cir. 2004); *Jones v. Murray*, 962 F.2d 302, 305 (4th Cir. 1992); *United States v. Kraklio*, 451 F.3d 922, 924–25 (8th Cir. 2006); *United States v. Kincade*, 379 F.3d 813, 832 (9th Cir. 2004); *Padgett v. Donald*, 401 F.3d 1273, 1278 n.4 (11th Cir. 2005); *Johnson v. Quander*, 440 F.3d 489, 494 n.1 (D.C. Cir. 2006).

<sup>232</sup> *See U.S. v. Conley*, 453 F.3d 674, 679–81 (6th Cir. 2006) (discussing that the DNA Act uses both the special needs analysis and the totality of circumstances balancing test).

<sup>233</sup> *See United States v. Knights*, 534 U.S. 112, 122 (2001) (demonstrating the Court's preference for reasonableness over the limited special needs exception); *see also Kincade*, 379 F.3d at 825, 828–32, 839 (discussing the divergence of *Knights* and *Kincade* from the special needs test).

<sup>234</sup> *See United States v. Kincade*, 379 F.3d 813, at 839 (2004) (explaining that the decision was based on the totality of circumstances analysis); *see also Nicholas v. Goord*, 430 F.3d 652, 672 (2005) (relying on the special needs test to uphold New York's DNA statute).

federal probationer.<sup>235</sup> Five judges voted to uphold the statute using a balancing test.<sup>236</sup> A sixth judge concurred in the result but wrote separately, upholding the statute under a special needs analysis.<sup>237</sup> Five justices dissented, including the unlikely alliance of Judges Reinhardt and Kozinski.<sup>238</sup>

Writing for the plurality, Judge O’Scannlain relied upon the totality of the circumstances approach carved out in *Knights* to uphold the DNA Act.<sup>239</sup> Noting that *Knights* represented “something of a departure” from the special needs analysis applied in *Edmond* and *Ferguson*, the plurality concluded that *Edmond* and *Ferguson* do not “condemn[] suspicionless searches of conditional releasees in the absence of a demonstrable ‘special need,’” but rather create “a constitutionally significant distinction between searches of” the general public and those of conditional releasees.<sup>240</sup> The plurality found it significant that the “Court has long understood special needs analysis to be triggered not by a complete absence of suspicion, but by a departure from the Fourth Amendment’s warrant-and-probable cause requirements.”<sup>241</sup> Thus, the plurality reasoned that these two lines of cases suggest that the Supreme Court intended to separate these two classes of persons and subject them to different analysis.<sup>242</sup>

The plurality in *Kincade* also concluded that the special needs test does not apply to conditional releasees.<sup>243</sup> Since conditional releasees, like ex-convicts, are subject to a broad range of restrictions (such as being denied the right to vote or own a gun), the plurality concluded that conditional releasees have “severely constricted expectations of privacy” in comparison with the general citizenry.<sup>244</sup> Thus, the plurality found “that the government has a far more substantial interest in invading their

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<sup>235</sup> *Kincade*, 379 F.3d at 816.

<sup>236</sup> *See id.* at 813 (illustrating that out of the eleven judges on the panel, five were on the majority, one concurred, and five dissented).

<sup>237</sup> *Id.* at 840.

<sup>238</sup> *Id.* at 842.

<sup>239</sup> *Id.* at 832.

<sup>240</sup> *U.S. v. Kincade*, 379 F.3d at 816 (2004), 828, 832.

<sup>241</sup> *Id.* at 829.

<sup>242</sup> *See id.* (distinguishing causes of the special needs analysis used in *Knights* and other cases as being reasonable suspicion or a lack of requirements for warrant-and-probable cause).

<sup>243</sup> *Id.* at 835.

<sup>244</sup> *Id.* at 834.

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privacy.”<sup>245</sup> According to the plurality, it is this distinction between ex-convicts and law-abiding citizens which justifies the government’s heightened interest in monitoring them:

We believe that such a severe and fundamental disruption in the relationship between the offender and society, along with the government’s concomitantly greater interest in closely monitoring and supervising conditional releasees, is . . . in the absence of some non-law enforcement “special need”—at least where such searches meet the Fourth Amendment touchstone of reasonableness as gauged by the totality of the circumstances.<sup>246</sup>

Judge Gould separately concurred in *Kincade*, and found that the special needs test, rather than a balancing test, should be applied to uphold the DNA Act, as it applied to conditional releasees.<sup>247</sup> He believed the Act served the special need of rehabilitating supervised releasees through deterrence.<sup>248</sup> Judge Gould argued that the DNA Act did not run afoul of the *Ferguson* primary purpose test because the “special need of supervised release looks forward to crime in the future while the felon is on supervised release; any use of the CODIS database to solve past crimes is incidental to the special and forward-looking penological need that justifies the program.”<sup>249</sup>

Perhaps the more interesting aspect of Judge Gould’s opinion is the question he posed—whether the government could continue to retain the DNA profile once an offender had completed his term of supervised release.<sup>250</sup> Although he believed that question was not ripe for review, Judge Gould asserted that the privacy interest at stake in that instance would be “substantial.”<sup>251</sup> He noted that the special need (rehabilitation

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<sup>245</sup> U.S. v. Kincade, 379 F.3d at 816 (2004), 834.

<sup>246</sup> *Id.* at 835.

<sup>247</sup> *Id.* at 840 (Gould, J., concurring).

<sup>248</sup> *Id.*

<sup>249</sup> *Id.* Given all the past crimes solved through cold hits, however, I would hardly term DNA databases’ ability to solve such crimes as “incidental” to their rehabilitation purpose. In fact, this is the primary purpose of such databases. See *infra* text accompanying note 315 (noting that one of the primary uses of DNA databases is aiding crime solving).

<sup>250</sup> United States v. Kincade, 379 F.3d 813, at 842 (2004).

<sup>251</sup> *Id.* at 841–42. Although declining to issue an opinion on the issue, Judge Gould indicates that it is possible that the dissenters would pick up a decisive sixth vote if indeed that question is presented to the Ninth Circuit at some point in the future. *Id.* at 843. The First Circuit has also broached this issue, stating in dicta that the government’s right to indefinite retention of DNA samples may not be “automatic” and that a separate balancing of interests would occur were that situation to arise. See, e.g., United States v. Weikert,

through deterrence) would be removed once the conditional releasee had completed his sentence and served his debt to society.<sup>252</sup>

In contrast, the dissenters in *Kincade* were generally opposed to the maintenance of offenders' DNA profiles in a database at any time. Judge Reinhardt rejected the idea that DNA profiles were necessary to help identify offenders, noting that the defendant and others like him had already been identified through booking and fingerprinting.<sup>253</sup> He concluded that "[t]he collection of a DNA sample thus does not 'identify' a conditional releasee any more than a search of his home does—it merely collects more and more information about that releasee that can be used to investigate unsolved past or future crimes."<sup>254</sup>

Judge Reinhardt criticized Judge Gould's special needs analysis as "obliterat[ing] the distinction between law enforcement and non-law enforcement purposes."<sup>255</sup> Instead, he found that the primary purpose of the Act was to generate evidence for "everyday law enforcement purposes."<sup>256</sup> Judge Reinhardt also criticized the plurality's use of a balancing test in the realm of suspicionless search cases, fearing it would permit the use of such searches in "many more situations" than currently authorized.<sup>257</sup> He labeled the permanent housing of offenders' DNA profiles in a national database as having "catastrophic potential" which could be used to "repress dissent" or "eliminate [all] political opposition."<sup>258</sup>

While Judge Reinhardt's dissent is hyperbolic, Judge Kozinski more cogently addressed his concerns in his dissent. Judge Kozinski termed the plurality opinion "an engraved invitation for future expansion" of the database to include innocent citizens.<sup>259</sup>

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504 F.3d 1, 15–18 (1st Cir. 2007). If a court were to invalidate a DNA-indexing law as it applied to offenders who had fully served their sentence, the Supreme Court may be more likely to review the issue of DNA-indexing laws than it has in the past. *See id.* at 15–16.

<sup>252</sup> *Kincade*, 379 F.3d at 841 (Gould, J., concurring).

<sup>253</sup> *Id.* at 857 n.16 (Reinhardt, J., dissenting).

<sup>254</sup> *Id.*

<sup>255</sup> *Id.* at 844.

<sup>256</sup> *United States v. Kincade*, 379 F.3d 813, at 855 (2004). Judge Reinhardt's characterization of the Act's primary purpose is more persuasive. Certainly, the Act is not primarily geared at rehabilitating probationers and supervised releasees; it governs all convicted felons, not just those freed from incarceration.

<sup>257</sup> *Id.* at 864.

<sup>258</sup> *Id.* at 847.

<sup>259</sup> *Id.* at 873 (Kozinski, J., dissenting). *See generally id.* at 872–73 (theorizing that under the plurality's balancing test, the government could

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He reasoned that if it is okay to take offenders' DNA while they are on supervised release, it would be equally justifiable to require ex-probationers to do the same under the theory that they are just as likely to reoffend as current probationers.<sup>260</sup> He summarized the plurality's theory as follows:

We have a pretty good idea that people who have committed crimes in the past are more likely than others to commit crimes in the future. It is thus very, very, very useful for us to get their DNA fingerprints now so we can use them later to investigate crimes.<sup>261</sup>

Judge Kozinski's concern in *Kincade* was not so much the taking of the blood sample, but its subsequent seizure and permanent inclusion in a searchable, nationwide database.<sup>262</sup> Unlike Judge Gould, he believed this issue was ripe to resolve, finding that the state sought to obtain the probationer's DNA, not to monitor his probation, but rather to maintain his DNA profile in CODIS for the remainder of his life.<sup>263</sup> Judge Kozinski felt that the issue needed to be resolved now, because in the future we will be "inured to the idea that the government is entitled to" maintain people's DNA profiles since CODIS will have been credited with solving so many crimes.<sup>264</sup> He likened the situation to the development of fingerprint databases which went relatively unchecked in the 1980s:

As a consequence, we have become accustomed to having our fingerprints on file in some government database. The suggestion that law enforcement agencies, including the FBI, must destroy the fingerprints of those who were wrongfully arrested and booked, and were later released, would today be greeted by reactions ranging from apathy to disdainful snigger. Why? Because we have come to accept that people—even totally innocent people—have no legitimate expectation of privacy in the fingerprints, and that's that.<sup>265</sup>

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require medical labs to turn over blood samples for DNA testing under the guise that the sample had been abandoned and thus the patient no longer retained an expectation of privacy in it).

<sup>260</sup> *Id.* at 872.

<sup>261</sup> *United States v. Kincade*, 379 F.3d 813, at 872 (2004).

<sup>262</sup> *Id.* at 873.

<sup>263</sup> *Id.* at 874.

<sup>264</sup> *Id.* at 873.

<sup>265</sup> *Id.* at 874. *But see* *United States v. Kelly*, 55 F.2d 67, 70 (2d Cir. 1932) (holding that United States attorneys are required to "destroy or to surrender to the defendant all such records [fingerprints and Bertillon measurements] after acquittal or when the prisoner is finally discharged without conviction"); N.Y. CRIM. PROC. LAW § 160.50 (McKinney 2004) (explaining that New York State requires the return of mug-shot photographs and fingerprints to accused yet

Judge Kozinski's position has some merit. Several courts have justified the creation of DNA databases by comparing DNA profiling to the taking of fingerprints during routine booking procedures. For example, the Ninth Circuit in *Rise v. Oregon* found that the information obtained from a DNA profile is "substantially the same as that derived from [a] fingerprint[]." <sup>266</sup> The court held that once a person has been convicted of an offense, he loses any legitimate expectation of privacy in that identifying information. <sup>267</sup>

The *Kincade* plurality quoted *Rise* in support of the proposition that DNA evidence, akin to fingerprints, can be obtained from felons, even where such evidence may not be used in that particular case:

Nevertheless, everyday "booking" procedures routinely require even the merely accused to provide fingerprint identification, regardless of whether investigation of the crime involves fingerprint evidence. Thus, in the fingerprinting context, there exists a constitutionally significant distinction between the gathering of fingerprints from free persons to determine their guilt of an unsolved criminal offense and the gathering of fingerprints for identification purposes from persons within the lawful custody of the state. <sup>268</sup>

The Maryland Court of Appeals made a similar argument in *State v. Raines*, noting that the Maryland DNA Act "merely serves to identify the perpetrator similar to the way investigators have used fingerprints for many years." <sup>269</sup>

This analogy to fingerprinting is not a completely accurate one, however. First, it is hard to argue that placing booking fingerprints in a database violates an offender's rights when millions of other Americans have their prints on file as the result of background checks, driver's license requirements, or security procedures. <sup>270</sup> The same cannot be said of DNA profiles. Outside of the criminal justice context, DNA profiles are rarely kept on

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exonerated individuals unless the "interests of justice require otherwise").

<sup>266</sup> 59 F.3d 1556, 1559 (9th Cir. 1995).

<sup>267</sup> See *id.* at 1559–61 (explaining that, under Oregon Chapter 669, the legitimate state interest in recording the identities of felons convicted of murder or a sexual offense justifies allowing the DOC to freely take their blood samples as they have reduced expectations of privacy).

<sup>268</sup> United States v. *Kincade*, 379 F.3d 813, at 836 n.31 (2004) (quoting *Rise*, 59 F.3d at 1559–60).

<sup>269</sup> 857 A.2d 19, 29 n.11 (Md. 2004).

<sup>270</sup> Tarricone, *supra* note 22, at 244.

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record.<sup>271</sup>

Furthermore, the early cases which upheld the taking of fingerprints from arrestees during the booking process did so, in part, out of recognition that fingerprints were a necessary method of identification of detainees and prisoners.<sup>272</sup> Under this theory, fingerprints and other identifying information (such as mugshot photos) can be taken upon a person's arrest without running afoul of the Fourth Amendment because the information is being used administratively to confirm the identity of the inmate, not convict that person of a crime.<sup>273</sup> Kaye dubs this as the "true identity" exception to the warrant requirement.<sup>274</sup>

The problem that arises with respect to analogizing DNA sampling to booking procedures is that the state is largely using the information for investigatory purposes, not for identification purposes (although it certainly could).<sup>275</sup> Courts have failed to make this distinction, simply assuming that once lawfully obtained for one purpose, the identifying information can be used for any other purpose, including criminal investigation.<sup>276</sup>

For example, in *Johnson v. Quander*, the D.C. Circuit approved the use of DNA profiles from a database for investigatory purposes, pointing out that an innocent individual does not have a right to expungement of his fingerprints or mugshot, even if his conviction is subsequently set aside.<sup>277</sup> Furthermore, the court held that the repetitive access of DNA records stored in CODIS is

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<sup>271</sup> See *id.* at 242 (noting that, as a safety measure, some state laws limit possession of DNA samples and profiles to law enforcement agencies).

<sup>272</sup> See *United States v. Kelly*, 55 F.2d 67, 70 (2d Cir. 1932) (explaining that the process of identification is important whether the offense is a misdemeanor or a felony).

<sup>273</sup> See Kaye, *supra* note 13, at 485–86 (explaining that fingerprinting is a way of identifying an individual who is arrested or charged with a crime).

<sup>274</sup> *Id.* at 488; see also *id.* at 488–89 (reasoning why this exception should apply equally to the collection of DNA samples, if they are indeed used for only this purpose).

<sup>275</sup> See *id.* at 488 (explaining that the identification exception is distinct from the investigation exception).

<sup>276</sup> See, e.g., *Jones v. Murray*, 962 F.2d 302, 308 (4th Cir. 1992) (explaining that DNA technology has multipurpose potential beyond mere identification, including investigating DNA clues at crime scenes); see also *id.* at 306 (noting that states have a legitimate interest in the identity of arrested persons, regardless of whether it is for identifying him, solving a crime the suspect has been arrested for, or solving other past and future crimes).

<sup>277</sup> 440 F.3d 489, 497 (D.C. Cir. 2006) (citing *Stevenson v. United States*, 380 F.2d 590, 593–94 (D.C. Cir. 1967)). *But see, supra* Part II (noting that, under the federal DNA Act, most state laws provide for a right of expungement of DNA profiles).

not a separate search for purposes of the Fourth Amendment because the profiles are akin to snapshots, revealing “identifying information based on a blood test conducted at a single point in time.”<sup>278</sup> Thus, the court concluded that the government’s subsequent “storage and use of [the DNA profile] does not give rise to an independent Fourth Amendment claim.”<sup>279</sup>

Historically, the court’s conflating of these two interests was not much of a concern since the use of fingerprints or DNA for investigatory purposes was linked to the crime for which the defendant was suspected of having committed; as such, the probable cause for arresting the suspect provided the probable cause to detain the suspect to take his prints.<sup>280</sup> With the advent of computerized DNA and fingerprint databases, however, the police have now gone one step further, devising an additional use of biometric identification data—namely, that of solving crimes unrelated to the one for which the defendant was arrested.<sup>281</sup>

Thus, in order to properly analyze whether the compelled provision of biometric identification information violates offenders’ rights, something more than a conclusory assumption that DNA is akin to booking procedures is needed. Kaye contends that this additional investigatory use of biometric identification data must have some independent legal justification, separate and apart from the true identity exception, since the governmental interest in investigation is “distinct from the traditional justification for recording biometric data.”<sup>282</sup> He asserts that it is “more appropriately analyzed under the ‘special needs’ exception” or even an entirely new category of suspicionless searches.<sup>283</sup> Whichever method is used, the use of DNA profiles as an investigatory tool in this manner seems justified since the invasion of privacy is lessened (the police are not examining the DNA samples for evidence that a suspect committed a particular crime but simply holding it for future reference).<sup>284</sup>

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<sup>278</sup> *Johnson*, 440 F.3d at 499.

<sup>279</sup> *Id.*

<sup>280</sup> *See, e.g., United States v. Iacullo*, 226 F.2d 788, 793 (7th Cir. 1955) (explaining that evidence against an accused is admissible if it is reasonably related to the crime charged such that it establishes a common purpose, intent, identity, guilty knowledge, etc.).

<sup>281</sup> *Kaye, supra* note 13, at 487.

<sup>282</sup> *Id.* at 488.

<sup>283</sup> *Id.*

<sup>284</sup> *See id.* at 487–88 (noting that inventoried DNA data can be used to solve

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b. A minority of circuits has used the special needs analysis to review DNA-indexing laws.

A year later in *Nicholas v. Goord*, the Second Circuit took a different approach to the Fourth Amendment analysis of New York's DNA indexing law, which mandated the collection of DNA samples from all convicted felons.<sup>285</sup> The district court had upheld the statute under a general balancing test, concluding that the state's significant interest in aiding criminal investigations outweighed plaintiffs' minimal interest in submitting their DNA for indexing.<sup>286</sup> The Second Circuit rejected the district court's reliance on *Knights* to suggest that a general balancing test applied to DNA-indexing laws.<sup>287</sup> Instead, it relied upon the special needs test to uphold the statute.<sup>288</sup>

The Second Circuit found it important that the search upheld in *Knights* was not a suspicionless search but was instead supported by reasonable suspicion.<sup>289</sup> It found that the Supreme Court's decision to employ a balancing test in that case "was arguably due as much to the existence of individualized suspicion as it was to *Knights*'s reduced expectation of privacy."<sup>290</sup> Noting that the Supreme Court had never applied to a suspicionless search regime a general balancing test, the Second Circuit declined to construe *Knights* as authorizing the application of a general balancing test to the suspicionless searches authorized by the DNA-indexing statute.<sup>291</sup> It also cautioned that applying a balancing test to all suspicionless searches would approve a "considerably more lenient" standard of review to searches which had traditionally been subject to a more "searching inquiry."<sup>292</sup>

The Second Circuit concluded that "the Court's emphasis in its recent cases on applying the special-needs test to suspicionless

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future crimes that are unrelated to original reason the DNA sample was collected and this is not deemed an invasion of privacy).

<sup>285</sup> See 430 F.3d 652, 656 n.5 (2d Cir. 2005) (explaining that the court confined its analysis to the constitutionality of the process of a compulsory blood draw since all plaintiffs had their blood drawn for analysis even though the New York law was amended in 1999 to allow for the taking of DNA sample by buccal cheek swab).

<sup>286</sup> *Id.* at 657.

<sup>287</sup> *Id.* at 665–66.

<sup>288</sup> *Id.* at 666.

<sup>289</sup> *Id.* at 665.

<sup>290</sup> *Nicholas v. Goord*, 430 F.3d 652, 665 (2d Cir. 2005).

<sup>291</sup> *Id.* at 666 (citing *United States v. Kincade*, 379 F.3d 813, 862–63 (9th Cir. 2004) (Reinhardt, J., dissenting)).

<sup>292</sup> *Id.* at 667.

searches strongly suggests, if it does not require, that we should continue to apply the special-needs test to DNA-indexing statutes.”<sup>293</sup> The court read *Edmond* and *Ferguson* as requiring “the application of the special-needs test in cases involving suspicionless searches, and to require that such searches serve as their immediate purpose an objective distinct from the ordinary evidence gathering associated with crime investigation.”<sup>294</sup> It cautioned, however, that not all law enforcement objectives fall outside the ambit of the special needs doctrine.<sup>295</sup> Comparing the *Edmond* and *Lidster* cases, the Second Circuit concluded that the Supreme Court had distinguished information-gathering searches (like the one at issue in *Lidster*) from those involving traditional law enforcement objectives (like the one in *Edmond*).<sup>296</sup>

In reviewing the New York DNA statute, the court found that that the primary purpose of the statute—the creation of a DNA database to help in the investigation of crimes—was more similar to the information-gathering stop approved in *Lidster*.<sup>297</sup> The court noted that the purpose behind DNA indexing was not to determine that a particular individual has engaged in some specific wrongdoing, but rather only to help identify the perpetrator of crimes generally.<sup>298</sup> It found it significant that the DNA samples “‘provide no evidence in and of themselves of criminal wrongdoing,’ and are not sought ‘for the investigation of . . . specific crime[s].’”<sup>299</sup> Thus, the court held that DNA indexing meets the special needs threshold because the state’s primary purpose is “distinct from the ordinary ‘crime detection’ activities associated with normal law-enforcement concerns.”<sup>300</sup>

The rationale underlying the *Nicholas* decision was substantially undercut, however, in *Samson* issued the following year. As discussed above, the *Samson* Court applied a balancing test to the suspicionless search of a parolee, an area it had

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<sup>293</sup> *Id.* at 664.

<sup>294</sup> *Id.* at 663.

<sup>295</sup> *Nicholas v. Goord*, 430 F.3d 652, 663 (2d Cir. 2005) (quoting *Illinois v. Lidster*, 540 U.S. 419, 424 (2004)).

<sup>296</sup> *Id.* (quoting *Lidster*, 540 U.S. at 423) (illustrating that the purpose of a police checkpoint program is to ask vehicle occupants for their assistance in solving a crime, not accusing them of committing one).

<sup>297</sup> *Id.* at 668 (quoting *Lidster*, 540 U.S. at 419–20; *Nicholas v. Goord*, No. 01 Civ. 7891, 2003 U.S. Dist. LEXIS 1621, at \*41 (S.D.N.Y. 2003)).

<sup>298</sup> *Id.* at 668–69 (quoting *Nicholas*, 2003 U.S. Dist. LEXIS 1621, at \*43–44).

<sup>299</sup> *Id.* at 669 (quoting *Nicholas*, 2003 U.S. Dist. LEXIS 1621, at \*44).

<sup>300</sup> *Nicholas v. Goord*, 430 F.3d 652, 669 (2d Cir. 2005).

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previously applied the special needs analysis to.<sup>301</sup> As a result, the Second Circuit again reviewed a DNA-indexing statute in *United States v. Amerson*.<sup>302</sup> The Court limited its inquiry to the narrow question of whether the federal DNA-indexing statute was unconstitutional as it “applied to individuals convicted of nonviolent crimes who were sentenced only to probation.”<sup>303</sup> While noting that its ruling in *Nicholas* may have been undercut in light of *Samson*, as it applied to prisoners and parolees, the Second Circuit refused to extend the *Samson* holding to probationers.<sup>304</sup> “[N]othing in *Samson* suggests that a general balancing test should replace special needs as the primary mode of analysis of suspicionless searches outside the context of the highly diminished expectation of privacy presented in *Samson*.”<sup>305</sup> Since the Supreme Court had not equated the status of probationers with parolees, the Second Circuit reasoned that it should continue to apply the special needs analysis to suspicionless searches of probationers.<sup>306</sup>

As it had in *Nicholas*, the Second Circuit found that the DNA-indexing law in question served a special need.<sup>307</sup> The court explained that what makes the state’s need to create a DNA database so special, despite its relationship to law enforcement goals, is “its incompatibility with the normal requirements of a warrant and probable cause.”<sup>308</sup> The court reasoned that special

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<sup>301</sup> See discussion *supra* Section IV.B.1.c.

<sup>302</sup> *United State v. Amerson*, 483 F.3d 73, 75 (2d Cir. 2007).

<sup>303</sup> *Id.*

<sup>304</sup> *Id.* at 79 n.5.

<sup>305</sup> *Id.* at 79.

<sup>306</sup> *Id.* The First Circuit disagreed with this analysis in *Weikert*. Noting that the circuits have not generally distinguished between the various types of releasees for purposes of Fourth Amendment analysis, the court “conclude[d] that there is no rationale for differentiating supervised release from other conditional release statuses for purposes of determining whether to apply the totality of the circumstances analysis or the special needs analysis.” *United States v. Weikert*, 504 F.3d 1 10–11 (1st Cir. 2007). This position ignores language from *Samson* which likened parolees to prisoners and thus distinguished them from probationers for purposes of the Fourth Amendment. *Samson v. California*, 547 U.S. 843, 850 (2006). The First Circuit’s position is misguided in my view. The real question is not whether there is a difference between types of conditional releasees for purposes of the Fourth Amendment, but whether there is a difference between *prisoners* and conditional releasees. The totality of the circumstances balancing test should be limited to administrative searches (such as that conducted in *Camara*), or to situations involving individuals with severely restricted freedoms (such as inmates).

<sup>307</sup> *United States v. Amerson*, 483 F.3d 73, 82–83 (2d Cir. 2007).

<sup>308</sup> *Id.* at 82.

needs are necessary in these situations, not because the rules are inconvenient to follow, but because “the rules are not needed to prevent the mischief that they are designed to prevent.”<sup>309</sup> In other words, warrants and probable cause are not required in such situations because individualized suspicion is not part of the equation.<sup>310</sup>

Since the purpose of collecting DNA samples (according to the court) “is to obtain identifying information, not to uncover evidence of wrongdoing or to solve a particular crime,”<sup>311</sup> the court concluded that DNA-indexing statutes do not require a warrant or probable cause:

The taking of DNA samples, unlike a normal law enforcement investigation, does not involve any suggestion that the individual is being suspected of having committed a crime (other than the one of which he had already been convicted). Nor does it force the individual to provide evidence to exonerate herself from a crime in which the government had no reason to think she was involved.<sup>312</sup>

The court also found it important that the DNA Act removes all discretion from law enforcement officials as to how to apply its provisions—all felons are required to provide samples, and the resulting profiles must be uploaded into the system.<sup>313</sup> As a result, the court noted that one of the major reasons for the warrant requirement—to check arbitrary use of law enforcement power and discretion—is absent in the case of DNA-indexing laws.<sup>314</sup>

The Second Circuit also found that the DNA-indexing law serves a special need because it serves purposes which cannot be achieved through the use of ordinary law enforcement methodologies.<sup>315</sup> The court felt such databases are preferred to

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<sup>309</sup> *Id.* (quoting *Nicholas*, 430 F.3d at 680 (Lynch, J., concurring)).

<sup>310</sup> *See id.* (explaining that the need for warrants and probably cause are unnecessary in situations where there is no threat of problems these tools were meant to prevent).

<sup>311</sup> *Id.* at 82. “[B]ecause of the blanket nature of the program, [the Second Circuit concluded that] the collection of DNA is not linked to [either] (a) investigating a particular crime committed by these defendants, or (b) (at least directly) to the likelihood of these defendants’ committing a future crime.” *Id.* at 82 n.8.

<sup>312</sup> *United States v. Amerson*, 483 F.3d 73, 82 (2d Cir. 2007).

<sup>313</sup> *Id.*

<sup>314</sup> *Id.* (citing *Skinner v. Ry. Labor Exec’s. Ass’n*, 489 U.S. 602, 621–22 (1989)).

<sup>315</sup> *Id.* at 82–83.

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the alternative of matching crime-scene DNA to DNA of known suspects because 1) they have the ability to solve crimes that would otherwise remain unsolved; 2) deliver unparalleled speed and accuracy in solving crimes; and 3) prevent misidentification of suspects and allow for the rapid exclusion of innocent suspects.<sup>316</sup>

**c. Judge Easterbrook's Categorical Analysis**

Judge Easterbrook developed a hybrid approach to the analysis of DNA-indexing laws in his concurrence in *Green v. Berge*.<sup>317</sup> Unlike the majority of the Seventh Circuit, which approved Wisconsin's DNA collection statute under a special needs analysis,<sup>318</sup> Judge Easterbrook resisted lumping together all persons subject to such DNA collection laws.<sup>319</sup> Instead, he identified four separate categories of persons who may become subject to these laws: 1) prisoners; 2) persons on conditional release; 3) convicted felons whose term of supervised release has expired; and 4) persons who have never been convicted of a felony.<sup>320</sup> He believed that a different legal analysis should be applied to each category.<sup>321</sup>

As to the first category, Judge Easterbrook believed that the Fourth Amendment does not apply at all, given prisoners' lack of privacy rights.<sup>322</sup> "Use of DNA is in this respect no different from use of a fingerprint; only the method of obtaining the information differs, and for prisoners that is a distinction without importance."<sup>323</sup> Second, although recognizing that persons on conditional release acquire additional liberty interests, Judge Easterbrook concluded that they are still subject to significant controls, and as such, can be subject to suspicionless DNA tests.<sup>324</sup> Judge Easterbrook believed that a balancing test should

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<sup>316</sup> *Id.* at 83.

<sup>317</sup> 354 F.3d 675, 679–80 (7th Cir. Wis. 2004) (Easterbrook, J., concurring).

<sup>318</sup> *Id.* at 679.

<sup>319</sup> *Id.* (Easterbrook, J., concurring).

<sup>320</sup> *Id.* at 679–80. I would add a fifth category for truly free persons. The same special needs analysis applies to both those arrested for criminal offenses and free persons, but the balance of interests favors the government more strongly in the former.

<sup>321</sup> *Id.* at 679 (Easterbrook, J., concurring).

<sup>322</sup> *Green v. Berge*, 354 F.3d 675, 679–80 (7th Cir. Wis. 2004) (Easterbrook, J., concurring).

<sup>323</sup> *Id.* at 680 (Easterbrook, J., concurring).

<sup>324</sup> *Id.* (Easterbrook, J., concurring). Judge Easterbrook is incorrect in his assessment, however, that prisoners and individuals on supervised release have

be used only once the felon's term of supervised release has ended.<sup>325</sup> He compared the continuing retention of the felon's DNA profile to other restrictions placed on freed, convicted felons, such as having to register as a sex offender over the course of a lifetime.<sup>326</sup> He concluded that the collection and preservation of felons' DNA is rationally related to the criminal conviction because convicted criminals have a greater propensity to commit new crimes, and therefore, such restrictions may have a deterrent effect.<sup>327</sup> Finally, Judge Easterbrook believed that the special needs test should be applied only to persons who have never been convicted of a felony.<sup>328</sup>

3. The government interest in creation of a DNA database significantly outweighs the minimal privacy interests of convicted felons and supervised releasees.

Regardless of the test used, courts have consistently found that the government's interest in operating DNA databases significantly outweighs the minimal intrusion of privacy that submission to DNA sampling poses, particularly for convicted felons and conditional releasees. In weighing the interests, courts have focused on the fact that many offenders are still subject to close government supervision.

For example, the *Kincade* plurality noted, "that the government has a far more substantial interest in invading" the privacy of conditional releasees than it does in the general public.<sup>329</sup> It found that the DNA Act served the state's compelling interest in ensuring that a releasee complies with the condition of his release and does not reoffend, noting that the "rates of re-arrest among parolees and probationers are astounding."<sup>330</sup> In

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no expectation of privacy. *Bell v. Wolfish*, 441 U.S. 520, 557 (1979). Although their privacy rights are diminished, prisoners still retain privacy interests in their bodies and any restrictions on those rights must still be reasonable. *Id.* at 560.

<sup>325</sup> See *Green*, 354 F.3d at 680 (Easterbrook, J., concurring) (explaining that releasees with a greater propensity to commit crimes may be given more post-release restrictions).

<sup>326</sup> See *id.* (Easterbrook, J., concurring) (discussing limitations placed on convicted felons for the remainder of their lives).

<sup>327</sup> *Green v. Berge*, 354 F.3d 675, 680 (7th Cir. Wis. 2004) (Easterbrook, J., concurring).

<sup>328</sup> *Id.* at 680–81. (Easterbrook, J., concurring).

<sup>329</sup> *United States v. Kincade*, 379 F.3d 813, 834 (9th Cir. 2004) (citing *United States v. Knights*, 534 U.S. 112, 119–20 (2001)).

<sup>330</sup> *Id.* at 838–39 (citing *Pennsylvania Bd. of Prob. & Parole v. Scott*, 524 U.S.

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addition, because DNA profiling helps deter convicts from re-offending and solve past and future crimes, the plurality found the weight of the government interest to be “monumental.”<sup>331</sup> The court also found that DNA databases serve an important state interest because they help absolve innocent suspects, not just convict them.<sup>332</sup>

In contrast, the plurality found that a conditional releasee’s privacy interest is minimal in this context because 1) the DNA profile only establishes a record of the offender’s identity, not his more intimate medical information and 2) he had “substantially reduced sensitivities” to physical intrusions, such as blood being drawn.<sup>333</sup> The court noted that since the DNA profile created from the offender’s blood sample only establishes a record of the defendant’s identity, the convicted offender could no longer claim a right of privacy in that information because the fact of his conviction extinguishes that right.<sup>334</sup>

The California Court of Appeal similarly held in *People v. King* that the reduced expectation of privacy experienced by convicted persons extends to their identities.<sup>335</sup> The court held that DNA testing of convicted persons does not violate their privacy rights because such persons have forfeited a right to their identities:

As to convicted persons, there is no question but that the state’s interest extends to maintaining a permanent record of identity to be used as an aid in solving past and future crimes, and this interest overcomes any privacy rights the individual might retain . . . . By their commissions of a crime and subsequent convictions, persons such as appellant have forfeited any legitimate expectation of privacy in their identities. In short, any argument that Fourth Amendment privacy interests do not prohibit gathering information concerning identity from the person of one who has been convicted of a serious crime, or of retaining that information for crime enforcement purposes, is an argument that long ago was resolved in favor of the government.<sup>336</sup>

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357, 365 (1998); *Roe v. Marcotte*, 193 F.3d 72, 79 (2d Cir. 1999); *United States v. Crawford*, 372 F.3d 1048, 1069–71 (9th Cir. 2004) (Trott, J., concurring)).

<sup>331</sup> *Id.* at 839.

<sup>332</sup> *Id.* at 839 n.38.

<sup>333</sup> *Id.* at 837.

<sup>334</sup> *United States v. Kincade*, 379 F.3d 813, 837 (9th Cir. 2004) (citing *Rise v. Oregon*, 59 F.3d 1556, 1560 (9th Cir. 1994)). The plurality noted that the right to privacy in one’s identity is extinguished even upon one’s lawful arrest and being booked into custody. *Id.*

<sup>335</sup> 82 Cal. App. 4th 1363, 1374 (Cal. App. 2000).

<sup>336</sup> *Id.* at 1374–75.

The *Kincade* plurality cautioned, however, that its opinion should not be read to expand DNA testing to cover anyone who, even temporarily, has a reduced expectation of privacy.<sup>337</sup> It distinguished conditional releasees from free persons who have to occasionally provide a record of their identities at places like traffic stops.<sup>338</sup> The plurality reasoned that law-abiding citizens do not lose a privacy interest in their identities to the same degree as convicted persons because “[t]hose who have suffered a lawful conviction lose an interest in their identity to a degree well-recognized as sufficient to entitle the government permanently to maintain a verifiable record of their identity; not merely sporadically to demand its production under independently lawful conditions.”<sup>339</sup> Thus, it concluded that DNA testing of convicted felons is minimally intrusive, both in terms of the bodily intrusion and the information generated.<sup>340</sup>

Similarly, in determining whether DNA-indexing statutes satisfy the special needs balancing test, the court must consider: “(1) the nature of the privacy interest involved; (2) the character and degree of the governmental intrusion; and (3) the nature and immediacy of the government’s needs, and the efficacy of its policy in addressing those needs.”<sup>341</sup> In *Nicholas*, the Second Circuit found that there can be “little doubt” that the state of New York had a “strong government interest” in obtaining the DNA of convicted offenders and maintaining a record of that information.<sup>342</sup> The Third Circuit focused on the dual ability of DNA databases to both inculcate and exonerate individuals in concluding that the federal DNA Act serves a “compelling interest.”<sup>343</sup> The *Amerson* court summed up the government’s broad interests as follows:

To consider the government’s interests in DNA testing solely in terms of DNA’s capacity to dissuade or to make more easily solvable the crimes that the particular felons being tested might commit in the future is to miss the breadth of the government’s proper interest in DNA testing. That interest is, emphatically, not

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<sup>337</sup> *United States v. Kincade*, 379 F.3d 813, 835 (9th Cir. 2004).

<sup>338</sup> *Id.* at 832.

<sup>339</sup> *Id.* at 837.

<sup>340</sup> *Id.* at 838.

<sup>341</sup> *United State v. Amerson*, 483 F.3d 73, 83–84 (2d Cir. 2007) (quoting *Cassidy v. Chertoff*, 471 F.3d 67, 75 (2d Cir. 2006)).

<sup>342</sup> *Nicholas v. Goord*, 430 F.3d 652, 669 (2d Cir. 2005) (citing *United States v. Sczubelek*, 402 F.3d 175, 185 (3d Cir. 2005)).

<sup>343</sup> *Sczubelek*, 402 F.3d at 185.

limited to the specific deterrence of the particular offender . . . . Rather, it reflects the whole panoply of societal benefits that stem from the capacity to identify or to exclude individuals, quickly, accurately, and at reasonable expense. And it is this very broad societal interest—*this special need*—that must be balanced against the intrusion that obtaining and storing DNA entails.<sup>344</sup>

Under the special needs analysis, these strong governmental interests must be weighed against the twofold invasion on inmates: 1) the physical intrusion of a blood draw or buccal cheek swab; and 2) the analysis of the DNA sample and maintenance of the resulting profile in the database.<sup>345</sup> The *Nicholas* court found the first physical intrusion to be “far outweighed” by the government’s interest in obtaining the uniquely identifying information from DNA, particularly in light of the diminished expectation of privacy of inmates.<sup>346</sup> Although the second intrusion is cause for greater concern since the state maintains the information indefinitely, the court concluded that this intrusion did not outweigh the state’s strong interests.<sup>347</sup> It found it particularly important that the DNA-indexing statute did not provide for the analysis or maintenance of any sensitive genetic information, but instead provided only for the analysis of identifying markers.<sup>348</sup> The *Amerson* court also found it significant in this regard that the portion of DNA used for analysis is currently considered to be “junk” DNA and is not currently associated with any known physical or medical characteristics.<sup>349</sup> Both courts also emphasized that these laws prohibit dissemination of genetic information to unauthorized parties.<sup>350</sup> Given these limits on the collection, analysis, and use of genetic information, the courts equated the intrusions posed by

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<sup>344</sup> *Amerson*, 483 F.3d at 89.

<sup>345</sup> *State v. Martin*, 955 A.D.2d 1144, 1151 (Vt. 2008).

<sup>346</sup> *Nicholas*, 430 F.3d at 669. The court also noted that the physical intrusion for inmates is minimal because they are subject to a blood draw for other purposes when they first enter prison. *Id.* at 669 n.29. The *Amerson* court extended this rationale to probationers who are often subject to random drug tests and other invasions of privacy. *United State v. Amerson*, 483 F.3d 73, 84–85 (2d Cir. 2007).

<sup>347</sup> *Nicholas v. Goord*, 430 F.3d 652, 670 (2d Cir. 2005).

<sup>348</sup> *Id.* (citing N.Y. EXEC. LAW § 995-c (McKinney 2004)).

<sup>349</sup> *Amerson*, 483 F.3d at 85 (citing H.R. REP. NO. 106-900, at 27 (2000)). The court added in a footnote that the reasonableness of such statutes would likely have to be reconsidered if science can make greater use of such DNA regions in the future. *Id.* at 85 n.13.

<sup>350</sup> *Id.* at 85; *Nicholas*, 430 F.3d at 670 (citing N.Y. EXEC. LAW § 995-c (McKinney 2004)).

DNA sampling with that imposed by fingerprinting.<sup>351</sup>

The *Amerson* court struck the balance in favor of the government even as it applied to probationers.<sup>352</sup> Although noting that probationers have more of a privacy interest in their identities than incarcerated persons, it found that such an interest is “severely diminished.”<sup>353</sup> In particular, the court found that DNA’s ability to establish identity with greater accuracy over fingerprints or descriptions of physical appearance lessens these privacy concerns.<sup>354</sup>

These cases illustrate the havoc the Court’s haphazard approach to its Fourth Amendment jurisprudence can wreak. The balancing test favored by a majority of circuits is, in light of decisions such as *Knights* and *Samson*, the seemingly appropriate standard to apply, and the likely one which the Supreme Court itself would use to review a DNA-indexing law. However, its primary flaw, as pointed out by its many detractors, is that it appears to have no limits as long as the person subjected to the search can be shown to have some reduced expectation of privacy.<sup>355</sup> The dissent in *Raines* characterized the use of a balancing test in this manner as “free floating” because there is “no context to the expectation of privacy prong; apparently, there are no limits to it.”<sup>356</sup> As a result, some critics foresee a virtually limitless expansion of DNA databases under this test.<sup>357</sup>

In contrast, the circuits which have applied the special needs test have had to engage in legal gymnastics to conform DNA-indexing laws to the Court’s primary purpose test. For example, in *A.A. ex rel. B.A. v. Attorney General of N.J.*, the New Jersey Superior Court, Appellate Division, attempted to articulate the

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<sup>351</sup> *Nicholas*, 430 F.3d at 671 (citing *United States v. Kincade*, 379 F.3d 813, 836 n.31 (9th Cir. 2004); *Green v. Berge*, 354 F.3d 675, 680 (7th Cir. 2004) (Easterbrook, J., concurring)); *Amerson*, 483 F.3d at 85–86 (citing *Nicholas*, 430 F.3d at 671).

<sup>352</sup> *See id.* 84–85 (noting DNA samples extracted from probationer carry diminished expectations than those of an innocent person; therefore, such samples denote less of an invasion of privacy).

<sup>353</sup> *United State v. Amerson*, 483 F.3d 73, 86 (2d Cir. 2007).

<sup>354</sup> *Id.* The court explained that this is so because the greater accuracy of DNA reduces the chance of misidentification. *Id.*

<sup>355</sup> *See, e.g., Maryland v. Raines*, 857 A.2d 19, 57–58 (Md. 2004) (Bell, J., dissenting) (restating rationale for the balance having fewer restrictions when applied to felons).

<sup>356</sup> *Id.* (Bell, J., dissenting).

<sup>357</sup> For example, Maclin has termed this type of balancing as “standard-less.” Maclin, *supra* note 21, at 187 n.261.

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distinction between the two situations, noting that the purpose of such laws is to deter recidivism rather than criminal activity generally.<sup>358</sup> The fact that DNA databases may deter future crime is incidental to the patently obvious purpose of helping law enforcement identify suspects and solve crime, however.<sup>359</sup>

Some courts have attempted to side-step this argument by distinguishing DNA databases from the searches in *Edmond* and *Ferguson* on the ground that DNA samples are being taken for a purpose separate and apart from the collection of evidence to investigate a particular crime.<sup>360</sup> The Maryland Court of Appeals summed up this rationale as follows:

[A] search like the one authorized by the Act in this case, whose primary purpose is to identify individuals with lessened expectations of privacy, is totally distinguishable from search of ordinary individuals for the purpose of gathering evidence against them in order to prosecute them for the very crimes that the search reveals.<sup>361</sup>

While DNA-indexing laws may not target the general population, they certainly target a significant subset of it.<sup>362</sup> As discussed above, the fact that DNA laws do not target specific individuals for committing particular crimes justifies only waiving the warrant requirement, not concluding that their primary purpose is something other than general crime control.

Rikelman asserts that upholding DNA-indexing laws in this manner sets a “dangerous precedent” by expanding the special needs doctrine so broadly it could be used to justify any

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<sup>358</sup> See 894 A.2d 31, 39, 46 (N.J. Super. Ct. App. Div. 2006) (noting that the legislative intent for DNA databanks includes use in discouraging repeat crime as well as criminal investigations).

<sup>359</sup> See *id.* at 46 (noting DNA Database and Databank Act does aid in the detection and deterrence of future criminal acts).

<sup>360</sup> See, e.g., *Green v. Berge*, 354 F.3d 675, 678 (7th Cir. 2004). There, the Seventh Circuit attempted to distinguish Wisconsin’s DNA-indexing statute from the checkpoint in *Edmond* on the ground that its primary purpose was not to search for “evidence of criminal wrongdoing,” but rather to “obtain reliable proof of a felon’s identity.” *Id.* at 678. The court in *Nicholas* similarly attempted to compare the purpose of the DNA-indexing law to that of the traffic checkpoint in *Lidster*, labeling it as mere “information-seeking.” *Nicholas v. Goord*, 430 F.3d 652, 668 (2d Cir. 2005) (citing *Illinois v. Lidster*, 540 U.S. 419, 424 (2004)). Both statements are comical; the true purpose of DNA-indexing statutes is, as other courts have recognized, to assist in the collection of evidence of criminal wrong-doing, albeit to solve generally past or future crime. See *Green*, 354 F.3d at 677.

<sup>361</sup> *Maryland v. Raines*, 857 A.2d 19, 33 (Md. 2004).

<sup>362</sup> *Id.*

warrantless search.<sup>363</sup> She believes that under this interpretation, a suspicionless search could qualify for the special needs exception “as long as the government is gathering evidence for general crime investigations in the future, rather than to investigate a specific crime now.”<sup>364</sup> Thus, she fears that the government will be able to justify warrantless wiretaps or other searches of ordinary citizens in support of the War on Terror.<sup>365</sup>

Logic and common sense suggest that the two situations are indeed different, however. A person’s DNA profile tells us nothing about his physical characteristics, personal shopping habits, hobbies, or associations. It provides law enforcement only with a record of that person’s identity. In contrast, the cataloguing of telephone conversations or credit card data does implicate the above privacy concerns, and therefore should not be permitted without a warrant, absent exigent circumstances. This is true regardless of whether the DNA sample is being used to target a particular individual at the time of taking the sample or holding it in reserve for future use.

Regardless, the mandate of *Ferguson* seems to be that the focus of suspicionless search schemes cannot be criminal investigation, whether it occurs at the time of the search or at some point in the future.<sup>366</sup> Kaye concludes that the Court’s primary purpose test has thus “pulled the rug out from under special-needs balancing for DNA databanks,” noting that the “raison d’etre” of DNA databases is criminal investigation by facilitating the identification of the perpetrators of sexual assaults, murders, and many other crimes.<sup>367</sup>

### *C. The Constitutionality of DNA Testing as it Applies to Felony Arrestees*

Resolving the debate over which standard of review to apply to DNA-indexing laws becomes even more imperative as some states have recently expanded their laws to cover felony

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<sup>363</sup> Julie Rikelman, *Justifying Forcible DNA Testing Schemes Under the Special Needs Exception to the Fourth Amendment: A Dangerous Precedent*, 59 BAYLOR L. REV. 41, 42 (2007).

<sup>364</sup> *Id.* at 59.

<sup>365</sup> *Id.* at 42.

<sup>366</sup> See *Ferguson v. City of Charleston*, 532 U.S. 67, 67–68 (2001) (holding official nonconsensual searches unconstitutional when used to deter pregnant women from using cocaine by threat of criminal sanction, unless authorized by a valid warrant).

<sup>367</sup> Kaye, *supra* note 129, at 192.

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arrestees, not just those convicted of felonies.<sup>368</sup> The question that must be answered is whether the balancing test favored by the majority of circuits would still be applicable to an arrestee, who has more of an expectation of privacy than a convicted felon or a supervised release. Given that DNA testing, akin to a fingerprint, seeks only to make a record of that person's identity, the answer may still be yes. But, courts may find that because of an arrestee's increased level of privacy protections, the special needs test would be the more appropriate measure to apply since an arrestee has not yet been convicted of anything.

Nineteen states to date have passed legislation authorizing the collection of DNA samples from all or some felony arrestees.<sup>369</sup> Fifteen others have introduced legislation to that effect in the 2009 legislative session.<sup>370</sup> The main argument made in favor of such an expansion of the DNA database is that the number of cold hits registered by the database will increase as the total number of offender profiles is increased.<sup>371</sup> This is borne out by studies which have shown that a significant number of serious crimes could have been prevented or solved much faster if the offender's DNA had been on file for an arrest, as opposed to waiting for a conviction.<sup>372</sup> Virginia alone has solved 222 crimes

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<sup>368</sup> See State DNA Database Laws: Qualifying Offenses, <http://www.dnaresource.com/documents/statequalifyingoffenses2009.pdf> (last visited May 25, 2009) (indicating that seventeen states have expanded their DNA-indexing laws to include most felony arrests). Alabama and Colorado passed arrestee laws in May of 2009 to bring the total to 19.

<sup>369</sup> *Id.* (showing that (1) Arizona, Arkansas, Maryland, Michigan, Minnesota, New Mexico, Tennessee, Texas, and Virginia have all adopted statutes permitting DNA sampling from some felony arrestees; and (2) Alabama, Alaska, California, Colorado, Kansas, Louisiana, North Dakota, South Carolina, South Dakota, and Vermont permit testing of all felony arrestees).

<sup>370</sup> 2009 DNA Database Expansion Legislation, <http://www.dnaresource.com/documents/2009DNAExpansionLegislation.pdf> (last visited May 25, 2009). In 2009, such proposed legislation fared better than in past years. *Id.* To date, at least five bills have passed at least one house: Missouri HB 152 passed the House while several other were referred to additional readings. *Id.* Statutes requiring DNA testing of at least some felony arrestees were enacted in Alabama, Arkansas, Colorado, and Vermont in 2009. *Id.*

<sup>371</sup> See Forensic DNA Databases, <http://www.dnaresource.com/documents/DNAdatabasebrochure.pdf> (last visited May 25, 2009) (defining cold hits as "when DNA from a crime scene is matched on the DNA database to a convicted offender's profile" and discussing how collecting DNA from all types of criminals would increase the number of cold hits).

<sup>372</sup> See Forensic DNA Testing: Fingerprints of the 21<sup>st</sup> Century, <http://www.dnaresource.com/documents/reasonsforexpansion.pdf> (last viewed May 25, 2009) (citing a Chicago study documenting that sixty violent crimes could have been prevented if the offender had been required to submit a DNA

linked to DNA tests of arrestees since expanded testing began in 2003.<sup>373</sup>

#### 1. The case law interpreting all arrestees legislation

To date, only two courts have issued opinions as to the constitutionality of such statutes. The Virginia Court of Appeals approved testing of arrestees,<sup>374</sup> while the Minnesota Court of Appeals rejected it.<sup>375</sup> Two state Attorneys General have also weighed in on opposite sides of the issue. The Alaska Attorney General recently issued an opinion on the constitutionality of Alaska HB 90 which expanded Alaska's DNA registration system by requiring all persons arrested on felony charges or crimes against persons to submit a DNA sample.<sup>376</sup> The Attorney General believed that the bill would be upheld against constitutional challenge, noting that the taking of DNA was akin to collection of fingerprints.<sup>377</sup> He also concluded that the use of buccal cheek swabs may "arguably [be] less intrusive than" the taking of fingerprints.<sup>378</sup> He felt that any privacy concerns surrounding dissemination of offenders' DNA profiles had been adequately addressed by previous versions of the statute, which mandate confidentiality, allow for only prescribed uses of the information, and make it a felony for any unauthorized use of DNA samples.<sup>379</sup>

The Virginia Supreme Court upheld the all-arrestee testing provision of its State's DNA-indexing law in *Anderson v. Commonwealth*.<sup>380</sup> There, the statute authorized any law enforcement officer to obtain a DNA sample from anyone

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sample after a prior felony arrest).

<sup>373</sup> *Id.*

<sup>374</sup> *Anderson v. Commonwealth*, 634 S.E.2d 372, 375 (Va. Ct. App. 2006), *aff'd*, 650 S.E.2d 702, 706 (Va. 2007).

<sup>375</sup> *In re Welfare of C.T.L.*, 722 N.W.2d 484, 492 (Minn. Ct. App. 2006).

<sup>376</sup> Memorandum from the Office of the Att'y Gen., State of Alaska to Sarah Palin, Governor of Alaska (June 6, 2007), *available at* 2007 WL 2333364 (stating that if the governor signed HB 90 into law, Alaska would be the seventh state to require DNA testing from arrested persons); H.B. 90, 25th Leg., 1st Sess. (Alaska 2007).

<sup>377</sup> *See* Memorandum from the Office of the Att'y Gen., *supra* note 375 (explaining that the privacy concern regarding the taking of DNA was no greater than the privacy concern regarding fingerprinting).

<sup>378</sup> *Id.*

<sup>379</sup> *Id.*

<sup>380</sup> *Anderson v. Commonwealth*, 650 S.E.2d 702, 706 (Va. 2007).

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arrested for certain violent felonies.<sup>381</sup> The court held that the acquiring of a DNA sample was no different than taking fingerprints upon arrest, and as such, does not require an additional finding of individualized suspicion.<sup>382</sup> The court found that once a suspect is arrested upon probable cause, his identification becomes a matter of state interest and his identity “is relevant not only to solving the crime for which the suspect is arrested, but also for maintaining a permanent record to solve other past and future crimes.”<sup>383</sup>

In *In re C.T.L.*, the Minnesota Court of Appeals declared the state’s DNA-indexing statute unconstitutional as it applied to the collection of DNA from juveniles and adults charged with committing one of several enumerated offenses.<sup>384</sup> The respondent juvenile was ordered to provide a DNA sample after being charged with assault and aiding and abetting.<sup>385</sup>

In reviewing the statute as it applied to arrestees, the *C.T.L.* court drew an analogy to *Schmerber v. California*.<sup>386</sup> There, the Court held that there must be more than just probable cause to compel a blood test from an individual arrested on suspicion of drunken driving.<sup>387</sup> Thus, the Minnesota Court of Appeals concluded that the probable cause justifying a person’s arrest

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<sup>381</sup> VA. CODE ANN. § 19.2-310.2:1 (West 2008).

<sup>382</sup> *Anderson*, 650 S.E.2d at 705 (citing *Jones v. Murray*, 962 F.2d 302, 306–07 (4th Cir. 1992)).

<sup>383</sup> *Id.* (quoting *Jones*, 962 F.2d at 306). Reviewing Virginia’s DNA-indexing statute as it then existed (it applied only to convicted felons at the time), the Fourth Circuit determined that the taking of DNA, similarly to fingerprinting, does not require individualized suspicion. *Jones*, 962 F.2d at 306. Finding that fingerprinting is authorized even where proof of a particular suspect’s crime may not involve fingerprint identification, the Fourth Circuit held that no “additional finding of individualized suspicion [was needed] before blood can be taken from incarcerated felons for the purpose of identifying them.” *Id.* 306–07.

<sup>384</sup> *In re Welfare of C.T.L.*, 722 N.W.2d 484, 468 (Minn. Ct. App. 2006).

<sup>385</sup> The Minnesota statute provided for the collection of DNA samples from three classes of persons: 1) juveniles who have had a probable cause determination on a charge of any one of several enumerated offenses or who have been adjudicated as having had committed such offenses; 2) persons (adults) who have had a judicial probable cause determination or have been convicted of having committed one of several enumerated offenses; or 3) persons sentenced as patterned sex offenders. MINN. STAT. ANN. § 299C.105 (West 2005), *invalidated by In re Welfare of C.T.L.*, 722 N.W.2d 484.

<sup>386</sup> *In re Welfare of C.T.L.*, 722 N.W.2d at 490 (citing *Schmerber v. California*, 384 U.S. 757 (1966)).

<sup>387</sup> *Schmerber*, 384 U.S. at 770. The Court ruled that probable cause to arrest a driver, and thus by implication the ability to search his person incident to arrest, had little to do “with respect to searches involving intrusions beyond the body’s surface.” *Id.* at 769.

does not support the taking of his DNA:

But, just as in *Schmerber*, where the existence of probable cause to arrest the defendant was not sufficient to permit an intrusion into his body without a warrant, a determination of probable cause to support a criminal charge, even if it is made by a judge, is not sufficient to permit a biological specimen to be taken from the person charged without a warrant. The fact that a judge has determined that the evidence in a case brings a charge against the defendant within reasonable probability does not mean that the judge has also determined that there is a fair probability that contraband or evidence of a crime will be found in a biological specimen taken from the defendant.<sup>388</sup>

The court's comparison of the two situations is fundamentally flawed, however. Its analysis rests on the mistaken assumption that investigation of a particular suspect for a particular crime is equivalent to the preservation of DNA profiles generally. It is not. One practice targets a specific person in connection with a specific crime, thus triggering the warrant requirement; the other simply houses the evidence for future reference, if it will be used at all.<sup>389</sup> Another fallacy in the court's logic is that DNA testing is akin to the chemical testing of blood or urine.<sup>390</sup> Unlike chemical testing, which can show intoxication or illegal drug use, and thus provide proof of criminal activity in and of itself, DNA test results are not indicative of criminal behavior.<sup>391</sup> They can only link a suspect to a crime scene.<sup>392</sup> As currently constituted, the DNA-testing program is simply a measure of biometric

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<sup>388</sup> *In re Welfare of C.T.L.*, 722 N.W.2d at 490–91. The court also implied that, unlike in *Schmerber* where there was a concern that the evidence of intoxication might disappear in the time it took to obtain a warrant, there is no such exigency as it applies to the extraction of arrestees' DNA. *Id.* at 490 (citing *Schmerber*, 384 U.S. at 771).

<sup>389</sup> *See id.* at 490–91 (explaining that having arrestees submit to DNA sampling is not a Fourth Amendment violation, however, in order to take a biological specimen from an individual charged with a crime, there must be a warrant).

<sup>390</sup> *See id.* at 489 (citing *Schmerber*, 384 U.S. at 758–89, 768–69) (comparing the blood test administered in *Schmerber*, which was chemically analyzed, to the Minnesota statute requiring arrestees to submit to DNA analysis).

<sup>391</sup> *See In re Welfare of C.T.L.*, 722 N.W.2d 484, 487 (Minn. Ct. App. 2006) (explaining how DNA is used for only identification purposes); *see also Schmerber*, 384 U.S. at 758 (stating that the chemical analysis of the suspect's blood sample showed that he was driving under the influence).

<sup>392</sup> *See In re Welfare of C.T.L.*, 722 N.W.2d at 487–88 (discussing how DNA from a crime scene can be linked to an ongoing or simultaneous criminal investigation).

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identification.<sup>393</sup>

If this were not the case, the court's rationale would apply just as equally to cases where the defendant's DNA had been seized pursuant to conviction. The court attempted to distinguish the two situations by pointing to the reduced expectation of privacy of convicted felons.<sup>394</sup> Yet, this fails to recognize that arrestees themselves have reduced expectations of privacy, particularly with respect to their identities.<sup>395</sup>

Worse, the court used the fact that the statute provided for a right of expungement of DNA profiles (where the arrested person is found not guilty or the charges are dismissed) to invalidate the government's interest in the arrestee's DNA profile.<sup>396</sup> It concluded that the state's interest in obtaining a DNA sample did not outweigh the arrestee's right to privacy since there is no difference between the privacy interest of a person who has been arrested and charged and that of a person who was charged but then the charges were later dismissed.<sup>397</sup> This argument completely misses the point. The question is not whether arrestees who have been cleared or acquitted have a different expectation of privacy in their DNA at the time of their arrest (which clearly they do not), but whether they have a different expectation after the fact of acquittal or dismissal (which the state has explicitly said that they do). Taken to its extreme, the Minnesota Court's argument is akin to saying that because state legislatures have provided for expungement of most types of juvenile records, states no longer have an interest in fingerprinting or monitoring any juvenile arrested for a juvenile

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<sup>393</sup> See CodeMedic, Biometric Recognition, <http://www.codemedic.com/birs.php> (last viewed May 25, 2009) (stating that DNA testing is a biometric recognition system).

<sup>394</sup> See *In re Welfare of C.T.L.*, 722 N.W.2d at 491 (acknowledging that convicted individuals have a reduced expectation of privacy, however, holding that this reduced expectation does not apply to those merely charged with crimes that are affected by the Minnesota statute).

<sup>395</sup> For example, arrestees are subject to the mandatory taking of fingerprints and booking photographs. *Jones*, 962 F.2d 302, 306 (4th Cir. 1992). Whether this reduction of privacy is sufficient to apply a general balancing test to the DNA testing of arrestees is another question, however. Those interests wane considerably once the arrested person is released, and no such interest in monitoring an arrestee exists concomitant with that of supervised releases. Thus, the special needs doctrine is the preferable standard of analysis for arrested persons.

<sup>396</sup> *In re Welfare of C.T.L.*, 722 N.W.2d 484, 491 (Minn. Ct. App. 2006).

<sup>397</sup> *Id.*

offense.<sup>398</sup>

The Tennessee Attorney General came to a similar conclusion, holding that such all-arrestee legislation is “constitutionally suspect.”<sup>399</sup> The Attorney General criticized the Virginia courts in *Anderson* for failing to distinguish between the “relatively superficial search of a person where contraband or weapons might be found and the search of the person’s genetic make up.”<sup>400</sup> Instead, he reasoned that under *Schmerber*, a search warrant is required to compel a blood draw from an arrestee on the basis that the privacy rights of an arrestee are greater than those of convicted persons.<sup>401</sup> Again, this argument fails to recognize the distinction between the chemical analysis conducted in *Schmerber* and the production of a DNA identity profile.

The Attorney General also cited *United States v. Purdy* for support.<sup>402</sup> *Purdy* is inapposite, however, since it did not involve a challenge to a DNA-indexing law.<sup>403</sup> There, the defendant challenged the forcible taking of his DNA after he was arrested on an outstanding misdemeanor warrant and subsequently charged with possession of a firearm.<sup>404</sup> The statute at issue, the Nebraska Physical Identifying Characteristics Act (NPICA), authorized the taking of physical evidence such as fingerprints or

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<sup>398</sup> See *id.* at 488. (citing MINN. STAT. ANN. § 299C.105 (West 2007)) (stating that if a juvenile is found not guilty, their DNA records will be destroyed and returned). As further evidence of the Minnesota Court of Appeals’ misplaced reliance on the existence of this provision, Judge Bataillon used, in part, the absence of an expungement provision to invalidate the Nebraska Identifying Physical Characteristics Act as it was being applied to DNA tests of arrested persons. See *U.S. v. Purdy*, No. 8:05CR204, 2005 WL 3465721, at \*7 (D. Neb. Dec. 19, 2005) (explaining how the new legislation included provisions that the Nebraska Identifying Act did not, such as expungement).

<sup>399</sup> 07 Tenn. Op. Att’y. Gen. 45 (2007), 2007 WL 1451632.

<sup>400</sup> *Id.* at 5. This argument seems somewhat disingenuous since a search for contraband can include an embarrassing and invasive full body cavity search, while the taking of a DNA sample requires a very brief and minimal intrusion. As previously discussed, forensic DNA testing does not reveal a person’s genetic makeup if appropriate limitations are imposed on the testing and subsequent use of the sample. *In re Welfare of C.T.L.*, 722 N.W.2d at 487.

<sup>401</sup> *Id.* at 2.

<sup>402</sup> *Id.* at 3.

<sup>403</sup> See *Purdy*, 2005 WL 3465721 at \*1 (determining constitutionality of “Identifying Act” that permits officers to collect DNA samples with a court order).

<sup>404</sup> *Id.* at \*1. It is unclear from the record whether his DNA sample was used to connect Purdy to the weapon he allegedly threw from the car before his arrest.

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blood and hair samples from persons to aid law enforcement in identifying the perpetrators of criminal offenses.<sup>405</sup> Another provision of the Act authorized law enforcement officials to collect physical evidence without a court order where the individual had been lawfully arrested.<sup>406</sup> Nebraska law enforcement officials had apparently interpreted this provision to permit the collection of DNA samples from any arrested person without a court order, even though it had been enacted prior to the development of DNA testing and did not specifically mention DNA.<sup>407</sup>

In overturning his practice as unconstitutional, Judge Bataillon found that the statute, as interpreted, would authorize “wholesale warrantless DNA profiling of persons who have not been convicted of a crime without any narrowing limitations or safeguards whatsoever.”<sup>408</sup> He found law enforcement’s interpretation of the law lacking because it did not require a showing of a nexus between the alleged crime and the information to be gleaned from the DNA tests.<sup>409</sup> He reasoned that an arrestee could not be compelled to provide a DNA sample “without a showing that such evidence would identify him as the perpetrator of the crime.”<sup>410</sup> He also noted that the apparent unconstitutionality of this practice was demonstrated by the fact

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<sup>405</sup> NEB. REV. STAT. § 29-3301 (2008). The Act authorized the issuance of a court order compelling the production of such evidence upon a showing of: 1) probable cause that an offense had been committed; 2) that procurement of such identifying characteristics would aid in the identification of the person who committed the offense and 3) that the person has refused to voluntarily provide such a sample. *Id.* at § 29-3303 (2008).

<sup>406</sup> The statute provided that it was not necessary to obtain a court order “where the individual has been lawfully arrested, nor under any circumstances where peace officers may otherwise lawfully require or request the individual to provide evidence of identifying physical characteristics.” *Id.* at § 29-3304 (2008). This section must be read as being limited to the taking of biological samples for identification purposes only. Under *Schmerber* and its progeny, this section of the Act would be unconstitutional if it were used to compel provision of blood or urine samples for drug testing or collection of evidence of other crimes. *Schmerber v. California*, 384 U.S.757, 761 (1966). Absent some exigency of consent, the taking of a biological sample from an arrestee for such purposes requires a warrant. *Id.* Judge Bataillon reached a similar conclusion, noting that it is “doubtful” whether § 3304 would be constitutional, even under Nebraska law. *U.S. v. Purdy*, No. 8:05CR204, 2005 WL 3465721, at \*2 (D. Neb. Dec. 19, 2005).

<sup>407</sup> *Purdy*, 2005 WL 3465721 at \*1.

<sup>408</sup> *Id.* at \*7.

<sup>409</sup> *Id.*

<sup>410</sup> *Id.*

that the Act had been amended shortly thereafter to require a warrant or probable cause for any nonconsensual taking of DNA from an arrestee.<sup>411</sup>

The Nebraska Supreme Court reached a similar conclusion regarding the same NPICA provision in *State v. McKinney*.<sup>412</sup> There, the defendant was arrested and convicted of misdemeanor forgery but had her DNA drawn in connection with a murder investigation.<sup>413</sup> The court interpreted the statute as requiring that a nexus must be shown between the offense the suspect is arrested for and the nontestimonial evidence which is being sought in connection therewith:

If we interpreted § 29-3304 to allow law enforcement to obtain identifying information under the IPCS [correctly abbreviated NPICA] whenever a person is lawfully arrested for any offense, it would snuff out probable cause—the oxygen for the Fourth Amendment. Such an . . . interpretation would permit the warrantless collection and profiling of DNA from any citizen including those arrested for misdemeanors and even traffic violations. Searches of arrestees would be permissible without requiring law enforcement to show any nexus between the arrestee and the crime for which his or her DNA is sought. The trial court's interpretation would require a citizen arrested for littering to submit to invasive bodily procedures in a search for evidence of any crime.<sup>414</sup>

The court's interpretation of the law in these two cases is correct—a nexus must be shown between the crime committed and the nontestimonial evidence sought where a person is singled out as a suspect in particular crime.<sup>415</sup> The difference

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<sup>411</sup> See *id.* (noting recent DNA-collection statutes have compensated for insufficiencies of previous collection statutes). As amended, the Nebraska DNA Testing Act provides, in pertinent part:

(1) No DNA sample shall be obtained from any person for any law enforcement purpose in connection with an investigation of a crime without probable cause, a court order, or voluntary consent as described in subdivision (2) of this section;

(2) In the absence of probable cause, if any person is requested by a law enforcement person or agency to consent to the taking of a DNA sample in connection with a law enforcement investigation of a particular crime, such consent shall be deemed voluntary only if:

(a) The sample is knowingly and voluntarily given in connection with the investigation of a particular crime;

NEB. REV. STAT. § 29-4126 (2008).

<sup>412</sup> 730 N.W.2d 74, 84 (Neb. 2007).

<sup>413</sup> *Id.* at 83.

<sup>414</sup> *Id.* at 84.

<sup>415</sup> *Id.*; see also *U.S. v. Purdy*, No. 8:05CR204, 2005 WL 3465721, at \*7 (D.

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between the situations outlined in *Purdy* and *McKinney*, on the one hand, and all-arrestee legislation on the other, however, is that all-arrestee legislation contains the additional safeguard that no one individual is singled out for testing.<sup>416</sup> All persons who are arrested must have their DNA taken. In such a situation, the warrant and probable cause requirements are inapplicable. The *McKinney* court recognized this difference:

In contrast to the DNA statutes requiring DNA collection for storage and profiling, § 29-3304 does not serve the important government interest of establishing a DNA database. Here, law enforcement did not take McKinney's DNA for databasing. Instead, they took it solely for the investigation of a particular crime for which the district court found that the officers did not have probable cause to believe McKinney was involved. Further, a critical distinction exists between § 29-3304 and DNA databasing statutes: § 29-3304 does not limit the offenders to whom it applies. Without a probable cause requirement, § 29-3304 would permit law enforcement personnel, at their whim, to take DNA from any incarcerated person. In contrast, DNA databasing statutes do not allow law enforcement to single out any particular offender.<sup>417</sup>

Thus, the arguments made by the Minnesota Court of Appeals in *C.T.L.* and the Tennessee Attorney General in opposition to the DNA testing of all felony arrestees are not persuasive.

## 2. What legal standard should be applied to properly evaluate all-arrestees legislation?

The next question that must be answered is what standard should be used to evaluate state-mandated DNA testing of felony arrestees—totality of the circumstances or special needs? The justification for employing a balancing test in the context of convicted felons—that they have a significantly reduced expectation of bodily privacy—is not as applicable to mere arrestees. Although people who are arrested lose certain privacy rights, particularly for the purposes of booking and jail administration, they are more akin to free persons. Their confinement prior to trial is often only temporary. In many instances, they are never formally charged. Thus, if a balancing

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Neb. Dec. 19, 2005) (expressing concern as to those predominate deficiencies in DNA collection systems that fail to show a nexus between the information the DNA obtained and the alleged crime thereby rendering such systems constitutionally illegitimate).

<sup>416</sup> See *McKinney*, 730 N.W.2d at 85.

<sup>417</sup> *Id.* at 85–86.

test were to be used in this context, the line between free persons and those with diminished expectations of privacy would become quite thin. Therefore, the proper method of analysis for DNA testing of arrestees is, as Judge Easterbrook has suggested, the special needs analysis.<sup>418</sup>

The question that must be answered, then, is whether the special need that justifies the DNA profiling of convicted offenders applies equally to arrestees. The answer is yes. The government continues to have an interest in streamlining investigations and preventing innocent people from being wrongly targeted or convicted.<sup>419</sup> By all accounts, the efficiency and effectiveness of DNA databases would be increased significantly as the number of profiles in the system is increased with the addition of the profiles of felony arrestees. In addition, just as it would with respect to the DNA testing of incarcerated felons, an individualized suspicion requirement would destroy the government's ability to create a database since "the collection of . . . blood samples is designed to solve future cases for which no present suspicion can exist."<sup>420</sup>

In contrast, although arrestees have more rights than prisoners, the intrusion on arrestees is still minimal since DNA sampling would simply become another extension of the booking process.<sup>421</sup> Kaye concludes: "[I]f DNA sampling is a standard part of the booking procedure and if the additional invasion of privacy due to [the] genotyping is negligible, the discretion that exists at the time of an arrest is not substantially more troublesome than it is in arrests not followed by DNA sampling."<sup>422</sup>

As a result, DNA sampling of all felony arrestees would appear to be a reasonable search under basis Fourth Amendment principles. Unfortunately, if the special needs test is applied rather than a balancing test and the *Ferguson/Edmond* primary purpose is adhered to, such an extension of DNA testing would likely be declared invalid. As a result, a new method for analyzing suspicionless search schemes needs to be developed.

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<sup>418</sup> *Green v. Berge*, 354 F.3d 675, 678 (7th Cir. 2004).

<sup>419</sup> *See State v. McKinney*, 730 N.W.2d 74, 85 (Neb. 2007) (noting government's compelling interest in collecting DNA information outweighs the diminished rights of convicts).

<sup>420</sup> *Jones v. Murray*, 962 F.2d 302, 305 (4th Cir. 1992).

<sup>421</sup> *Kaye*, *supra* note 13, at 501.

<sup>422</sup> *Id.*

## V. RECOMMENDATIONS FOR THE FUTURE

Although they have received almost universal approval by courts, DNA-indexing laws present difficult legal challenges, not because they pose a grave threat to constitutional rights, but because they do not conveniently fit within the framework of the Court's current suspicionless search analysis. Thus, lower courts have often had to apply tests which do not adequately cover all aspects or uses of DNA databases, or resort to tactics that mischaracterize DNA databases as something they are not in an attempt to wedge a square peg into a round hole.<sup>423</sup> This is an approach which is satisfying neither legally nor morally.

In order to prevent overreaching by law enforcement on the one hand and judicial-contortionism on the other, a new method for analysis of suspicionless search regimes under the Fourth Amendment must be developed to evaluate DNA-indexing laws. Kaye advocates that the Court create a new biometric identification exception to the warrant requirement.<sup>424</sup> In order to determine whether a given procedure is constitutional, he describes a three-part test: "1) [t]he process [must not be] physically or mentally invasive . . . 2) [t]he data [must be] useful . . . to link individuals to crime scenes or to establish the true identity of a given individual . . . 3) [t]he data [gained from the biometric process must be] valid, reliable, and effective for linking individuals to crime scenes or establishing [their] true identity . . ." <sup>425</sup> He concludes that DNA-indexing laws, even those targeted at all arrestees, would conform to this test and would fall within this exception.<sup>426</sup>

Although Professor Kaye's biometric identification exception is a novel solution to circumventing the Court's primary purpose roadblock, the disadvantage of this approach is that it creates yet another category of suspicionless search. At this point, the Supreme Court's Fourth amendment analysis needs more clarity, not less. Therefore, in this digital age, the Court should hit the delete button on its suspicionless search doctrine and start over.

To achieve such clarity, I propose a radical new theory—reverting back to the special needs doctrine as Justice Blackmun

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<sup>423</sup> See Kaye, *supra* note 129, at 192 (noting reluctance of lower courts to participate in trends aimed at attacking DNA data-banking laws for convicted offenders).

<sup>424</sup> *Id.* at 194–95.

<sup>425</sup> *Id.* at 193–94.

<sup>426</sup> *Id.* at 194.

had originally envisioned it. To do so, the Court must eliminate the confusing, and difficult to apply, primary, non-law enforcement purpose test created in *Edmond* and *Ferguson*. The new test should be applied to all departures from the probable cause and warrant requirement, not just those identified by the Court as warranting its application. In order to clear up any confusion surrounding its use, the special needs doctrine should be reformulated, stripped bare of any language related to law enforcement purposes, including Justice Blackmun's own phrase "beyond the normal need for law enforcement."<sup>427</sup>

The original meaning of this phrase was innocent enough: the justification put forth by law enforcement for departing from the warrant and probable cause requirements had to be more than the elimination of the individuals rights than would helping the police catch criminals more quickly.<sup>428</sup> However, this language soon came to mean that the purpose of the search itself, not just the justification for departing from the warrant requirement, could not have a connection to law enforcement functions.<sup>429</sup> A special need is a special need, regardless of whether it has a law enforcement-related purpose or not.

As Professor Kaye puts it, special needs "denote[s] any system of inspections designed to effectuate goals other than or in addition to catching criminals."<sup>430</sup> The special needs test should therefore be read simply to require the government to conform to the probable cause and warrant requirements unless it can articulate some independent need justifying a departure from them such as preserving public safety or maintaining order in a prison or school. Under this new version of the test, courts should examine the rationale behind dispensing with the probable cause and warrant requirements, not the alleged purpose of the search. This will serve two functions. It will keep courts out of a guessing game, trying to discern the true intent of a search scheme. Second, it will serve as a check on the unlimited expansion of suspicionless search schemes by erecting a preliminary screening device before courts can engage in a

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<sup>427</sup> *O'Connor v. Ortega*, 480 U.S. 709, 720 (1987).

<sup>428</sup> *See id.* (noting warrant requirement would unduly interfere in law enforcement functions, such as the "swift and informal disciplinary procedures" necessary for policing the school environment).

<sup>429</sup> *See id.* (recognizing Court's prior acknowledgement of pertinent factors outside the normal needs of law enforcement that potentially justify departure from warrant and probable-cause precedent).

<sup>430</sup> *Kaye, supra* note 129, at 191.

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balancing of the interests.

As a practical matter, the implementation of this new test would not dramatically alter the outcome of many cases; it would simply subject them to a more rigorous and consistent legal analysis. For example, under this test, probation and parole officers would still be able to conduct warrantless searches of supervised releasees on the ground that the operation of an effective parole or probation system requires the ability to conduct random inspections. Schools would still be able to conduct drug testing of athletes on the ground that such tests are necessary to promote public safety. However, programs for which there is little or no justification for departing from the traditional requirements (such as roadblocks to conduct sobriety or illegal drug use checks) would fail.

What then is the special need that justifies the taking of DNA profiles from convicted offenders and felony arrestees? It has to be more than the fact that creation of DNA databanks is helpful to law enforcement in solving past and future crime or that imposition of the traditional requirements would severely hinder their creation. Such justifications would support the use of most any law enforcement tactic, in contravention of the spirit of the special needs analysis. Consequently, there must be a more unique special need, justifying collection of biometric identification data for this purpose.

Two reasons strongly support the recognition of a special need in this instance. First, forensic DNA profiles are different in kind from other types of personal information capable of being warehoused which could reveal personal habits or associations. The retention of DNA identification information does not implicate privacy concerns nearly to the same degree as would, for example, the collection of a person's credit card data or reading habits. Second, DNA databases serve dual interests of promoting crime control and protecting innocent persons from undue involvement with law enforcement.

These reasons apply equally to the sampling of all felony arrestees. Given that DNA testing is only marginally more intrusive than fingerprinting, it is not unreasonable to think of DNA testing as but one more additional step in the booking procedure. It has become routine for law enforcement officers to input other identification information obtained during the booking process such as fingerprints and mugshots into a database. Why then should DNA be treated any differently?

Beyond making changes to the legal analysis which should be used to assess the constitutionality of DNA databases, I urge the states to take additional measures to ensure that DNA databases operate efficiently and adequately protect the privacy of the offenders in the future:

- All states should expand their DNA-testing program to include the taking of samples from all felony arrestees.
- Investigators should attempt to collect DNA samples from a higher number and wider variety of crime scenes to maximize the potential of DNA databases to act as crime-solving tools.
- The testing of DNA samples should be strictly limited (as it already is in most states) to examining noncoding regions of the DNA molecule for identification purposes only.
- DNA samples and profiles should be removed from all levels of the database and destroyed where the offender is not charged within 12 months of arrest, the charges are dismissed, the offender is acquitted at trial, or where the conviction is subsequently overturned. This restriction should apply to all forms of identifying information such as fingerprints and mugshots.
- DNA samples and profiles obtained from people who voluntarily submit to DNA testing should be destroyed and not uploaded into a database in the absence of written, informed consent.
- All states should follow the lead of the federal government and expressly limit the dissemination of DNA profiles to law enforcement or research purposes only. If DNA profiles are disclosed to researchers, all personal identifying information such as name or inmate number should be redacted.

One potential recommendation favored by libertarians that I have left off the list is that DNA samples should be destroyed after the profiles have been uploaded into the database.<sup>431</sup> While this would ensure that testing of DNA samples would not be improperly expanded in the future, it would limit the government's ability to retest samples or add additional test procedures at a future date. Although this would not become an issue in the majority of cases, it would impede the government's

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<sup>431</sup> See Simoncelli & Krinsky, *supra* note 67, at 7.

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ability to resolve cases where the offender is no longer available to provide a sample for retesting. It would also prevent the updating of existing profiles upon the development of new technological advances. For example, assume the FBI wanted to expand the number of loci tested from 13 to 26 to allow for more discriminating results. If the original DNA samples had been destroyed upon their upload into CODIS, the new testing regime could only be applied to new DNA samples and not to any of the existing five million profiles. Thus, the proper way to address these privacy concerns is not to order destruction of the samples, but to continue to rigorously enforce the existing security provisions as a deterrent against improper use or dissemination of genetic information.

Because of the limited information provided by forensic DNA profiles and the limited physical invasion of privacy occasioned by the DNA collection process, sampling of offenders and arrestees for DNA profiles should be upheld by courts as a reasonable search under the Fourth Amendment. However, in order to properly evaluate this process for all types of offenders subject to DNA testing, not just those individuals currently under some form of supervision, the Supreme Court must modify its suspicionless search doctrine by applying the special needs doctrine without use of the primary purpose test.