Competing Rights Under the Totality of the Circumstances Test: Expanding DNA Collection Statutes

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Notes

COMPETING RIGHTS UNDER THE TOTALITY OF THE CIRCUMSTANCES TEST: EXPANDING DNA COLLECTION STATUTES

I. INTRODUCTION

Imagine that Lisa, a young woman who lives in your hometown, is raped, sodomized, and robbed while walking home from school. Lisa remarkably survives this excruciating ordeal and is able to call the police. An ambulance brings her to the hospital where she is treated for her injuries. While there, a physical evidence recovery kit collects specimens for evidence. Although Lisa survives, the perpetrator is never caught. To make matters worse, what Lisa does not know is that the man responsible for her trauma had several run-ins with the law before. In fact, this man was previously arrested for assault with a deadly weapon and attempted robbery. However, due to a technicality, the man was never convicted. As a result, he continues to stalk, rape, and brutally murder several other women living close to your town. As Lisa hears the news reports of these women, she is forced to relive the moment that her life was nearly taken as she was savagely raped and beaten. For the rest of her life, Lisa wonders if the man who nearly took her life is nearby, still waiting and lurking. Could something have been done to prevent these heinous crimes and gruesome murders?

1 This scenario is fictional and solely the work of the author.

2 See John Maddux, Arresting Development: A Call for North Carolina to Expand Its Forensic Database by Collecting DNA from Felony Arrestees, 32 CAMPBELL L. REV. 103, 117–18 (2009) (describing similar accounts of real-life situations where obtaining DNA samples from arrestees would have prevented horrific crimes). For example, in 1999 a man kidnapped a teenage girl as she waited for a bus in Chicago and then brought her to an abandoned building and raped her. Id. at 117. A sample of the offender’s DNA was taken from the girl, but analysis led to no matches with any other DNA profiles. Id. The perpetrator was arrested for an unrelated aggravated criminal sexual assault nine months later. Id. He was arrested again for the same type of assault two months after that. Id. Following his arrest for criminal sexual assault he proceeded to rape four other girls. Id. Unfortunately, Illinois did not require a DNA sample to be taken from an individual arrested for a felony, so the man was able to commit four additional rapes all in the same month that he raped the girl at the bus stop. Id. Had his profile been taken upon arrest, it would have matched the profile already on record from his rape of the Chicago girl, and his subsequent crimes would have likely been prevented. Id.; see also infra Part IV (proposing that all fifty states collect DNA samples upon arrest in order to prevent crimes like those in the hypothetical above).
In some states, the answer is probably. Specifically, tragedies like the one described above could be prevented if that state authorized the collection of DNA samples from arrestees. Absent such a statute, the man in the scenario described above—and many others like him—escape prosecution from the criminal justice system. At the most basic level, law enforcement agencies use DNA samples to solve and prevent crimes, as well as exonerate those who were unjustly convicted of a crime. Expanding state databases to include samples from those arrested for certain crimes (“arrestees”) would certainly increase the potential to prevent heinous crimes and would also aid in exonerating the innocent. The public policy arguments in support of DNA databases are almost innumerable. As a result, it is no wonder that many states have or are considering expanding their DNA databases to include samples from those arrested for certain types of crimes.

However, there is another side to this argument that must be presented. Expanding such databases to include samples from individuals who have not yet been convicted of the crime he or she was arrested for raises enormous individual privacy concerns. This is even more of a concern because of the breadth of knowledge obtainable from a single DNA sample. Further, as DNA technology advances, DNA samples and profiles have the possibility of revealing more information than scientists originally believed possible. As a result, while states have a legitimate interest in protecting the public, this interest must be

3 See infra note 87 (specifying which states obtain DNA samples from individuals upon arrest). But see infra note 89 (describing which states do not collect DNA samples from arrested individuals).
4 See infra note 33 (explaining how obtaining DNA samples from arrestees can solve and prevent crimes).
5 See Maddux, supra note 2, at 117 (recounting a fictional situation where horrific crimes probably could have been prevented had Illinois required DNA samples to be taken from individuals upon arrest).
6 See infra note 33 (describing the positive impact that DNA analysis has on law enforcement agencies).
7 See infra note 70 (providing statistics of the number of crimes solved because of arrestee DNA sampling).
8 See infra note 69 (presenting the benefits associated with DNA sampling upon arrest).
9 See infra note 88 (listing states that have legislation pending that would expand their respective DNA collection statutes to include arrestees).
10 See infra note 34 (explaining the individual privacy concerns that arise as a result of collecting DNA samples upon arrest).
11 See infra note 36 (describing the type of information contained in an individual’s DNA).
12 See infra note 34 (presenting potential information that may be yielded for a DNA sample in the future).
balanced with protecting the privacy rights of our society.\textsuperscript{13} So long as individual privacy concerns are protected, however, there are few reasons to forbid law enforcement agencies from using cutting-edge technologies when combating crime.\textsuperscript{14}

Because of the benefits associated with obtaining DNA samples upon arrest, this Note proposes that every state should adopt legislation expanding its respective DNA collection statute to include samples from arrestees.\textsuperscript{15} However, in order to adequately address the individual privacy concerns and guard against potential abuses arising from this type of legislation, this Note also proposes that any state enacting such a law must include additional procedural safeguards, especially in the form of language that more clearly articulates the prohibited uses of a DNA sample.\textsuperscript{16}

First, Part II of this Note describes existing federal and state laws regarding DNA collection from arrested individuals and explains how various federal and state court decisions have addressed the constitutionality of DNA sampling from arrestees.\textsuperscript{17} Second, Part III analyzes the approach that courts are taking in deciding the constitutionality of pre-conviction DNA sampling and also evaluates the adequacy of the language and procedural safeguards contained in existing state and federal DNA collection statutes.\textsuperscript{18} Finally, Part IV proposes that all states should adopt legislation expanding their respective DNA collection statutes to include samples from arrestees, but should only do so as long as each state’s respective DNA collection statute contains adequate safeguards.\textsuperscript{19}

\textsuperscript{13} See infra note 110 (defining the balancing test that courts must conduct when analyzing Fourth Amendment searches under the “totality of the circumstances” approach).

\textsuperscript{14} See infra note 33 (stating the benefits associated with more efficient law enforcement practices).

\textsuperscript{15} See infra Part IV (proposing that each state should expand its DNA sampling databank to include samples from arrestees).

\textsuperscript{16} See infra Part IV (suggesting that states should specify prohibited uses of DNA samples to protect against potential abuse of the system).

\textsuperscript{17} See infra Part II.B (describing current federal and state laws regarding DNA collection from arrestees and also defining how federal and state courts have addressed the constitutionality of this issue).

\textsuperscript{18} See infra Part III (analyzing the approach taken by federal and state courts in addressing the constitutionality of DNA sampling from arrestees and also assessing the language used by various jurisdictions in maintaining procedural safeguards regarding DNA sampling from various categories of individuals).

\textsuperscript{19} See infra Part IV (proposing that each state should expand its DNA sampling databank to include samples from arrestees).
II. BACKGROUND

To date, slightly over half of the states and the federal government require DNA samples to be obtained from certain categories of individuals upon arrest. Additionally, fourteen states have proposed legislation that would expand their DNA databases to include samples from arrestees. Before analyzing the benefits generally associated with the expansion of DNA collection statutes, Part II.A briefly introduces how law enforcement agencies rely on DNA sampling techniques while comparing DNA sampling to traditional fingerprint collecting. Next, Part II.B provides a general overview of current federal and state laws requiring DNA samples from arrestees. Lastly, Part II.C presents how various state and federal courts have differed in their interpretations of the constitutionality of obtaining DNA samples from varying categories of arrestees.

A. A Basic Examination of Identification Techniques Used by Law Enforcement

Scientists have known the DNA structure for approximately forty years, but the use of DNA sampling as an effective law enforcement tool is a relatively recent phenomenon. While DNA sampling techniques are not currently infallible, scientists are convinced that DNA sampling has been an extremely effective tool in solving and preventing crimes.

See infra note 87 (listing each state that obtains DNA samples from arrestees).

See infra note 88 (providing a list of the fourteen states, which have legislation pending that would expand their respective DNA statutes to include various forms of arrestees).

See infra Part II.A (introducing the DNA sampling procedure in general, while also presenting potential information that can be obtained from a DNA sample).

See infra Part II.B (providing a general overview of current state and federal laws that have allowed DNA samples to be taken from felony arrestees).

See infra Part II.C (presenting the different interpretations taken by state and federal courts regarding the constitutionality of obtaining DNA samples from arrestees).


See United States v. Pool, 621 F.3d 1213, 1221 (9th Cir. 2010) (finding that using DNA samples for identification purposes is the most accurate means of identification available); see also Kimberly A. Polanco, Note, Constitutional Law—The Fourth Amendment Challenge to DNA Sampling of Arrestees Pursuant to the Justice for All Act of 2004: A Proposed Modification to the Traditional Fourth Amendment Test of Reasonableness, 27 U. ARK. LITTLE ROCK L. REV. 483, 489 (2005) (describing the flaws of DNA testing). DNA can be highly accurate when done
Indeed, some believe this investigation technique is “the greatest forensic advancement since the advent of fingerprinting.” 27 Therefore, it is useful to briefly discuss how DNA sampling has functioned as a valid investigative tool. 28

1. DNA Sampling

DNA identification as a basic law enforcement technique has been a legitimate tool in criminal investigations since its emergence in the late 1980s. 29 DNA is an extremely effective investigative tool because DNA functions as the fundamental building block of an individual’s entire genetic makeup. 30 More specifically, each person’s DNA is different from every other individual. 31 Law enforcement agencies use this correctly, but DNA testing is not error-free. Id. at 525. DNA sampling may result in erroneous matches due to problems with sample quality, flaws in the testing process, or through human error, which can occur when DNA samples are handled, collected, analyzed, or labeled. Id.; Unreliable or Improper Forensic Science, INNOCENCE PROJECT, http://www.innocenceproject.org/understand/Unreliable-Limited-Science.php (last visited Sept. 11, 2011) (explaining that the most common problem associated with DNA sampling is contamination).


28 See infra Part II.A.1 (describing how law enforcement has used DNA sampling to aid in its law enforcement activities).

29 See History of Forensic DNA Analysis, DNA INITIATIVE, supra note 25 (explaining that since DNA typing was introduced in the 1980s it has revolutionized forensic science); see also Elkins, supra note 27, at 276 (noting the widespread acceptability of DNA identification as a valid tool in criminal investigations since their introduction in the late 1980s); INNOCENCE PROJECT, supra note 26 (noting that since the 1980s, DNA evidence has helped law enforcement agencies).


31 NAT’L INST. OF JUSTICE, supra note 25; see also Identifying DNA Evidence, DNA INITIATIVE, http://www.DNA.gov/basics/evidence_collection/identifying (last visited Sept. 10, 2011) [hereinafter Identifying DNA Evidence, DNA INITIATIVE] (describing the basic biology behind DNA technology). Specifically, each DNA molecule consists of two strands that contain a particular sequence of nucleic acids, known as a double helix. Id. Placed along the “backbones” of the double helix structure are polymers, known as nucleotides, which come in four different forms. Id. Although all humans share an enormous amount
of similarity in the order of the nucleotides, there are sufficient differences that exist to provide each individual with a distinctive pattern that can serve as a unique identifier. \textit{Id.} It should be noted that DNA is unique to each individual, except in the case of identical twins. \cite{United States v. Sczubelek, 402 F.3d 175, 181 n.2 (3d Cir. 2005).} 

\cite{SMITH ALLING LANE & WASH. STATE UNIV., NATIONAL FORENSIC DNA STUDY REPORT (2003), available at http://www.dnaresource.com/documents/NationalForensicDNastudyreport.pdf; see also NAT‘L INST. OF JUSTICE, supra note 25 (describing DNA as a powerful tool because of its uniqueness to every individual).} 

\cite{LANE & WASH. STATE UNIV., supra note 32; see also INNOCENCE PROJECT, supra note 26 (explaining how DNA analysis has aided in convicting the guilty and exonerating the innocent since the late 1980s); DNA Forensics, HUMAN GENOME PROJECT INFORMATION, http://www.ornl.gov/sci/techresources/Human_Genome/elsi/forensics.shtml#7 (last visited Sept. 10, 2011) (detailing that most individuals who have committed major crimes have also committed other offenses, and DNA databases make it easier to identify suspects). DNA databases also help exonerate the innocent. \textit{Id.} Additionally, sampling arrestee DNA can result in financial savings for costs related to law enforcement investigation, prosecution, and incarceration. \textit{Id.} 


\cite{Basic Biology of DNA, DNA INITIATIVE, supra note 30; see also Sarah M. Ruby, Checking the Math: Government Secrecy and DNA Databases, 61/F. J.L. & POL’Y FOR INFO. SOC’Y 257, 265 (2010) (explaining that DNA samples are revealing because they contain entire genomes and might eventually reveal the genetic predispositions of a given offender population); Gene Testing, HUMAN GENOME PROJECT INFORMATION, http://www.ornl.gov/sci/techresources/Human_Genome/medicine/genetest.shtml (last visited Sept. 11, 2011) (explaining that DNA-based tests are the most sophisticated of the techniques used to test for genetic disorders).} 

\cite{See Aaron B. Chapin, Note, Arresting DNA: Privacy Expectations of Free Citizens Versus Post-Convicted Persons and the Unconstitutionality of DNA Dragnets, 89 MINN. L. REV. 1842, 1860 (2005) (describing that physical DNA samples can be analyzed to learn intimate details about an individual); see also Harlan, supra note 34, at 181 (“It is well recognized that
technology progresses, the ability to discover new information through DNA analysis is potentially limitless.\(^{37}\)

Aside from the vast amount of information that can be obtained from one’s DNA sample, DNA analysis is a powerful tool because it is relatively easy to obtain a sample of DNA.\(^{38}\) In fact, people leave samples of their DNA wherever they go—this fact makes DNA samples much more effective than fingerprint samples.\(^{39}\) Almost any biological evidence found at a crime scene can be subject to DNA testing.\(^{40}\) In addition to being able to obtain samples from sources like blood, semen, vaginal swabs, urine, or hair, investigators are able to generate genetic profiles from swabs taken from objects touched by hands.\(^{41}\) Because DNA samples from crime scenes can be collected with relative ease, obtaining a sample from one who is convicted of or arrested for a felony is even simpler.\(^{42}\) The benefits associated with DNA sampling have led each state to require the collection of DNA samples from—at least—all DNA contains information regarding familial lineage, predisposition to disease, and even the propensity for aggressive, addictive, or criminal behaviors.”).

\(^{37}\) See ANNA C. HENNING, CONG. RESEARCH SERV., R 40077, COMPULSORY DNA COLLECTION: A FOURTH AMENDMENT ANALYSIS 13 (2010), available at http://www.fas.org/sgp/crs/misc/R40077.pdf (suggesting that emerging scientific research might reveal new uses for “junk DNA”). Previously, “junk DNA” was thought not to reveal scientific, medical, or biological information. \(^{40}\) Identifying DNA Evidence, DNA INITIATIVE, supra note 31; see also McCullagh, supra note 27 (describing that obtaining a DNA sample is minimally invasive, and can be done as easily as taking an oral swab of an individual’s mouth).

\(^{38}\) Identifying DNA Evidence, DNA INITIATIVE, supra note 31; see also Elkins, supra note 27, at 277 (discussing how “DNA is found in cells from all bodily fluids, tissue, and hair,” and we leave samples of it wherever we go); \(^{41}\) Defining possible sources of where DNA may be found at the scene of a crime), specifically, DNA is found in cells from a wide array of sources. \(^{42}\) See, e.g., Elkins, supra note 27, at 277 (noting that scientists can now “analyze the [tiny] amount of DNA in a human fingerprint and reveal the unique genetic pattern of the person who left it” (alteration in original)).

\(^{39}\) National Forensic DNA Study Report, DNARESOURCE.COM (2010), http://www.dnaresource.com/documents/NationalForensicDNAstudyreport.pdf (defining possible sources of where DNA may be found at the scene of a crime). Specifically, DNA is found in cells from a wide array of sources. \(^{40}\) See, e.g., Elkins, supra note 27, at 277 (noting that scientists can now “analyze the [tiny] amount of DNA in a human fingerprint and reveal the unique genetic pattern of the person who left it” (alteration in original)).

\(^{40}\) Identifying DNA Evidence, DNA INITIATIVE, supra note 31; see National Forensic DNA Study Report, DNARESOURCE.COM (2010), http://www.dnaresource.com/documents/NationalForensicDNAstudyreport.pdf (defining possible sources of where DNA may be found at the scene of a crime). Specifically, DNA is found in cells from a wide array of sources. \(^{41}\) See, e.g., Elkins, supra note 27, at 277 (noting that scientists can now “analyze the [tiny] amount of DNA in a human fingerprint and reveal the unique genetic pattern of the person who left it” (alteration in original)).
persons convicted of a felony. Additionally, about half of the states require the collection of DNA samples from individuals arrested for certain felonies (“felony arrests”). Many question the constitutionality of obtaining samples upon arrest. However, those in support of DNA collection from individuals upon arrest argue that DNA sampling is analogous to the long upheld practice of fingerprint sampling. Privacy rights advocates conversely believe that there are significant differences between fingerprints and DNA samples. As a result, discussing the differences between DNA sampling and traditional fingerprinting is important.

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43 See 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, 166 (2006) (noting that all states have legislation requiring that DNA profiles of certain categories of individuals be included in CODIS).


45 See Tania Simoncelli, Dangerous Excursions: The Case Against Expanding Forensic DNA Databases to Innocent Persons, 34 J.L. MED. & ETHICS 390, 391 (2006) (presenting the view that sampling arrestee DNA is unconstitutional); HENNING, supra note 37, at 14 (questioning the constitutionality of obtaining arrestee DNA samples); infra Part II.C (describing the competing views about the constitutionality of obtaining samples from arrestees).

46 See Corey Preston, Faulty Foundations: How the False Analogy to Routine Fingerprinting Undermines the Argument for Arrestee DNA Sampling, 19 WM. & MARY BILL RTS. J. 475, 476 (2010) (explaining how “courts upholding arrestee DNA sampling statutes have relied heavily on the argument that DNA sampling is merely a harmless ‘technological progression’ from fingerprinting”).

47 See, e.g., Simoncelli, supra note 45, at 391-92 (stating that unlike physical attributes depicted by fingerprints, DNA samples can provide much more intimate personal information); Preston, supra note 46, at 480 (critiquing the argument that DNA sampling is akin to routine fingerprinting); see also infra Part II.A.2 (discussing the differences between DNA sampling and fingerprinting).

48 See infra Part II.A.2 (comparing DNA sampling to fingerprinting).
2. Fingerprinting vs. DNA Sampling

Fingerprinting for identification purposes has been used for more than one hundred years. Fingerprinting is used to identify a person because the patterns of friction ridges on human fingertips are “unique and permanent to each individual.” When obtaining a fingerprint sample, officers are required to take an impression of the three-dimensional curved surface of one’s fingertip and place it on a two-dimensional card. These standard cards are either stored in records or recorded digitally—enabling them to be electronically transmitted to various agencies for comparison. Agencies can effectively identify a person by examining the fingerprint’s visible individual characteristics.

Information from a fingerprint can only be used to ascertain one’s identity whereas an individual’s DNA contains vast amounts of information. However, unlike fingerprints, which require an individual to leave a discernible fingerprint at the crime scene, individuals leave DNA samples wherever they travel; it is much more difficult for a perpetrator to avoid leaving some form of DNA evidence at the scene of a crime. Moreover, as society advances, scientific research continues to expand knowledge of what a person’s DNA reveals. To date, DNA can provide information regarding a wide array

50 Steele, supra note 49; see also FINGERPRINT IDENTIFICATION, FBI, supra note 49 (describing that “[n]o two persons have exactly the same arrangement of ridge patterns, and the patterns of any one individual remain unchanged throughout life”).
51 See Steele, supra note 49 (explaining how the officer must carefully roll the finger onto the card, from one edge to the other, to ensure a clear and adequate impression).
52 FINGERPRINT IDENTIFICATION, FBI, supra note 49 (“Fingerprints can be recorded on a standard fingerprint card or can be recorded digitally and transmitted electronically to the FBI for comparison.”).
53 TANIA SIMONCELLI & SHELDON KRIMSKY, AM. CONST. SOC’Y FOR L. & POL’Y, A NEW ERA OF DNA COLLECTIONS: AT WHAT COST TO CIVIL LIBERTIES? 1, 2 (2007), available at http://www.acslaw.org/files/Microsoft%20Word%20-%20Simoncelli%20&%20Krimsky%20-%20DNA%20Collection%20%26%20Civil%20Liberties%20-%20September%202007_0.pdf; see also FINGERPRINT IDENTIFICATION, FBI, supra note 49 (explaining that because no two persons have the same fingerprint, fingerprints are an infallible method of identification).
54 See United States v. Pool, 621 F.3d 1213, 1222 (9th Cir. 2010) (assessing the strengths of DNA samples versus fingerprint samples); see also Elkins, supra note 27, at 277 (describing the benefits of DNA sampling compared to fingerprinting).
55 See Elkins, supra note 27, at 277 (discussing the great lengths criminals go to in order to avoid leaving behind samples of their DNA).
56 See 42 U.S.C. § 14132(d) (2006) (directing the Federal government to continue to provide funding for future DNA analysis and research); see also David H. Kaye, Commentary, Two Fallacies About DNA Data Banks for Law Enforcement, 67 BROOK. L. REV.
of factors, including but not limited to, “familial connections, physical attributes, genetic mutations, ancestry and disease predisposition.” 57 In the medical field, DNA testing is used to study how to predict which medical treatments will be effective for individual patients. 58 Thus, as predictive medicine becomes a reality, it is quite possible that DNA could eventually be used to predict human behavior as well. 59 Many privacy rights proponents view this potential for knowledge as dangerous precedent that could have terrifying consequences for the criminal justice system if adequate safeguards are not employed. 60 Regardless of the potential dangers associated with the amount of information obtainable from a DNA sample, law enforcement agencies have significantly benefited from conducting DNA analysis. 61 As a result, all fifty states authorize DNA collection from various categories of

179, 181–82 (2001) (discussing the debate on DNA database expansion); Simoncelli & Krinsky, supra note 53, at 39–42 (noting that repeated claims have been made “that human behaviors such as aggression, substance addiction, criminal tendency, and sexual orientation can be explained by genetics”).

57 Simoncelli & Krinsky, supra note 53, at 2. At the time when DNA testing was first introduced into the criminal justice system in the late 1980s, our knowledge of associations between genes and diseases was fairly limited. Id. However, the completion of the human genome sequence in 2000 and its final version in 2003 has allowed clinical testing to be done to determine links to more than 1,000 genetic conditions. Id. at 3; see also John D. Biancamano, Arresting DNA: The Evolving Nature of DNA Collection Statutes and Their Fourth Amendment Justifications, 70 OHIO ST. L.J. 619, 624 (2009) (noting that examination of a person’s DNA can reveal “[p]ropensities for heart disease, certain types of cancer, and many other health problems”); Chapin, supra note 36, at 1860 (stating that “it is scientifically well established that a physical DNA sample contains intimate personal information”); Alec Rice, Note, Brave New Circuit: Creeping Towards DNA Database Dystopia in U.S. v. Weikert, 14 ROGER WILLIAMS U. L. REV. 691, 718 (2009) (suggesting that DNA samples can be used “in future genetic research into the biological roots of criminal behavior”); Ruby, supra note 35, at 265 (noting that DNA samples are revealing and that they might reveal the genetic predispositions of a given offender population).


59 Id. at 302. It is common knowledge that the cycle of violence is repeated across generations and recently, alleles of specific genes have been identified and linked with propensities to violence. Id. at 303. However, “[a]lthough genes may constrain or influence behavior, they do so only in concert with each other and with the environment both internal and external to the organism carrying the genes.” Id. at 304.

60 See generally Ruby, supra note 35, at 265 (calling for a change to give researchers access to offenders’ profiles rather than samples due to the fact that DNA samples “might reveal the genetic predispositions of a given offender population”).

61 See DNA Forensics, HUMAN GENOME PROJECT INFORMATION, supra note 33 (detailing that most individuals who have committed major crimes have also committed other offenses and that DNA databases make it easier to identify suspects); see also supra note 33 (describing the benefits of obtaining DNA samples upon arrest).
individuals. The next section presents an overview of the important history and current legislation of varying DNA collection laws among the states.

B. Current State and Federal Laws Regarding DNA Collection Legislation

Using DNA analysis as a law enforcement tool has primarily been employed through obtaining samples from individuals convicted of certain offenses. These collected samples are then taken and stored in large databases. Each of the fifty states and the federal government possess a DNA collection statute and accompanying database. Part B.1 and Part B.2 present the differences between federal and state DNA collection statutes and their respective databases.

1. Federal DNA Collection Statutes

Perhaps the most well-known database is the Combined DNA Index System (“CODIS”), which is maintained by the Federal Bureau of Investigation (“FBI”). “The CODIS system 'enables federal, state, and local crime labs to exchange and compare DNA profiles electronically.' There are several benefits to the CODIS system. By

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62 See Maclin, supra note 43, at 168 (describing that all fifty states authorize DNA collection from those convicted of certain offenses).
63 See infra Part II.B (detailing current state and federal laws regarding DNA collection and analysis).
64 See LAKE & WASH. STATE UNIV., supra note 32 (discussing how DNA analysis is commonly used by obtaining samples from persons already convicted of certain offenses).
66 See infra note 69 (explaining that each state has its own local DNA database that is included within the federal government’s national database).
67 See infra Part II.B (presenting the existing variations between state and federal DNA collection statutes).
69 Combined DNA Index System, FBI, supra note 68. CODIS is divided into several indexes including: convicted offenders, forensic, missing persons, unidentified human remains, and arrestees, where state law permits. Id. As of August 2011, the National DNA Index (“NDIS”) contains over 9,965,486 offender profiles and 384,604 forensic profiles. CODIS – NDIS Statistics, FBI, supra note 27. Additionally, as of July, 2011, CODIS has produced over 149,200 hits assisting in more than 143,200 investigations. Id. Specifically, the DNA Identification Act of 1994 formalized the CODIS, and by 1998 all fifty states had a
searching for potential matches, the system can connect multiple crime scenes with suspects thousands of miles away.\textsuperscript{71} The CODIS system allows law enforcement personnel from multiple jurisdictions to coordinate their respective investigations and share leads that have been developed independently.\textsuperscript{72}

Due to its effectiveness, the federal government has recently sought to enlarge CODIS through the DNA Fingerprint Act of 2005 (“2005 Act”).\textsuperscript{73} The 2005 Act specifically allows for DNA samples to be

connection with CODIS as a national index linking databases at the local, state, and national level. \textit{id.} \textsuperscript{70} See \textit{What is Codis?}, DNA INITIATIVE, http://www.dna.gov/solving-crimes/cold-cases/howdatabasesaid/codis/ (last visited Sept. 10, 2011) [hereinafter \textit{What is Codis?}, DNA INITIATIVE] (“The success of CODIS is demonstrated by the thousands of matches that have linked serial cases to each other and cases that have been solved by matching crime scene evidence to known convicted offenders.”); CODIS – NDIS Statistics, FBI, supra note 27 (tracking “the number of criminal investigations where CODIS has added value to the investigative process” and providing links to the fifty states for more specific statistical analysis). Under Minnesota’s statute—which does not collect samples from arrestees—DNA sampling has aided in 2,160 investigations. \textit{id.} On the other hand, Virginia—which does collect samples from arrestees—has a total of 320,014 profiles in its database, and DNA sampling has aided in almost 7,000 investigations. \textit{id.}; see also Maddux, supra note 2, at 105 (noting that the CODIS system allows law enforcement agencies to more easily and effectively collaborate on solving crimes). Maddux also describes how DNA sampling from arrestees can save taxpayers’ dollars. \textit{id.}; JAY SIEGEL, WHY ARRESTEE DNA LEGISLATION CAN SAVE INDIANA TAXPAYERS OVER $60 MILLION PER YEAR (Jan. 2009), available at http://www.dnasaves.org/files/IN_DNA_Cost_Savings_Study.pdf (describing how obtaining samples from arrestees can save taxpayers’ dollars).

\textsuperscript{71} See Maddux, supra note 2, at 105 (illustrating the benefits of a nationally linked DNA database system); see also Christian Hassell, FBI Efforts to Eliminate the DNA Backlog, FBI (May 20, 2010), http://www.fbi.gov/news/testimony/fbi-efforts-to-eliminate-the-dna-backlog (stating that there are “over eight million offender DNA profiles and 300,000 forensic samples in [the National DNA Index System]”). “CODIS has assisted in over 112,000 investigations at the local, state, and national levels.” \textit{id.}

\textsuperscript{72} Combined DNA Index System, FBI, supra note 68; see Maddux, supra note 2, at 117–18 (providing an account of two personal stories where DNA sampling upon arrest would have probably prevented the rape of many women and would have saved lives); Police: DNA Links Rape Suspect To Other Attacks, THE BOSTON CHANNEL (Dec. 28, 2010), available at http://www.thebostonchannel.com/r/26300326/detail.html (describing a recent case where CODIS aided in solving a murder of two teens).

\textsuperscript{73} 42 U.S.C. § 14132(a) (2006). The 2005 Act provides:

The Director of the Federal Bureau of Investigation may establish an index of—

(I) DNA identification records of—

(A) persons convicted of crimes;

(B) persons who have been charged in an indictment or information with a crime; and

(C) other persons whose DNA samples are collected under applicable legal authorities, provided that DNA samples that are voluntarily submitted solely for elimination purposes shall not be included in the National DNA Index System[.]
collected from persons who have been indicted for a crime. As amended in 2006, the statute permits the collection of “DNA samples from individuals who are arrested, facing charges, or convicted.”

In terms of procedural safeguards under the 2005 Act, one may have his or her profile expunged from CODIS upon submission of a final court order showing that the conviction was overturned or that the person was not convicted of the offense. The federal government stipulates that for a state to receive access to the national DNA database, each state’s statute must contain a provision providing for the opportunity to expunge certain DNA profiles. The federal DNA collection statute also

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Id.

74 Id. § 14132 (a)(1)(B).

75 42 U.S.C. § 14135a(a)(1)(A) (2006). This statute authorizes DNA samples from arrested individuals:

(a) Collection of DNA samples
   (1) From individuals in custody
      (A) The Attorney General may, as prescribed by the Attorney General in regulation, collect DNA samples from individuals who are arrested, facing charges, or convicted or from non-United States persons who are detained under the authority of the United States. The Attorney General may delegate this function within the Department of Justice as provided in section 510 of Title 28, and may also authorize and direct any other agency of the United States that arrests or detains individuals or supervises individuals facing charges to carry out any function and exercise any power of the Attorney General under this section.

Id.

76 42 U.S.C. § 14132(d); see also Sarah B. Berson, Debating DNA Collection, NAT’L INST. OF JUSTICE (Oct. 29, 2009), http://www.ojp.usdoj.gov/nij/journals/264/debating-DNA.htm (describing variations in terms of states and their expungement procedures). For an example of a state that requires a defendant to request expungement, see COLO. REV. STAT. ANN § 16-23-105 (2010). “A person who qualifies for expungement . . . of this section may submit a written request for expungement to the Colorado bureau of investigation. Id.; LA. REV. STAT. ANN. § 15:614 (2005) (“A person whose DNA record or profile has been included in the data base or data bank pursuant to this Chapter may request that his record or profile be removed . . . .”).

77 42 U.S.C. § 14132(d)(2)(A). This section provides:

(2) By States
   (A) As a condition of access to the index described in subsection (a) of this section, a State shall promptly expunge from that index the DNA analysis of a person included in the index by that State if—
      (i) the responsible agency or official of that State receives, for each conviction of the person of an offense on the basis of which that analysis was or could have been included in the index, a certified copy of a final court order establishing that such conviction has been overturned; or
authorizes the disclosure of DNA test results for various reasons. Specifically, the statute dictates that the results of DNA tests may be disclosed “to criminal justice agencies for law enforcement identification purposes.” The statute also provides that, so long as personally identifiable information is removed, test results may be disclosed for identification research in a population statistics database. Like the federal collection statute, each state has its own DNA collection statute. These state statutes vary in terms of who must provide DNA samples and the purposes for which the samples may be used.

2. State Arrestee DNA Collection Statutes

Following passage of the federal law authorizing the collection of DNA samples from felony arrestees, many states followed suit by enacting similar laws permitting DNA collection upon arrest. Virginia, the pioneer of DNA database expansion, enacted a law in 2002 allowing law enforcement to collect DNA samples from “[e]very person arrested..."
for the commission or attempted commission of a violent felony.”

Shortly thereafter, Louisiana passed legislation in 2003 expanding its database to enable collection from certain categories of arrestees. Although both Virginia and Louisiana are known for being two of the most aggressive states pursuing DNA database expansion, other states have enacted similar laws.

Approximately half of the states currently authorize DNA sampling from arrestees; however, the states differ in terms of which categories of arrestees will be subject to DNA sampling. In addition to the states

84 VA. CODE ANN. § 19.2-310.2:1 (2008). Specifically, this code section provides that “[e]very person arrested for the commission or attempted commission of a violent felony . . . shall have a sample of his saliva or tissue taken for DNA (deoxyribonucleic acid) analysis to determine identification characteristics specific to the person.” Id. Virginia defines violent felonies to include: “First and second degree murder and voluntary manslaughter,” “[m]ob-related felonies,” “[a]ny kidnapping or abduction,” “[a]ny malicious felonious assault or malicious bodily wounding,” “[r]obbery,” “criminal sexual assault,” and “[a]son.” VA. CODE ANN. § 19.2-297.1 (2008); see also Maclin, supra note 43, at 166 (discussing Virginia’s statute expanding collection of DNA to include arrestees).

85 LA. REV. STAT. ANN. § 15:609(A)(1) (2005). This section provides:
A. (1) A person who is arrested for a felony or other specified offense, including an attempt, conspiracy, criminal solicitation, or accessory after the fact of such offenses on or after September 1, 1999, shall have a DNA sample drawn or taken at the same time he is fingerprinted pursuant to the booking procedure.

Id. See infra note 87 (listing all of the states currently allowing the sampling of DNA from arrestees).

86 See ALA. CODE § 36-18-24(b)(6) (2010) (collecting samples from persons arrested for any felony offense or any sexual offense); ALASKA STAT. § 44.41.035(b)(6) (2010) (collecting samples from persons arrested for certain types of violent felonies); ARIZ. REV. STAT. ANN. § 13-610(k) (2008) (obtaining DNA samples from persons arrested for certain categories of felonies including: murder, sex crimes, and burglary); ARK. CODE ANN. § 12-12-1006(b)(1)-(2) (West Supp. 2011) (collecting samples from persons arrested for a “felony or a class A misdemeanor”); CAL. PENAL CODE § 296(a) (West 2008) (collecting samples from persons arrested for a felony); COLO. REV. STAT. ANN. § 16-23-103(1)(a) (West Supp. 2010) (collecting samples from all adults arrested for a felony); FLA. STAT. ANN. § 943.325 (West 2006 & Supp. 2011) (collecting samples from all felony arrests); KAN. STAT. § 21-2511(e)(2) (2007 & Supp. 2010) (collecting samples from “any adult arrested or charged or juvenile placed in custody for or charged with the commission or attempted commission of any felony”); LA. REV. STAT. ANN. § 15:609(A)(1) (collecting samples from all persons arrested for a felony); MD. CODE ANN., PUB. SAFETY § 2-504(a)(3)(i)-(2) (LexisNexis Supp. 2010) (collecting DNA samples from those arrested for certain categories of felonies including: murder, sex crimes, and burglary); MICH. COMP. LAWS ANN. § 750.520m(1)(a) (West Supp. 2011) (collecting samples from those arrested for certain types of violent felonies); MO. REV. STAT. § 650.055 (2008) (collecting samples from an individual seventeen years of age or older who is arrested for certain felony offenses); N.M. STAT. ANN. § 29-3-10(A) (LexisNexis Supp. 2010) (collecting samples from an individual eighteen or older who is arrested for murder, sex crimes, or burglary); N.C. GEN. STAT. ANN. § 15A-266.3A (2009) (collecting samples from individuals arrested for certain offenses); N.D. CENT. CODE § 31-13-03 (2009)
currently authorizing DNA collection from arrestees, many states have recently proposed legislation to expand their own databases to include DNA samples from certain types of arrestees. Although the trend appears to favor expansion of DNA databases, privacy concerns remain

(collecting samples from all persons arrested for a felony); OHIO REV. CODE ANN. § 2901.07 (West 2010) (collecting samples from an individual eighteen years of age or older who is arrested for a crime); S.C. CODE ANN. § 23-3-620 (2009) (collecting samples from persons arrested for any felony that is punishable by a sentence of 5 years or more); S.D. CODIFIED LAWS § 23-5A-5.2 (2009) (collecting samples from those arrested for violent felonies); TENN. CODE ANN. § 40-35-319 (West Supp. 2008) (defining a violent felony as: first or second degree murder; kidnapping; aggravated assault; aggravated child abuse; robbery; aggravated burglary; carjacking; sexual battery; sexual battery by an authority figure; statutory rape by an authority figure or aggravated statutory rape; rape; aggravated rape; rape of a child or aggravated rape of a child; aggravated arson; or attempting to commit, solicit, or conspire to commit any of the offenses listed above); TEX. GOV’T CODE ANN. § 411.1471 (West 2005) (collecting samples from those arrested for murder, sex crimes, or burglary); UTAH CODE ANN. § 53-10-403 (West 2010) (collecting samples from any individual booked for a violent felony); VT. STAT. ANN. tit. 20, § 1932(12)(A) (2000 & Supp. 2010) (collecting samples from those arrested for any felony); VA. CODE ANN. § 19.2-310.2:1 (2007) (collecting samples from those arrested for murder and various sex crimes). Texas takes a different approach—it only obtains samples from individuals arrested for certain felonies if that person had been previously convicted of a felony as described in the statute. See TEX. GOV’T CODE ANN. § 411.1471(a)(2) (West 2005) (applying to a defendant who was “arrested for a felony . . . after having been previously convicted of or placed on deferred adjudication for an offense”).

and have caused several states to refuse to collect DNA samples from arrestees.\textsuperscript{89}

Due to the sensitive nature of the information contained in a DNA sample, many states have attempted to ameliorate privacy concerns through procedural safeguards.\textsuperscript{90} For example, of those states permitting DNA sampling from arrestees, all include some ability to expunge the profiles if the arrest does not result in a conviction.\textsuperscript{91} The most common way to remove a profile from the database is by means of a written request from the arrestee.\textsuperscript{92} At least one state, Vermont, automatically expunges a DNA profile if there is no conviction.\textsuperscript{93}


\textsuperscript{90} See Berson, \textit{supra} note 76 (describing various expungement procedures). The reason that all states have a provision allowing for expungement of records is because federal law mandates this as a prerequisite to receive access to the national DNA database. \textit{Id.; supra} note 79 (presenting the language contained in the federal DNA collection statute stipulating that, in order to receive access to the national DNA database, each state must provide for a means of expungement for those not convicted of the crime); \textit{see also infra} Part III B (assessing specific procedural safeguards contained in various state DNA collection statutes).

\textsuperscript{91} See \textit{supra} note 77 (presenting the expungement provision contained in the Federal DNA Collection Act that requires each state to have procedures for expungement as a condition to that state’s access to the national database).

\textsuperscript{92} See \textit{Alaska Stat.} § 44.41.035(f) (2010) (allowing individuals to petition for expungement upon showing of a court order establishing innocence); \textit{Ariz. Rev. Stat. Ann.} § 13-610(j) (2008) (stating that an arrestee’s DNA profile resulting from a conviction may be expunged if the conviction is overturned on appeal and the arrestee files a petition); \textit{Ark. Code Ann.} § 16-90-905 (2009) (allowing the sealing or expunging of records provided a petition and uniform order have been made); \textit{Cal. Penal Code.} § 299 (West 2008) (allowing for written requests for expungement if there is no otherwise legal basis for retaining the specimen); \textit{Fla. Stat. Ann.} § 943.325(16) (West Supp. 2011) (explaining that a petition must be made in order to comply with the procedures and requirements for removing DNA samples from the statewide DNA databases); \textit{Kan. Stat.} § 21-2511(e)(3) (2007 & Supp. 2010) (expunging a person’s DNA sample and profile require a petition by that person); \textit{Md. Code Ann., Pub. Safety} § 2-511 (LexisNexis 2003) (allowing individuals to “request that [their DNA] information be expunged on the grounds that the conviction that resulted in the inclusion meets” certain criteria); \textit{Mich. Comp. Laws Ann.} § 28.176(11) (West 2004) (disposing of a DNA sample shall occur upon “a written request for disposal and a certified copy of a final court order establishing that the charge for which the sample was obtained has been dismissed or has resulted in an acquittal”); \textit{N.D. Cent. Code} § 31-
Because privacy is one of the main concerns associated with expanding and maintaining DNA databases, many state statutes impose penalties for wrongdoing involving unauthorized use or disclosure of DNA data found in the collection databases.\textsuperscript{94} States also attempt to safeguard against abuse by authorizing specific uses for the DNA

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\textsuperscript{93} See VT. STAT. ANN. tit. 20, § 1940 (2009 & Supp. 2011). Vermont’s automatic expungement statute reads as follows:

(a) In accordance with procedures set forth in subsection (b) of this section, the department shall destroy the DNA sample and any records of a person related to the sample that were taken in connection with a particular alleged designated crime in any of the following circumstances:

(1) A person’s conviction related to an incident that caused the DNA sample to be taken is reversed, and the case is dismissed.
(2) The person is granted a full pardon related to an incident that caused the DNA sample to be taken.
(3) If the sample was taken post-arraignment, the felony charge which required the DNA sample is downgraded to a misdemeanor by the prosecuting attorney upon a plea agreement or the person is convicted of a lesser offense that is a misdemeanor other than domestic assault pursuant to 13 V.S.A. § 1042 or a sex offense for which registration is required pursuant to 13 V.S.A. § 5401 et seq.
(4) If the sample was taken post-arraignment, the person is acquitted after a trial of the charges which required the taking of the DNA sample.
(5) If the sample was taken post-arraignment, the charges which required the taking of the DNA sample are dismissed by either the court or the state after arraignment unless the attorney for the state can show good cause why the sample should not be destroyed.

\textsuperscript{94} See 42 U.S.C. § 14135e(c) (2006) (imposing a fine of $250,000 or the possibility of imprisonment for each instance of wrongdoing under the federal DNA collection statute). The penalties imposed by the states for such violations vary widely in terms of both the amount of the fine and length of imprisonment. See, e.g., Berson, supra note 76 (describing how several states impose penalties for misuse of DNA samples).
samples.\textsuperscript{95} For example, several states provide that the DNA samples may be used for identification of missing persons, identification of remains from natural or other disasters, or statistical research.\textsuperscript{96} However, some states authorizing DNA sampling from arrestees go even further and prohibit the use of the samples for predicting or identifying medical or genetic disorders.\textsuperscript{97}

Although several states’ statutes contain very specific language prohibiting certain uses of DNA samples, other state statutes fall short and include vague language authorizing the use of DNA identification registration systems for broad purposes.\textsuperscript{98} Alaska, for example, authorizes its DNA registration system to be used for “improving the operation of the system” and does not affirmatively prohibit certain

\textsuperscript{95} See, e.g., Berson, supra note 76 (discussing how several individual states provide for limitations on uses of DNA samples); see also infra Part III.B (examining the adequacy of the language of the procedural safeguards contained in varying state statutes).

\textsuperscript{96} See ALASKA STAT. § 44.11.035(f) (2010) (specifying that DNA samples may be analyzed for identification of missing persons, identification of remains from natural or other disasters, or statistical research); FLA. STAT. ANN. § 943.325(13) (West 2006 & Supp. 2011) (allowing DNA samples to be analyzed to assist in the recovery or identification of human remains); IND. CODE § 10-13-6-13(5)(A) (2004) (allowing testing of DNA samples for research or administrative purposes and assisting in the recovery or identification of human remains); KAN. STAT. § 21-2511(j) (2007 & Supp. 2010) (allowing DNA records to be used to assist in identifying human remains); MICH. COMP. LAWS ANN. § 28.176(11) (West 2004) (allowing samples to be analyzed for academic, research, or statistical analysis providing that personal identifications are removed).

\textsuperscript{97} See, e.g., VT. STAT. ANN. tit. 20, § 1937(b) (2000) (“Analysis of DNA samples obtained pursuant to this subchapter is not authorized for identification of any medical or genetic disorder.”); FLA. STAT. ANN. § 943.325(13)(b) (West Supp. 2011) (stating that the DNA samples collected under this section may not be used for identifying any medical or genetic condition); TEX. GOV’T CODE ANN. § 411.143(d) (West 2005) (“The information contained in the DNA database may not be collected, analyzed, or stored to obtain information about human physical traits or predisposition for disease unless the purpose for obtaining the information is related to a purpose described by this section.”).

\textsuperscript{98} See, e.g., ALASKA STAT. § 44.11.035(f)(4) (2010) (“The DNA identification registration system is confidential . . . and may be used only for . . . improving the operation of the system . . . ”); ARIZ. REV. STAT. ANN. § 13-610 (2008) (allowing samples to be used “[f]or law enforcement identification purposes”); ARK. CODE ANN. § 12-12-1111(c)(1) (2003) (explaining that DNA samples “shall be used only for law enforcement identification purposes or to assist in the recovery or identification of human remains from disasters or for other humanitarian identification purposes, including identification of missing persons”); LA. REV. STAT. ANN. § 15:611(c) (2005) (utilizing the same limiting language as the Arkansas statute); S.D. CODIFIED LAWS § 23-5A-19 (Supp. 2011) (allowing the results of DNA analysis to “be used for any law enforcement identification purpose”).
uses. South Dakota’s broad language allows for DNA analysis to be conducted for “any law enforcement identification purpose.”

Unlike the many states that do not affirmatively prohibit certain uses, Texas’s statute pushes the envelope and allows DNA to be used for other purposes not linked to establishing identity. Specifically, Texas’s statute provides that “[t]he information contained in the DNA database may not be collected, analyzed, or stored to obtain information about human physical traits or predisposition for disease unless the purpose for obtaining the information is related to a purpose described by [the] section.” With this type of language, presumably, DNA samples could be used to check for human physical traits or even to study for predisposition for disease, as long as law enforcement agents could articulate a reason for doing so that is “related to” a purpose described elsewhere in the section. General provisions such as these create the possibility that the government could misuse DNA samples for its own

99 See, e.g., ALASKA STAT. § 44.41.035(4) (“The DNA identification registration system is confidential, is not public record . . . and may only be used for . . . improving the operation of the system . . .”).
100 S.D. CODIFIED LAWS § 23-5A-19 (allowing the results of DNA analysis to “be used for any law enforcement identification purpose” (emphasis added)).
101 See infra note 102 (describing the language found in Texas’ DNA collection statute).
102 TEX. GOV’T CODE ANN. § 411.143(d) (emphasis added). In terms of the “related to a purpose” described by this section language, the other purposes that DNA may be used for include:

(a) The principal purpose of the DNA database is to assist a federal, state, or local criminal justice or law enforcement agencies in the investigation or prosecution of sex-related offenses or other offenses in which biological evidence is recovered . . .

(c) Other purposes of the database include:

(1) assisting in the recovery or identification of human remains from a disaster or for humanitarian purposes;

(2) assisting in the identification of living or deceased missing persons; and

(3) if personal identifying information is removed:

(A) establishing a population statistics database; [and]

(B) assisting in identification research and protocol development . . .

Id.

103 See supra note 102 (giving the language contained in Texas’s DNA collection statute). Although the statute specifies that personal identification information must be removed if being used to establish a population statistics database or in assisting with identification research, this type of language greatly increases the amount of information that can legally be obtained when analyzing DNA samples. See infra Part III.A (explaining that without specific language articulating the purpose for which DNA samples may be used, DNA samples may no longer be treated as analogous to fingerprinting, and thereby individual privacy rights are more greatly infringed).
purposes. However, the amount of information contained in DNA samples and the possibility for abusing such information are not the only concern associated with DNA sampling procedures—many question whether DNA sampling from arrestees complies with the Fourth Amendment.

C. State and Federal Court Decisions Regarding the Collection of DNA Samples from Arrestees

Courts have consistently held that compulsory DNA collection and analysis must be analyzed under the Fourth Amendment because it constitutes a search. The Fourth Amendment guarantees protection against “unreasonable searches and seizures.” Courts examining this issue under the Fourth Amendment must assess whether the collection of DNA samples is reasonable. Historically, nearly all courts reviewing compulsory post-conviction DNA collection laws upheld the laws against Fourth Amendment challenges, but did so by relying on differing legal tests. The most common tests used to address the constitutionality of DNA sampling procedures include either the special needs test or a general reasonableness test, which is known as the totality of the circumstances approach.

104 See Kaye, supra note 56, at 505 (stating that the potential that the government may misuse DNA samples for its own purposes must not be ignored).
105 See supra Part II.C (describing Fourth Amendment concerns also associated with DNA sampling procedures).
106 See, e.g., United States v. Amerson, 483 F.3d 73, 77 (2d Cir. 2007) (“It is settled law that DNA indexing statutes, because they authorize both a physical intrusion to obtain a tissue sample and a chemical analysis to obtain private physiological information about a person, are subject to the strictures of the Fourth Amendment.”).
107 U.S. CONST. amend IV. The Fourth Amendment provides:

The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.

Id.

108 See United States v. Samson, 547 U.S. 843, 848 (2006) (determining whether a search is reasonable requires the court to enter into a balancing test that weighs the government’s interest against the degree to which a search intrudes upon an individual’s privacy interest); see also Maclin, supra note 43, at 168 (explaining that under the Fourth Amendment, courts are asked to assess whether or not the government’s action is reasonable).
109 See infra note 110 (describing the varying legal tests courts use in assessing the constitutionality of DNA sampling procedure).
110 See HENNING, supra note 37, at 7 (presenting various tests courts have used in assessing Fourth Amendment searches and seizures). When determining whether searches and seizures are reasonable, courts have applied different standards in different
constitutionality of arrestee DNA sampling statutes under the totality of the circumstances test. A discussion of the two federal court decisions addressing pre-conviction DNA sampling is presented in Part II.C.1. Then, Part II.C.2 will describe two varying state court decisions assessing the constitutionality of pretrial DNA sampling.

1. Relevant Federal Court Decisions

Although many courts have addressed the constitutionality of DNA sampling from convicted persons, only two federal courts have reviewed circumstances. When analyzing an issue under the Fourth Amendment, courts generally examine such issues under one of three varying standards. The most stringent standard involves traditional law enforcement activities, such as searching homes. To be reasonable, these activities require “probable cause” — the most stringent Fourth Amendment standard. The second category involves limited intrusions that satisfy the Fourth Amendment strictures with a reasonableness standard that is lower than probable cause. For example, a police officer patting down a suspect to search for weapons falls under this second category. In these situations, courts allow searches justified by “reasonable suspicion,” which is a suspicion that requires “somewhat less specific evidence than probable cause requires.” The third category includes “suspicionless” searches, where courts apply a general balancing test to determine the reasonableness of a search. On one side of the balancing test, courts assess the degree to which a search or a seizure intrudes upon an individual’s privacy compared with the degree to which the search is needed for the promotion of legitimate governmental interests. This approach is also known as the “general reasonableness or ‘totality-of-the-circumstances’ test.” Id.; see also United States v. Kraklio, 451 F.3d 922, 924 (8th Cir. 2008) (using the totality of the circumstances approach); United States v. Weikert, 504 F.3d 1, 7 (1st Cir. 2007) (applying the totality of the circumstances approach); United States v. Banks, 490 F.3d 1178, 1183 (10th Cir. 2007) (applying the totality of the circumstances test); United States v. Sczubelek, 402 F.3d 175, 184 (3d Cir. 2005) (applying the totality of the circumstances to determine reasonableness of the search); Groceman v. U.S. Dep’t Justice, 354 F.3d 411, 413–14 (5th Cir. 2004) (using the totality of the circumstances approach in assessing reasonableness of the search); United States v. Kincaid, 379 F.3d 813, 832 (9th Cir. 2004) (analyzing the facts of the case with the common standard known as totality of the circumstances); Jones v. Murray, 962 F.2d 302, 307–08 (4th Cir. 1992) (applying the totality of the circumstances approach); see also Amerson, 483 F.3d at 78 (applying the special needs test); United States v. Hook, 471 F.3d 766, 772 (7th Cir. 2006) (analyzing the case with the special needs standard).

111 See United States v. Pool, 621 F.3d 1213, 1230 (9th Cir. 2010) (applying the totality of the circumstances test in the context of assessing the constitutionality of obtaining DNA samples from arrestees); see also United States v. Mitchell, No. 09-4718, 2011 WL 3086952, at *23 (3d Cir. July 25, 2011) (using the totality of the circumstances approach); In re C.T.L., 722 N.W.2d 484, 491 (Minn. Ct. App. 2006) (applying the totality of the circumstances test); Samson, 547 U.S. at 850 (rejecting the special needs test in the case of a suspicionless search from a parolee). As a result, this Note focuses only on analyzing pretrial DNA collection statutes under totality-of-the-circumstances approach.

112 See infra Part II.C.1 (presenting two federal court decisions addressing the constitutionality of obtaining DNA samples from arrestees).

113 See infra Part II.C.2 (detailing two state court decisions assessing the constitutionality of pretrial DNA sampling).
the constitutionality of collecting DNA samples from arrestees—the Ninth Circuit in *United States v. Pool* and the Third Circuit in *United States v. Mitchell*. Both courts analyzed the constitutionality of obtaining pre-conviction DNA samples under the totality of the circumstances test. Under this approach, a court must determine the reasonableness of the search by assessing “‘on the one hand, the degree to which [the DNA collection] intrudes upon an individual’s privacy and, on the other, the degree to which it is needed for the promotion of legitimate governmental interests.’”

In applying the totality of the circumstances test, both federal circuits found that pre-conviction DNA sampling does not violate the Fourth Amendment. Before reaching this conclusion, both courts examined at length the proper way to characterize a DNA sample. In *Pool*, the court found that the government’s interest in collecting DNA samples was no different from the government’s interest in collecting fingerprint

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114 See *Pool*, 621 F.3d at 1218 (reviewing the constitutionality of obtaining pretrial DNA samples); *Mitchell*, 2011 WL 3086952, at *1 (reviewing the same constitutionality issue).

115 See *Mitchell*, 2011 WL 3086952, at *13 (applying the totality of the circumstances test to the challenge of the latest restatement of the DNA Act); see also *Pool*, 621 F.3d at 1218 (determining whether obtaining DNA samples is constitutional).

116 *Mitchell*, 2011 WL 3086952, at *1 (alteration in original) (quoting *Samson v. California*, 547 U.S. 843, 848 (2006)); see also *Pool*, 621 F.3d at 1237 (explaining that under the totality of the circumstances approach, a court must balance the intrusion on an individual’s privacy with the promotion of legitimate government interests); Robert Molko, *The Perils of Suspicionless DNA Extraction of Arrestees Under California Proposition 69: Liability of the California Prosecutor for Fourth Amendment Violation? The Uncertainty Continues in 2010*, 37 WM. & MARY B. J. 183, 196 (2010) (explaining use of the totality of the circumstances approach). Molko describes governments’ interest in such situations including: 1) the need to immediately and accurately identify the arrestees; 2) the ability to solve past and future crimes efficiently and accurately; 3) the need to exonerate innocent individuals; 4) the need to protect innocent individuals from even becoming suspects; 5) the need to prevent future crimes before they occur; 6) the need to protect public safety by more quickly identifying recidivist offenders and 7) the public interest in solving crimes as promptly as possible.

Id. at 193. (internal quotations omitted). In the context of assessing the constitutionality of DNA collection statutes, generally, the government favors the totality of the circumstance approach because it is an easier test to satisfy. Id. at 196; see also Martha L. Lawson, *Note, Personal Does Not Always Equal “Private”: The Constitutionality of Requiring DNA Samples from Convicted Felons and Arrestees*, 9 WM. & MARY B. RTS. J. 645, 656–58 (2001) (describing the government’s interests in obtaining samples from arrestees and the intrusions faced by individuals).

117 See *Pool*, 621 F.3d at 1218 (holding that pre-conviction DNA sampling does not violate the Fourth Amendment); see also *Mitchell*, 2011 WL 3086952, at *1 (holding that collection of DNA from arrestees and pretrial detainees does not violate the Fourth Amendment).

118 See infra note 150 (describing how courts assessing the constitutionality of DNA sampling from arrestees has turned on how the court characterizes the role of the collected DNA sample).
samples. In Mitchell, the district court originally held that pre-conviction DNA sampling was unconstitutional because DNA samples hold the potential to reveal a host of private genetic information; however, the court of appeals rejected this line of reasoning and concluded that “at least in the current state of scientific knowledge, the DNA profile derived from the [individual’s] blood sample establishes only a record of the [individual’s] identity.” Interestingly, both courts were mindful of the vast amount of sensitive information that can be obtained from a person’s DNA, but ultimately found that, with the current state of the technology, the “junk DNA” used in creating a DNA profile does not contain any individual genetic information, which allowed each court to hold that the government’s interest in a person’s DNA outweighed the individual’s reasonable expectation of privacy.

Although these courts refused to factor this future risk into their assessment of the constitutionality of the DNA collection program as it currently exists, both courts acknowledged that scientific advances may one day make it possible to extract more information from “junk DNA.” When and if this day comes, courts have admitted that an

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119 See Pool, 621 F.3d at 1231 (alteration in original) (“Pool has not provided a basis for weighing the interests in DNA profiling in a manner that is different from the interests involved in fingerprinting and photography.”). The court was not persuaded by Pool’s argument that the CODIS DNA profiles could be used for more than law enforcement purposes. Id. at 1229–30. Pool cited to several articles suggesting that “junk DNA” could eventually be used to determine sensitive information, including affecting how and when genes are expressed. Id. at 1230. “[J]unk DNA” is a term that generally refers to any non- genetic DNA, that is, stretches of DNA that do not code for RNA. Id.; see also Henning, supra note 37, at 13 (explaining that junk DNA could have the potential to reveal more biological information than previously assumed); Simon A. Cole, Is the “Junk” DNA Designation Bunk?, 102 NW. U. L. REV. COLLOQUIY 54, 56–57 (2007), available at http://www.law.northwestern.edu/lawreview/colloquy/2007/23/ (describing that “junk DNA” may reveal more information than originally thought possible).

120 See Mitchell, 2011 WL 3086952, at *20 (quoting United States v. Amerson, 483 F.3d 73, 85 (2d Cir. 2007)).

121 See Mitchell, 2011 WL 3086952, at *18; see also Pool, 621 F.3d at 1230 (noting that junk DNA does not yet contain any individual genetic information). The court acknowledged that the defendant’s concerns about the potential use of DNA were understandable but was more persuaded by the mitigating factors associated with the defendant’s concerns. Id. at 1221. Specifically, the court stated that DNA collection systems were not designed to reveal genetic information such as physical and mental traits. Id. Additionally, although the court noted that some scientific evidence available suggests that “junk DNA” contained in CODIS may contain additional information, this only indicates that the government “might be able to ascertain genetic traits from the [junk DNA], not that it actually could do so.” Id. (emphasis in original).

122 See Mitchell, 2011 WL 3086952, at *19 (noting that a scenario in which scientific advances “make it possible to extract more information from ‘junk DNA’—is ‘not unforeseeable’); see also United States v. Weikert, 504 F.3d 1, 13 (1st Cir. 2007) (admitting that scientific advancements make it possible to obtain more information from junk DNA).
individual’s interests could be vastly different, and the balance may tip in the opposite direction. In addition to the federal court decisions, two state courts have encountered challenges to their pretrial DNA collection statutes.

2. State Decisions: Two Competing Views

Like the two federal court decisions discussed above, two state courts have addressed challenges to their pretrial DNA collection statutes. On the one hand, the Minnesota Court of Appeals held in 2006 that Minnesota’s pre-conviction DNA statute violated the Fourth Amendment. Specifically, the court found that an arrestee’s privacy expectation was no different than a not-guilty or uncharged person’s privacy expectation. The court held that the government’s interest in collecting DNA samples outweighed the privacy interest of an uncharged person.

On the other hand, the Supreme Court of Virginia reached the opposite conclusion in 2007 when it upheld Virginia’s statute...
authorizing DNA collection from arrestees after applying the totality of the circumstances approach. In this case, the court compared DNA sampling to the routine taking of fingerprints, finding that collecting such samples necessitated only a minimal privacy intrusion. After applying the general balancing test, the court concluded that law enforcements’ interest in determining the arrestee’s identifiable characteristics outweighed the minor intrusion resulting from the DNA sampling.

Overall, even when courts have applied the same test in similar contexts, the ultimate holdings have varied widely. These inconsistent outcomes cause uncertainty when predicting what conduct will

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129 Anderson, 650 S.E.2d at 706. In this case, a sample of Angel Anderson’s DNA was taken after he was arrested for charges of rape and sodomy. Id. Anderson’s profile was entered into a database and a routine analysis resulted in a ‘cold hit’ linking Anderson to a previous case where a young woman had been raped, sodomized, and robbed, which ultimately led to Anderson’s conviction for the prior offense. Id. at 703–04. Anderson argued that the taking of his DNA sample upon arrest violated the Fourth Amendment in that it constituted a “suspicionless” seizure. Id. at 706.

130 Id. at 705. The court noted that, as previously established, the taking of a DNA sample is permissible “as a part of routine booking process.” Id. at 706. As a result, “no ‘additional finding of individualized suspicion’ much less probable cause, must be established before the sample may be obtained.” Id. (quoting Jones v. Murray, 650 S.E.2d 302, 306 (4th Cir. 1992)). More specifically, the court stated:

> [W]hen a suspect is arrested upon probable cause, his identification becomes a matter of legitimate state interest and he can hardly claim privacy in it. We accept this proposition because the identification of suspects 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. This becomes readily apparent when we consider the universal approbation of “booking” procedures that are followed for every suspect arrested for a felony, whether or not the proof of a particular suspect’s crime will involve the use of fingerprint identification.

Id. at 705 (quoting Jones v. Murray, 650 S.E.2d 302, 306 (4th Cir. 1992)).

131 Id. at 706. The court rejected using the special needs test and instead indicated that the taking of the DNA sample is permissible as part of routine booking procedures. Id. The court also described that, because the arrest is made pursuant to probable cause, identification of the arrestee is a matter of legitimate governmental interest and as a result there is no privacy as to his identity. Id.

132 Compare United States v. Pool, 621 F.3d 1213, 1230 (9th Cir. 2010) (finding that obtaining a DNA sample from an arrestee complies with the Fourth Amendment), United States v. Mitchell, No. 09-4718, 2011 WL 3086952, at *1 (3d Cir. July 25, 2011) (holding that the Fourth Amendment is not violated when a DNA sample is collected from an arrestee), and Anderson, 650 S.E.2d at 702 (holding that DNA samples collected from an arrestee was not a violation of the Fourth Amendment), with In re C.T.L., 722 N.W.2d 484, 491 (Minn. Ct. App. 2006) (finding that obtaining a DNA sample from an arrestee violates the Fourth Amendment).
constitute a violation of the Fourth Amendment. Ultimately, the few state and federal court decisions addressing the constitutionality of pretrial DNA sampling give direction as to what test would most likely be applied in this context; they also highlight the importance of characterizing DNA samples. The way that the court characterizes the DNA in terms of the amount of information obtainable from the sample appears to be outcome determinative when assessing the constitutionality of the respective DNA collection statute. As a result, Part III of this Note examines the likely outcome when future pretrial DNA statutes are challenged and analyzed under the totality of the circumstances test.

III. ANALYSIS

Part III assesses the constitutionality of DNA sampling from arrestees when analyzed under the totality of the circumstances test. Part III.A examines the competing rights that must be weighed under this approach and considers how technological advancements might alter the constitutional analysis of DNA statutes. Next, Part III.B discusses the current DNA collection statutes, both state and federal, and the language contained within these statutes. Part III.B.1 considers the language contained in the federal statute. Part III.B.2 evaluates the language contained in several state statutes, which lack adequate

133 See infra Part III.A (describing the different court opinions, which leads to questions in terms of what conduct satisfies the Fourth Amendment).
134 Compare In re C.T.L., 722 N.W.2d at 491 (viewing DNA samples as inherently different from fingerprinting, and finding that obtaining a DNA sample from an arrestee violates the Fourth Amendment), with Anderson, 650 S.E.2d at 706 (considering DNA samples to be analogous to fingerprints, and finding that obtaining a DNA sample from an arrestee to comply with the Fourth Amendment), and Pool, 621 F.3d at 1230 (viewing DNA samples as analogous to fingerprints).
135 See infra note 150 (comparing court decisions that have reached opposite outcomes on the basis of how they have characterized the DNA sample).
136 See infra Part III.A (analyzing the various court decisions and how these decisions will affect future challenges brought against pretrial DNA collection statutes).
137 See infra Part III.A (discussing the totality of the circumstances approach as it applies to DNA sampling from arrestees).
138 See infra Part III.A.2 (considering how advancing technology may affect an individual’s privacy expectation interest).
139 See infra Part III.B (analyzing the language used in varying federal and state DNA collection statutes).
140 See infra Part III.B.1 (explaining the language contained in the federal DNA collection statute).
procedural safeguards, and Part III.B.3 concludes by exploring language in various state statutes containing ample procedural safeguards.\textsuperscript{141}

A. Balancing Rights: Assessing the Constitutionality of Pretrial DNA Sampling under the Totality of the Circumstances Approach

The Fourth Amendment protects individuals from unreasonable searches and seizures.\textsuperscript{142} To adhere to the Fourth Amendment’s reasonableness standard, the totality of the circumstances approach assesses reasonableness by examining the degree to which a search intrudes upon an individual’s privacy, and balances that with the necessity of the search for the promotion of legitimate government interests.\textsuperscript{143} The government favors this approach because most DNA collection statutes have been upheld under this standard.\textsuperscript{144} Under this approach, courts are only required to balance the government’s interest with an individual’s immediate privacy interest.\textsuperscript{145} Courts are not required to account for the likelihood of future technological advancements; however, courts are aware that a slight alteration in the facts could drastically alter one’s privacy interest.\textsuperscript{146} At least one court has struck down its state’s pretrial DNA collection statute because of the privacy concerns raised by the amount of information ascertainable from a DNA sample.\textsuperscript{147} Interestingly, the DNA samples that have been collected in each case hold identical information; thus, it is puzzling to

\textsuperscript{141} See infra Part III.B.2–3 (evaluating the language contained in state DNA collection statutes).
\textsuperscript{142} See supra note 107–08 (giving the language of the Fourth Amendment and explaining its reasonableness approach).
\textsuperscript{143} See United States v. Pool, 621 F.3d 1230, 1237 (9th Cir. 2010) (stating that, under the totality of the circumstances approach, the court must assess “on the one hand, the degree to which it intrudes upon an individual’s privacy, and on the other, the degree to which it is needed for the promotion of legitimate governmental interests” (quoting United States v. Knights, 534 U.S. 112, 118–19 (2001))).
\textsuperscript{144} Molko, supra note 116, at 196 (explaining that the government favors assessing DNA collection statutes under the totality of the circumstances approach because it is an easier test to satisfy).
\textsuperscript{145} See supra note 110 (describing the balance undertaken under the totality of the circumstances approach).
\textsuperscript{146} See supra note 110 (presenting decisions where courts have admitted that a slight alteration in the facts of a case may result in a different outcome under the totality of the circumstances test).
\textsuperscript{147} Compare Pool, 621 F.3d at 1231 (finding that obtaining a DNA sample from an arrestee does not violate the Fourth Amendment), with United States v. Mitchell, No. 09-4718, 2011 WL 3086952, at *1 (3d Cir. July 25, 2011) (finding that obtaining a DNA sample from an arrestee violates the Fourth Amendment).
see that courts characterize the role of the arrestee DNA sampling differently.\textsuperscript{148} The balancing test tips in favor of individual privacy rights when courts accept the fact that DNA samples contain highly sensitive amounts of information and the possibility to reveal more information than originally thought possible.\textsuperscript{149} However, when courts find that DNA samples are akin to fingerprinting, the balance leans in the opposite direction favoring the government’s interests.\textsuperscript{150} This leads to confusion when determining how courts will ultimately view the role of the DNA samples collected and maintained by law enforcement personnel in state and national DNA databases, especially in an advancing society, and ultimately casts doubt on the constitutionality of all pretrial DNA collection statutes.\textsuperscript{151} If the ambiguities among the several court decisions are not resolved, it will be difficult for states collecting pretrial DNA samples, or those considering collection, to be certain that their actions will survive constitutional scrutiny.\textsuperscript{152} States may even be deterred from collecting DNA samples from arrestees, which would negatively affect the efficiency and strength of effective law

\textsuperscript{148} See supra notes 40–42 (discussing how all DNA samples are found, collected, and analyzed, and describing the amount of information that may be obtained from an individual’s DNA).

\textsuperscript{149} See Pool, 621 F.3d at 1230 (noting that an individual’s privacy rights would be drastically different if samples could reveal more than the information that is currently accessible from a DNA profile). However, the court also noted that, at present, CODIS profiles are essentially useless for all but identification purposes. Id.

\textsuperscript{150} Compare id. at 1223 (noting that the information gained from the DNA CODIS profiles is quite similar to the information gained from fingerprinting and photographing, and that sampling from arrestees does not violate the Fourth Amendment), and Anderson v. Commonwealth, 650 S.E.2d 702, 705 (Va. 2007) (finding that a DNA sample taken from an individual upon arrest is no more revealing and is no different in character than acquiring fingerprints upon arrest, and also upholding the constitutionality of obtaining a DNA sample from an arrestee), with In re C.T.L., 722 N.W.2d 484, 491 (Minn. Ct. App. 2006) (viewing DNA samples as inherently different from fingerprinting, and finding that obtaining a DNA sample from an arrestee violates the Fourth Amendment).

\textsuperscript{151} See Molko, supra note 116, at 199 (explaining how important it is to adopt a single test and apply that test in a uniform manner in order to provide predictability in the constitutionality issue regarding DNA sampling statutes); infra Part IV (suggesting that so long as DNA samples are solely used to identify an individual and are guaranteed not to be tested for varying disorders, traits, or diseases, then the balance should tip in favor of the government when assessing the reasonableness of obtaining a DNA sample from an arrestee).

\textsuperscript{152} See HENNING, supra note 37, at 13 (describing the ambiguities caused by the inconsistent court opinions addressing arrestee DNA sampling); see also supra note 134 (describing the varying outcomes reached by courts when analyzing pretrial DNA collection statutes).
enforcement practices. Part III.A.1 assesses the public policy arguments in favor of DNA sampling from arrestees when obtaining the sample is analogous to fingerprinting practices, and ultimately, it suggests that public policy can be best served when courts find that the balance weighs in favor of the government’s interests.

1. DNA Samples: Similar to Fingerprints or Much More?

In terms of pretrial DNA sampling, the way the court characterizes a DNA sample usually affects the court’s holding. Courts likening DNA sampling to fingerprints typically find that the government’s interest in effective law enforcement procedures outweighs the arrestee’s individual expectation of privacy, which is beneficial for society. Sampling arrestees allows the government to use DNA collection databases to solve past crimes that might otherwise go unsolved, prevent future crimes, and exonerate suspects and the wrongly incarcerated. In addition, sampling arrestees helps law enforcement agents identify recidivist offenders more quickly. Overall, collecting samples from

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153 See infra text accompanying note 157 (explaining the benefits that DNA sampling from arrestees provides).

154 See infra Part III.A.1 (assessing the public policy arguments in support of finding that DNA samples are akin to fingerprinting).

155 Compare Pool, 621 F.3d at 1223 (analogizing DNA samples to fingerprints, and holding that arrestee DNA sampling does not violate the Fourth Amendment), United States v. Mitchell, No. 09-4718, 2011 WL 3086952, at *1 (3d Cir. July 25, 2011) (comparing DNA samples to fingerprints, and holding that DNA sampling from arrestees does not violate the Fourth Amendment), and Anderson, 650 S.E.2d at 705 (finding that DNA samples are analogous to fingerprints, and holding that arrestee DNA sampling does not violate the Fourth Amendment), with In re C.T.L., 722 N.W.2d at 491 (finding that the information obtainable from a DNA sample is much larger than the amount of information obtainable from a fingerprint, and that obtaining DNA samples upon arrest violates the Fourth Amendment).

156 See infra note 176 (describing the Pool and Anderson decisions, which found that the government’s interest in effective law enforcement outweighed an arrestee’s expectation of privacy after finding that DNA sampling is similar to the traditional fingerprinting process).

157 See Pool, 621 F.3d at 1222 (explaining why DNA samples are more useful than fingerprint samples); see also Molko, supra note 116, at 196 (listing the government’s interest in obtaining DNA samples from arrestees). But see supra note 34 (discussing how an individual’s privacy rights are implicated when DNA samples are obtained upon arrest).

158 See United States v. Samson, 547 U.S. 843, 846 (2006) (finding that a state has an “‘overwhelming interest’” in supervising individuals who have been convicted of certain crimes because they “are more likely to commit future criminal offenses” (quoting Pennsylvania Bd. of Probation & Parole v. Scott, 524 U.S. 357, 365 (1998))); see also McCullagh, supra note 27 (describing that DNA samples allow more crimes to be solved, more individuals to be exonerated, and more unknown crime victims to be identified); CODIS – NDIS Statistics, FBI, supra note 27 (measuring the success of the National DNA Index by tracking “the number of criminal investigations where CODIS has added value to
arrestees aids the public interest because it increases law enforcement’s ability to solve crimes as promptly as possible. In this sense, as long as DNA samples are used for the sole purpose of determining the identity of an individual, like fingerprints taken at an arrest, public policy is better served by upholding arrestee DNA collection statutes.

However, the individual privacy rights that are implicated should not be discounted. An individual’s DNA contains an enormous amount of sensitive and personal information about one’s self—information that one should not be compelled to hand over to the government absent some articulated governmental interest. Refusing to obtain samples from arrestees preserves an individual’s right to maintain the privacy of his or her own genetic information—genetic information that can be used to acquire vast amounts of sensitive and personal details about a particular individual. Consequently, analysis under the totality of the circumstances approach requires that the individual rights side of the equation be more highly implicated if it is not guaranteed that the government’s use of the DNA samples is being
used solely for determining an individual’s identity.\(^{164}\) However, ensuring that a DNA sample is only used for identification purposes might be increasingly more difficult in an advancing society.\(^{165}\) When such advancements take place, an increased weight will likely be given to an individual’s privacy expectation under the totality of the circumstances approach.\(^{166}\)

2. The Totality of the Circumstances Test in an Advancing Society

Under the general balancing test known as the totality of the circumstances approach, courts are aware that a slight change in the fact pattern of a case could make the individual’s expectation of privacy a much greater concern; this would likely result in vastly different outcomes in future court decisions.\(^{167}\) As society advances, the potential

\(^{164}\) See, e.g., Pool, 621 F.3d at 1230 (stressing that the court’s holding could not be extended to a case where a future litigant may demonstrate that the CODIS system yields information of a type unavailable in a fingerprint or a photograph). In a concurring opinion, Circuit Judge Lucero noted:

Yet I stress that we do not purport to decide the hypothetical case in which a future litigant may demonstrate that CODIS loci do code for RNA, or that the number of repeats at CODIS loci yield information of a type unavailable in a fingerprint or a photograph; nor do we consider a case in which the nature of the genetic information stored in the CODIS database is changed from present practice. In such a case, a defendant’s interests could be vastly different. If that day arrives, a future court will conduct a totality-of-the-circumstances test anew. But for now, Pool’s CODIS profile reveals only his identity, and the majority rightly factors only Pool’s interest in that identity into its Fourth Amendment balancing. Id. at 1228 (Lucero J., concurring).

\(^{165}\) See id. at 1221 (positing that the government, through the use of familial comparisons, may suspect innocent people simply because their DNA has some strands that are similar to the defendant’s DNA); see also Ruby, supra note 35, at 265 (explaining that DNA samples are revealing because they contain entire genomes, and they might eventually reveal the genetic predispositions of a given offender population, which increases the likelihood that the government will wish to use DNA samples for their own purposes).

\(^{166}\) See infra Part III.A.2 (analyzing the totality of the circumstances approach in an advancing society); see supra note 162 (describing where courts have already noted that increased technology could cause the balancing act under the totality of the circumstances test to tip in favor of the individual).

\(^{167}\) See Pool, 621 F.3d at 1228 (Lucero J., concurring) (stressing that if a future litigant may demonstrate that the profiles contained in CODIS do code for the type of information unavailable in a fingerprint or a photograph, the defendant’s interests could be vastly different). Consequently, with advancing technology, DNA profiles contained in CODIS may hold the potential to reveal more information than initially thought possible—when this day comes, the balance under the totality of the circumstances may tip in favor of the individual. Id.
for abuse increases. There will inevitably be scientific advancement regarding the type of information obtainable from a DNA sample. When these advancements take place, the balance under the totality of the circumstances test will likely tilt in favor of the individual’s privacy rights, which will likely affect the constitutionality of collecting DNA samples upon arrest.

Legal scholars and courts alike have already questioned the sort of impact these scientific advancements will have on the legal community. For example, as DNA testing is already being used to predict which medical treatments will be effective, surely, the use of DNA to predict human behavior is not far behind. Considering this, if DNA samples have the potential to be tested for more than identity determinations, one court decision holding that the individual’s privacy right was greater than the government’s interest in effective law enforcement could potentially render the entire state DNA collection procedure from arrestees unconstitutional. Accordingly, if states do not include more specific provisions defining the appropriate and

168 See supra notes 35–37 (describing that the information obtainable from a DNA sample could be drastically different in the future). Some have explained that DNA samples have the potential to eventually reveal the genetic predispositions of a given offender population. Id.; see also Ruby, supra note 35, at 265 (suggesting that DNA samples may be able to reveal genetic predispositions of a given offender population). Obviously, such information would be of extreme interest to the government; however, allowing DNA samples to be analyzed for this type of information would be a much greater privacy intrusion for an individual than would the intrusion caused by obtaining a fingerprint sample. Id.

169 See HENNING, supra note 37, at 13 (suggesting that new information may ultimately be discoverable from “junk DNA,” which is the DNA contained in the CODIS database).

170 See Pool, 621 F.3d at 1230 (noting that the defendant’s interests could be vastly different if more information were able to be obtained from the DNA profiles stored in CODIS); see also infra note 208 (describing court decisions explicitly recognizing the potential for abuse associated with DNA sampling and how a slight change in the type of information obtained could result in drastically different individual interests).

171 See Pool, 621 F.3d at 1230 (questioning how the balance would play out under the totality of the circumstances approach if the DNA profiles contained in CODIS held the potential to reveal more information than originally thought possible); see also Beecher-Monas & Garcia-Rill, supra note 58, at 301 (discussing that advancements in DNA technology could greatly alter law enforcement practices); supra note 35 (describing how advances in DNA technology will impact law enforcement).

172 See Beecher-Monas & Garcia-Rill, supra note 58, at 300 (finding that it will likely be possible to test for predicting human behavior); see also HENNING, supra note 37, at 13 (explaining that it will be entirely possible to use “junk DNA” to obtain more information than originally thought as further advancements in technology take place).

173 See infra note 206 (describing that a change in the type of information analyzed from a DNA sample could result in an individual’s right to privacy outweighing the government’s interest in public safety); see also infra Part IV (arguing that DNA collection statutes should contain more prohibitory language that would ensure such samples are not used to determine more than an individual’s identity).
inappropriate uses of DNA samples in their respective DNA collection statutes, then courts will not view arrestee DNA collection as a procedure similar to fingerprinting, and as a result, DNA collection will probably fail constitutional scrutiny. Such an occurrence would have a damaging effect on society because it would largely reduce law enforcement’s ability to effectively solve and prevent crimes, and ultimately save lives.

Although the individual privacy argument should not be discounted, as long as states ensure that law enforcement personnel only use DNA samples to determine an individual’s identity, courts should have no reason to treat DNA samples different from fingerprint samples. Doing so will facilitate efficient law enforcement practices and contemporaneously guard against individual privacy concerns.

174 See Pool, 621 F.3d at 1230 (emphasizing that the court’s holding could not be extended to a case where a future litigant may demonstrate that the CODIS system yields information of a type unavailable in a fingerprint or a photograph, and that, should this day come, a defendant’s privacy rights may be more severely implicated). Variations across the states exist in terms of how each state allows DNA samples to be analyzed—some states specifically prohibit the use of DNA samples for testing for genetic conditions or diseases, while others allow DNA samples to be analyzed for such information so long as the information is related to an additional purpose within that section. Compare VT. STAT. ANN. tit. 20, § 1937(b) (2000) (“Analysis of DNA samples obtained pursuant to this subchapter is not authorized for identification of any medical or genetic disorder.”), and FLA. STAT. ANN. § 943.325(13)(b) (West Supp. 2011) (stating that the DNA samples collected under this section may not be used for identifying any medical or genetic condition), with TEX. GOV’T CODE ANN. § 411.143(d) (West 2005) (“The information contained in the DNA database may not be collected, analyzed, or stored to obtain information about human physical traits or predisposition for disease unless the purpose for obtaining the information is related to a purpose described by this section.”). It is unlikely that courts would view DNA samples that are used to analyze this type of information as analogous to the type of information obtainable from a fingerprint. See Pool, 621 F.3d at 1230 (finding that if a DNA sample were able to be tested for information beyond identifying an individual, like genetic trait testing, an individual’s privacy rights would be more highly implicated).

175 See Maddux, supra note 2, at 117 (providing personal accounts of how lives would have likely been saved had Illinois collected arrestee DNA samples); see also What is Codis?, DNA INITIATIVE, supra note 70 (finding that DNA sampling and the CODIS system have resulted in thousands of matches that have linked serial cases to each other and have aided in solving cases by matching crime scene evidence to known and convicted offenders); supra note 33 (describing the benefits associated with obtaining DNA samples from arrestees).

176 See Anderson v. Commonwealth, 650 S.E.2d 702, 705 (Va. 2007) (considering DNA samples to be analogous to fingerprints, and finding that obtaining a DNA sample from an arrestee is in compliance with the Fourth Amendment); Pool, 621 F.3d at 1230 (finding that DNA samples are similar to fingerprints, and holding that arrestee DNA sampling does not violate the Fourth Amendment).

177 Compare Molko, supra note 116, at 115 (describing the government’s interests in effective law enforcement practices to include: immediately and accurately identifying the
However, ensuring that DNA samples are only used for law enforcement purposes, especially in an advancing society, can be difficult. Examining the adequacy of the language contained in several state DNA collection statutes is important for later understanding how such statutes can be improved.

B. Examining the Adequacy of DNA Collection Statutes

A comparison of each state’s DNA collection procedure yields a wide variation in terms of the language used in employing procedural safeguards by each state. Although there is a consensus across the nation in terms of recognizing the benefits of DNA collection upon arrest, a wide variety exists in terms of the specificity of the procedural safeguards employed by each state and the federal government. Part III.B.1 of this Note addresses the adequacy of the language contained in the federal DNA collection statute in terms of ensuring that the DNA profiles are used only for identifying an individual. Part III.B.2 analyzes the inadequacies in current state DNA collection statutes.

arrestees; the ability to solve past and future crimes efficiently and accurately; exonerating innocent individuals; protecting innocent individuals from becoming suspects; preventing future crimes before they occur; protecting public safety by more quickly identifying recidivist offenders; and solving crimes as promptly as possible, with Chapin, supra note 36 (presenting the individual privacy concerns associated with DNA sampling). See United States v. Mitchell, No. 09-4718, 2011 WL 3086952, at *19 (3d Cir. July 25, 2011) (acknowledging the “seriousness of [the defendant’s] concerns about the possible misuse and future use of DNA samples”); see also Henning, supra note 37, at 13 (suggesting that “junk DNA” may reveal sensitive medical or biological information, and may contain more biological information than was previously assumed).

See infra Part III.B (analyzing the language contained in various state DNA collection statutes).


See supra Part II.B.2 (describing the varying procedures employed across the nation in terms of addressing the procedural safeguards of certain states’ DNA collection statutes); supra note 33 (describing the benefits of obtaining DNA samples upon arrest).

See infra Part III.B.1 (examining the language contained in the federal DNA collection statute).

See infra Part III.B.2 (analyzing state statutes with inadequate procedural safeguards).
Finally, state DNA collection statutes with adequate procedural safeguards are analyzed in Part III.B.3.\(^\text{184}\)

1. Assessing the Adequacy of the Federal DNA Collection Statute

As described above, the use of DNA and the significant contribution that its use has played in enhancing law enforcement practices cannot be overstated.\(^\text{185}\) Further, as technology and science advance, DNA's potential for solving and preventing crimes seems limitless.\(^\text{186}\) Although this may seem obvious, the federal government felt strongly enough about DNA analysis and its potential to include a provision in the 2005 Act specifically directed at the continuous improvement of DNA technology.\(^\text{187}\) This underscores the contribution that DNA has had on our criminal justice system and supports the fact that our government is aware of the potential that DNA analysis may hold for the future; the federal government is ready and willing to contribute to the study of DNA to guarantee that further advancements occur.\(^\text{188}\)

With the government already supporting efforts to increase the use and information obtainable from DNA analysis, it is more important than ever to ensure that adequate procedural safeguards are contained in various DNA collection statutes.\(^\text{189}\) In terms of specific procedural safeguards, the federal DNA collection statute authorizes DNA test results to be disclosed for varying reasons.\(^\text{190}\) The federal statute dictates

\(^{184}\) See infra Part III.B.3 (analyzing state statutes with adequate procedural safeguards).

\(^{185}\) See supra note 33 (defining the contribution that DNA analysis has played in law enforcement).

\(^{186}\) See supra note 33 (describing how the benefits from DNA sampling are relatively new, and that its total potential for law enforcement has unlikely been met); see also CODIS—NDSIS Statistics, FBI, supra note 27 (providing statistical data on the number of criminal investigations where CODIS has added value to the investigative process).


\(^{188}\) See Beecher-Monas & Garcia-Rill, supra note 58, at 302 (explaining how DNA analysis could be used in the future to aid law enforcement practices); see also What is Codis?, DNA INITIATIVE, supra note 70 (explaining how DNA sampling solves and prevents crimes by linking criminal investigations across the country).

\(^{189}\) See infra Part IV (proposing that each state should adopt certain language in its DNA collection statute to ensure that DNA samples are viewed as analogous to fingerprinting).

\(^{190}\) See 42 U.S.C. § 14132 (allowing DNA samples to be used for law enforcement identification purposes, for criminal defense purposes, and for a population statistics database if identifiable information is removed for a populations statistics database and for identification research). For an examination of the difficulties surrounding removing identifiable information from DNA samples, see Piel, supra note 34, at 77–79. But see VT. STAT. ANN. tit. 20, § 1937(b) (2000) (refusing to allow analysis of DNA samples to identify any medical or genetic disorder); FLA. STAT. ANN. § 943.325(13)(b) (West Supp. 2011)
that DNA test results may be disclosed “to criminal justice agencies for law enforcement identification purposes.” The statute also provides that, so long as personally identifiable information is removed, test results may be disclosed for identification research in a population statistics database. Although the statute specifies that tests may be disclosed to criminal justice agencies for identification purposes, as DNA technologies advance and law enforcement begins to rely on these advancements, the information obtained in a DNA sample for “identification purposes” will likely contain much more information than could be obtained from a fingerprint. Consequently, if the definition of “identification purposes” is not clarified and agencies are permitted to use the DNA samples to obtain more information than could simply be obtained by a fingerprint, then an individual’s privacy interest implicated by the sampling of his or her DNA will need to be more heavily weighted. Like the federal DNA collection statute, many state DNA collection statutes lack adequate procedural safeguards.

2. State DNA Collection Statutes Lacking Adequate Procedural Safeguards

Like the general language contained in the federal act, many states employ similar language in their own DNA collection statutes. For

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(stating that the DNA samples collected under this section may not be used for identifying any medical or genetic condition).
192 Id. § 14132(3)(D).
193 See infra Part IV (proposing for more clarification and procedural safeguards in the federal DNA collection statute).
194 See infra Part IV (arguing for clarification in the federal DNA collection statute to ensure more procedural safeguards). See generally Anderson v. Commonwealth, 650 S.E.2d 702, 705 (Va. 2007) (considering DNA samples to be analogous to fingerprints and finding that collecting an arrestee DNA sample complies with the Fourth Amendment).
195 See infra Part III.B.2 (describing the inadequacies found in several state DNA collection statutes).
196 See ALASKA STAT. § 44.41.035(f)(1) (2010) (allowing law enforcement to use DNA samples “for identification analysis”); see also ARIZ. REV. STAT. ANN. § 13-610(A) (2008) (providing that analysis of the DNA samples may be used for law enforcement identification purposes); CAL. PENAL CODE. § 295.1(a) (West 2008) (performing DNA analysis for identification purposes); FLA. STAT. ANN. § 943.325 (West 2006 & Supp. 2011) (performing DNA analysis for law enforcement identification purposes); KAN. STAT. § 21-2511 (2007 & Supp. 2010) (allowing DNA analysis for law enforcement identification purposes); LA. REV. STAT. ANN. § 15:611 (2005) (permitting DNA analysis for law enforcement identification purposes); N.M. STAT. ANN. § 29-3-10 (LexisNexis Supp. 2010) (mandating all persons arrested for a felony who are at least 18 years old to “provide a DNA sample”); OHIO REV. CODE ANN. § 2901.07 (West 2006 & Supp. 2011) (mandating that convicted felons over the age of 18 provide DNA samples).
example, like the federal statute, Alaska specifies the purposes for which the DNA registration system may be used. One of the more troubling provisions is that the statute stipulates that the DNA identification registration system may be used for “improving the operation of the system.” Inclusion of this provision is problematic because it is inherently hard to define what is or what will be perceived as reasonably linked to “improving the operation of the system.” Additionally, the fact that Alaska’s statute provides no specific prohibited uses, which are contained in many other state statutes, makes this general provision even more troublesome.

Although many statutes do not affirmatively prohibit analyzing DNA samples for certain purposes, one other state statute goes even further by allowing DNA to be analyzed for other purposes not linked to establishing identity. Specifically, the Texas statute provides that “[t]he information contained in the DNA database may not be collected, analyzed, or stored to obtain information about human physical traits or predisposition for disease unless the purpose for obtaining the information is related to a purpose described by this section.”

197 ALASKA STAT. ANN. § 44.41.035(f)(4) (“The DNA identification registration system is confidential . . . and may only be used for . . . improving the operation of the system . . . .”.

198 Id. But see VT. STAT. ANN. tit. 20, § 1937(b) (2000) (specifying that DNA analysis is not authorized for identification of any medical or genetic disorder); FLA. STAT. ANN. § 943.325(13)(b) (West Supp. 2011) (stating that the DNA samples collected under this section may not be used for identifying any medical or genetic condition).

199 ALASKA STAT. ANN. § 44.41.035(f)(4) (“The DNA identification registration system is confidential . . . and may only be used for . . . improving the operation of the system . . . .”).

200 Compare id. (failing to provide any specific prohibited uses); ARIZ. REV. STAT. ANN. § 13-610 (2009) (allowing samples to be used for law enforcement identification purposes); ARK. CODE ANN. § 12-12-1111(c)(1) (2003) (mandating that DNA samples be used only for “identification purposes”); KAN. STAT. § 21-2511(e)(1) (2007 & Supp. 2010) (containing language that DNA samples shall only be used for law enforcement identification purposes while not prohibiting any specific uses of the samples), and LA. REV. STAT. ANN. § 15:611(c) (2005) (“Except as otherwise provided . . . the tests to be performed on each DNA sample shall be used only for law enforcement identification purposes.”), with VT. STAT. ANN. tit. 20, § 1937(b) (“Analysis of DNA samples obtained pursuant to this subchapter is not authorized for identification of any medical or genetic disorder.”), and FLA. STAT. ANN. § 943.325(13)(b) (West Supp. 2011) (stating that the DNA samples collected under this section may not be used for identifying any medical or genetic condition).

201 See infra text accompanying note 202 (presenting the problematic language contained in Texas’ DNA collection statute).

202 See TEX. GOV’T CODE ANN. § 411.143(d) (West 2005) (emphasis added). In terms of the “related to a purpose” described by this section’s language, the other purposes that DNA may be used for include:

(a) The principal purpose of the DNA database is to assist a federal, state, or local criminal justice agency in the investigation or prosecution of sex-related offenses or other offenses in which biological evidence is recovered . . .
Presumably, DNA samples under this statute can be used to check for human physical traits or to study predisposition for disease, as long as the purpose is “related to” a purpose described elsewhere in the section.\textsuperscript{203} Although the statute specifies that personal identification information must be removed if it is used to establish a population statistics database or to assist with identification research, this type of language leaves the door open for a variety of abuses that would greatly infringe upon the privacy rights of individuals.\textsuperscript{204} Arguably, this type of unclear language can result in DNA samples being used to research whether certain individuals have a predisposition for violent behavior, or whether a person has a propensity to commit certain types of crimes—so long as the articulated purpose for conducting additional research is “related to” another articulated purpose.\textsuperscript{205}

Provisions like the ones discussed above allow DNA analysis to reveal much more information than a fingerprint.\textsuperscript{206} Without adequate procedural safeguards, the breadth of information accessible under this statute and others like it would reveal much more than identity; it has

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\textsuperscript{203} See id. (“The information contained in the DNA database may not be collected, analyzed, or stored to obtain information about human physical traits or predisposition for disease unless the purpose for obtaining the information is related to a purpose described by this section.”). 

\textsuperscript{204} See United States v. Pool, 621 F.3d 1230, 1230 (9th Cir. 2010) (accepting the possibility that DNA samples could be abused by the government); see also Beecher-Monas & Garcia-Rill, supra note 58, at 301 (discussing that advancements in DNA technology could greatly alter law enforcement practices); supra notes 34–36 (explaining the potential for future abuse of DNA sampling databases). 

\textsuperscript{205} See supra note 57 (explaining the concern over future abuse of DNA samples). 

\textsuperscript{206} See TEX. GOV’T CODE ANN. § 411.143(d). This provision explicitly allows for DNA samples to be tested for human physical traits or predisposition for disease if the purpose for obtaining the information is related to another purpose under the same section. Id. Clearly, the type of information that may be accessed under this statute contains much more information than the type of information accessible from a fingerprint. Id.; see also United States v. Mitchell, No. 09-4718, 2011 WL 3086952, at *19 (3d Cir. July 25, 2011) (finding that DNA samples hold the potential to be analyzed for information that is much different than the information accessible in a fingerprint).
the potential to reveal countless pieces of intimate information about an individual.\footnote{See also Kaye, supra note 56, at 181–82. Kaye, one of the country’s foremost experts on scientific evidence, explains that:

Civil liberties advocates and other commentators decry “unfettered government-sponsored bioinvasion” and worry that DNA databanks will expose “[w]ho I am, my biological potential, my health situation, my paternity, my race, [and the] most profound personal secrets.” The more extreme critics even depict the data base statutes as countenancing medical experimentation on unconsenting human subjects in violation of the Nuremberg Code and basic ethical principles. Id. (alteration in original) (citations omitted).}

Accordingly, the individual’s privacy expectation in his or her DNA sample will not be akin to that of his or her fingerprint if states continue to liberally allow the use of DNA for various purposes that are not essential to establishing one’s identity. This will likely lead courts to find that an individual’s right to privacy outweighs the government’s interest in efficient law enforcement.\footnote{Compare Pool, 621 F.3d at 1231 (finding that obtaining a DNA sample from an arrestee complies with the Fourth Amendment), Mitchell, 2011 WL 3086952, at *1 (holding that arrestee DNA samples comply with the Fourth Amendment), and Anderson v. Commonwealth, 650 S.E.2d 702, 703 (Va. 2007) (finding that DNA sampling from an arrestee complied with the Fourth Amendment), with In re C.T.L., 722 N.W.2d 484, 491 (Minn. Ct. App. 2006) (finding that obtaining a DNA sample from an arrestee violates the Fourth Amendment).} In comparison to the inadequate language contained in these state DNA collection statutes, several other state DNA collection statutes contain sufficient procedural safeguards.\footnote{See supra Part III.B.3 (explaining state DNA collection statutes with adequate procedural safeguards).}

3. State DNA Collection Statutes Containing Adequate Procedural Safeguards

While several statutes lack specific prohibitive language, there are several other state statutes that contain provisions with definite limitations on DNA analysis.\footnote{See Berson, supra note 76 (explaining the privacy rights and penalties associated with DNA sampling procedures while also noting that several states, including some states authorizing DNA sampling from arrestees, prohibit certain specific uses of the DNA samples).} When states include very specific safeguards within their statutes, DNA collection and analysis will more likely be viewed as analogous to fingerprinting.\footnote{See, e.g., Pool, 621 F.3d at 1230. The Pool court stressed that the DNA samples contained in CODIS are akin to fingerprint samples or photographs. Id. The court noted that an individual’s privacy rights would be drastically different if the DNA samples could reveal more than the current accessible information available from DNA profiles. Id. As a result, when states construe their DNA statutes, it is important to include adequate procedural safeguards to ensure that the samples are used to ascertain an individual’s}
section of Vermont’s DNA collection statute provides permissible ways to analyze DNA samples; it specifically states that analysis may not be done for the purpose of “identifying . . . any medical or genetic disorder.”

Including this provision is important because, presumably, under many other state statutes, the DNA samples could be used to test for genetic diseases or other disorders so long as testing for these conditions improves “the operation of the system” or is “related to” another purpose defined elsewhere in the state’s statute. Without this type of provision, an individual’s reasonable expectation of privacy in his or her DNA sample may be greatly reduced because it is not guaranteed that the DNA sample may only be used to ascertain one’s identity. Instead, although the presence of genetic diseases or other disorders is associated with one’s identity, this type of information is more sensitive than the type of information available in a fingerprint. Accordingly, if the information that is allowed to be obtained from DNA samples is drastically different than the type of information available in a fingerprint, it follows that the analysis in addressing one’s privacy rights implicated by DNA sampling must be different than the analysis used in

212 VT. STAT. ANN. tit. 20, § 1937 (2000). The Vermont statute providing for the authorized use of DNA samples in full states:

(a) Analysis of DNA samples is authorized:
(1) to type the genetic markers from DNA samples for law enforcement identification purposes;
(2) if personal identifying information is removed, for protocol development and administrative purposes, including:
   (A) development of a population database;
   (B) to support identification protocol development of forensic DNA analysis methods; and
   (C) for quality control purposes; or
(3) to assist in the identification of human remains.

(b) Analysis of DNA samples obtained pursuant to this subchapter is not authorized for identification of any medical or genetic disorder.

213 See supra Part III.B.2 (describing other state statutes that contain broad and inadequate protective language).

214 See supra note 167 (detailing the concern that arises should DNA samples be used to obtain more information about an individual that cannot be revealed by a fingerprint).

215 See Harlan, supra note 34 (describing that DNA samples can reveal private information regarding familial lineage and predisposition to over four thousand types of genetic conditions and diseases and also suggesting that DNA samples may be tested to identify genetic markers for traits including aggression, sexual orientation, substance addiction, and criminal tendencies).
examining fingerprints.\textsuperscript{216} However, as long as DNA samples are analyzed solely for identifying individuals, then there is no reason that the use of DNA should be treated any differently than simple fingerprinting processes.\textsuperscript{217}

C. Evaluating the Use of Arrestee DNA Sampling

The positive impact that DNA analysis has already had on our law enforcement agencies is undeniable.\textsuperscript{218} Although sampling DNA from arrestees clearly has significant benefits for law enforcement and society at large, its full potential has not yet been realized.\textsuperscript{219} This is because approximately half of the states currently allow DNA samples to be taken from arrestees.\textsuperscript{220} If each state employed procedures requiring the collection of DNA samples from arrestees, the number of samples within the database would increase, which would increase the likelihood of a match.\textsuperscript{221} DNA sampling from arrestees provides a greater opportunity to solve crimes and would increase the speed with which law

\textsuperscript{216} See supra Part III.C (arguing that if DNA sampling is used to obtain information beyond the type of information available in a fingerprint, then the analysis must also be different and an individual’s expectation of privacy will need to be more heavily weighted).

\textsuperscript{217} Compare In re C.T.L., 722 N.W.2d 484, 491 (Minn. Ct. App. 2006) (viewing DNA samples as inherently different from fingerprinting, and finding that obtaining a DNA sample from an arrestee violates the Fourth Amendment), with United States v. Pool, 621 F.3d 1230, 1243 (9th Cir. 2009) (considering DNA samples to be analogous to fingerprints and finding the collection of a DNA sample from an arrestee to comply with the Fourth Amendment), United States v. Mitchell, No. 09-4718, 2011 WL 3086952, at *1 (3d Cir. July 25, 2011) (finding a DNA sample to be similar to fingerprints, and holding that obtaining an arrestee DNA sample complies with the Fourth Amendment), and Anderson v. Commonwealth, 650 S.E.2d 702, 706 (Va. 2007) (concluding that DNA samples from arrestees and fingerprinting are comparable, and holding that collecting an arrestee DNA sample complies with the Fourth Amendment).

\textsuperscript{218} See Maddux, supra note 2, at 119 (describing the benefits that arise out of obtaining DNA samples from arrestees). In addition to an increase in the effectiveness of law enforcement agencies, Maddux also presents the cost-savings that are associated with obtaining DNA samples from arrestees, as it relates to North Carolina. \textit{Id.}; see also SIEGEL, supra note 70 (explaining how DNA sampling from arrestees can save taxpayer’s money).

\textsuperscript{219} See supra Part IV (arguing that DNA samples should be taken from arrestees in every state to help increase uniformity in the national DNA databanks and increase law enforcement’s effectiveness in solving and preventing crimes).

\textsuperscript{220} See supra note 87 (listing which states authorize DNA samples to be obtained from arrestees).

\textsuperscript{221} See What is Codis?, DNA INITIATIVE, supra note 70 (explaining the benefits of having a nationally linked DNA database); see also Hassell, supra note 71 (describing that a nationally linked DNA database allows law enforcement officials from multiple jurisdictions to coordinate their searches thereby providing for more efficient law enforcement operations); supra note 70 (defining the benefits that arise from a nationally linked DNA database).
enforcement agencies can focus their investigative efforts. More crimes will go unsolved and future crimes will go unprevented if states do not allow DNA samples from arrestees. However, requiring collection of such samples would still need to pass constitutional scrutiny. Although the Supreme Court has yet to address the constitutionality of obtaining samples from arrestees, it is likely that it will eventually hear the issue due to the inconsistent opinions of several state and federal courts. The several state and federal court decisions addressing this issue illustrate that the outcomes in future cases involving arrestees may depend primarily on how the DNA sample is characterized. If states work to ensure that DNA samples are used solely for identification purposes, and not for revealing sensitive information that is not linked solely to identity, courts will be more inclined to find that the government’s interest in an arrestee’s DNA outweighs that individual’s expectation of privacy. Currently, the language in many state statutes lacks adequate safeguards to ensure that DNA samples are only used for identification purposes.

222 See CODIS – NDIS Statistics, FBI, supra note 27. The FBI’s CODIS website contains statistics measuring the number of crimes that DNA sampling helps solve. Id. Comparing Minnesota’s statistics with Virginia’s statistics helps to illustrate how more profiles generated provides for more matches within the system. Id. Increasing the number of profiles contained within CODIS by sampling from arrestees allows law enforcement officers to operate more effectively. Id.

223 See Maddux, supra note 2, at 117 (describing that if Illinois had collected DNA samples upon arrest, several lives would have likely been saved).

224 See U.S. CONST. amend IV. The Fourth Amendment protects against unreasonable searches and seizures. Id.

225 Compare United States v. Pool, 621 F.3d 1230, 1241 (9th Cir. 2010) (finding that obtaining a DNA sample from an arrestee complies with the Fourth Amendment), United States v. Mitchell, No. 09-4718, 2011 WL 3086952, at *1 (3d Cir. July 25, 2011) (holding that arrestee DNA sampling complies with the Fourth Amendment), and Anderson v. Commonwealth, 650 S.E.2d 702, 702 (Va. 2007) (finding that the Fourth Amendment allows for the collection of arrestee DNA samples), with In re C.T.L., 722 N.W.2d 484, 491 (Minn. Ct. App. 2006) (finding that obtaining a DNA sample from an arrestee violates the Fourth Amendment).

226 Compare In re C.T.L., 722 N.W.2d at 491 (viewing DNA samples as inherently different from fingerprinting, and finding that obtaining a DNA sample from an arrestee violates the Fourth Amendment), with Anderson, 650 S.E.2d at 706 (considering DNA samples to be analogous to fingerprints, and finding obtaining a DNA sample from an arrestee to comply with the Fourth Amendment).

227 See supra note 225 (describing the variations in outcomes when courts have assessed the constitutionality of obtaining DNA samples from arrestees).

228 See, e.g., TEX. GOV’T CODE ANN. § 411.1471 (West 2005); see also supra Part III.B (noting the problems associated with the broad language contained in many states’ DNA collection statutes); supra Part III.B.2 (analyzing the language contained in several state statutes lacking adequate procedural safeguards); infra Part IV (suggesting that instead of containing generic language authorizing a broad range of uses for the DNA samples, each
broad language, the government could potentially analyze DNA samples for far more than simply determining the identity of an individual (as would a fingerprint), as long as the government articulates some purpose related to law enforcement. Absent additional safeguards, the potential ability to gather highly sensitive pieces of information is simply too high.

On the basis of this line of reasoning, Part IV of this Note proposes how states could improve their DNA collection statutes to ensure that the DNA samples are only used to identify an individual in the future.

IV. CONTRIBUTION

Although there are many potential dangers associated with DNA sampling due to the amount of sensitive information obtainable from such samples, if adequate procedural safeguards are employed, there is no reason that all fifty states should not recognize the full benefit of arrestee DNA sampling. As a result, Part IV proposes that all states should begin collecting DNA samples from certain categories of arrestees. However, this Part proposes that each state that collects samples from arrestees must provide statutory language guarding against specific uses of DNA samples unrelated to determining an individual’s identity. This provision will ensure that the public views the degree of privacy intrusion perceived as a result of the collection of one’s DNA as analogous to fingerprinting. Lastly, this Part proposes that in order to encourage all states to implement arrestee DNA sampling, the federal government should condition receiving access to the national DNA database upon a state requiring that samples be collected upon arrest for certain categories of crimes. In addition, the federal government should provide an incentive for states to include state’s statute needs to include more specific language outside of expressing that DNA samples may be used for “law enforcement identification purposes”).

See supra text accompanying notes 102–04 (describing the problematic language contained in Texas’s DNA collection statute).

See infra Part IV (arguing for the need of more procedural safeguards in each state’s DNA collection statute).

See infra Part IV (suggesting the type of language that states should include in their DNA collection statutes to ensure that DNA samples are viewed as being analogous to fingerprints).

See supra note 33 (explaining the advantages gained from obtaining DNA samples from arrestees).

See supra note 87 (listing all of the states that currently obtain DNA samples from arrestees).

See infra Part IV (proposing certain language that should be contained in each state’s DNA collection statute).
certain language in their respective DNA collection statutes that specifies certain purposes for which DNA samples may not be used.\textsuperscript{235}

Because this Part suggests that the federal government should create incentives for states to collect arrestee DNA samples, the remainder of this Note focuses on creating a model federal statute to address this issue, rather than suggesting a model statute that states could adopt. Specifically, a proposed amendment to the federal DNA collection statute reads as follows:\textsuperscript{236}

(a) Establishment of index
The Director of the Federal Bureau of Investigation may establish an index of—

(1) DNA identification records of—
(A) persons convicted of crimes;
(B) persons who have been charged in an indictment or information with a crime arrested for a violent felony\textsuperscript{237}; and
(C) other persons whose DNA samples are collected under applicable legal authorities, provided that DNA samples that are voluntarily submitted solely for elimination purposes shall not be included in the National DNA Index System;

(2) analyses of DNA samples recovered from crime scenes;
(3) analyses of DNA samples recovered from unidentified human remains; and
(4) analyses of DNA samples voluntarily contributed from relatives of missing persons . . . .

(b) Information

\textsuperscript{235} See infra Part IV (proposing that the federal government should provide incentives to states for expanding their DNA collection statutes to include arrestees, but should also require that DNA analysis conducted pursuant to the state DNA statute may not be used for identification of genetic conditions and diseases or genetic markers of traits including but not limited to aggression, sexual orientation, substance addiction, and criminal tendencies).

\textsuperscript{236} This Note proposes an amendment to 42 U.S.C. § 14132 (2006). The text of the existing statute appears in ordinary Roman type, while the amendments appear in italics.

\textsuperscript{237} The proposed amendments are italicized and are the contribution of the author. “Arrested” under this subchapter is defined as “apprehended or physically taken into custody, resulting in the submission of arrest fingerprints to the department.” “Violent felony” is defined as: “first and second degree murder and voluntary manslaughter, mob-related felonies, any kidnapping or abduction, any malicious felonious assault or malicious bodily wounding, robbery, criminal sexual assault, and arson.”
The index described in subsection (a) of this section shall include only information on DNA identification records and DNA analyses that are—

(3) maintained by Federal, State, and local criminal justice agencies (or the Secretary of Defense in accordance with section 1565 of Title 10) pursuant to rules that allow disclosure of stored DNA samples and DNA analyses only—

(A) to criminal justice agencies for law enforcement identification purposes;
(B) in judicial proceedings, if otherwise admissible pursuant to applicable statutes or rules;
(C) for criminal defense purposes, to a defendant, who shall have access to samples and analyses performed in connection with the case in which such defendant is charged; or
(D) if personally identifiable information is removed, for a population statistics database, for identification research and protocol development purposes, or for quality control purposes;

(2) analysis of DNA samples obtained pursuant to this subchapter is not authorized for identification of genetic conditions and diseases or genetic markers of traits including but not limited to aggression, sexual orientation, substance addiction, and criminal tendencies.238

. . . .

(3) By States

(A) As a condition of access to the index described in subsection (a) of this section, a State shall promptly expunge from that index the DNA analysis of a person included in the index by that State if—

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238 See VT. STAT. ANN. tit. 20, § 1937(b) (2000) ("Analysis of DNA samples obtained pursuant to this subchapter is not authorized for identification of any medical or genetic disorder."); FLA. STAT. ANN. § 943.325(13)(b) (West Supp. 2011) ("The analyses of DNA samples collected under this section shall be used only for law enforcement identification purposes . . . and may not be used for identification of any medical or genetic condition.").
(i) the responsible agency or official of that State receives, for each conviction of the person of an offense on the basis of which that analysis was or could have been included in the index, a certified copy of a final court order establishing that such conviction has been overturned; or
(ii) the person has not been convicted of an offense on the basis of which that analysis was or could have been included in the index, and the responsible agency or official of that State receives, for each charge against the person on the basis of which the analysis was or could have been included in the index, a certified copy of a final court order establishing that such charge has been dismissed or has resulted in an acquittal or that no charge was filed within the applicable time period.

(B) as a condition of access to the index described in subsection (a) of this section, a State shall obtain DNA samples from individuals arrested for violent felonies;239 additionally, a state may not:

(i) analyze a DNA sample obtained pursuant to this subchapter for identification of genetic conditions and diseases or genetic markers of traits including but not limited to aggression, sexual orientation, substance addiction, and criminal tendencies ...240

239 This Note proposes that DNA samples should only be obtained from those arrested for certain types of violent offenses, especially crimes involving sexual violence, because these types of crimes have the highest rates of recidivism among offenders. See Molko, supra note 116, at 197 (describing that sexually violent perpetrators have the highest rate of recidivism).
240 This language is modeled after both Vermont’s DNA collection statute and Florida’s DNA collection statute. See VT. STAT. ANN. tit. 20, § 1937(b) (prohibiting DNA analysis for the purpose of identification of any medical or genetic disorder); FLA. STAT. ANN. § 943.325(13)(b) (forbidding DNA samples to be analyzed for identifying any medical or genetic condition).
The language contained in this proposed statute will ensure that DNA samples are only used to determine an individual’s identity. Adopting specific provisions, such as the proposed language above, will aid in combating fears about the amount of information obtainable by a DNA sample. Furthermore, eliminating any qualifying language that could potentially allow states to analyze DNA samples for sensitive and personal information will also allow courts to view DNA sampling as equivalent to fingerprinting. States should not wait until the time comes when DNA samples contained in state and national DNA databases reveal much more than one’s identity; they should instead work to guard against potential abuses immediately.

The proposed statute in this Part also provides an incentive for states to collect DNA samples from arrestees. The government already stipulates that access to the national DNA database is conditioned upon each state providing a means to expunge certain DNA samples. The government could use this method to increase the number of states that collect arrestee DNA samples by conditioning access to the national databank on states agreeing to collect samples from arrestees. However, in the same light, the federal government should also instruct each state to include specific provisions in their statutes expressly mandating that DNA samples will not be used for the improper purposes described above. Including language that prohibits certain uses of DNA samples.

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241 See supra note 57 (describing fears regarding the amount of information potentially obtainable from a DNA sample).

242 Compare VT. Stat. Ann. tit. 20, § 1937(b) (“Analysis of DNA samples obtained pursuant to this subchapter is not authorized for identification of any medical or genetic disorder.”), and FLA. Stat. Ann. § 943.325(13)(b) (stating that the DNA samples collected under this section may not be used for identifying any medical or genetic condition), with TEX. GOV’T CODE ANN. § 411.143(d) (West 2005) (“The information contained in the DNA database may not be collected, analyzed, or stored to obtain information about human physical traits or predisposition for disease unless the purpose for obtaining the information is related to a purpose described by this section.”).

243 See HENNING, supra note 37, at 13 (describing that “junk DNA” may be used to obtain more information than originally thought possible); see also Cole, supra note 119, at 56–57 (describing that “junk DNA” may reveal more information than originally thought possible).

244 The federal government requires states to provide a means for expungement for varying individuals if the state wants access to the national database; this policy led to the suggestion that the federal government provide incentives for states to collect arrestee DNA samples. See 42 U.S.C. § 14132(d)(2)(A) (2006) (conditioning access to the national DNA index upon a state promptly expunging a DNA profile if the individual meets certain criterion).

245 Id.

246 See supra note 77 (explaining that the government already stipulates access to the national DNA databank upon a requirement that state DNA databases provide for a means of expungement).
samples, rather than only specifying what is permissible, provides more protection for individual privacy rights. Courts will be more likely to view DNA samples as akin to fingerprinting with these provisions; thus, they will be more likely to find such collection procedures constitutional. These provisions will make state law enforcement more effective and will protect individual privacy rights.

V. CONCLUSION

Courts have nearly unanimously upheld the compulsory collection of DNA from convicted persons, but they have not yet reached a consensus in terms of the constitutionality of obtaining DNA samples from arrestees. Although most courts addressing this issue have applied the same test in assessing this procedure’s constitutionality, courts are split in their holdings. These cases illustrate that the outcomes in future cases involving DNA sampling from arrestees may depend on how the court frames the role of DNA collection—whether it is analogous to the consistently upheld practice of fingerprinting or a greater intrusion on one’s privacy. Thus far, when analyzing this issue under the totality of the circumstances approach, it appears that when a court views DNA sampling as parallel to fingerprinting, the court will find that the government’s interest in effective law enforcement procedures will outweigh an individual’s privacy expectation. Courts have reached the opposite conclusion when they rely on the fact that

247 See United States v. Pool, 621 F.3d 1230 (9th Cir. 2010) (finding that obtaining a DNA sample from an arrestee complies with the Fourth Amendment); United States v. Mitchell, No. 09-4718, 2011 WL 3086952, at *1 (3d Cir. July 25, 2011) (holding that collecting an arrestee DNA sample does not violate the Fourth Amendment); and Anderson v. Commonwealth, 650 S.E.2d 702, 706 (Va. 2007) (finding that collection of an arrestee DNA sample complies with the Fourth Amendment).

248 Compare Pool, 621 F.3d at 1241 (finding that obtaining a DNA sample from an arrestee complies with the Fourth Amendment), Mitchell, 2011 WL 3086952, at *1 (holding that obtaining an arrestee DNA sample does not violate the Fourth Amendment), and Anderson, 650 S.E.2d at 702 (finding that collecting an arrestee DNA sample satisfies the Fourth Amendment analysis), with In re C.T.L., 722 N.W.2d 484, 491 (Minn. Ct. App. 2006) (finding that obtaining a DNA sample from an arrestee violates the Fourth Amendment).

249 See supra Part II.C (discussing state and federal court decisions addressing the constitutionality of obtaining DNA samples from arrestees).

250 See supra Part III.A (arguing that assessments of the constitutionality of pretrial DNA statutes depends on how the role of DNA is characterized).

251 See Pool, 621 F.3d at 1231 (finding that obtaining a DNA sample from an arrestee complies with the Fourth Amendment), Mitchell, 2011 WL 3086952, at *1 (holding that obtaining a DNA sample from an arrestee does not violate the Fourth Amendment), and Anderson, 650 S.E.2d at 702 (holding that an arrestee DNA sample complies with the Fourth Amendment).
DNA samples have the potential to reveal much more than a fingerprint.\footnote{See In re C.T.L., 722 N.W.2d at 491 (finding that obtaining a DNA sample from an arrestee violates the Fourth Amendment).}

Although protecting an arrestee’s privacy rights is a legitimate concern, under the totality of the circumstances test, the individual’s rights must be balanced against the government’s interests in effective law enforcement procedures.\footnote{See supra note 110 (describing the totality of the circumstances approach).} As a result, it appears that if the information obtained from DNA samples could be more readily identified as similar to fingerprinting, the government’s interest in effective law enforcement procedures would seem to almost always outweigh the arrestee’s expectation of privacy.\footnote{See supra notes 1–2 (presenting a hypothetical situation where obtaining a DNA sample from an arrestee could save someone’s life).}

Returning back to the story of the young woman from your hometown, imagine that your state had a pretrial DNA sampling statute that allowed the collection of an arrestee’s DNA sample. A few weeks before the hypothetical situation, the same man responsible for Lisa’s trauma had been arrested for attempted robbery. Pursuant to state law, his DNA sample was collected and entered into the state database. The database runs through its typical analysis procedure and indicates a match from the DNA collected from Lisa at the hospital. As a result of this pretrial statute, the man is rightly convicted of the crime and locked away—the other women who would have been raped and killed after Lisa were spared.

If every state collected DNA samples upon arrest, more crimes would be prevented and more lives would be saved. Although the benefits of obtaining samples from arrestees are undeniable, that is not to say that no protections should exist for arrestees subject to DNA sampling.\footnote{See supra Part III.A (discussing how an individual’s privacy rights must be balanced against the government’s interest in effective law enforcement).} Instead, states should ensure that the DNA samples obtained and stored in their DNA databanks are only used to identify an individual, and that the samples do not have the potential to be analyzed for additional information unnecessary to ascertaining one’s identity.\footnote{See supra Part IV (proposing that state statutes should be required to contain certain procedural safeguards).} Absent such language in statutes, DNA collection statutes authorizing samples to be collected from arrestees may not survive constitutional challenges. If DNA statutes fail to provide adequate procedural safeguards, their constitutionality may be in jeopardy, and the sexual
predator who raped Lisa—and killed several other young women in your town—would continue to walk free.

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