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Comment

MARYLAND v. KING: SACRIFICING THE FOURTH AMENDMENT TO BUILD UP THE DNA DATABASE

STEPHANIE B. NORONHA*

In *Maryland v. King*,¹ a sharply divided United States Supreme Court held that a Maryland law allowing warrantless collection of genetic information from people who have been arrested for, but not convicted of, serious crimes does not violate the Fourth Amendment's prohibition against unreasonable searches.² While the use of deoxyribonucleic acid ("DNA") evidence to convict or exonerate criminal defendants has increased steadily over the past few decades,³ the Court's decision in *King* has grave implications for the collection of DNA from arrestees—people who are supposed to be presumed innocent.⁴

Although DNA technology is undoubtedly a powerful crime fighting tool,⁵ the *King* Court's assessment of the DNA collection of arrestees under the reasonableness balancing test⁶ is a misguided judicial response to the

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1. 133 S. Ct. 1958 (2013).

2. *Id.* at 1980.

3. WILSON J. WALL, GENETICS AND DNA TECHNOLOGY: LEGAL ASPECTS 20–21 (2002). The use of DNA for criminal purposes was a direct offshoot of its use in medical research. *Id.* at 15. In 1984, while studying how inherited illnesses pass through families, English geneticist Alec Jeffreys discovered, by chance, that particular regions of DNA contained repeating DNA sequences. He quickly realized that these repeating sequences were highly variable and could be used to distinguish individuals. *Alec Jeffreys and Genetic Fingerprinting*, UNIVERSITY OF LEICESTER, <http://www2.le.ac.uk/departments/genetics/jeffreys> (last visited Dec. 3, 2013).

4. *See infra* Part II.B.

5. Sarah Hammond, *The DNA Factor: June 2010*, NAT'L CONFERENCE OF STATE LEGISLATORS (June 2010), available at <http://www.ncsl.org/research/civil-and-criminal-justice/the-dna-factor.aspx> (explaining the growing role of DNA evidence in criminal investigations).

6. *See infra* Part I.A.

immediate benefits of new technology, and it leaves room for government abuse.⁷ Unlike searches of physical places and things, a search of someone's DNA is unique with respect to the physical intrusion necessary to effectuate the search⁸ and the amount of data rendered by the search.⁹ While DNA searches require limited physical invasion of the human body, they yield a considerable amount of aggregated data.¹⁰ Thus, these types of searches are complex and require special consideration. The *King* Court, however, wrongly applied the reasonableness balancing test.¹¹ Instead, the Court should have relied on a line of cases that involves searching data on seized computers, which are more comparable to cases on collecting and searching DNA data. If the Court had done so, the Court would have found that similar to the requirement to obtain a search warrant to search data on seized computers, the government should be required to obtain a search warrant before entering an arrestee's DNA profile into a DNA database to search for a "hit."¹²

I. LEGAL BACKGROUND

The reasonableness clause of the Fourth Amendment protects "[t]he right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures."¹³ Constantly advancing technology has muddled the judiciary's application of those words to real-life situations. DNA technology is one such example, and federal and state courts have assessed the constitutionality of DNA collection under varying tests¹⁴ and have disagreed as to whom DNA statutes apply.¹⁵

7. *See infra* Part II.A.

8. *See infra* Part II.A.2.

9. *See infra* Part II.A.3.

10. *See infra* Part II.A.3.

11. *See infra* Part II.A.

12. *See infra* Part II.C.

13. U.S. CONST. amend. IV. The full text reads: "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.* The Fourth Amendment is applicable to Maryland and every other state through the Fourteenth Amendment. *See Mapp v. Ohio*, 367 U.S. 643, 654–55 (1961) (holding that evidence obtained as a result of an unlawful search was "inadmissible in a state court"); *see also infra* Part I.A.

14. *See infra* Part I.B.1.

15. *See infra* Part I.B.2.

A. *Fourth Amendment Overview: Assessing “Reasonableness” Within the Context of the Fourth Amendment*

The U.S. Constitution prohibits only “unreasonable” searches.¹⁶ Thus, once a court has determined that a government action is indeed a “search,” triggering the protections of the Fourth Amendment, the reasonableness of the search must subsequently be determined. As Supreme Court Justice Harlan’s oft-quoted concurrence in *Katz v. United States*¹⁷ described, a “search” within the meaning of the Fourth Amendment occurs when the government violates an individual’s “actual (subjective) expectation of privacy,” and that expectation is one that society would acknowledge as reasonable.¹⁸ A search warrant based on probable cause generally satisfies the inquiry of whether a search is reasonable under the Fourth Amendment,¹⁹ although the Supreme Court has repeatedly held that “neither a warrant nor probable cause, nor, indeed, any measure of individualized suspicion, is an indispensable component of reasonableness in every circumstance.”²⁰ For example, in *Skinner v. Railway Labor Executives’ Ass’n*,²¹ the Court concluded that where a Fourth Amendment intrusion serves “special needs, beyond the normal need for law enforcement,” a court may “balance the governmental and privacy interests to assess the practicality of the warrant and probable cause requirements in the particular context.”²² In the event that adherence to the warrant and probable cause requirements is impracticable, the search may be constitutional under certain circumstances.²³ In these situations, the

16. U.S. CONST. amend. IV. “The right of the people to be secure in their persons, houses, papers, and effects, against *unreasonable* searches and seizures . . .” *Id.* (emphasis added). See also *Ohio v. Robinette*, 519 U.S. 33, 39 (1996) (“[T]he ‘touchstone of the Fourth Amendment is reasonableness.’” (quoting *Florida v. Jimeno*, 500 U.S. 248, 250 (1991))).

17. 389 U.S. 347 (1967).

18. *Id.* at 361 (Harlan, J., concurring). The Court of Appeals of Maryland adopted this test in *Venner v. State*, 279 Md. 47, 51–52, 59, 367 A.2d 949, 952, 956 (1977).

19. See *Skinner v. Ry. Labor Execs.’ Ass’n*, 489 U.S. 602, 619 (1989) (explaining that “[i]n most criminal cases” where there was a valid warrant issued upon probable cause, the Court has found reasonableness). The Fourth Amendment requires law enforcement officers to demonstrate to a neutral magistrate that they have probable cause to believe the search will reveal particular evidence of a crime. *Johnson v. United States*, 333 U.S. 10, 13–15 (1948). In *Illinois v. Gates*, the Supreme Court set out the modern “totality-of-the-circumstances” test for determining probable cause. 462 U.S. 213, 238 (1983). Among other factors, this analysis takes into consideration the basis of knowledge of the person supplying the information and whether the information is trustworthy. *Id.* at 230.

20. *Nat’l Treasury Emps. Union v. Von Raab*, 489 U.S. 656, 665 (1989).

21. 489 U.S. 602 (1989).

22. *Id.* at 619 (quoting *Griffin v. Wisconsin*, 483 U.S. 868, 873 (1987)).

23. *Id.*

Supreme Court has applied the “special needs” test in cases involving school searches,²⁴ searches of public employees,²⁵ searches of probationers’ homes,²⁶ and drug testing of individuals under certain circumstances.²⁷

The Supreme Court has also applied a “reasonableness balancing test” to warrantless searches, assessing reasonableness by weighing the invasion of an individual’s privacy against the government’s interest.²⁸ For example, in *United States v. Knights*,²⁹ the Court held that a warrantless search of a probationer’s apartment, “supported by reasonable suspicion and authorized by a condition of probation, was reasonable within the meaning of the Fourth Amendment.”³⁰ Applying the reasonableness balancing test, the Court concluded that Knights’ status as a probationer diminished his reasonable expectation of privacy.³¹ This diminished expectation was outweighed by the government’s interest in apprehending criminals.³²

Five years later, the Supreme Court extended the *Knights* holding in *Samson v. California*.³³ The Court applied the same balancing test to determine whether a suspicionless search of a parolee on a public street was reasonable under the Fourth Amendment.³⁴ The Court considered the conditions for a parolee’s release, “including mandatory drug tests, restrictions on [personal] association[s] . . . and mandatory meetings with

24. See *New Jersey v. T.L.O.*, 469 U.S. 325, 340–41 (1985) (concluding that school officials need not obtain a warrant nor have probable cause that a student under their authority has violated the law prior to searching the student; rather, the legality of a search under such circumstances should depend on “the reasonableness, under all the circumstances, of the search”).

25. See *O’Connor v. Ortega*, 480 U.S. 709, 725–26 (1987) (holding that “public employer intrusions on the constitutionally protected privacy interests of government employees for noninvestigatory, work-related purposes, as well as for investigations of work-related misconduct, should be judged by the standard of reasonableness under all the circumstances”).

26. See *Griffin v. Wisconsin*, 483 U.S. 868, 872–73, 875 (1987) (upholding a warrantless search of a probationer’s home because of the government’s “special need” for “the exercise of supervision to assure that the [probation] restrictions are in fact observed”).

27. See *Skinner*, 489 U.S. at 634 (upholding warrantless and suspicionless alcohol and drug tests for railway employees); cf. *City of Indianapolis v. Edmond*, 531 U.S. 32, 41–42 (2000) (striking down an automobile checkpoint program “whose primary purpose was to detect evidence of ordinary criminal wrongdoing,” and explaining that this type of “general interest in crime control” may not qualify as a special need (quoting *Delaware v. Prouse*, 440 U.S. 648, 659 n.18 (1979))).

28. *United States v. Knights*, 534 U.S. 112, 117–19 (2001).

29. 534 U.S. 112 (2001).

30. *Id.* at 122.

31. *Id.* at 119–20.

32. *Id.* at 119–22. The high recidivism rate of probationers also weighed against Knights’ privacy interest. *Id.* at 120.

33. 547 U.S. 843, 847, 857 (2006).

34. *Id.* at 846–47, 850–53.

parole officers.”³⁵ According to the Court, “parolees have fewer expectations of privacy than probationers, because parole is more akin to imprisonment than probation is to imprisonment.”³⁶ The Court ultimately held that the government’s interest in protecting society from future crime outweighed the parolee’s already diminished expectation of privacy.³⁷

B. Applying the Fourth Amendment to DNA Collection: An Overview of Courts’ Analyses of DNA Collection Laws

In acknowledging the Fourth Amendment as a protector of “people, not places,”³⁸ the Supreme Court in *Katz* held that the warrantless wiretapping of a public phone booth constituted an unreasonable search.³⁹ That decision came at an important time in American history, when technological advances facilitated intrusion, without physical trespass, into many aspects of people’s lives.⁴⁰ Technological advances in the forty-six years since *Katz* have made it easier to invade someone’s privacy. As a result, the Supreme Court now faces the difficult task of interpreting the Fourth Amendment so that it can keep pace with rapid technological innovations.

Recently in *United States v. Jones*,⁴¹ the Court confronted the question of whether the government’s warrantless installation of an electronic tracking device—a global positioning system (“GPS”)—on the car of a suspect’s wife violated the Fourth Amendment.⁴² The government monitored the GPS for twenty-eight days and collected more than two thousand pages of data before arresting the suspect, Antoine Jones, for trafficking narcotics.⁴³ The Court held that the government’s actions constituted a search within the meaning of the Fourth Amendment and that a warrantless search such as this one violated the Fourth Amendment.⁴⁴

35. *Id.* at 851.

36. *Id.* at 850.

37. *Id.* at 852–54, 856–57 (internal quotation marks omitted).

38. *Katz v. United States*, 389 U.S. 347, 351 (1967).

39. *Id.* at 357–59.

40. See, e.g., Mark Silverstein, *Privacy Rights in State Constitutions: Model for Illinois?*, 1989 U. ILL. L. REV. 215, 274 n.510 (1989) (“In the 1960’s [sic], public consciousness of new threats to privacy grew as technological break-throughs made possible new kinds of previously unknown surveillance.”).

41. 132 S. Ct. 945 (2012).

42. *Id.* at 948–49.

43. *Id.* at 948.

44. *Id.* at 949. Although the Court found the government’s actions constituted a Fourth Amendment “search,” the Court ultimately determined the case on common law trespass theory.

In addition to powerful electronic tracking devices capable of revealing a person's location, the advent of technology made possible the extraordinary ability to analyze a person's genetic material. Numerous federal court decisions leave little doubt that the collection of DNA and the subsequent matching of the sample in a DNA database constitute a "search" subject to Fourth Amendment scrutiny.⁴⁵ Federal and state courts, however, disagree on several questions raised by the practice of collecting individuals' DNA, as well as its implications on Fourth Amendment rights. First, although federal circuits almost unanimously upheld the constitutionality of suspicionless DNA searches of convicted criminals,⁴⁶ they assessed the constitutionality of DNA collection under *different tests*: a majority of circuits applied the reasonableness balancing test, while a minority of circuits applied the special needs test.⁴⁷ Second, federal and state courts disagreed as to *whom* the DNA statutes apply.⁴⁸ Both federal and state DNA collection laws now allow DNA collection from more than just convicted criminals.⁴⁹ Prior to the Court's decision in *King*, federal and

Id. at 950–51. Thus, the Court declined to address the government's argument that attachment and use of the GPS device was nonetheless reasonable, even if it were a search. *Id.* at 954.

45. See, e.g., *Skinner v. Ry. Labor Execs.' Ass'n*, 489 U.S. 602, 616–17 (1989) (recognizing that the collection and chemical testing of urine, blood, and breath samples constitute searches under the Fourth Amendment); *United States v. Kraklio*, 451 F.3d 922, 923 (8th Cir. 2006) ("The government does not dispute the drawing of blood for purposes of DNA collection is a search subject to Fourth Amendment scrutiny."); *Nicholas v. Goord*, 430 F.3d 652, 658 (2d Cir. 2005) (concluding that "the extraction and analysis of [prisoners'] blood for DNA-indexing purposes constituted a search implicating the Fourth Amendment"); *United States v. Sczubelek*, 402 F.3d 175, 182 (3d Cir. 2005) ("Requiring [an individual] to give a blood sample constitutes a Fourth Amendment search."); *Padgett v. Donald*, 401 F.3d 1273, 1277 (11th Cir. 2005) ("The Commissioner does not dispute that the statutorily required extraction of saliva for DNA profiling constitutes a 'search' within the meaning of the [Fourth] Amendment."); *United States v. Kincade*, 379 F.3d 813, 821 n.15 (9th Cir. 2004) (en banc) ("The compulsory extraction of blood for DNA profiling unquestionably implicates the right to personal security embodied in the Fourth Amendment, and thus constitutes a 'search' within the meaning of the Constitution."); *Green v. Berge*, 354 F.3d 675, 676 (7th Cir. 2004) (noting that "the taking of a DNA sample is clearly a search"); *Groceman v. United States Dep't of Justice*, 354 F.3d 411, 413 (5th Cir. 2004) ("The extraction of blood from a prisoner to collect a DNA sample implicates Fourth Amendment rights."); *Boling v. Romer*, 101 F.3d 1336, 1340 (10th Cir. 1996) ("[O]btaining and analyzing the DNA or saliva of an inmate convicted of a sex offense is a search and seizure implicating Fourth Amendment concerns . . ."); *Jones v. Murray*, 962 F.2d 302, 306 (4th Cir. 1992) ("It appears to be established, at least with respect to free persons, that the bodily intrusion resulting from taking a blood sample constitutes a search within the scope of the Fourth Amendment.").

46. See *Kincade*, 379 F.3d at 830–32 n.25 (citing over thirty decisions in which both federal and state courts have upheld DNA collection statutes, and noting that it could find only two instances in which courts held such a law unconstitutional).

47. See *infra* Part I.B.1.

48. See *infra* Part I.B.2.

49. See *infra* Part I.B.2.

state courts were sharply divided on whether DNA collection from arrestees is a reasonable search under the Fourth Amendment.⁵⁰

1. Federal Circuits Apply Different Fourth Amendment Tests to DNA Collection

A majority of federal circuits adopted the Supreme Court's reasonableness balancing test for use in DNA collection cases.⁵¹ For example, in *United States v. Kincade*,⁵² the U.S. Court of Appeals for the Ninth Circuit used the balancing analysis to uphold compulsory DNA profiling of convicted offenders.⁵³ Similarly, in *Jones v. Murray*,⁵⁴ the U.S. Court of Appeals for the Fourth Circuit found that Virginia legislation directing the state to take and store the blood of convicted felons for DNA analysis was constitutional.⁵⁵ The U.S. Courts of Appeals for the Third, Fifth, and Eleventh Circuits followed suit, applying the reasonableness balancing test to determine the constitutionality of DNA sampling of convicted persons.⁵⁶

The minority of courts, namely the U.S. Courts of Appeals for the Second and Seventh Circuits, applied the special needs test to uphold the constitutionality of DNA indexing laws.⁵⁷ For example, in *United States v. Amerson*,⁵⁸ the Second Circuit upheld a federal law⁵⁹ requiring DNA sample collection from any individual convicted of a felony, including

50. *See infra* Part I.B.2.b.

51. *See, e.g.*, *United States v. Weikert*, 504 F.3d 1, 11 (1st Cir. 2007) (applying the balancing test); *Banks v. United States*, 490 F.3d 1178, 1184 (10th Cir. 2007) (same); *United States v. Kraklio*, 451 F.3d 922, 924 (8th Cir. 2006) (same).

52. 379 F.3d 813 (9th Cir. 2004) (en banc).

53. *Id.* at 836–39.

54. 962 F.2d 302 (4th Cir. 1992).

55. *Id.* at 303, 305, 308.

56. *See, e.g.*, *Padgett v. Donald*, 401 F.3d 1273, 1275, 1280 (11th Cir. 2005) (upholding a Georgia statute, which required DNA sampling of all convicted felons, by applying the balancing test); *United States v. Sczubelek*, 402 F.3d 175, 184–87 (3d Cir. 2005) (applying the balancing test to determine that collecting DNA from individuals on supervised release is constitutional); *Groceman v. United States Dep't of Justice*, 354 F.3d 411, 412–14 (5th Cir. 2004) (using the balancing test to uphold the collection of DNA from prisoners convicted of armed bank robbery and conspiracy to commit armed bank robbery).

57. *See* *Nicholas v. Goord*, 430 F.3d 652, 655–56, 667 (2d Cir. 2005) (analyzing the constitutionality of New York's DNA-database statute, which permitted extraction and analysis of convicted felons' blood for DNA-indexing purposes, under the "special needs" test); *Green v. Berge*, 354 F.3d 675, 676, 679 (7th Cir. 2004) (concluding that a Wisconsin statute, which required persons convicted of felonies to provide DNA samples for storage in a data bank, satisfied the "special needs" test).

58. 483 F.3d 73 (2d Cir. 2007).

59. Justice For All Act of 2004, Pub. L. No. 108–405, 118 Stat. 2260.

nonviolent felons who are sentenced only to probation.⁶⁰ According to the court, collecting DNA samples to create a DNA index qualifies as a special need because creating a DNA index “fulfills important purposes that could not be achieved by reliance on ‘normal’ law enforcement methodology.”⁶¹

2. *Federal and State Courts Disagree as to Whom DNA Statutes Apply*

Over time, the disagreements surrounding DNA issues increased as state and federal laws expanded the application of DNA collection laws from certain dangerous and violent felons, to all convicted people, and eventually, in some jurisdictions, to arrestees.⁶² As these laws changed, courts at both the federal and state levels issued divergent opinions regarding the constitutionality of requiring arrestees to submit to DNA collection.⁶³

a. *Changing Law: Federal and State Laws Move Toward DNA Collection from Arrestees*

In 1994, Congress passed the Violent Crime Control and Law Enforcement Act (the “Act”),⁶⁴ allowing the Federal Bureau of Investigation (“FBI”) to establish and maintain an index of DNA samples from convicted criminals, crime scenes, and unidentified human remains.⁶⁵ In response to the Act, the FBI established the Combined DNA Index System (“CODIS”).⁶⁶ CODIS allows federal, state, and local forensic laboratories to share DNA profiles in an attempt to tie evidence from crime

60. *Amerson*, 483 F.3d at 75.

61. *Id.* at 82–83.

62. *See infra* Part I.B.2.a.

63. *See infra* Part I.B.2.b.

64. Violent Crime Control and Law Enforcement Act of 1994, Pub. L. No. 103-322, § 210304, 108 Stat. 1796 (codified as amended at 42 U.S.C. § 14132 (2000 & Supp. IV 2004)).

65. *See id.* (The Director of the FBI has the authority to create “an index of 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.” The Director may also index the analyses of DNA samples obtained from “crime scenes,” “unidentified human remains,” and “relatives of missing persons” that are voluntarily provided).

66. *CODIS Brochure*, THE FED. BUREAU OF INVESTIGATION, <http://www.fbi.gov/about-us/lab/biometric-analysis/codis/codis-brochure-2010> (last visited Oct. 24, 2013).

scenes, in which there were no suspects, to DNA samples of convicted offenders on file in the system.⁶⁷

Then, in 2000, Congress passed a new program to help clear state backlogs of DNA samples—the DNA Analysis Backlog Elimination Act of 2000 (the “2000 DNA Act”).⁶⁸ This federal statute approved the collection, analysis, and indexing of DNA samples from people convicted of federal crimes, and required convicted felons to submit DNA samples to the national database.⁶⁹ The 2000 DNA Act also expanded eligibility for inclusion in CODIS by requiring federal parolees and probationers to provide DNA samples.⁷⁰ Early federal cases such as *Jones v. Murray*⁷¹ and *Roe v. Marcotte*⁷² upheld similar DNA statutes. Today, all fifty states have passed statutes that require some or all convicted felons to provide a DNA sample for inclusion in CODIS or state database systems.⁷³

In 2004, Congress passed the Justice for All Act (the “2004 DNA Act”), which expanded CODIS to include individuals charged with a crime and, in some circumstances, arrestees.⁷⁴ The following year, Congress

67. *Frequently Asked Questions (FAQs) on the CODIS Program and the National DNA Index System*, THE FED. BUREAU OF INVESTIGATION, <http://www.fbi.gov/about-us/lab/biometric-analysis/codis/codis-and-ndis-fact-sheet> (last visited Oct. 24, 2013).

68. DNA Analysis Backlog Elimination Act of 2000, Pub. L. No. 106-546, § 3, 114 Stat. 2726 (codified as amended at 42 U.S.C. § 14135a).

69. *Id.*

70. *Id.*

71. 962 F.2d 302, 303, 307–08 (4th Cir. 1992) (upholding a Virginia law allowing the collection and storing of blood of convicted felons for DNA analysis).

72. 193 F.3d 72, 74, 82 (2d Cir. 1999) (upholding the constitutionality of a Connecticut statute requiring convicted sex offenders to submit a blood sample for DNA analysis and inclusion in the DNA databank).

73. *DNA Sample Collection from Arrestees*, NAT’L INST. OF JUSTICE (Dec. 7, 2012), <http://nij.gov/topics/forensics/evidence/dna/collection-from-arrestees.htm>. See also *State v. Raines*, 383 Md. 1, 8, 857 A.2d 19, 23 (2004) (“In the last fifteen years, state governments began to enact DNA collection statutes, and currently all fifty states and the federal government . . . have some type of DNA collection statute that requires some or all convicted felons to submit a tissue sample, either blood, saliva or other tissue, for DNA profile analysis and storage in a DNA data bank.”). In 2004, the Court decided *Hiibel v. Sixth Judicial District Court of Nevada*, where it found that a law requiring a person subjected to a *Terry* stop to identify himself did not violate the Fourth Amendment; in other words, this person did not have a right to withhold his identity from police. 542 U.S. 177, 181–82, 187–88 (2004).

74. Justice for All Act of 2004, Pub. L. No. 108-405, § 203, 118 Stat. 2260 (amending § 210304 of the DNA Identification Act of 1994 (codified as 42 U.S.C. 14132)). In amending the prior words “of persons convicted of crimes,” Section 203 (a)(1) inserted the following:

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 profiles from arrestees who have not been charged in an indictment or information with a crime, and DNA

passed the DNA Fingerprint Act of 2005,⁷⁵ which made two key changes. First, the DNA Fingerprint Act of 2005 amended Section 3 of the 2000 DNA Act, which only approved collection of DNA from those already convicted.⁷⁶ Second, Section 1004 of the DNA Fingerprint Act of 2005 permitted the collection of DNA samples from “individuals who are arrested or from non-United States persons who are detained under the authority of the United States.”⁷⁷

b. Variations in Specific State Laws on DNA Collection of Arrestees

As of June 2012, twenty-eight of the fifty states, in addition to the federal government, have passed DNA collection laws that permit the collection of DNA from arrestees.⁷⁸ These laws differ from each other in many aspects, including the types of offenses that make arrestees eligible for DNA collection, the moment at which a sample can be collected or analyzed, and expungement processes if a charge is dismissed or exonerated.⁷⁹ California and Maryland exemplify the variances between DNA arrestee statutes.

i. California

California’s DNA collection law for arrestees is very broad. Since 2009, California police departments have collected DNA from anyone arrested for a felony under provisions of Proposition 69, a statewide ballot measure approved in 2004 that initially applied only to people convicted of felonies and arrested for certain violent crimes.⁸⁰ California’s more recent law allows for DNA collection upon arrest for any felony, including

samples that are voluntarily submitted solely for elimination purposes shall not be included in the National DNA Index System.

75. DNA Fingerprint Act of 2005, Pub. L. No. 109-162, §§ 1001–1005, 119 Stat. 3084, 3084–86 (2006) (codified in various parts of Sections 18 and 42 of the United States Code). This Act is also known as Violence Against Women and Department of Justice Reauthorization Act of 2005.

76. DNA Analysis Backlog Elimination Act of 2000, Pub. L. No. 106-546, § 3, 114 Stat. 2726 (codified as amended at 42 U.S.C. § 14135a).

77. DNA Fingerprint Act of 2005, *supra* note 75, § 1004.

78. *DNA Sample Collection from Arrestees*, *supra* note 73.

79. *See infra* Parts I.B.2.b.i.–ii.

80. *See* CAL. PENAL CODE § 296(a)(2)(A)–(B) (West 2013) (mandating law enforcement to collect DNA samples from “[a]ny adult person who is arrested for or charged with any of the following felony offenses: (A) Any felony offense . . . or attempt to commit any felony offense . . . or any felony offense that imposes upon a person the duty to register in California as a sex offender (B) Murder or voluntary manslaughter or any attempt to commit murder or voluntary manslaughter”).

financial and drug crimes.⁸¹ This law also allows law enforcement to collect and analyze the DNA information, as well as to enter the genetic evidence into a state data bank.⁸² If the charge against an arrestee is ultimately dismissed or the arrestee is exonerated, that person must affirmatively take action to have his or her genetic profile removed from the database; expungement is not automatic.⁸³

ii. Maryland

Unlike California, Maryland's DNA collection law for arrestees (the "Maryland DNA Collection Act") allows DNA collection only from individuals arrested for serious felonies.⁸⁴ In light of Fourth Amendment privacy concerns, the Maryland DNA Collection Act (along with three other state DNA collection laws for arrestees) requires probable cause before a DNA sample can be analyzed.⁸⁵ Moreover, Maryland is more restrictive than states like California in that the Maryland DNA Collection Act requires the automatic removal of an arrestee's genetic profile if the charge against the arrestee is dismissed or exonerated.⁸⁶ Also, the Maryland DNA Collection Act does not permit familial searches, wherein law

81. CAL. PENAL CODE § 296.1 (West 2013). Under California law a felony is: "[A] crime which is punishable with death or by imprisonment in the state prison. Every other crime or public offense is a misdemeanor except those offenses that are classified as infraction." CAL. PENAL CODE § 17. This DNA law was later found unconstitutional in *People v. Buza*, 129 Cal. Rptr. 3d 753, 755 (Cal. Ct. App. 2011). The case was eventually transferred to the California Supreme Court with directions to vacate and reconsider in light of the U.S. Supreme Court's decision in *Maryland v. King*. *People v. Buza*, 302 P.3d 1051 (Cal. 2013).

82. CAL. PENAL CODE § 297 (West 2013).

83. *See id.* § 299 (noting that a person with "no past or present qualifying offense . . . may make a written request to have his or her specimen and sample destroyed and searchable database profile expunged from the data bank" if certain criteria are met).

84. MD. CODE ANN., PUB. SAFETY § 2-504(a)(3)(i) (West 2013). The statute states that a DNA sample shall be collected from individuals charged with "a crime of violence or an attempt to commit a crime of violence" or "burglary or an attempt to commit burglary." *Id.*

85. *Id.*; *see also* Julie Samuels et al., *Collecting DNA From Arrestees: Implementation Lessons*, NAT'L INST. OF JUSTICE (June 2012), available at <http://www.nij.gov/journals/270/pages/arrestee-dna.aspx> (last modified Sept. 18, 2012) ("[A]rraignment or a judicial probable cause determination is needed for collection in Florida, Illinois, Minnesota, North Carolina, Tennessee, Vermont and Virginia; Texas requires an indictment or waiver of indictment if the arrestee has not been previously convicted of or placed on deferred adjudication for a qualifying offense. Probable cause is needed for analysis in Colorado, Maryland, New Mexico (2011) and Utah.").

86. MD. CODE ANN., PUB. SAFETY § 2-511(a)(1) (West 2013).

enforcement uses DNA databases to search for genetic information indicating a relative of a person they seek to identify.⁸⁷

c. The Split: Federal and State Courts Diverge as They Consider DNA Collection from Individuals Who Have Been Arrested but Not Yet Convicted

Prior to the Supreme Court's decision in *King*, federal and state courts were split as to the constitutionality of requiring arrestees to submit to DNA sample collection.⁸⁸ At the federal level, the Ninth Circuit, in *United States v. Pool*,⁸⁹ upheld the constitutionality of an order requiring the defendant—who had been arrested, indicted, and detained for a federal felony but not yet convicted—to provide a DNA sample as a condition of his pretrial release.⁹⁰ Similarly, a divided Third Circuit held in *United States v. Mitchell*⁹¹ that taking a DNA sample from a pretrial arrestee did not violate the Fourth Amendment.⁹² The Third Circuit adopted a fingerprint/DNA analogy, concluding that a DNA profile serves only to identify arrestees and thus, like fingerprinting, it is an acceptable “routine booking procedure[.]”⁹³

A similar divide occurred at the state level. In *Anderson v. Commonwealth*,⁹⁴ the Supreme Court of Virginia upheld the constitutionality of a Virginia law that permitted law enforcement to collect DNA samples of rape arrestees.⁹⁵ In contrast, the Minnesota Court of Appeals in *In re Welfare of C.T.L.*⁹⁶ held that Minnesota's DNA statute

87. *Id.* § 2-506(d) (“A person may not perform a search of the statewide DNA data base for the purpose of identification of an offender in connection with a crime for which the offender may be a biological relative of the individual from whom the DNA sample was acquired.”).

88. Compare *Friedman v. Boucher*, 580 F.3d 847, 851, 858 (9th Cir. 2009) (determining that the search and seizure of a pretrial detainee's DNA was unconstitutional), and *In re Welfare of C.T.L.*, 722 N.W.2d 484, 492 (Minn. Ct. App. 2006) (concluding that a state statute authorizing DNA sampling from an individual who has been charged but not yet convicted violates the Fourth Amendment), with *United States v. Mitchell*, 652 F.3d 387, 415–16 (3d Cir. 2011) (concluding that a federal statute, which allowed DNA collection from arrestees and pretrial detainees, is constitutional), and *United States v. Thomas*, No. 10-CR-6172CJS, 2011 WL 1627321, at *1 (W.D.N.Y. Apr. 27, 2011) (adopting the magistrate judge's conclusion that the federal DNA statute was constitutional as applied to an indicted but not convicted person).

89. 621 F.3d 1213 (9th Cir. 2010), *reh'g granted*, 646 F.3d 659 (9th Cir. 2011), *vacated as moot*, 659 F.3d 761 (9th Cir. 2011).

90. *Id.* at 1214–15, 1228.

91. 652 F.3d 387 (3d Cir. 2011).

92. *Id.* at 389–90.

93. *Id.* at 413.

94. 650 S.E.2d 702 (Va. 2007).

95. *Id.* at 704, 706.

96. 722 N.W.2d 484 (Minn. Ct. App. 2006).

authorizing DNA sampling from indicted, but not yet convicted individuals, violated the Fourth Amendment.⁹⁷ Similarly, a California appellate court found the California DNA collection law for arrestees unconstitutional.⁹⁸

3. *Maryland v. King: DNA Collection upon Arrest Is Reasonable Under the Fourth Amendment*

On April 10, 2009, Alonzo Jay King, Jr. was arrested in Wicomico County, Maryland, on first- and second-degree assault charges.⁹⁹ During booking, King's DNA was collected via buccal swab under the authority of the Maryland DNA Collection Act.¹⁰⁰ On July 13, 2009, King's DNA sample was entered into the state's database.¹⁰¹ While he was awaiting trial on his assault charges, King's DNA profile generated a match to a DNA sample that was collected in a 2003 unsolved rape case in Salisbury, Maryland.¹⁰²

The DNA match was presented to a grand jury, which indicted King for the 2003 rape.¹⁰³ The grand jury did not consider any other evidence before returning the indictment, making the DNA match the sole link of King to that crime.¹⁰⁴ Arguing that the Maryland DNA statute was unconstitutional, King moved to suppress the DNA match.¹⁰⁵ The Maryland Circuit Court for Wicomico County upheld the statute as constitutional and, after pleading not guilty, King was convicted for the rape charge and sentenced to life in prison without parole.¹⁰⁶

On appeal, the Court of Appeals of Maryland reversed the Circuit Court decision, finding the provisions of the Maryland DNA Collection Act that allowed collection of DNA from felony arrestees to be in violation of the Fourth Amendment.¹⁰⁷ The majority concluded that a DNA swab was an unreasonable search because King's "expectation of privacy is greater than the State's purported interest in using King's DNA to identify him."¹⁰⁸

97. *Id.* at 486, 491–92.

98. *People v. Buza*, 129 Cal. Rptr. 3d 753, 755 (Cal. Ct. App. 2011); *see also supra* note 81.

99. *Maryland v. King*, 133 S. Ct. 1958, 1966 (2013).

100. *Id.*

101. *Id.*

102. *Id.* at 1965–66.

103. *Id.* at 1966.

104. *Id.* at 1965.

105. *Id.* at 1966.

106. *Id.*

107. *Id.*

108. *Id.* (quoting *King v. State*, 425 Md. 550, 561, 42 A.3d 549, 556 (2012)).

In *Maryland v. King*, the Supreme Court reversed the judgment of the Court of Appeals of Maryland, concluding that “DNA identification of arrestees is a reasonable search that can be considered part of a routine booking procedure.”¹⁰⁹ Writing for the majority, Justice Anthony Kennedy acknowledged the reasonableness balancing test, which weighs the defendant’s expectation of privacy against the state’s interest in conducting the search, as the appropriate measure of Fourth Amendment “reasonableness” under the circumstances.¹¹⁰

Justice Kennedy considered five “legitimate government interest[s] served by the Maryland DNA Collection Act.”¹¹¹ These included the need of law enforcement to: (1) know the identity of the person arrested, including his or her criminal history;¹¹² (2) know the level of risk the individual poses to the public;¹¹³ (3) “ensur[e] that persons accused of crimes are available for trials”;¹¹⁴ (4) “prevent[] crime by arrestees”;¹¹⁵ and (5) “free[] a person wrongfully imprisoned for the same offense.”¹¹⁶ Turning to the individual’s privacy interests, Justice Kennedy opined that a buccal swab of the inner cheek involves “minimal intrusion.”¹¹⁷ Additionally, “the processing of [King’s] DNA sample’s 13 CODIS loci did not intrude on [his] privacy in a way that would make his DNA identification unconstitutional” because “the CODIS loci come from noncoding parts of the DNA that do not reveal [] genetic traits” or “private medical information,” and, even if they did, “they are not in fact tested for that end.”¹¹⁸

In dissent, Justice Antonin Scalia argued that the Fourth Amendment categorically prohibits “searching a person for evidence of a crime” without cause.¹¹⁹ He doubted the majority’s identification rationale, stating clearly “this search had nothing to do with establishing King’s identity.”¹²⁰ Finally, he repudiated the majority’s analogy between DNA collection and fingerprinting, noting that “fingerprints of arrestees are taken primarily to

109. *Id.* at 1980.

110. *Id.* at 1970.

111. *Id.*

112. *Id.* at 1971–72.

113. *Id.* at 1972.

114. *Id.* at 1972–73 (quoting *Bell v. Wolfish*, 441 U.S. 520, 534 (1979)).

115. *Id.* at 1973 (quoting *United States v. Salerno*, 481 U.S. 739, 749 (1987)).

116. *Id.* at 1974.

117. *Id.* at 1979.

118. *Id.*

119. *Id.* at 1980 (Scalia, J., dissenting).

120. *Id.* at 1984.

identify them” whereas “the DNA of arrestees is taken to solve crimes (and nothing else).”¹²¹

II. ANALYSIS

Today, the federal government and more than half of the Nation’s states have laws similar to the Maryland DNA Collection Act that permit the collection of DNA from some or all arrestees.¹²² The Supreme Court’s recent ruling in *Maryland v. King* has important consequences for every state and for the constitutional privacy rights of all citizens.¹²³ Although the facts of *King* left little doubt that the defendant had committed a heinous crime,¹²⁴ the Court’s holding that the warrantless collection and processing of DNA from an arrestee is a constitutional search departs from the fundamental values originally embodied in the Fourth Amendment.¹²⁵ As a result, Americans’ Fourth Amendment rights have been weakened—forced to take a backseat to the advantages of new technology.¹²⁶ Unlike searches of physical places and things, a search of DNA is unique with respect to the place being searched,¹²⁷ the physical intrusion needed to effect the search,¹²⁸ and the amount of data rendered.¹²⁹ The technology of DNA collection permits intrusion inside the human body with very limited physical invasion, but yields aggregated data.¹³⁰ Instead of applying the reasonableness balancing test in this context¹³¹—and thereby leaving open many unresolved questions¹³²—the Court should have looked to a line of cases that involves problems analogous to DNA collection, such as cases

121. *Id.* at 1987.

122. *Id.* at 1968 (majority opinion).

123. *See infra* Parts II.A–C.

124. Subsequent to his arrest, law enforcement uploaded a sample of King’s DNA to the Maryland DNA database, which, as a result, produced a match to a DNA sample collected in an unsolved rape case from 2003. *King*, 133 S. Ct. at 1966. The majority explained the advantages of DNA identification: “[T]he utility of DNA identification in the criminal justice system is already undisputed Future refinements may improve present technology, but even now STR analysis makes it possible to determine whether a biological tissue matches a suspect with near certainty.” *Id.* at 1966–67 (internal quotation and citation omitted).

125. *See infra* Part II.A.3.

126. *See infra* Parts II.A.1–3.

127. *See infra* Part II.A.2.

128. *See infra* Part II.A.2.

129. *See infra* Part II.A.3.

130. *See infra* Part II.A.

131. *See infra* Part II.A.

132. *See infra* Part II.B.

involving searches of data on seized computers.¹³³ By comparing the legal issues implicated by computer searches to those implicated by DNA collection, the Court would have found that, similar to searches of seized computers, the government should be required to obtain a search warrant before entering an arrestee's DNA profile into a DNA database to search for a "hit."¹³⁴

A. *The King Court Wrongly Applied the Reasonableness Balancing Test and Thus Did Not Properly Assess the Constitutionality of DNA Collection and Analysis*

While *Maryland v. King* is the first case in which the Supreme Court encountered the difficult task of determining the constitutionality of DNA collection of arrestees,¹³⁵ it is not the only time the Court has assessed the impact that advanced technology and intrusions into the body have on Fourth Amendment rights.¹³⁶ The facts of *King*, however, forced the Supreme Court to consider both issues simultaneously in making its decision on whether the search of an arrestee by way of collecting and analyzing his DNA violates the Fourth Amendment's prohibition against unreasonable searches.¹³⁷ The Court applied the reasonableness balancing test to determine the reasonableness of such a search "by assessing, 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,"¹³⁸ taking into account the "totality of the circumstances."¹³⁹ The Court found three factors relevant to its assessment: (1) the status of the person from whom evidence is gathered,¹⁴⁰ (2) the physical intrusion the search entails,¹⁴¹ and (3) the type of evidence gathered, including the amount of information that evidence is capable of

133. See *infra* Part II.C.

134. See *infra* Part II.C.

135. *Maryland v. King*, 133 S. Ct. 1958, 1968 (2013) ("[T]he DNA swab procedure used here presents a question the Court has not yet addressed . . .").

136. See *supra* Parts I.A–B.

137. *Id.*

138. *United States v. Knights*, 534 U.S. 112, 118–19 (2001) (quoting *Wyoming v. Houghton*, 526 U.S. 295, 300 (1999)). For a more detailed discussion on the reasonableness balancing test and other cases where the Court has applied this test, see *supra* Part I.A.

139. *Knights*, 534 U.S. at 118 (quoting *Ohio v. Robinette*, 519 U.S. 33, 39 (1996)).

140. See *infra* Part II.A.1.

141. See *infra* Part II.A.2.

revealing.¹⁴² The Court's assessment of these three factors undervalued an arrestee's privacy interests and the protection of privacy interests in general.

I. Arrestee Status

Since 2000, the Supreme Court has twice applied the reasonableness balancing test in Fourth Amendment cases involving individuals serving post-conviction punishments: addressing the issue of probationers in *United States v. Knights*¹⁴³ and, more recently, the issue of parolees in *Samson v. California*.¹⁴⁴ In these cases, the Court explained that a person's reasonable expectation of privacy depends on the level of freedom that person enjoys in society.¹⁴⁵ People under state control—including prisoners, probationers, and parolees—exist on a “‘continuum’ of state-imposed punishments,” and thus are accorded more limited privacy than free citizens.¹⁴⁶ The *Samson* Court explained that “[o]n this continuum, parolees have fewer expectations of privacy than probationers, because parole is more akin to imprisonment than probation is to imprisonment.”¹⁴⁷ What is alarming about the Court's privacy analysis in *King* is its implication that arrestees, by virtue of their status alone, belong somewhere on this continuum.¹⁴⁸ In placing arrestees on this continuum, the Court considered the diminished expectations of privacy associated with being arrested and effectively suggested that a

142. See *infra* Part II.A.3.

143. 534 U.S. 112 (2001).

144. 547 U.S. 843 (2006).

145. *Knights*, 534 U.S. at 119–20 (“The probation condition thus significantly diminished Knights’ reasonable expectation of privacy.”). But see *id.* at 120 n.6 (“We do not decide whether the probation condition so diminished, or completely eliminated, Knights’ reasonable expectation of privacy . . . that a search by a law enforcement officer without any individualized suspicion would have satisfied the reasonableness requirement of the Fourth Amendment.”). The Court in *Samson*, however, ruled on this specific issue and held that it does, stating:

We granted certiorari . . . to answer a variation of the question this Court left open in *United States v. Knights* . . . whether a condition of release can so diminish or eliminate a released prisoner’s reasonable expectation of privacy that a suspicionless search by a law enforcement officer would not offend the Fourth Amendment. Answering that question in the affirmative today, we affirm the judgment of the California Court of Appeal.

Samson, 547 U.S. at 847.

146. *Samson*, 547 U.S. at 850 (citing *Knights*, 534 U.S. at 119).

147. *Id.*

148. *Maryland v. King*, 133 S. Ct. 1958, 1978 (2013) (“The expectations of privacy of an individual taken into police custody ‘necessarily [are] of a diminished scope.’” (quoting *Bell v. Wolfish*, 441 U.S. 520, 557 (1979))).

search via collection and analysis of DNA is less invasive on an arrestee's privacy as opposed to the privacy of a free citizen.¹⁴⁹

There are two groups of people that are directly affected by laws that authorize the collection of DNA upon arrest: those who are found guilty of the crime and those who are found not guilty. Because DNA collection and analysis is already permitted for those convicted of certain crimes,¹⁵⁰ DNA laws concerning arrestees do not expand current law enforcement investigative capabilities for the former group. Thus, the real target of DNA laws concerning arrestees is the latter group—those who are ultimately found not guilty. This fact is what distinguishes arrestees from probationers and parolees and what weakens the validity of the *King* Court's reliance on the continuum and the diminished expectation of privacy theories set out in cases such as *Knights* and *Samson*.

There is a second plausible way the situation in *King* might be distinguished from the Court's rulings in *Samson* and *Knights*. In *Samson*, an officer who was aware of Samson's parolee status searched him without any specific suspicion that Samson had committed a crime.¹⁵¹ Affirming the reasoning in *Knights* and ultimately finding the search reasonable, the Court found "salient" the requirement that probationers and parolees be clearly and unambiguously informed of their search conditions and concluded that awareness of such conditions removed a legitimate expectation of privacy.¹⁵² In these cases, both Samson and Knights consented to suspicionless searches and were unambiguously aware of what consent meant, facts that the Court found important and weighed heavily in its application of the reasonableness balancing test.¹⁵³

In *King*, however, the Court made no mention of consent. If consent were so critical in weighing the privacy expectation interest in *Samson* and *Knights*, surely the fact that arrestees have no say in whether they want their DNA collected can, at the very minimum, weigh in favor of the individual privacy interests side of the balancing test. The *King* Court, however, failed to address this issue—an example of how the reasonableness balancing test allows the Court to pick and choose what it deems pertinent to the privacy interests analysis.

149. *Id.*

150. *See supra* note 73 and accompanying text.

151. *See Samson*, 547 U.S. at 846–47 (“[P]ursuant to Cal. Penal Code Ann. § 3067(a) . . . and based solely on petitioner’s status as a parolee, Officer Rohleder searched petitioner.”).

152. *Id.* at 852 (“In *Knights*, we found that acceptance of a clear and unambiguous search condition ‘significantly diminished Knights’ reasonable expectation of privacy.” (quoting *United States v. Knights*, 534 U.S. 112, 120 (2001))).

153. *Id.* at 850–52.

2. *The Physical Intrusion*

In addition to status, the *King* Court also found the degree of physical intrusion involved in the collection of DNA relevant to its overall assessment of the scope of individual privacy interests.¹⁵⁴ One significant characteristic of DNA technology is its ability to invade privacy in a less physically intrusive way.¹⁵⁵ Indeed, *King* is not the first time the Court has been confronted with technological innovations implicating constitutional privacy rights in this manner.¹⁵⁶ For example, in *Kyllo v. United States*,¹⁵⁷ despite the lack of a physical invasion, the Court required a warrant to use thermal imaging to measure heat escaping from a house.¹⁵⁸ Because the government had not obtained a warrant, the Court found the search unconstitutional.¹⁵⁹

Similar to the minimal invasion required to perform thermal imaging of a house, a DNA buccal swab of the inner cheek also involves minimal physical intrusion. In fact, a buccal swab is substantially less intrusive than other types of approved intrusions to which arrestees are routinely subjected.¹⁶⁰ Yet, the Court in *Kyllo* found the use of a thermal imaging device from a public vantage point to monitor the radiation of heat from a home constituted a search within the meaning of the Fourth Amendment,

154. *Maryland v. King*, 133 S. Ct. 1958, 1979 (2013).

155. The collection of DNA via buccal swab “requires the collector to swab up-and-down and rotate a sterile cotton swab on the interior of the cheek in the subject’s mouth, with enough pressure to remove cells.” *King v. State*, 425 Md. 550, 557 n.5, 42 A.2d 549, 553 n.5 (2012), *rev’d*. *Maryland v. King*, 133 S. Ct. 1958 (2013). The process of drawing blood requires the skin to be pierced and a foreign object to be inserted into the body for “a perceptible amount of time.” *Haskell v. Harris*, 669 F.3d 1049, 1059, *reh’g granted*, 686 F.3d 1121 (9th Cir. 2012).

156. *See, e.g.*, *United States v. Jones*, 132 S. Ct. 945, 948 (2012) (deciding whether attachment of Global-Positioning-System “GPS” tracking device on a vehicle, and subsequent use of GPS device to monitor the vehicle’s movements on public streets, is a lawful search); *Kyllo v. United States*, 533 U.S. 27, 29 (2001) (deciding whether warrantless use of thermal imaging device to measure heat emanating from home without physically invading the house is a lawful search); *California v. Ciraolo*, 476 U.S. 207, 215 (1986) (involving technology enabling human flight, that is, the airplane, which allowed public view of uncovered portions of the house and its curtilage that once were private); *Katz v. United States*, 389 U.S. 347, 353 (1967) (explaining that even though a listening device attached to the outside of a public telephone booth and used to eavesdrop on defendant inside the telephone booth “did not happen to penetrate the wall of the booth,” this alone, “can have no constitutional significance”).

157. 533 U.S. 27 (2001).

158. *Id.* at 40–41.

159. *Id.*

160. *See, e.g.*, *Schmerber v. California*, 384 U.S. 757, 771 (1966) (describing the low level of physical intrusion that results from a blood test).

thereby requiring a search warrant.¹⁶¹ The Court in *King*, however, found that a DNA swab does not require a search warrant.¹⁶²

This reasoning begs the question: why is it that the Court finds privacy, secrecy, and autonomy within the four walls of the home paramount, but does not hold intrusion into the human body to as high of a standard?¹⁶³ Why is it that when a person is lawfully arrested within the home, the government does not have the unrestricted authority to search the entire home, without probable cause, for evidence of other unrelated crimes,¹⁶⁴ but the government may do so with the body? The Court offers no satisfying answer. Instead of requiring a warrant as it did in *Kyllo*, the Court in *King* applied the reasonableness balancing test, using the reduced physical intrusion on privacy as part of the *justification* for a government search that otherwise would not be permitted. As a result, the two competing interests in the reasonableness balancing test—individual privacy and the government’s need for the intrusion—transform into dependent variables.¹⁶⁵ As professor and author Scott E. Sundby explained, “the government’s ability to intrude in a less physically intrusive manner does not promote privacy interests but actually undermines the overall right to be free from government surveillance by expanding the scope of acceptable intrusions.”¹⁶⁶

Thus, while the Court continues to insist on strong justifications and prior judicial approval for police intrusion inside the home,¹⁶⁷ it did not guard the expectations of privacy into the body as zealously as it should

161. *Kyllo*, 533 U.S. at 40.

162. *Maryland v. King*, 133 S. Ct. 1958, 1980 (2013).

163. *See Florida v. Jardines*, 133 S. Ct. 1409, 1414 (2013) (“But when it comes to the Fourth Amendment, the home is first among equals. At the Amendment’s ‘very core’ stands ‘the right of a man to retreat into his own home and there be free from unreasonable governmental intrusion.’” (quoting *Silverman v. United States*, 365 U.S. 505, 511 (1961))); *Ferguson v. City of Charleston*, 532 U.S. 67, 101–02 (2001) (Scalia, J., dissenting) (“I doubt whether [a probationer’s] reasonable expectation of privacy in his home [is] any less than petitioners’ reasonable expectation of privacy in their urine taken, or in the urine tests performed . . .”).

164. *See Maryland v. Buie*, 494 U.S. 325, 335–37 (1990) (limiting warrantless searches of the home in in-home arrests to a “protective sweep,” which must “be justified by probable cause to believe that a serious and demonstrable potentiality for danger existed”).

165. Scott E. Sundby, “*Everyman’s Fourth Amendment: Privacy or Mutual Trust Between Government and Citizen?*,” in *THE FOURTH AMENDMENT SEARCHES AND SEIZURES: ITS CONSTITUTIONAL HISTORY AND THE CONTEMPORARY DEBATE* 297, 301 (Cynthia Lee ed., 2011) (“[M]inimizing the level of the privacy intrusion can help compensate for a weaker government justification, such as one lacking individualized suspicion.”).

166. *Id.*

167. *See United States v. Kyllo*, 533 U.S. 27, 40 (2001) (“We have said that the Fourth Amendment draws ‘a firm line at the entrance to the house . . .’” (quoting *Payton v. New York*, 445 U.S. 573, 590 (1980))).

have. Instead, the Court allowed the breadth of Fourth Amendment protection to recede in the presence of innovative technology that, while minimally physically invasive, is just as much a violation of Fourth Amendment rights.

3. *The Type of Evidence*

Some federal and state courts view DNA collection and analysis from arrestees as a process that involves two separate “searches” within the meaning of the Fourth Amendment.¹⁶⁸ The first search is the physical intrusion caused by running the swab against the inner cheek (“first search”).¹⁶⁹ The second search is the processing and analysis of the DNA sample (“second search”).¹⁷⁰ The *King* Court provided insufficient consideration of this latter search. While the first search may be minimally physically intrusive, it is the second search that conflicts with Fourth Amendment privacy interests.¹⁷¹ In its brief discussion of the privacy interests involved in the second search, the Court in *King* cites safeguards built within the Maryland DNA Collection Act:

[T]he processing of [King’s] DNA sample’s 13 CODIS loci did not intrude on [his] privacy in a way that would make his DNA identification unconstitutional. First . . . the CODIS loci come from noncoding parts of the DNA that do not reveal the genetic traits of the arrestee. . . . And even if non-coding alleles could provide some information, they are not in fact tested for that end. It is undisputed that law enforcement officers analyze DNA for the sole purpose of generating a unique identifying number against which future samples may be matched. . . . Finally, the Act provides statutory protections that guard against further invasion of privacy. . . . [T]he Act requires that “[o]nly DNA records that directly relate to the identification of individuals shall be collected and stored.” No purpose other than identification is permissible In light of the scientific and statutory safeguards, once [King’s] DNA was lawfully collected, the STR analysis of [King’s] DNA pursuant to CODIS procedures did not

168. See *King v. State*, 425 Md. 550, 594, 42 A.3d 549, 575 (2012), *rev’d*, 133 S. Ct. 1958 (2013) (“As other courts have concluded, we look at any DNA collection effort as two discrete and separate searches. The first search is the actual swab of the inside of [the arrestee’s] mouth and the second is the analysis of the DNA sample thus obtained, a step required to produce the DNA profile.”).

169. *Id.*

170. *Id.*

171. See *United States v. Mitchell*, 681 F. Supp. 2d 597, 609 (W.D. Pa. 2009), *rev’d*, 652 F.3d 387 (3d Cir. 2011) (agreeing that the physical intrusion of the body implicated by the buccal swab is not greatly intrusive, but it is the searching of the DNA that is cause for alarm).

amount to a significant invasion of privacy that would render the DNA identification impermissible under the Fourth Amendment.¹⁷²

While discussing these safeguards, the Court acknowledged the possibility for abuse,¹⁷³ but skirted the privacy issue implicated by the second search. Disregarding its emphasis on the scope of privacy rights in cases leading up to *King*,¹⁷⁴ the Court ultimately undervalued Fourth Amendment privacy rights.

Privacy is not just about personal privacy; it includes the right to informational privacy, personal autonomy, peace of mind, and feeling safe from government invasion.¹⁷⁵ Indeed, Justice Sotomayor, concurring in *United States v. Jones*, advocated that the “unique attributes of GPS surveillance” be taken into account when considering reasonable societal

172. *Maryland v. King*, 133 S. Ct. 1958, 1979–80 (2013) (citation omitted) (quoting *Vernonia School Dist. 47J v. Acton*, 515 U.S. 646, 658 (1995)).

173. *Id.* at 1979 (“While science can always progress further, and those progressions may have Fourth Amendment consequences, alleles at the CODIS loci ‘are not at present revealing information beyond identification.’ . . . The argument that the testing at issue in this case reveals any private medical information at all is open to dispute.” (citation omitted)). The Court added, however, “[i]f in the future police analyze samples to determine, for instance, an arrestee’s predisposition for a particular disease or other hereditary factors not relevant to identity, that case would present additional privacy concerns not present here.” *Id.*

174. For example, in *Schmerber v. California*, the Court held that the unconsented, warrantless blood test for assessment of alcohol concentration was constitutional because “[t]he officer . . . might reasonably have believed that he was confronted with an emergency, in which the delay necessary to obtain a warrant, under the circumstances, threatened the ‘destruction of evidence.’” 384 U.S. 757, 770 (1966) (citation omitted). Blood alcohol decreases with time, the Court explained, and because there was no time to seek a warrant, these “special facts” permitted bypass of the warrant requirement. *Id.* at 770–71. In concluding its opinion, the *Schmerber* Court left no ambiguity:

Search warrants are ordinarily required for searches of dwellings, and absent an emergency, no less could be required where intrusions into the human body are concerned. . . . The importance of informed, detached and deliberate determinations of the issue whether or not to invade another’s body in search of evidence of guilt is indisputable and great.

.....

We thus conclude that the present record shows no violation of petitioner’s right under the Fourth [Amendment] [W]e reach this judgment only on the facts of the present record. *The integrity of an individual’s person is a cherished value of our society. That we today hold that the Constitution does not forbid the States minor intrusions into an individual’s body under stringently limited conditions in no way indicates that it permits more substantial intrusions, or intrusions under other conditions.*

Id. at 770–72 (emphasis added).

175. See, e.g., STEPHEN J. SCHULHOFER, MORE ESSENTIAL THAN EVER: THE FOURTH AMENDMENT IN THE TWENTY-FIRST CENTURY 6 (2012) (“[T]he [Fourth] [A]mendment offers a guarantee not merely of secrecy but of *personal autonomy*.”).

expectations of privacy in the sum of one's public movements.¹⁷⁶ *Jones* was ultimately decided on common law trespass theory¹⁷⁷ and did not require the Court to answer the more complex issue of what would happen in a situation where the electronic monitoring did not require a physical trespass.¹⁷⁸ The *King* Court, however, essentially provided the answer to this scenario in the context of DNA collection because the same problems that Justice Sotomayor recognized in *Jones* are manifest in *King*. As Justice Sotomayor explained:

GPS monitoring generates a precise, comprehensive record of a person's public movements that reflects a wealth of detail about her familial, political, professional, religious, and sexual associations. . . . The Government can store such records and efficiently mine them for information years into the future. And because GPS monitoring . . . by design, proceeds surreptitiously, it evades the ordinary checks that constrain abusive law enforcement practices: "limited police resources and community hostility."

Awareness that the Government may be watching chills associational and expressive freedoms. And the Government's unrestrained power to assemble data that reveal private aspects of identity is susceptible to abuse.

The net result is that GPS monitoring—by making available at a relatively low cost such a substantial quantum of intimate information about any person whom the Government, in its unfettered discretion, chooses to track—may "alter the relationship between citizen and government in a way that is inimical to democratic society."¹⁷⁹

These problems highlighted in *Jones* parallel the problems associated with the collection of DNA from arrestees. While the scope of DNA data is restricted because it is not collected from anyone other than arrestees or

176. *United States v. Jones*, 132 S. Ct. 945, 954–56 (Sotomayor, J., concurring). In *Jones*, the Court held that government attachment of a GPS tracking device to Jones's vehicle, and subsequent use of that device to monitor the vehicle's movements on public streets, was a search within the meaning of the Fourth Amendment. *Id.* at 948–49 (majority opinion).

177. *Id.* at 949–52. The Court explains why the government's actions constituted a trespass: "The Government *physically occupied* private property for the purpose of obtaining information." *Id.* at 949 (emphasis added).

178. *Id.* at 954 ("It may be that achieving the same result through electronic means, without an accompanying trespass, is an unconstitutional invasion of privacy, but the present case does not require us to answer that question.").

179. *Id.* at 955–56 (Sotomayor, J., concurring) (citations omitted).

others associated with the state (such as probationers and parolees),¹⁸⁰ DNA's exceptional nature contains information on "physical characteristics and traits, genetic disorders, susceptibility to disease and ethnic origin."¹⁸¹ Although the Maryland DNA Collection Act includes limitations on the use of DNA to mitigate the impact on personal privacy,¹⁸² it still affects an individual's right to retain control or have oversight of the data or material taken from his or her body. This concept not only goes against the Fourth Amendment's protection of personal privacy, but also *personal autonomy* because it intrudes on an individual's interest in security and freedom.¹⁸³

By authorizing the collection and processing of DNA upon arrest, the *King* decision effectively allows unreasonable governmental intrusions that "unjustifiably disturb our peace of mind and our capacity to thrive as independent citizens in a vibrant democratic society."¹⁸⁴ If the Court were to conduct a proper reasonableness balancing test, it should take into account these important interests.

B. Consequences and Loose Ends of King

The Supreme Court's decision in *King* has significant Fourth Amendment implications that extend beyond the case itself. It leaves open unresolved questions and subjects certain classes of individuals to the risk of law enforcement abuse.

1. Broad Implications for Broad Statutes

In his dissent in *King*, Justice Scalia noted that the majority decision was very broad; he warned that because of "today's decision, your DNA can be taken and entered into a national DNA database if you are ever arrested, rightly or wrongly, and for whatever reason."¹⁸⁵ Compared to the Maryland DNA Collection Act, DNA collection laws in states like California are much broader and, therefore, raise more questions given the

180. Although, as discussed in more detail *supra*, the collection and entering of arrestee DNA into a database system may compromise the privacy of related biological family members. See *supra* Part II.B.3.

181. See Liz Campbell, *A Rights-Based Analysis of DNA Retention: "Non-Conviction" Databases and the Liberal State*, 12 CRIM. L. REV. 889, 891 (2010) (exploring the human rights implications of DNA retention).

182. *Maryland v. King*, 133 S. Ct. 1958, 1979–80 (2013) ("[T]he Act requires that '[o]nly DNA records that directly relate to the identification of individuals shall be collected and stored.'" (quoting MD. CODE ANN., PUB. SAFETY § 2-505(b)(1))).

183. See *supra* text accompanying note 176.

184. SCHULHOFER, *supra* note 175, at 6.

185. *King*, 133 S. Ct. at 1989 (Scalia, J., dissenting) (emphasis added).

Court's broad ruling in *King*. For example, in *Haskell v. Harris*,¹⁸⁶ the Ninth Circuit heard arguments challenging California's DNA collection law but suspended consideration of the case when the Supreme Court granted certiorari in *King*.¹⁸⁷ The California statute, as discussed *supra*,¹⁸⁸ is unlike the Maryland DNA Collection Act in that it does not provide for automatic, mandatory expungement of the DNA profile if the arrestee is acquitted or the charges are dismissed;¹⁸⁹ nor does it limit DNA collection to individuals arrested for serious felonies.¹⁹⁰ If the Ninth Circuit were to permit the collection of DNA from individuals arrested pursuant to the California DNA collection law, would it be a greater violation of Californians' Fourth Amendment rights?

While the *King* Court mentions Maryland's automatic expungement provision, it does not stress this provision or include it in its balancing of privacy and government interests.¹⁹¹ Because federally assigned rights are the minimum that each state must follow,¹⁹² the Court's decision in *King* may suggest that DNA collection laws in states such as California, which contain less restrictive provisions on government collection of DNA in their statutes, are unconstitutional. Thus, while states need not change their statute to mirror the Maryland DNA Collection Act immediately, their statute may be challenged on the ground that the less restrictive process of collecting DNA, as opposed to Maryland's process, affords less rights.

2. Aggravating the Pretext Problem

The Court in *King* agreed on certain facts: (1) King's DNA was obtained without a warrant pursuant to the Maryland DNA Collection Act; (2) King was indicted for rape only after the DNA evidence was presented

186. 669 F.3d 1049 (9th Cir. 2012).

187. Order for Publication at 1–2, *Haskell v. Harris*, No. 10-15152 (9th Cir. Aug. 14, 2013) (decision pending following en banc reargument on December 9, 2013).

188. *See supra* Part I.B.2.b.

189. *See supra* note 86. Provisions such as automatic expungement are especially important to Fourth Amendment rights because when a DNA profile is allowed to remain in a database system, it is subject to multiple searches in the future. DNA, that remains in the database even after the arrestee is acquitted or the charges against him are dropped, leaves open the ability for law enforcement to investigate and resolve crimes that an individual in the database has yet to commit.

190. *See supra* note 84.

191. *Maryland v. King*, 133 S. Ct. 1958, 1967 (2013).

192. The first section of the Fourteenth Amendment of the United States Constitution states, in relevant part: "All persons born or naturalized in the United States, and subject to the jurisdiction thereof, are citizens of the United States and of the state wherein they reside. No state shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States . . ." U.S. CONST. amend. XIV.

to a grand jury; and (3) no individualized suspicion existed that a search of King's DNA would reveal evidence of the crime for which he was arrested.¹⁹³ Indeed, the facts of *King* do not place it into one of the clear categories of cases where the Court has found warrantless searches constitutional: stop and frisk,¹⁹⁴ automobile,¹⁹⁵ consent of a third party,¹⁹⁶ exigent circumstances,¹⁹⁷ and special needs.¹⁹⁸ The Court, however, had one tool left: the reasonableness balancing test. The Court seemed to have forgotten the reasoning behind the warrant requirement in the first place, which the Court clearly set out in *McDonald v. United States*¹⁹⁹:

We are not dealing with formalities. The presence of a search warrant serves a high function. Absent some grave emergency, the Fourth Amendment has interposed a magistrate between the citizen and the police. This was done not to shield criminals It was done so that an objective mind might weigh the need to invade that privacy in order to enforce the law. The right of privacy was deemed too precious to entrust to the discretion of those whose job is the detection of crime and the arrest of criminals We cannot be true to that constitutional requirement and excuse the absence of a search warrant without a

193. *King*, 133 S. Ct. at 1965–66. Law enforcement only obtained a search warrant subsequent to the first match, so that they might take a second sample of DNA from King. *Id.* at 1966.

194. *See, e.g., Terry v. Ohio*, 392 U.S. 1, 30–31 (1968) (holding “that where a police officer observes unusual conduct which leads him reasonably to conclude in light of his experience that criminal activity may be afoot and that the persons with whom he is dealing may be armed and presently dangerous, where in the course of investigating this behavior he identifies himself as a policeman and makes reasonable inquiries, and where nothing in the initial stages of the encounter serves to dispel his reasonable fear for his own or others’ safety, he is entitled for the protection of himself and others in the area to conduct a carefully limited search of the outer clothing of such persons in an attempt to discover weapons which might be used to assault him. Such a search is a reasonable search under the Fourth Amendment . . .”).

195. *See, e.g., California v. Acevedo*, 500 U.S. 565, 579–80 (1991) (holding that even though law enforcement did not have probable cause to search the automobile as a whole, where they had probable cause to believe only that a container within the automobile had contraband or evidence, officers were permitted to search the container and did not need to hold the container pending issuance of a search warrant).

196. *See, e.g., Illinois v. Rodriguez*, 497 U.S. 177, 179, 181, 183–84 (1990) (holding that a warrantless entry is permissible when based upon the consent of a third party whom law enforcement, at the time of entry, reasonably believes to possess common authority over the premises, but who in fact does not).

197. *See, e.g., Chambers v. Maroney*, 399 U.S. 42, 50–52 (1970) (discussing when the exigent circumstances exception to the warrant requirement is applicable).

198. *See, e.g., Vernonia School Dist. 47J v. Acton*, 515 U.S. 646, 648, 664–65 (1995) (upholding the constitutionality of a warrantless, suspicionless random drug testing program required for students participating in high school or grade school interscholastic athletics).

199. 335 U.S. 451 (1948).

showing by those who seek exemption from the constitutional mandate that the exigencies of the situation made that course imperative.²⁰⁰

By somehow linking the probable cause of one crime and making it justifiable to search for evidence for a separate, unrelated crime,²⁰¹ the Court has aggravated the pretext problem—a problem that has concerned the Court throughout its history of deciding Fourth Amendment issues.²⁰² For example, the law on searches incident to arrest has long been criticized because of the possibility of officer abuse.²⁰³ It is easy for an officer to find a reason to stop someone in their vehicle for a traffic violation,²⁰⁴ and, after the Court's decision in *Atwater v. City of Lago Vista*,²⁰⁵ officers have discretion as to whether they will make an arrest, even for misdemeanor offenses.²⁰⁶

DNA collection upon arrest is less justifiable than the typical search incident to arrest because the Court has only allowed the latter under the justification of officer safety and preservation of evidence.²⁰⁷ The Court in

200. *Id.* at 455–56.

201. *Maryland v. King*, 133 S. Ct. 1958, 1970 (2013) (“The arrestee is already in valid police custody for a serious offense supported by probable cause.”). The Court added that “[w]hen probable cause exists to remove an individual from the normal channels of society and hold him in legal custody, DNA identification plays a critical role in serving those interests.” *Id.* at 1971.

202. *See* *United States v. Robinson*, 414 U.S. 218, 248 (1973) (Marshall, J., dissenting) (“There is always the possibility that a police officer, lacking probable cause to obtain a search warrant, will use a traffic arrest as a pretext to conduct a search.”); *see also* *Johnson v. United States*, 333 U.S. 10, 14 (1948) (discussing how motivation and competition for “ferreting out crime” can pressure police to circumvent the law).

203. *Robinson*, 414 U.S. at 248 (“[I]n most jurisdictions and for most traffic offenses the determination of whether to issue a citation or effect a full arrest is discretionary with the officer. There is always the possibility that a police officer, lacking probable cause to obtain a search warrant, will use a traffic arrest as a pretext to conduct a search.”).

204. *See* WAYNE R. LAFAVE, 3 SEARCH AND SEIZURE: A TREATISE ON THE FOURTH AMENDMENT 156 (5th ed. 2012) (“[V]ery few drivers can traverse any appreciable distance without violating some traffic regulation’ It is apparent that virtually everyone who ventures out onto the public streets and highways may then, with little effort by the police, be placed in a position where he is subject to a full search. . . . [I]t is clear that this subterfuge is employed as a means for searching for evidence on the persons of suspects who could not be lawfully arrested for the crimes of which they are suspected.” (quoting B. GEORGE, CONSTITUTIONAL LIMITATIONS ON EVIDENCE IN CRIMINAL CASES 65 (1969))).

205. 532 U.S. 318 (2001).

206. *Id.* at 323.

207. *See* *Chimel v. California*, 395 U.S. 752, 762–63 (1969) (“When an arrest is made, it is reasonable for the arresting officer to search the person arrested in order to remove any weapons that the latter might seek to use in order to resist arrest or effect his escape. Otherwise, the officer’s safety might well be endangered, and the arrest itself frustrated. In addition, it is entirely reasonable for the arresting officer to search for and seize any evidence on the arrestee’s person in

United States v. Robinson left the pretext issue “for another day,”²⁰⁸ and the *King* Court decided that day had not yet arrived.²⁰⁹

3. *Familial Searches*

Familial searching, which remains an unresolved issue after *King*, opens the door to another form of law enforcement abuse. A familial search is “an additional search of a law enforcement DNA database conducted after a routine search has been completed and no profile matches are identified during the process.”²¹⁰ Occasionally, routine DNA searches produce partial match profiles.²¹¹ Familial searching, however, is when law enforcement “deliberate[ly] search[es] a DNA database [] for the intended purpose of potentially identifying close biological relatives to the unknown forensic profile obtained from crime scene evidence.”²¹² This type of searching “is based on the concept that first order relatives . . . will have more genetic data in common than unrelated individuals” and would only be used “if the comparison of the forensic DNA profile with the known offender/arrestee DNA profiles has not identified any matches to any of the offenders/arrestees.”²¹³

While the ability of DNA to allow for “familial searches” obviously makes DNA collection very different from fingerprinting,²¹⁴ the Court in *King* alarmingly placed much weight on the similarities between DNA collection and fingerprinting to reach the conclusion that collection of arrestees’ DNA is constitutional.²¹⁵ Because of the unique nature of DNA, however, free citizens may be implicated when an arrestee’s DNA information is entered into a DNA database system and compared using familial searches.

order to prevent its concealment or destruction There is ample justification, therefore, for a search of the arrestee’s person and the area ‘within his immediate control.’”).

208. *Robinson*, 414 U.S. at 221 n.1.

209. *Maryland v. King*, 133 S. Ct. 1958, 1970 (2013).

210. *Familial Searching*, THE FED. BUREAU OF INVESTIGATION, <http://www.fbi.gov/about-us/lab/biometric-analysis/codis/familial-searching> (last visited Oct. 29, 2013).

211. *Id.*

212. *Id.*

213. *Id.*

214. See JENNIFER LYNCH, FROM FINGERPRINTS TO DNA: BIOMETRIC DATA COLLECTION IN U.S. IMMIGRANT COMMUNITIES AND BEYOND 7 (2012) (“DNA presents privacy issues different from those involved in other biometrics collection. . . . [I]t can contain information about a person’s entire genetic make-up, including gender, familial relationships”).

215. *Maryland v. King*, 133 S. Ct. 1958, 1977 (2013) (“DNA identification of arrestees, of the type approved by the Maryland statute here at issue, is ‘no more than an extension of methods of identification long used in dealing with persons under arrest.’” (citation omitted)).

Justice Kennedy acknowledged that the Maryland DNA Collection Act explicitly prohibits familial DNA searches.²¹⁶ As of 2011, however, several states allow familial searching, including California, Colorado, Texas, and Virginia.²¹⁷ California notoriously caught the “Grim Sleeper” serial killer after taking a DNA sample from his son.²¹⁸ *King* seems to suggest that familial searches in this context would be unconstitutional; however, the *King* Court declined to further explore the familial search issue.²¹⁹

For people in states that do allow familial searches, any time an arrested family member’s cheek is swabbed and their DNA is archived, so too is information related to the family member. It is essentially like creating a “gene for criminality.” If your father is a criminal, his DNA profile will be in the national database; and because you share half of your DNA with your father,²²⁰ your DNA now can be more easily identified, increasing your chances of being accused, and possibly convicted, of a crime.

Now that the Court has ruled on this issue, it is the responsibility of the states to protect citizens from potential abuse such as familial searching and arresting on pretext.²²¹ That responsibility, however, is misplaced and should not be left to the discretion of individual states—protection from Fourth Amendment violations is within the purview of the federal government and should be a right equally protected for all.

C. DNA and Computers: How Far the Government Can Plausibly Go Without Violating the Fourth Amendment

What, then, could have been a better solution to prevent the vast broadening of the Fourth Amendment the Court effectively accomplished with its ruling in *King*? Given that Fourth Amendment jurisprudence regarding searches of DNA is fairly undeveloped,²²² a similar model to turn to is how courts have dealt with searches of seized computers. A strong analogy might be drawn between computer data and DNA information:

216. *Id.* at 1967 (“Tests for familial matches are also prohibited.”).

217. *Familial Searching*, *supra* note 210.

218. Lauren Sher & Neal Karlinsky, *New Technique of Using Family’s DNA Led Police to ‘Grim Sleeper’ Suspect*, ABCNEWS.COM (July 8, 2010), <http://abcnews.go.com/Nightline/familys-dna-led-police-grim-sleeper-serial-killer/story?id=11116381>.

219. *See supra* note 216.

220. *See Campbell*, *supra* note 181 (“An individual’s DNA . . . is inherited from both one’s parents.”).

221. *See supra* Part II.B.2.

222. *Maryland v. King*, 133 S. Ct. 1958, 1968 (2013) (“[T]he DNA swab procedure used here presents a question the Court has not yet addressed . . .”).

DNA searches are conducted via government technology, and DNA samples contain vast amounts of personal information in a very small amount of space.²²³ Similar to what occurs when a computer is seized and then searched at a later time, relevant DNA information cannot be separated from irrelevant information at the site of the search, so the government has no choice but to take it all.²²⁴ Additionally, computer and DNA database searches threaten the same type of government abuse, such as exploratory searches into personal information that are detached from law enforcement's original suspicions for arrest.²²⁵

Rather than understand the process of collecting and entering an arrestee's DNA into a database as two distinct searches—the physical swab and the analysis of the DNA sample—the DNA collection effort could be broken down into three steps that may or may not be reasonable under the Fourth Amendment: (1) the physical collection of the DNA sample; (2) the creation of the DNA profile from the DNA sample; and (3) the inclusion of the DNA profile within CODIS, or any other database, so that it can be searched for a possible “hit.”

The second step of creating the DNA profile is arguably not a search under the Fourth Amendment, and, therefore, the creation of a DNA profile may be constitutional.²²⁶ While step one does constitute a Fourth Amendment search, it does not address the more grave constitutional problem of unreasonableness as seen in step three; one can plausibly assert that taking a DNA buccal swab and creating a profile from the sample is constitutional,²²⁷ yet inclusion of the DNA profile within CODIS, and the unfettered ability to search for a “hit” within that database, cannot be said to be a reasonable search.²²⁸

For these reasons, the *King* Court should have required the government to obtain a search warrant before entering an arrestee's DNA sample into a DNA database to search for a “hit,” just as courts have

223. Kelly Lowenberg, *Applying the Fourth Amendment When DNA Collected for One Purpose is Tested for Another*, 79 U. CIN. L. REV. 1289, 1291 (2011).

224. *Id.*

225. Catherine W. Kimel, *DNA Profiles, Computer Searches, and the Fourth Amendment*, 62 DUKE L.J. 933, 968 (2013) (“CODIS searches are, in essence, general-warrant computer searches turned on their head: Instead of searching a single computer for evidence of any and every crime, DNA matching searches any and every CODIS subject for evidence of one particular crime (times one hundred thousand, every day).”).

226. *See infra* Part II.C.1.

227. *See infra* Part II.A.2.

228. *See infra* Part II.C.2.

required a search warrant for post-seizure computer searches.²²⁹ As with warrants in other contexts, a DNA warrant could be issued upon a showing of probable cause to believe that the specific DNA profile the government wishes to compare its sample against will produce evidence of the crime under investigation.

1. *Beginning With Step Two: The Creation of an Information-Limited DNA Profile from the Information-Rich DNA Sample*

As mentioned *supra*, the second “search” may not violate the Fourth Amendment, not because it is a reasonable search, but because it arguably is not a search at all.²³⁰ In his article *Searches and Seizures in a Digital World*, Professor Orin S. Kerr explored the ways in which the Fourth Amendment applies to the search and seizure of computer data and questioned when a search occurs during the retrieval of information from a computer hard drive.²³¹ According to Professor Kerr, “a search occurs when information from or about the data is exposed to possible human observation, such as when it appears on a screen, rather than when it is copied by the hard drive or processed by the computer.”²³² Professor Kerr found support in *United States v. Karo*,²³³ a Supreme Court case in which the defendant was being investigated as part of a narcotics conspiracy and received cans of ether, one of which contained a police-placed transmitter intended to help track the defendant’s movements.²³⁴ The Court determined that merely placing the transmitter in an ether can transferred to the defendant was not a violation of his Fourth Amendment rights because the transmitter was not used to convey information to the police.²³⁵

229. *See infra* Part II.C.2.

230. *See supra* Part II.A.2. I begin with the second search because it is well-established that the first search—the buccal swab technique—is a reasonable search that does not violate the Fourth Amendment. *See supra* Part II.A.2.

231. Orin S. Kerr, *Searches and Seizures in a Digital World*, 119 HARV. L. REV. 532, 534–35 (2005) (listing “four basic differences between the dynamics of traditional home searches and the new computer searches” and “how the Fourth Amendment applies to the data acquisition stage of computer searches”).

232. *Id.* at 551. Kerr provided three arguments to support his reasoning: “First, focusing on the exposure of data most accurately transfers our physical world notions of searches to the context of computers. . . . Second, the exposure-based approach reinforces the traditional Fourth Amendment concern with limiting the scope of searches. . . . Third, the exposure-based approach proves much easier to administer than the alternatives.” *Id.* at 551–52.

233. 468 U.S. 705 (1984).

234. *Id.* at 708–10; *see* Kerr, *supra* note 231, at 553–54 (discussing *Karo*).

235. *Karo*, 468 U.S. at 712.

Professor Kerr found further support in *Arizona v. Hicks*.²³⁶ In *Hicks*, a law enforcement officer was searching an apartment and saw valuable stereo pieces.²³⁷ Suspicious that the stereo was stolen, he wrote down the serial numbers of some of the pieces.²³⁸ The Court held that merely copying these serial numbers did not constitute a Fourth Amendment seizure.²³⁹

Similar to copying serial numbers or computer data contained in a hard drive, DNA information is “copied” from a DNA sample, and a limited form of the sample creates the DNA profile.²⁴⁰ A DNA profile that is not entered into CODIS or a state DNA database is useless to law enforcement and provides them with no valuable information.²⁴¹ Therefore, if Professor Kerr is correct that mere copying of information is not subject to Fourth Amendment scrutiny, this suggests that the action of creating a DNA profile by copying data from a DNA sample should also not be subject to Fourth Amendment scrutiny.

It follows then that law enforcement may create a legal DNA profile from the sample. Furthermore, the DNA profile arguably represents only a limited copy of the original DNA sample, as the profile excludes a “genetic treasure map.”²⁴² Similar to the mere copying information discussed by Professor Kerr, creating a limited DNA profile is helpful for law enforcement purposes and may have a plausible legal argument to support constitutionality.

2. *Step Three: Inclusion of the DNA Profile in the CODIS Database*

While law enforcement may be permitted to legally collect an arrestee’s DNA sample and create a limited DNA profile out of that sample, law enforcement should not be able to immediately submit the DNA profile

236. 480 U.S. 321 (1987); see Kerr, *supra* note 231, at 558 (discussing *Hicks*).

237. *Hicks*, 480 U.S. at 323.

238. *Id.*

239. *Id.* at 324.

240. Caitlin Smith, et al., *DNA Goes to Court* 30 NATURE BIOTECHNOLOGY 1047, 1047–48 (2012) (explaining that, out of the billions of base pairs in the human genome, the FBI chooses particular base pairs to include in a DNA profile).

241. For example, in *King v. State*, law enforcement did not benefit from merely collecting King’s DNA but rather from entering the DNA sample in the database bank and getting a “hit.” 425 Md. 550, 557, 42 A.3d 549, 553 (2012), *rev’d*, 133 S. Ct. 1958 (2013).

242. *Id.* at 549, 42 A.3d at 577 (“A DNA sample, obtained through a buccal swab, contains within it unarguably much more than a person’s identity. Although the Maryland DNA Collection Act restricts the DNA profile to identifying information only, we can not turn a blind eye to the vast genetic treasure map that remains in the DNA sample retained by the State.”).

to CODIS, or any other DNA database system, to search for a “hit” because allowing this opens the door to unrestricted searches and the potential for constitutional violations. According to Professor Kerr, “[j]ust as an individual generally has a reasonable expectation of privacy in his home and his packages, so too should he have a reasonable expectation of privacy in the contents of his personal hard drive.”²⁴³ Likewise, arrestees should have a reasonable expectation of privacy in the information contained within their DNA.

There is a significant distinction between the moment when the DNA sample is collected (and a limited DNA profile is created by the government), and the moment when the profile is entered into a DNA database, thereby initiating a search for a “hit.” Once entered, the DNA profile is capable of producing incriminating information if a matching profile exists in the system.²⁴⁴ Thus, while law enforcement may be able to collect the DNA of arrestees and have the limited DNA profile in their possession, entering the limited DNA profile into the database should only be allowed in the presence of a search warrant. This prohibition would properly address commentators’ legitimate concerns that law enforcement might abuse their authority if they are allowed to include arrestees’ samples in the database.²⁴⁵ To be sure, although entering an arrestee’s DNA profile into CODIS to search for a “hit” may help law enforcement, constitutional rights cannot be ignored. Thus, to protect these rights, law enforcement should be required to obtain a search warrant before entering an arrestee’s DNA profile into CODIS.

III. CONCLUSION

When compared to the amount of emphasis the *King* Court placed on governmental interests, the time the Court spent on the privacy interests side of the reasonableness balancing test is unfortunately diminutive. The Court’s ultimate finding after application of the reasonableness balancing test lessened the scope of protection of privacy rights for us all and has left the door open for government abuse.²⁴⁶ Requiring law enforcement to wait to enter an arrestee’s DNA profile into a DNA database until they obtain a search warrant would allow the government to continue to make use of the

243. Kerr, *supra* note 231, at 549.

244. *See supra* note 67.

245. *See, e.g.,* Ashley Eiler, Note, *Arrested Development: Reforming the Federal All-Arrestee DNA Collection Statute to Comply with the Fourth Amendment*, 79 GEO. WASH. L. REV. 1201, 1226 (2010) (discussing the possibility that police might conduct warrantless arrests with the purpose of collecting DNA to verify a “hunch”).

246. *See supra* Part II.A–B.

extraordinary capability and utility of DNA technology, without violating the Fourth Amendment's prohibition against unreasonable searches.²⁴⁷ Careful consideration of the extent to which DNA may be used is imperative not only for various privacy interests and rights afforded by the Fourth Amendment, but also because there is no other constitutional right that would protect our interest in our own genetic material.²⁴⁸ While DNA technology's enhancement of investigative capabilities is extraordinary, as is its ability to help solve crimes in a quick, accurate way, the cost of police intrusion into personal liberty is too high to allow collection and processing of DNA upon arrest of those presumed to be innocent.²⁴⁹

247. *See supra* Part II.C.2.

248. The Supreme Court has made clear numerous times that the Fifth Amendment right against self-incrimination does not extend to the collection of DNA, blood, or fingerprints in connection with a criminal case. *See Schmerber v. California*, 384 U.S. 757, 760–65 (1966) (rejecting Schmerber's claim that withdrawal of his blood and admission into evidence of the analysis that indicated intoxication was not inadmissible on Fifth Amendment privilege against self-incrimination grounds because the privilege only protects "testimony [and] evidence relating to some communicative act or writing by the petitioner"); *Maryland v. King*, 133 S. Ct. 1958, 1975 (2013) ("And though the Fifth Amendment's protection against self-incrimination is not, as a general rule, governed by a reasonableness standard, the Court has held that 'questions . . . reasonably related to the police's administrative concerns . . . fall outside the protections of *Miranda* and the answers thereto need not be suppressed.'" (citations omitted)).

249. Justice Stevens might agree. As he eloquently, but succinctly, explained in *Bell v. Wolfish*, "the easiest course for [law enforcement] officials is not always one that our Constitution allows them to take." 441 U.S. 520, 595 (1979) (Stevens, J., dissenting).