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The Blueprint: Critiques of the Fingerprint and Abandonment Paradigms Utilized to Reject an Expectation of Privacy in DNA

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**THE BLUEPRINT: CRITIQUES OF THE FINGERPRINT AND
ABANDONMENT PARADIGMS UTILIZED TO REJECT AN
EXPECTATION OF PRIVACY IN DNA**

**CRIMINAL COURT OF NEW YORK
NEW YORK CITY**

People v. Vernon B.¹
(decided June 15, 2012)

I. INTRODUCTION

The defendant, Vernon B., was charged with one count of criminal possession of a weapon in the fourth degree.² On November 10, 2011, a police officer allegedly observed the defendant throwing a bag from the window of a residence, and upon inspection, he found the bag contained a loaded 9mm pistol, which subsequently tested positive for male DNA.³ On April 27, 2012, the People filed a motion under Criminal Procedure Law (“CPL”) section 240.40 to compel the defendant to submit to an oral swab for DNA testing.⁴ The defendant opposed the motion on both Fourth Amendment and procedural grounds.⁵

The United States Supreme Court and the New York Court of Appeals have both determined that a search into a person’s body war-

¹ 35 Misc. 3d 1241(A) (N.Y. Crim. Ct. 2012).

² *Id.* at 1.

³ *Id.*

⁴ *Id.* See N.Y. CRIM. PROC. § 240.40(2)(b)(v) (McKinney 2009):

Upon motion of the prosecutor, and subject to constitutional limitation the court . . . may order the defendant to provide non-testimonial evidence. Such order may . . . require the defendant to . . . [p]ermit the taking of samples of blood, hair or other materials from his body in a manner not involving an unreasonable intrusion thereof or a risk of serious physical injury thereto.

⁵ The defendant argued that the People’s motion was submitted late without good cause, and that the People did not establish the required elements of the constitutional standard set by the New York Court of Appeals for a valid search for bodily evidence. *Vernon B.*, 35 Misc. 3d 1241(a) at 1 (citing to *In re Abe. A.*, 437 N.E.2d 265, 266 (N.Y. 1982)).

rants the protection of the Fourth Amendment and therefore must be conducted reasonably.⁶ A determination of reasonableness is correlative: greater intrusions require the highest degree of suspicion probable cause, which is the belief that it more likely than not evidence is located in a specific place.⁷ Lesser intrusions, however, require a mere reasonable, articulated suspicion about the presence of evidence.⁸

The degree of intrusion associated with a DNA search has never been explicitly ruled on by the United States Supreme Court or the New York Court of Appeals, likely because of the unique nature of DNA. DNA is a molecule that is present in almost every cell of the body, and it contains an individual's entire genetic structure, a sequence comprised of three million unique identifiers that, when compared to a separate molecule of DNA, creates an almost certain possibility of matching the samples and their donors.⁹ Because of this accuracy, DNA evidence is highly sought after to aid prosecutors in obtaining convictions with increasing frequency.¹⁰

The broad power of DNA evidence must be tempered by the protections of probable cause and not any lower standard. This assertion is justified not only by precedent, but also by scientific developments and common sense concerns affecting DNA evidence. For example, some commentators have suggested that DNA evidence is not the infallible gold standard it is generally presumed to be.¹¹ Despite possible concerns about DNA, the variety of ways that prosecuting authorities can use DNA samples to help marshal evidence is increasing.¹² Therefore, it is a troubling prospect to consider the ever grow-

⁶ *Schmerber v. California*, 384 U.S. 757, 768 (1966); *Abe A.*, 437 N.E.2d at 266.

⁷ *New Jersey v. T.L.O.*, 469 U.S. 325, 337 (1985).

⁸ *Terry v. Ohio*, 392 U.S. 1, 21 (1968).

⁹ *People v. Wesley*, 633 N.E.2d 451, 458 (N.Y. 1994).

¹⁰ See 35 J.L MED & ETHICS 310 (2007) (finding that as of 2001, 68% of prosecutors reported using DNA evidence at least once in a felony case).

¹¹ See Kimberly A. Polanco, *Constitutional Law- the Fourth Amendment Challenge to DNA Sampling of Arrestees Pursuant to the Justice for All Act of 2004*, 27 U. ARK. LITTLE ROCK. L. REV. 483, 525 (2005) (questioning the reliability of DNA sample analysis quality assurance procedures).

¹² See 42 U.S.C. §§ 1435 a(a)(1), (c)(1) (2012) (establishing a federal database of DNA samples from convicted offenders, and compiling state samples into a national database); N.Y. EXEC. LAW § 995-c (McKinney 2012) (establishing a state database of DNA samples seized from convicted offenders). Some states and the federal government now conduct seizures, and store DNA samples from arrestees, and then compare these samples to evidence from both unsolved and future crimes. See, e.g., *United States v. Mitchell*, 652 F.3d 387, 405 (3d Cir. 2011) (holding that suspicionless collection of DNA samples from arrestees

ing intrusions created by DNA seizures and the use of DNA evidence at trial. Recent scientific developments proving that crime scene DNA evidence can be fabricated quite easily, as well as other scientific and legal concerns, such as the reliability of analysis and potential for disclosure of private medical information, demonstrate the intrusion of a seizure has grown and may never stop doing so.¹³ These considerations undoubtedly call for a requirement that obtaining DNA samples through any means constitutes a search requiring probable cause.

This case note will discuss a jurisdictional split regarding the degree of intrusion created by a DNA seizure. First, this note will present the case law associated with the protective majority approach, which analyzes DNA seizures as full intrusions requiring probable cause.¹⁴ Next, the minority approach will be discussed, which based on flawed assertions, interprets the intrusion created by DNA seizures as unintrusive.¹⁵ Under the minority approach little or no government justification is required for a DNA seizure. The minority reaches this result by equating DNA with abandoned material or by characterizing it as merely a genetic fingerprint; however, this comparison is inherently unsound.¹⁶ Last, it will be demonstrated that the minority approach is inconsistent with federal precedent and its characterization of DNA rests on flawed interpretations of scientific facts. Correct interpretations of the related law, associated science, and the incorporation of recent developments will demonstrate that DNA seizures are highly intrusive, and therefore must be protected fully by probable cause.

II. THE OPINION: *PEOPLE V. VERNON B.*

A. Facts

On November 10, 2011, a police officer allegedly observed

does not violate the Fourth Amendment).

¹³ See *infra* Part IV.

¹⁴ See *United States v. Nicolosi*, 885 F. Supp. 50, 55 (E.D.N.Y. 1995) (using probable cause as the standard for determining the appropriateness of a DNA seizure).

¹⁵ *United States v. Owens*, No. 06-CR-72A, 2006 WL 3725547, at *1, *6 (W.D.N.Y. Dec. 15, 2006).

¹⁶ *Id.*

the defendant, Vernon B., throwing a bag from the window of a residence.¹⁷ Upon searching the bag, the officer recovered a 9mm pistol loaded with one round of ammunition, and the defendant was subsequently charged with criminal possession of a weapon in the fourth degree.¹⁸ The recovered pistol tested positive for the presence of male DNA.¹⁹ On April 27, 2012, the People sought an order compelling the defendant to provide an oral swab to determine if his DNA was a match to the sample found on the pistol.²⁰ The defendant opposed the motion asserting, *inter alia*, that the stringent standards set for issuing an order to obtain forensic evidence from a defendant were not met.²¹

B. The Holding

The standard for issuing a constitutionally valid order to obtain physical forensic evidence, set by the Court of Appeals in *Matter of Abe A.*,²² requires the prosecution to establish three elements.²³ The first element is probable cause, which requires essentially a demonstration it is more likely than not that the defendant committed the crime.²⁴ The second element is a clear indication that relevant material evidence will be found, and the third element is that the method used to secure the evidence is safe and reliable.²⁵ These elements are based on the bodily search standard first set by the United States Supreme Court in *Schmerber v. California*,²⁶ and they have been used to govern the constitutionality of DNA searches in New York State trial courts.²⁷

¹⁷ *Vernon B.*, 35 Misc. 3d at 1.

¹⁸ *Id.* (citing N.Y. PENAL LAW § 265.01(1) (providing that “[a] person shall be guilty of criminal possession of a weapon in the fourth degree when (1) he or she possesses any firearm”)).

¹⁹ *Id.*

²⁰ *Id.*

²¹ *Id.* Defendant also argued that the motion was not submitted within the time period prescribed by statute; however, the governing statute, N.Y. CRIM. PROC. § 240.90 (McKinney 2009), permits the late submission of a discovery motion on good cause, and the Court permitted the prosecution to submit the motion because of the date on which it received the lab reports for the case. *Vernon B.*, 35 Misc. 3d at 1.

²² 437 N.E.2d 265 (N.Y. 1982).

²³ *Id.* at 266.

²⁴ *Id.*

²⁵ *Id.* at 270.

²⁶ 384 U.S. 757 (1966).

²⁷ *Abe A.*, 437 N.E.2d at 270 (citing to *Schmerber*, 384 U.S. at 770). As will be discussed,

The court in *Vernon B.* dismissed the defendant's contentions regarding the reasonableness and the likelihood of success regarding the proposed search.²⁸ However, the court held that it may be likely the People had not established probable cause that the defendant committed the crime.²⁹ The court also expressed reservations about whether the police officer had probable cause to search the bag thrown from the window.³⁰ Because the bag and gun provided the only reason to believe the defendant committed the crime, if these items were illegally seized, then they must be suppressed and the prosecution must be terminated.³¹ The court found that the possibility of illegal seizure was very real, and therefore did not issue a ruling on the DNA order because of the possibility that the prosecution would be terminated.³²

C. The Court's Reasoning

The determination of whether probable cause exists is essential because a request for non-testimonial evidence like the DNA order sought in *Vernon B.* is akin to a search warrant.³³ A motion to compel a bodily intrusion, either through a discovery order or search warrant, is essentially a judicial determination that probable cause exists, and this determination must be supported on legally obtained ev-

the removal of DNA must be protected by full probable cause as is done in New York State courts. *See, e.g.,* *People v. Afrika*, 914 N.Y.S. 2d 542, 543 (App. Div. 4th Dep't 2010) (relying on the *Abe A.* standard to govern the intrusiveness of a DNA search). However, some courts and commentators have argued that DNA searches should be subject to lesser standards of protection as DNA searches involve little to no intrusion on personal interests. *See infra* Parts IV, V. The court in *Abe A.* went so far as to suggest that any lesser protections for bodily searches are not "constitutionally firm." *Abe A.*, 265 N.E.2d at 269.

²⁸ *Vernon B.*, 35 Misc. 3d at 2 ("[T]he only viable challenge that the defense raises to an oral swab order under *Abe A.* is that there is no probable cause because the evidence in this case was allegedly seized unlawfully.").

²⁹ *Id.*

³⁰ *Id.*

³¹ *Id.* ("[I]f the bag, pistol and ammunition had been illegally seized they will be suppressed, and there would be no probable cause, thus resolving the DNA testing issue and, not incidentally, terminating the prosecution.").

³² *Vernon B.*, 35 Misc. 3d at 2 ("Holding the suppression hearing at this point will therefore perhaps prevent an unnecessary physical intrusion into defendant and the delay that DNA testing will cause, while at the same time advancing this case towards a resolution.").

³³ *See Abe A.*, 437 N.E.2d at 266 (setting the standard for the constitutional limitations on a search of a defendant's body).

idence only.³⁴ Therefore, an order to search a defendant's body, founded upon probable cause, is "properly issued [when] the application contain[s] sufficient lawfully obtained information, untainted by and independent of alleged illegally obtained evidence" to support the determination.³⁵ Warrantless searches are typically presumed unreasonable and impermissible, unless exigent circumstances necessitate the action and overcome this presumption.³⁶

While the court in *Vernon B.* did not decide the issue of probable cause, the court discussed several cases with similar facts that informed its ultimate conclusion that suspension of the proceedings was necessary until this determination was made.³⁷ In the first group of cases, the officer's presence on the property was equivalent to a trespass because it was not supported by a warrant and no exigent circumstances existed.³⁸ Because of the possible trespass and lack of emergency, the court questioned whether the officer was able to enter the defendant's property constitutionally, simply because he saw a bag thrown from a window.³⁹ Even if the officer was permitted to enter the property, a second search was conducted when the defendant's bag was opened and the gun was seized.⁴⁰ While the bag itself was in plain view and subject to seizure, the search into the defendant's bag constituted a search of a closed container, which is typically impermissible unless the arrestee can reach its contents.⁴¹ The arrestee in *Vernon B.* undoubtedly could not reach the bag to seize its

³⁴ *Vernon B.*, 35 Misc. 3d at 1 (citing *People v. Harris*, 465 N.E.2d 36 (N.Y. 1984)). This rule applies only if the evidence is obtained as the fruit of an unreasonable search or seizure. See generally WAYNE R. LAFAVE, ET AL., *SEARCH AND SEIZURE* § 1.1 -1.3 (4th ed. 2004).

³⁵ *Vernon B.*, 35 Misc. 3d at 1-2 (citing *People v. King*, 663 N.Y.S. 2d 610, 613 (App. Div. 2d Dep't 1997)).

³⁶ See *Welsh v. Wisconsin*, 466 U.S. 740, 749-50 (1984) (holding that searches or seizures inside the home are presumptively unreasonable and that the government must prove the presence of exigent circumstances to overcome this presumption).

³⁷ *Vernon B.*, 35 Misc. 3d at 2 (holding unclear).

³⁸ *Id.* at 2. The court cited to *United States v. Jones*, 132 S. Ct. 945 (2012), and *People v. Abruzzi*, 385 N.Y.S.2d 94 (App. Div. 2d Dep't 1976), to support this conclusion. *Id.* In *Jones*, the court held that trespassing with an attempt to find something constituted a search by police. *Jones*, 132 S. Ct. at 951. In *Abruzzi*, the court held that looking into private property and then entering constituted a search warranting Fourth Amendment protection. *Abruzzi*, 385 N.Y.S.2d at 97.

³⁹ *Vernon B.*, 35 Misc. 3d at 2.

⁴⁰ *Id.* at 2.

⁴¹ *Id.* (citing *People v. Smith*, 452 N.E.2d 1224 (N.Y. 1983) (holding that the plain view doctrine permitting warrantless seizures of evidence did not apply because the defendant could not reach the container, and because the contents could have been secured until a warrant was issued)).

contents because it had been thrown from a window, creating the possibility that the gun's seizure was unconstitutional.⁴² As the entry into the property and the subsequent seizure of the defendant's bag and gun provided the only evidence to believe the defendant committed the crime, if found to be seized unlawfully they would be suppressed and the prosecution would be terminated.⁴³ A careful examination of the facts and a hesitancy to conduct DNA searches absent probable cause, as was done in *Vernon B.*, are important because the interest in one's body is one of the most closely guarded areas in all of Fourth Amendment jurisprudence.⁴⁴

III. FEDERAL PRECEDENT DICTATES THAT DNA SAMPLES ARE PROTECTED BY THE FOURTH AMENDMENT

DNA research is just coming out of its infancy in relation to the law.⁴⁵ This is understandable considering that the human genome was not sequenced until 1953,⁴⁶ and DNA evidence use did not become generally accepted in New York until the 1990s.⁴⁷ Therefore, a discussion of the Fourth Amendment's bodily intrusion precedent, as it applies to DNA, requires explanation through other types of seizures from the body.⁴⁸

⁴² *Id.*

⁴³ *Vernon B.*, 35 Misc. 3d at 2 ("Accordingly, if the bag, pistol and ammunition had been illegally seized, they will be suppressed, and there would be no probable cause . . . incidentally, terminating this prosecution.").

⁴⁴ "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." *Schmerber*, 384 U.S. at 770.

⁴⁵ DNA was not used in criminal investigations until the mid 1980s, and since that time numerous technological advancements have occurred. *Dist. Attorney's Office for the Third Judicial Dist. v. Osborne*, 557 U.S. 52, 62 (2009).

⁴⁶ James Watson and Francis Crick first published their famous determination of the double-helix structure of DNA in 1953. James D. Watson & Francis H.C. Crick, *A Structure for Deoxyribose Nucleic Acid*, 171 NATURE 737-38 (1953).

⁴⁷ *See Wesley*, 633 N.E.2d 451 (holding that DNA evidence is generally accepted and reliable among the scientific community, and passes the *Frye* test).

⁴⁸ *See, e.g., Schmerber*, 384 U.S. 757 (discussing bodily intrusion searches of the blood); *Cupp v. Murphy*, 412 U.S. 291 (1973) (discussing bodily intrusions searches for evidence under the nails); *Skinner v. Railway Labor Executives Association*, 489 U.S. 602 (1989) (discussing bodily intrusion searches of urine and deep-lung breath); *Nicholas v. Goord*, 430 F.3d 652 (2d Cir. 2005) (using the above mentioned cases to determine whether the seizure of DNA constitutes a search).

A. Setting the Standard for a Heightened Bodily Interest

The United States Supreme Court addressed the field of law now governing DNA samples for the first time in 1966 when it decided *Schmerber v. California*.⁴⁹ In *Schmerber*, the defendant was receiving medical treatment in a local hospital for injuries suffered while driving when the police arrested him and directed physicians to take blood samples.⁵⁰ The samples were later tested and found to contain blood alcohol levels above the legal limit.⁵¹ Based on this evidence the court convicted the defendant of driving while intoxicated.⁵² The Court affirmed the state court's conviction⁵³ and held that taking the blood samples and introducing them at trial did not violate any of the defendant's constitutional rights.⁵⁴

The Court in *Schmerber* reasoned that the purpose of the Fourth Amendment is not to prevent searches, but to protect people against intrusions made in an unreasonable manner.⁵⁵ Therefore, because the protection of "human dignity" is an extension of the Fourth Amendment, any attempt to gather evidence that protrudes "beyond the surface of the body" constitutes a search garnering the full protection of the Constitution, and a reasonableness evaluation must be conducted.⁵⁶ To determine the reasonableness of a search under the Fourth Amendment, the nature and depth of an intrusion on the individual's privacy interests must be balanced against the legitimate governmental interests that intrusion promotes.⁵⁷ Because the individual interest in personal dignity is so important in the Court's view, the balance of reasonableness test requires that the seizure of the per-

⁴⁹ *Schmerber*, 384 U.S. 757.

⁵⁰ *Id.* at 758.

⁵¹ *Id.* at 758-59.

⁵² *Id.* at 759.

⁵³ *Id.*

⁵⁴ See generally *Schmerber*, 384 U.S. at 768 (holding that the seizure of physiological evidence from the defendant's body did not violate the privilege against self incrimination provided by the Fifth Amendment, that the search into the body was permitted by the Fourth Amendment, and that the defendant's Due Process rights and Sixth Amendment right to counsel were not violated).

⁵⁵ *Id.*

⁵⁶ *Id.* at 769-70.

⁵⁷ See *Delaware v. Prouse*, 440 U.S. 648, 654 (1979) (holding that "the permissibility of a particular law enforcement practice is judged by balancing its intrusion on the individual's Fourth Amendment interests against its promotion of legitimate governmental interests.").

son be conducted on probable cause⁵⁸ and that authorities demonstrate a clear indication that relevant evidence will be found.⁵⁹ Additionally, the methods used to obtain the evidence must be reasonable in both the extent of the intrusion created by a particular procedure on the individual's interests in privacy and bodily integrity, and in the specific way that the procedure threatens the individual's safety or health.⁶⁰

Applying this test, the Court in *Schmerber* found that the officer's suspicions about the defendant's intoxication, such as his glassy, bloodshot eyes and "similar symptoms of drunkenness," were highly relevant.⁶¹ These symptoms of intoxication justified not only his arrest but also presented a clear indication that his blood would contain evidence of intoxication.⁶² Likewise, the Court held that blood tests in general were reasonable in terms of the defendant's interests in privacy and bodily integrity because they are a commonplace and minimally invasive procedure.⁶³ In addition, the blood test did not unreasonably endanger the defendant's health or safety because it was conducted in a medically appropriate manner.⁶⁴ The holding in *Schmerber* is important in the DNA search context because it established a heightened privacy interest over the body and fashioned a unique test of review for bodily searches.⁶⁵ However, it is also important because blood tests, a common and accurate method of obtaining DNA samples, were, as a practice, specifically held to constitute a reasonable means of conducting a search.⁶⁶

⁵⁸ *Schmerber*, 384 U.S. at 768.

⁵⁹ *Id.* at 769-70 ("The interests in human dignity and privacy which the Fourth Amendment protects forbid any such intrusions on the mere chance that desired evidence might be obtained . . . [thus requiring] a clear indication that in fact such evidence will be found.").

⁶⁰ *Id.* at 770-71 (noting that "the test chosen was a reasonable one" with regard to the bodily integrity concerns, specifically when performed with regard to the safety concerns). See also *Winston v. Lee*, 470 U.S. 753 (1985) (holding that conducting surgery to remove a bullet was unreasonable in light of the need for general anesthesia, which affected the safety concerns and the need for exploratory probing to locate the bullet, which affected bodily integrity concerns, when weighed against the government's interest and vast array of alternative evidence).

⁶¹ *Schmerber*, 384 U.S. at 769.

⁶² *Id.* at 770 ("[T]he facts which established probable cause . . . also suggested the required relevance and likely success of a test of petitioner's blood for alcohol.").

⁶³ *Id.* at 771.

⁶⁴ *Id.*

⁶⁵ *Id.* at 767-68.

⁶⁶ See *Wesley*, 633 N.E.2d at 440 (discussing the long standing use and value of blood tests as a means of establishing DNA, for purposes of establishing paternity, and holding that

B. Minimally Invasive Intrusions Still Constitute Searches

The *Schmerber* test of reasonableness requires an analysis of the effects and intrusiveness of a search on an individual's health and safety.⁶⁷ *Schmerber*, however, only discussed blood tests.⁶⁸ DNA samples can be obtained in several other ways, such as through buccal swabs or hair samples.⁶⁹ These methods are much less physically invasive than a blood test.⁷⁰ Because of their less invasive nature, the question of what degree of constitutional protection applies to these less invasive procedures, if any, remains in debate.⁷¹ However, there is additional Supreme Court precedent, most notably *Cupp v. Murphy*,⁷² that has been relied on to suggest that less invasive DNA seizure techniques are still protected by the Fourth Amendment.⁷³

In *Cupp*, the Court addressed the constitutionality of minimally invasive bodily search procedures. The defendant was convicted of murdering his wife;⁷⁴ the victim was strangled to death in her home, and numerous lacerations and abrasions were found on her throat.⁷⁵ The presence of these lacerations implied that the attacker would undoubtedly have evidence of the victim's blood under his

the use of blood samples for establishing a person's genetic identity was acceptable as evidence in criminal prosecutions).

⁶⁷ *Schmerber*, 384 U.S. at 771.

⁶⁸ *Id.* at 771-72 (excluding minimally invasive searches into the body conducted outside a medical facility from this holding, but suggesting they would constitute searches, and require the same careful analysis).

⁶⁹ A buccal swab requires that a cotton swab be placed into a person's mouth, and then run along his or her cheek, and a hair sample requires that only a few hairs be plucked from the scalp. Polanco, *supra* note 11, at 502-03.

⁷⁰ Unlike the buccal swab or hair sample procedure, a blood test requires that a needle physically pierce the skin. *Id.* at 501.

⁷¹ Compare *Nicolosi*, 885 F. Supp. at 55 (holding that the seizure of saliva for the purposes of examining a defendant's DNA constituted the definition of a search under *Schmerber*, as it was literally inside the body), with *Owens*, 2006 WL 3725547, at *6 (reasoning that because DNA can be voluntarily separated, for example through expectorating, it is more akin to a characteristic constantly exposed to the public, and there is no Fourth Amendment protection for these characteristics, as is there is no expectation of privacy over what one knowingly exposes to the public).

⁷² 412 U.S. 291 (1973).

⁷³ See, e.g., *Nicolosi*, 885 F. Supp. at 52 (discussing the relevance of *Cupp*, 412 U.S. 291, and *Skinner*, 489 U.S. 602, to minimally intrusive DNA seizures).

⁷⁴ *Cupp*, 412 U.S. at 292.

⁷⁵ *Id.*

fingerprints from scratching her during the struggle.⁷⁶ Officers promptly called the defendant in for questioning and noticed a dark spot, resembling blood, on his finger.⁷⁷ Officers asked permission to scrape for samples under his fingernails, but the defendant refused and attempted to hide his hands.⁷⁸ The defendant then began to scrape under the nails himself with a key from his pocket, and it was then that officers proceeded to take the samples over his protest.⁷⁹

The Court held that this seizure, however minimal, implicated the Fourth Amendment and the *Schmerber* balancing test because it affected the defendant's "personal security."⁸⁰ Applying this test, the Court found that the officers undoubtedly had probable cause to suspect the defendant had committed the crime because of the way he hid his hands.⁸¹ This action, when combined with the lacerations on the victim's neck, presented the clear indication required to believe relevant evidence would be found.⁸² The Court was also satisfied that the procedure was conducted reasonably because the intrusion required to scrape material from under a nail was limited and did not deeply affect the defendant's privacy interests or his health and safety.⁸³ This holding is highly informative for the DNA context because a variety of DNA seizure methods, such as buccal swabbing⁸⁴ or hair sampling⁸⁵ entail minimal invasions on the body but under *Cupp*'s broad and protective holding they can still trigger constitutional scrutiny.

⁷⁶ *Id.*

⁷⁷ *Id.*

⁷⁸ *Id.*

⁷⁹ *Cupp*, 412 U.S. at 296.

⁸⁰ *Id.* at 294.

⁸¹ *Id.* at 296.

⁸² *Id.* at 295.

⁸³ *Id.* at 296.

⁸⁴ "Swabbing the inside of someone's mouth with a soft pad to collect saliva or skin cells is an effective way to collect DNA." Polanco, *supra* note 11, at 526.

⁸⁵ While hair is analogized to fingerprints, and exempted from the protections of the Fourth Amendment as was done in *In re Rosahn*, 671 F.2d 690, 695 (2d Cir. 1982), the degree of intrusion of the subsequent analysis of DNA taken from the hair should bring this search within the confines of the Fourth Amendment. See *Skinner*, 489 U.S. at 617 (finding a privacy interest in private medical facts revealed during the analysis of bodily material). Hair sampling should also be considered a search because while hair may be constantly exposed to the public, the root is within the body, fitting the *Schmerber* definition, and the hair must be scientifically analyzed for any evidentiary use which distinguishes it from fingerprints. See Elizabeth E. Joh, *Reclaiming "Abandoned" DNA: The Fourth Amendment and Genetic Privacy*, 100 N.W. U. L. REV. 857, 868 (2006) (arguing that constantly exposed characteristic theories of the Fourth Amendment, like those advanced in *Rosahn*, should not include genetic privacy concerns).

tiny.⁸⁶

C. Genetic Privacy Interests Make DNA a Search

An analysis of the effect of an intrusion on individual interests in privacy and bodily integrity is also required as part of the *Schmerber* balancing test.⁸⁷ Genetic privacy is one example of a serious concern affecting these individual interests.⁸⁸ Nevertheless, DNA is frequently mischaracterized and considered to be just a means of identification not affecting this interest.⁸⁹ However, DNA includes private medical facts, and the Court addressed concerns about the protection afforded to medical privacy in *Skinner v. Railway Labor Executives Association*.⁹⁰ In *Skinner*, the Federal Railroad Administration (“FRA”) enacted a program that enabled supervisors to take breath, blood, and urine samples from any railroad employee involved in an accident.⁹¹ The Court ultimately concluded that this practice did not violate the Fourth Amendment,⁹² but undoubtedly involved a search.⁹³

The Court in *Skinner* reasoned that such practices were so intrusive on personal liberty and bodily integrity⁹⁴ that they deserved Fourth Amendment protection because they constituted physical

⁸⁶ See *Skinner*, 489 U.S. 602 (extending *Cupp* and *Schmerber* to include non-surgical intrusions that invade on personal security); see also *Nicolosi*, 885 F. Supp. at 55 (holding that minimal intrusions for DNA implicate the Fourth Amendment) (citing *Cupp*, 412 U.S. at 295).

⁸⁷ *Schmerber*, 384 U.S. at 771.

⁸⁸ DNA samples undoubtedly contain an enormous amount of information that a person would have an interest in keeping private. *Nicolosi*, 885 F. Supp. at 55.

⁸⁹ See, e.g., *Nicholas*, 430 F.3d at 670 (classifying DNA use as a means of identification only). But see DNA Forensics, Oak Ridge National Lab, http://www.ornl.gov/sci/techresources/Human_Genome/elsi/forensics.shtml#4 (last visited June 4, 2013) (discussing how a genetic blueprint, like DNA, can only provide limited additional information to identity at this time, but the science is expanding, and some of the material available now, is something which individuals could expect to keep private, such as susceptibility to disease). DNA samples also provide an opportunity for nefarious uses, that other means of identification do not. Andrew Pollack, *DNA Evidence Can Be Fabricated, Scientists Show*, N.Y. TIMES, Aug. 17, 2009.

⁹⁰ 489 U.S. 602 (1989).

⁹¹ *Id.* at 604.

⁹² *Id.* at 634.

⁹³ *Id.* at 617 (“These intrusions [for blood, urine, and breath samples] must be deemed searches under the Fourth Amendment.”).

⁹⁴ *Id.* (“The ensuing chemical analysis of the sample to obtain physiological data is a further invasion of the tested employee’s privacy interests.”).

searches of a person's body⁹⁵ and therefore had to be protected by the amendment's reasonableness standard. The interest in bodily integrity was implicated because the FRA's procedures would reveal a host of medical facts about the employee that he or she would undoubtedly want to keep private.⁹⁶ The protection of private medical facts, even without serious physical intrusion such as surgery, is what, by extension to the DNA context, makes *Skinner* so relevant.⁹⁷ The Eastern District of New York and some commentators even consider *Skinner* to be dispositive on the issue of whether DNA constitutes a search.⁹⁸ Many DNA seizures today focus on attempts to seize only identity information in an effort to skirt the protections created by *Skinner* to protect private medical information,⁹⁹ but the door must remain open to considerations of whether any private medical facts or undiscovered scientific considerations will affect the reasonableness of the intrusion created by a DNA seizure.¹⁰⁰

⁹⁵ *Skinner*, 489 U.S. at 616.

⁹⁶ *Id.* at 617 (“[C]hemical analysis of urine, like that of blood, can reveal a host of private medical facts . . .”). The invasion on the privacy associated with the act of urinating also weighed in on the Court's decision to consider these practices searches. *Id.*

⁹⁷ “[E]ven the smallest penetration of the body will yield the entirety of a person's genetic information.” Joh, *supra* note 85. This genetic information can reveal “insights into many intimate aspects of people . . . including susceptibility to particular diseases, legitimacy of birth, and perhaps predispositions to certain behaviors and sexual orientation.” DNA Forensics, *supra* note 89. The disclosure of these facts undoubtedly implicates the private facts discussed in *Skinner*.

⁹⁸ See *Nicolosi*, 885 F. Supp. at 54 (holding the privacy interest found in *Skinner* is an essential component of why DNA must be considered a fully intrusive search); see Polanco, *supra* note 11, at 507 (“*Skinner* stands for the proposition that an analysis of biological material that reveals no private information would not qualify as a search for purposes of the Fourth Amendment.”); See Joh, *supra* note 85, at 872 (reasoning that *Skinner*'s holding that subsequent analysis of the sample constitutes a search, applies to DNA).

⁹⁹ See, e.g., N.Y. EXEC. LAW § 995-c(3)(a) (“[A] sample appropriate for DNA testing to determine identification characteristics . . .”).

¹⁰⁰ *Nicholas*, 430 F.3d at 669 (“The junk DNA that is extracted has, at present, no known function, except to accurately and uniquely establish identity. Although science may someday be able to unearth much more information about us through our junk DNA.”). This junk DNA, however, provides additional personal information such as susceptibility to disease. See DNA Forensics, *supra* note 89. Today, junk DNA can undoubtedly be used to fabricate evidence, indicating the time has arrived for even identity DNA to be subject to full protections. See Pollack, *supra* note 89.

IV. THE MINORITY VIEW: DNA SEARCHES WARRANT LITTLE OR NO FOURTH AMENDMENT PROTECTION

If the individual interest in privacy is lessened, or the procedures of the search entail a lesser intrusion, the government would be permitted to conduct that search under a less protective standard than probable cause.¹⁰¹ These lower protections are warranted because citizens would essentially be deemed to have less fear of the “random or arbitrary acts of the government.”¹⁰² Even in these situations, courts have still required a reasonable, articulated suspicion about the value of the search.¹⁰³ Relying on this lower standard, the Western District of New York and some commentators have argued that the individual privacy interest maintained over DNA is so decreased that the full protections of the Fourth Amendment may not be entirely necessary, or that Fourth Amendment protection may not be necessary at all.¹⁰⁴

A. Why We Do Not “Abandon” Our DNA

The abandonment theory is one view advanced in support of lower standards for the seizure of DNA evidence. This view, enunciated in *United States v. Owens*,¹⁰⁵ asserts that humans essentially discard their DNA so frequently through various means such as coughing, chewing gum, or even licking a stamp, that there is a very limited expectation of privacy over it.¹⁰⁶ In *Owens*, the defendant, while fleeing the scene after robbing a bank, abandoned a sweatshirt which had male DNA on it.¹⁰⁷ Fingerprints obtained from the bank matched a sample of the defendant’s fingerprints maintained in a national database, and relying on this match the prosecution sought an order com-

¹⁰¹ *Skinner*, 489 U.S. at 624 (“When the balance of interests precludes insistence on a showing of probable cause, we have usually required ‘some quantum of individualized suspicion’ before concluding that a search is reasonable.”) (quoting *United States v. Martinez-Fuerte*, 428 U.S. 543, 560 (1976)).

¹⁰² *Id.* at 622.

¹⁰³ *Id.* at 624.

¹⁰⁴ See, e.g., *Owens*, 2006 WL 3725547 (discussing the applicability of reasonable suspicion, and advancing a lowering of the DNA privacy interest on an abandonment theory); see also Justin A. Alfano, *Look What Katz Leaves Out: Why DNA Challenges The Scope Of The Fourth Amendment*, 33 HOFSTRA L. REV. 1017 (2005) (arguing a lowering of the DNA privacy interest on the theory the physical and privacy intrusions associated with DNA are minimal, if not nonexistent).

¹⁰⁵ *Owens*, 2006 WL 3725547.

¹⁰⁶ *Id.* at *6.

¹⁰⁷ *Id.* at *3.

pling the defendant to provide a saliva swab to be examined for the purposes of matching his DNA to the abandoned sweatshirt.¹⁰⁸

The court in *Owens* held that instead of probable cause, a reasonable suspicion about the probative value of a DNA seizure is the required standard the prosecution must meet in order to compel a defendant to submit a buccal swab.¹⁰⁹ In doing so, the court distinguished several seemingly dispositive cases as well.¹¹⁰ The court conceded that the principle created in *Skinner*, namely that a practice of gathering evidence does not need to involve a surgical intrusion to constitute a search when the search reveals private medical facts, applied to DNA.¹¹¹

However, the court distinguished DNA from the evidence searched in *Skinner* by examining the way humans interact with their DNA.¹¹² The court reasoned that DNA molecules in a variety of the internal fluids in which humans carry them are “readily and involuntarily separated from the human body.”¹¹³ DNA collection is therefore distinguishable from the urine samples in *Skinner*, which were removed through urinating, a bodily function that has long been regarded as a private and protected act.¹¹⁴ In the court’s reasoning, the voluntary abandonment of DNA is so powerful it diminishes the individual privacy interest over DNA so greatly that this action alone distinguishes DNA samples from the samples obtained in *Skinner*.¹¹⁵

One commentator has argued that this abandonment principle can be expanded, and DNA removed from the scope of the Fourth Amendment’s protections entirely because of recent technological advancements.¹¹⁶ DNA samples can now be obtained through the application of a sticky patch to the skin, which peels off dead skin

¹⁰⁸ *Id.*

¹⁰⁹ *Id.* at *16.

¹¹⁰ *Owens*, 2006 WL 3725547, at *13.

¹¹¹ *Id.* at *10.

¹¹² *Id.* at *6 (noting that “DNA evidence is distinguishable as it is readily and involuntarily separated from the human body . . . [it] may be obtained . . . from various sources, including blood . . . semen . . . saliva, urine, hair, skin or . . . bones and teeth . . . [or] articles of clothing, cigarette butts, chewing gum, envelopes, [and] stamps”).

¹¹³ *Id.*

¹¹⁴ *Id.* at *10 (citing *Skinner*, 489 U.S. at 617) (recognizing the degree of privacy traditionally afforded to the act of urination).

¹¹⁵ *Owens*, 2006 WL 3725547, at *13 (“The cases . . . overlook the critical fact that one’s DNA is routinely held out to the public.”).

¹¹⁶ Alfano, *supra* note 104, at 1031.

cells containing the DNA sequence.¹¹⁷ This practice eliminates any physical intrusion protected by *Cupp* and would remove DNA entirely from the protections of *Skinner*.¹¹⁸ Without the protections afforded to a physical intrusion and any protections afforded to private genetic information, the seizure of DNA by sticky patch is arguably similar to taking a copy of an exposed and partially abandoned characteristic, such as a person's fingerprint.¹¹⁹

However, the abandonment theory overlooks a key distinction: when a human leaves DNA behind in his everyday life, it is not the same as surrendering DNA for evidentiary purposes. This distinction garners support from a careful reading of the Supreme Court's decision in *Cupp*. In *Cupp*, the defendant walked into the police station with evidence literally on his hands in the form of a blood stain in plain view.¹²⁰ However, the search in *Cupp* did not occur until *after* police seized and analyzed this evidence.¹²¹ The holding, which delayed the moment that the search occurred until the scientific analysis was conducted, implies that an additional, protected expectation of privacy exists for evidence when its incriminating character is not visible to the naked eye.¹²² This shows that there is an interest in keeping DNA from being scientifically analyzed, even though there may not be an interest in keeping the DNA within the body.¹²³ This is a distinction most people undoubtedly understand,

¹¹⁷ *Id.*

¹¹⁸ *Skinner*, 489 U.S. 602. See Alfano, *supra* note 104, at 1031 (arguing that frequent abandonment of DNA, and the attempt to seize identity only DNA eliminates DNA from the protections of *Skinner*).

¹¹⁹ *Skinner*, 489 U.S. 602. Fingerprints have long been distinguished because they are constantly exposed to the public, are placed on all surfaces the individual comes into contact with, and reveal nothing but the identity of the individual. *Davis v. Mississippi*, 394 U.S. 721, 727 (1969). These characteristics imply that the seizure of fingerprints creates a minimal intrusion and may be conducted on lower standards of suspicion. *Id.*

¹²⁰ *Cupp*, 412 U.S. at 292.

¹²¹ *Id.* at 295.

¹²² See LAFAVE, *supra* note 34, at § 2.6 (arguing that *Cupp* supports a distinction on these grounds, that even though evidence may be plainly exposed, as was the blood spot on the defendant's hand in *Cupp*, that the subsequent microscopic analysis, constituted a second search, one that defendant had an increased expectation of privacy over, and that interfered with his bodily security). While the average person may recognize their DNA is placed on a stamp, they also understand that the DNA cannot be identified, or even seen, without sophisticated scientific technology, and they would have an expectation that analysis would not occur, negating any decrease in their expectation of personal privacy over DNA. *Id.*

¹²³ Compare *id.* (arguing DNA is protected from analysis by a valid privacy interest), with *Owens*, 2006 WL at 3725547, at *6 (arguing the mere separation of DNA eliminates almost all privacy interests) See also *infra* Part B (discussing how the analysis of DNA is signifi-

particularly in today's society where popular media makes it quite clear that DNA searches are going to be analyzed as evidence for the purposes of prosecuting crimes.¹²⁴ The way in which humans interact with and dispose of DNA, therefore, does not justify lowering the protections provided to DNA. In actuality, it implies that precedent requires DNA to be considered a search warranting the full protections of probable cause.

B. Genetic Privacy and Identity: DNA Is Not a Fingerprint Anymore

An analogy to fingerprints is commonly used by those arguing that DNA should be excluded from the Fourth Amendment's full protection.¹²⁵ The analogy centers around the assumption that the portions of DNA seized are only relevant for the purpose of establishing the identity of a perpetrator and do not expose any private medical facts.¹²⁶ The analogy is also defended on the grounds that DNA serves only an identity function, and that its analysis is equally reliable to the analysis of fingerprints.¹²⁷ However, these arguments are weakened when considered in light of advances in DNA technology and an analysis of the current state of the forensic process.

cantly more difficult and error prone, than the analysis of fingerprints).

¹²⁴ See, e.g., Nielsen Ratings Service: Top Programs of 2011, http://blog.nielsen.com/nielsenwire/media_entertainment/niensens-tops-of-2011-television/ (listing two crime shows, which use DNA testing for evidentiary purposes among the top ten primetime television programs, and five crime shows, which occasionally use DNA testing for evidentiary purposes, among the top ten recorded programs on television, for all of 2011).

¹²⁵ *Nicholas*, 430 F.3d at 671 ("The collection and maintenance of DNA information, while effected through relatively more intrusive procedures such as blood draws or buccal cheek swabs, in our view plays the same role as fingerprinting."); *Owens*, 2006 WL 3725547, at *13 ("DNA evidence may be obtained, [in a] somewhat analogous [way] to a fingerprint"). *Alfano*, *supra* note 104, at 1031 (equating DNA with fingerprints).

¹²⁶ *Alfano*, *supra* note 104, at 1031-33 (arguing that DNA's only difference from fingerprints is the potential to reveal facts protected by *Skinner*, but rejecting this concern as meaningless in light of the seizure of identity only DNA).

¹²⁷ See *id.* at 1032 (making the comparison between DNA and fingerprints while conceding that core loci or microscopic portions of the DNA must be separated for the identity function of the two types of evidence to be equal). This concession demonstrates that complex scientific procedures are irrelevant to the comparison of DNA to fingerprints to proponents of the fingerprint approach.

1. *DNA and Fingerprints Are Not the Same*

The analysis of DNA evidence provides opportunities for unconstitutional invasions of privacy that fingerprint analysis does not.¹²⁸ An examination of these opportunities shows that comparing DNA to fingerprints is essentially a way around *Skinner*'s protections over private medical data.¹²⁹ Taking the fingerprints of a suspect provides absolutely no possibility of intrusion into liberty interests whatsoever; fingerprinting merely serves to identify a suspect or place him at a certain location.¹³⁰ Fingerprinting, therefore, deserves the lesser protections it has been afforded because it presents a significantly lower possibility of intrusion on personal liberty.¹³¹

By comparison, while it is true that only identity DNA is ultimately analyzed when a seizure of DNA occurs,¹³² during the process the entire DNA molecule is exposed, and this includes private medical facts protected by *Skinner*.¹³³ Even if the facts of the case are not disclosed, those conducting the tests could still learn a variety of information about the defendant, such as particular genetic characteristics like predisposition to disease, or even that a person suffers from a particular disease.¹³⁴ Certain diseases that can now be identified include serious mental illnesses,¹³⁵ and the Supreme Court has held, in other contexts, that the right to keep mental illness private is a vital function of the Constitution and that liberty is greatly impaired merely because of the stigma associated with suffering from such a

¹²⁸ See Maunel E. Nestle, *Fingerprint Identification*, 36 AM. JUR. PROOF OF FACTS 2d 285, at 2 (2012) (defining fingerprints as a series of loops, swirls, and ridges, which are unique of identifiers of identity, and nothing else).

¹²⁹ *Skinner*, 489 U.S. at 617 (“[C]hemical analysis of urine, like that of blood, can reveal a host of private medical facts.”). The invasion on the privacy associated with the act of urinating also weighed in on the Court’s decision to consider these practices searches. *Id.*

¹³⁰ See, e.g., *Davis*, 394 U.S. at 727 (reasoning that very few liberty interests are invaded by the seizure of fingerprints, and they can be seized on a mere reasonable suspicion).

¹³¹ No information, other than an individual’s fingerprint, is revealed when a fingerprint sample is taken. Nestle, *supra* note 128, at 2.

¹³² See *Nicholas*, 430 F.3d at 670 (interpreting the New York State DNA database as permitting only the seizure of identity DNA from offenders). See also N.Y. EXEC. LAW § 995-c(3)(a) (“A sample appropriate for DNA testing to determine identification characteristics.”).

¹³³ DNA molecules are contained in the blood seized, and then the identity portions of the gene sequence are isolated. National Institute of Justice, *DNA Evidence: Basics of Analyzing*, <http://www.nij.gov/topics/forensics/evidence/dna/basics/analyzing.htm>.

¹³⁴ DNA Forensics, *supra* note 89.

¹³⁵ Mitchell, *Blood Tests Could Reveal Bipolar Disorder*, MSNBC Health Blog, http://www.msnbc.msn.com/id/23337532/ns/health-mental_health/t/blood-test-could-reveal-bipolar-disorder/#.UGsrCE1IFPc (last visited June 4, 2013).

condition.¹³⁶ This exposure forces an individual to rely only on a technician's discretion and the deterrent effect of possible statutory penalties to ensure that his or her private medical data is not exposed.¹³⁷ While genetic privacy concerns are somewhat assuaged by the use of identity-only DNA, which would only reveal the identity of the subject and no additional facts, these concerns are in no way eliminated. The mere possibility that damaging private medical facts can be revealed justifies an explicit requirement that DNA be brought within the protections of *Skinner* and the Fourth Amendment to avoid an invasion of one's privacy.

2. *Identity-Only DNA: It Is Not Just for Identity Anymore*

Another assertion made by those analogizing DNA to fingerprints is that both serve no purpose other than identifying a specific individual.¹³⁸ Any similarity between DNA and fingerprints has recently been called into question, however, as a group of scientists in Israel recently fabricated DNA that can match any person in the world, using strands of identity-only DNA.¹³⁹ According to scientists at the National Institute for Standards and Technology, the engineered DNA and bodily fluids were remarkably accurate and similar to real samples.¹⁴⁰ The fake DNA, which can be made by any "biology undergraduate," according to the study author, is made through either the identity DNA kept in a state database or a tiny sample of DNA obtained from a person through surreptitious means.¹⁴¹ This duplication, or, more appropriately, "forging" technology permanently separates DNA from fingerprints. Not only is fingerprint forgery

¹³⁶ Cf. *Addington v. Texas*, 441 U.S. 418, 426 (1979) (finding that public revelation of mental illness can significantly impair one's constitutional liberty interests in being free from social stigma).

¹³⁷ N.Y. EXEC. LAW § 995-f (penalizing the unauthorized disclosure or use of DNA records). *Contra* Alfano, *supra* note 104, at 1031 (characterizing this fear as a simple mistrust of government authorities). The fear rises above mistrust, as various constitutional protections are involved.

¹³⁸ See sources cited *supra* note 125 (compiling cases comparing the identity function of both DNA and fingerprints).

¹³⁹ See Pollack, *supra* note 89.

¹⁴⁰ *Id.*

¹⁴¹ *Id.*

incredibly difficult to perform,¹⁴² but the comparison between DNA and fingerprints rests on the assumption that identity DNA is useless for any nefarious purpose.¹⁴³

Although forgeries are remote possibilities, the distinction between fingerprints and DNA grows even stronger when they are considered. To illustrate, if a fingerprint analysis and a DNA comparison were presented to the fact-finder, the DNA report would have a higher persuasive value.¹⁴⁴ This is because DNA is well regarded as a highly accurate form of identification, and because of this it is highly persuasive to jurors,¹⁴⁵ regardless of whether DNA actually deserves this reputation for reliability.¹⁴⁶ Thus, the mere possibility of an incredibly persuasive - albeit forged - piece of evidence being introduced at trial weakens the analogy to fingerprints due to the potential heightened impact it could have on the fact-finder.¹⁴⁷ By extension, this increases the intrusion on both personal liberty and bodily control created by a DNA seizure because this technology shows that DNA is not simply a means of identifying individuals any longer.¹⁴⁸ It is essential now, in the face of potential forgery, to ensure that any DNA sample is collected through a court order and by medical professionals adhering to strict medical and evidentiary protocols, rather than surreptitiously acquiring samples involuntarily left behind by a defendant. Therefore, the argument that lower protections for DNA are warranted due to its identity function is adverse to the interests of justice for a defendant.

¹⁴² See B. Geller, et al., *Fingerprint Forgery-A Survey*, J. FORENSIC SCI. 46(3) 731-33 (2001) (discussing how few cases of fingerprint forgery exist).

¹⁴³ See sources cited *supra* note 125 (compiling cases equating fingerprints and identity DNA); Alfano, *supra* note 104, at 1031.

¹⁴⁴ See DAVID H. KAYE, ET AL., REFERENCE MANUAL FOR SCI. EVID. 129, 2011 WL 7724255, 54 (3d ed.) (discussing the possibility that the dense nature of DNA expert testimony makes it seem more persuasive than it actually is).

¹⁴⁵ One author suggests the success of DNA as a persuasive tool is due in part by television dramatization of DNA evidence, like CSI, and that jurors get confused by much of the math and science involved in DNA evidence. See L. Meyers, *The Problem with DNA*, AM. PSYCHOLOGICAL ASS'N MONITOR, Vol. 38 No. 6, at 52.

¹⁴⁶ See *infra* Part IV(c).

¹⁴⁷ Meyers, *supra* note 145.

¹⁴⁸ Undoubtedly the ultimate intrusion on bodily control, and personal liberty, would be if bodily fluids were used to frame an individual, as the Fourth Amendment in its plain language protects the right of "people to be secure in their persons." U.S. CONST. amend. IV. Any possible type of bodily forensic evidence can be forged, including evidence such as saliva, that merely establishes someone was in a particular location, and even semen, which could be used to implicate someone in a heinous sexual attack. Pollack, *supra* note 89.

3. *DNA is Far More Difficult to Examine, Increasing the Possibility of Error*

The analogy to fingerprints rests on a third leg, that the subsequent analysis of the seized bodily items, namely DNA and fingerprints, are inherently equally reliable.¹⁴⁹ However, this assumption has been called into doubt in light of recent events bringing the value and reliability of DNA evidence into question, independent of any technological issues. While the science of DNA is not open to question, the fallibility of the technicians processing the associated samples should be.¹⁵⁰ DNA samples can be contaminated quite easily by a variety of sources.¹⁵¹ These sources include chemical agents that are simply nearby when the sample is collected, or even trace DNA from the technician processing the sample.¹⁵² If a DNA sample is degraded in any way, the ensuing analysis can be fraught with inaccuracy.¹⁵³

In addition, DNA technicians have also revealed that they have withheld or manipulated evidence for unknown reasons.¹⁵⁴ Technicians have even alluded to the fact that the labs themselves are filled with error, but do the best they can.¹⁵⁵ This issue is particularly relevant in light of the recent issues at the Nassau County Evidence Lab, where errors forced the lab to retest over 3,000 scientific samples because of possible error, and 9,000 convictions were called into doubt.¹⁵⁶ Errors like these indicate that even if the science is acceptable, the scientists performing the tests may still be acting in a way that makes the procedure unsafe and unreliable.

In addition, simple clerical errors, such as misplacing or switching samples have been known to lead to wrongful convictions,

¹⁴⁹ See, e.g., N.Y. EXEC. LAW § 995-c(5) (assigning value to identity only DNA).

¹⁵⁰ See *Melendez-Diaz v. Massachusetts*, 557 U.S. 305, 319 (highlighting a variety of the issues that affect the forensic sciences, including fraudulent, and incompetent analysts).

¹⁵¹ Laurel Beeler, *DNA Identification Tests and the Courts*, 63 WASH L. REV. 903, 921 (1988) (detailing the possibility of bacteria infiltrating and affecting a DNA sample).

¹⁵² *Id.*

¹⁵³ Polanco, *supra* note 11, at 526 (showing some of the errors presented in police conduct in handling a DNA sample).

¹⁵⁴ John Solomon, *Conviction Tossed on FBI Lab Misconduct*, ASSOCIATED PRESS, May 27, 2003.

¹⁵⁵ *Id.*

¹⁵⁶ Frank Eltmann, *Nassau County Shuts Down Crime Lab*, N.Y. TIMES, Feb. 18, 2011.

an issue that arises not from the science of DNA but from the human nature of the technicians testing it.¹⁵⁷ Comparing these issues to fingerprints, DNA testing relies heavily on these questionable and complicated procedures, whereas the analysis of fingerprints does not.¹⁵⁸ The greater degree of difficulty associated with examining DNA further weakens the analogy to fingerprints and increases the degree of intrusion created by a DNA search.

V. CONCLUSION

Should the threshold determination be made that the search was supported by probable cause; the Kings County Criminal Court will require the defendant, Vernon B., to submit a DNA sample.¹⁵⁹ This DNA seizure and any subsequent uses of that DNA evidence, have a significant impact on his “bodily integrity.” However, the Supreme Court’s interpretation of the Fourth Amendment presents a safeguard for his bodily interests, and has implemented procedures to protect against any mischief that may result from the use of this evidence and any ensuing impairments on liberty.¹⁶⁰ That protection is probable cause, a standard that channels the inquiry towards the strength of the evidence and helps establish whether conducting a search is reasonable, despite the intrusions that are created.¹⁶¹ This safeguard of probable cause is required in the context of DNA because of the high likelihood of unreasonable intrusions, and the ever-changing nature and degree of these possible intrusions in relation to our understanding of DNA science.¹⁶²

Despite this important safeguard, some argue that because DNA is involuntarily abandoned in our everyday lives, it therefore

¹⁵⁷ Ryan McDonald, *Juries and Crime Labs: Correcting the Weak Links in the DNA Chain*, 24 AM. J.L. & MED. 345, 356 (illustrating the difficulties crime labs face in maintaining DNA samples).

¹⁵⁸ Simply by their relevant natures this fact is inferred, comparison fingerprinting merely requires an analysis of the similarities between two enlarged photographs. Geller, *supra* note 142, at 731. Whereas, DNA requires microscopic analysis and the isolation of incredibly complex and individual parts of the human cell structure. DNA Forensics, *supra* note 89.

¹⁵⁹ 35 Misc. 3d 1241(a).

¹⁶⁰ *Nicholas*, 430 F.3d at 652, 678-79 (Lynch, J., concurring).

¹⁶¹ *Id.* at 680.

¹⁶² The Kings County Criminal Court revisited the issue of whether the police acted lawfully when seizing the gun from Vernon B.’s home, and determined that they had. *Vernon B.*, 954 N.Y.S. 2d 835, 835 (Crim. Ct. 2012). On November 19, 2012 the court granted the People’s motion for a DNA order. *Id.* at 836.

does not warrant any type of protection.¹⁶³ A careful reading of precedent shows, however, that regardless of this involuntariness an individual does not abandon the right to protect that DNA from analysis, nor does he surrender the privacy associated with medical facts discernible from that sample.¹⁶⁴ Others analogize DNA to a fingerprint to further the argument against protection, arguing that DNA serves no purpose other than to identify an individual.¹⁶⁵ However, the associated science clearly shows DNA consists of something more; it is the blueprint to life containing almost every private medical fact about us, going far beyond mere identifying characteristics unlike a simple picture of the outside of a finger.¹⁶⁶ Other distinctions between DNA and fingerprints, such as the inherent possibility of nefarious use and the differing levels of complexity required for analysis, create an insurmountable divide. This divide, which is founded on legal precedent, scientific principles, recent scientific developments, and common sense distinctions between types of forensic evidence, all outlined above, truly demonstrates why DNA must be protected in full by the Fourth Amendment and never be subject to any lesser standard.

Avi Goldstein *

¹⁶³ *Owens*, 2006 WL 3725547, at *6 (reasoning that because DNA can be voluntarily separated, for example through expectorating, it is more akin to a characteristic constantly exposed to the public, and there is little Fourth Amendment protection for these characteristics, as is there is a diminished expectation of privacy over what one knowingly exposes to the public).

¹⁶⁴ See generally *Cupp*, 412 U.S. 291; *Skinner*, 489 U.S. 602; and *infra* sections III(b) and III(c).

¹⁶⁵ *Nicholas*, 430 F.3d at 671 (majority opinion) (“The collection and maintenance of DNA information, while effected through relatively more intrusive procedures such as blood draws or buccal cheek swabs, in our view plays the same role as fingerprinting.”); *Owens*, 2006 WL 3725547, at *13 (“DNA evidence may be obtained, [in a] somewhat analogous [way] to a fingerprint”). Alfano, *supra* note 104, at 1031 (equating DNA with fingerprints).

¹⁶⁶ See DNA Forensics, *supra* note 89 (discussing how a genetic blueprint, like DNA, can only provide limited additional information to identity at this time, but the science is expanding, and some of the material available now, is something which individuals could expect to keep private, such as susceptibility to disease).

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