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Roadside Saliva Swab Testing: A Solution to Drugged Driving or a Violation of the Fourth Amendment Right to Privacy?

Demery J. Ormrod

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Note

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DEMERY J. ORMROD

In Birchfield v. North Dakota, the Supreme Court recognized a distinction between substitute methods for testing blood alcohol contents: pursuant to a DUI arrest, breathalyzer tests may be performed without a warrant, whereas blood draws (even if pursued for the exact same reason) may not. My focus here, in this Note, is on roadside saliva swab testing, a method used by police to determine whether a driver is driving under the influence of cannabis. Ultimately, this Note argues for warranted saliva swab testing, resting on a straightforward analogy: A is more like B than it is like C—or, in this particular case, saliva swabs are more like blood draws than breathalyzer tests. And, for this reason, as with blood draws, officers should be required to procure a warrant prior to conducting a roadside saliva swab test.

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Roadside Saliva Swab Testing: A Solution to Drugged Driving or a Violation of the Fourth Amendment Right to Privacy?

DEMERY J. ORMROD*

“Nowhere in the Bill of Rights are the words ‘unless inconvenient’ to be found.”

– A.E. Samaan

INTRODUCTION

In *Birchfield v. North Dakota*, the Supreme Court held that police must obtain a warrant before taking a blood sample from someone arrested for driving under the influence, but warrantless breathalyzer tests, in the same circumstance, are permitted.¹ The basis for this distinction was twofold: (1) whereas a blood test is necessarily intrusive, a breathalyzer test does not compromise one’s bodily integrity,² and (2) blood contains a wealth of information, thus implicating Fourth Amendment privacy concerns, whereas breath does not.³ In the wake of *Birchfield*, a new constitutional puzzle has emerged. Namely, should warrants be required for roadside saliva swab testing, a police tactic frequently used in connection with arrests for driving under the influence of cannabis?⁴ Or, framing the puzzle analogically: are

* J.D. Candidate at the University of Connecticut School of Law. I would like to extend a very special thank you to Professor Kiel Brennan-Marquez for his guidance, advice, mentorship, and shared Fourth Amendment enthusiasm. I would also like to thank the members of the *Connecticut Law Review* for their thoughtful advice and feedback. Above all, thank you to my friends and family, especially my Mom for her unwavering support and encouragement; my Dad, my first family member to take on the arduous task of reading this Note in its entirety; and Matt, for always believing in me. Finally, I would like to dedicate this Note to my nieces and nephew—Kennedy, Sebastian, and Amelia.

¹ *Birchfield v. North Dakota*, 136 S. Ct. 2160, 2184 (2016).

² *Id.* at 2176–78.

³ *Id.* at 2177–78.

⁴ Except as used in source titles and direct quotes, I will use the words “cannabis” and “weed” as opposed to the oft-used term “marijuana.” Several sources report the inherently racist history behind the word. According to NPR, “‘marijuana’ came into popular usage in the U.S. in the early 20th century because anti-cannabis factions wanted to underscore the drug’s ‘Mexican-ness.’ It was meant to play off of anti-immigrant sentiments.” Matt Thompson, *The Mysterious History of ‘Marijuana’*, NPR (July 22, 2013, 11:46 AM), <https://www.npr.org/sections/codeswitch/2013/07/14/201981025/the-mysterious-history-of-marijuana>. The drug’s racist background persists in the disproportionality of cannabis arrests, as a 2013 report by the ACLU reported that Black Americans are 3.73 times more likely than white Americans to be arrested for cannabis possession. ACLU, *THE WAR ON MARIJUANA IN BLACK AND WHITE* 17 (2013). For additional resources, see generally ISAAC CAMPOS, *HOME GROWN: MARIJUANA AND THE ORIGINS OF MEXICO’S WAR ON DRUGS* (2012); Eric Schlosser, *Reefer Madness*, ATLANTIC (Aug. 1994), <https://www.theatlantic.com/magazine/archive/1994/08/reefer-madness/303476/>.

saliva swabs more like blood draws or like breathalyzer tests (and why)? That is the question I address here. And my answer, in short, is that blood draws offer the closer analogy, counseling in favor of warrants for roadside saliva swab tests.

The saliva swab test emerged as a response to the increased legalization of medicinal and recreational cannabis.⁵ Put simply, the saliva swab test is a roadside test in which a police officer uses a cheek swab to extract saliva from a driver's mouth.⁶ The saliva sample is subsequently placed in a portable machine used to detect whether a particular controlled substance—in this case, cannabis—is present in the driver's system.⁷ Largely attributable to the lack of federal direction, states have also variably developed procedures regarding roadside saliva testing. But common to all states that have implemented these tests, thus far, is the absence of a warrant requirement.⁸ States that have adopted the test typically utilize the saliva swab as part of a twelve-step sobriety test. “[T]he oral swab helps establish one more link in the evidence chain to get a warrant to get a blood draw,”⁹ which, according to the *Birchfield* Court, does require the procurement of a warrant.¹⁰

Despite concerns about the unreliability of these saliva tests, which has been a topic of discussion among other commentators and researchers,¹¹ this

⁵ In fifteen states and Washington, D.C., adults over the age of twenty-one may legally use cannabis recreationally, and cannabis is legal for medicinal purposes in thirty-six states. Jeremy Berke, Shayanne Gal & Yeji Jesse Lee, *All the States Where Marijuana Is Legal – and 5 More that Voted to Legalize It in November*, BUS. INSIDER (Feb. 22, 2021, 2:49 PM), <https://www.businessinsider.com/legal-marijuana-states-2018>.

⁶ Chloé White, *Roadside Saliva Testing Is Probably Unconstitutional*, ACLU (May 8, 2018, 10:15 AM), <https://www.aclu.org/blog/criminal-law-reform/drug-testing/roadside-saliva-testing-probably-unconstitutional>.

⁷ *Id.*

⁸ In Illinois, the test is conducted as part of the Standardized Field Sobriety Test. Robert McCoppin, *Cops Want to Know Who's Driving While Stoned. Tests Are Being Developed, but Level of Impairment After Smoking Weed Is Still Hard to Measure.*, CHI. TRIB. (Oct. 25, 2019, 7:00 AM), <https://www.chicagotribune.com/marijuana/illinois/ct-marijuana-roadside-drug-test-20191025-zr2ouoci6jfxdnjncifhtv3s4-story.html> (“Police are not trying to use the device to determine how much THC a person has in their system, nor whether they are impaired. They are merely looking for evidence to support probable cause to arrest the person.”). However, since the saliva swab testing is still merely in its pilot stage, drivers can refuse to submit to testing. *Id.* Similarly, in Michigan, if a driver suspected of being impaired is stopped, an officer may, as part of the Twelve-Step Sobriety Test, require a driver to submit a mouth swab for testing. Sonia Khaleel, *Michigan State Police to Begin Roadside Drug Testing Program that Includes Mouth Swabs for Oral Screenings*, DETROIT METRO TIMES (Oct. 1, 2019, 4:00 PM), <https://www.metrotimes.com/news-hits/archives/2019/10/01/michigan-state-police-to-begin-roadside-drug-testing-program-that-includes-mouth-swabs-for-oral-screenings>. Michigan diverges from Illinois, however, because in Michigan, a driver's refusal to submit to the swab test will result in a civil infraction. *Id.* In California, upon reasonable suspicion of driving under the influence of drugs (DUID), an officer can request a buccal swab from the driver. William Weinberg, *DUI Drugs Roadside Mouth Swab Test*, ORANGE CNTY. DUI LAW. BLOG (Apr. 20, 2017), <https://www.orangecountyduilawyerblog.com/dui-drugs-roadside-mouth-swab-test/> (“A positive result almost guarantees the driver will be arrested on suspicion of driving under the influence of drugs and required to submit to a blood test.”).

⁹ Eric Baerren, *Mt. Pleasant Participates in Roadside Drug Testing Program*, MORNING SUN (Oct. 8, 2019), https://www.themorningsun.com/news/cops/courts/mt-pleasant-participates-in-roadside-drug-testing-program/article_e3dc3d88-e93b-11e9-871f-878771574e6a.html.

¹⁰ *Birchfield v. North Dakota*, 136 S. Ct. 2160, 2185 (2016).

¹¹ See RICHARD P. COMPTON, U.S. DEP'T OF TRANSP., NAT'L HIGHWAY TRAFFIC SAFETY ADMIN.,

Note will primarily address the constitutional concerns surrounding warrantless roadside saliva swab tests. Though these tests are typically not conducted incident-to-arrest (or, after lawful arrest, which was the case in *Birchfield*), but instead prior to arrest, I will nonetheless utilize the framework employed by the United States Supreme Court in *Birchfield v. North Dakota* to assess their constitutionality, as the intimate nature of a saliva test raises the same concerns regarding blood testing considered by the Court in *Birchfield*. Ultimately, this Note will argue that extracting saliva, like extracting blood, is intrusive and provides a sample that law enforcement can preserve, rendering saliva swab testing impermissible absent a valid warrant.

This Note will begin, in Part I, by examining the current state of the law on drugged driving, noting the absence of federal standards and briefly describing various states' approaches. This Part will also detail saliva swab testing, including its inception in the United States, the role it plays in drugged driving arrests, the testing devices and tools employed, and, most notably, states' implementation of warrantless roadside saliva swab testing. In Part II, I will introduce the applicable Fourth Amendment framework and describe the legal background upon which *Birchfield v. North Dakota* was decided. This Part will proceed with a discussion of *Birchfield*, its twin pillars, and the Court's novel concern with DNA privacy and the preservability of a DNA sample. Next, in Part III, leaning on empirical data, coupled with the *Birchfield* Court's concern surrounding informational dynamics, I will argue that saliva testing is more like blood testing than breath testing and, therefore, should be treated like a blood draw and may only be obtained after a warrant is issued. In this Part, I will address counterarguments and also briefly mention other recognized concerns with saliva testing, including its unreliability and potential for Equal Protection violations. Finally, in Part IV, I will propose solutions to the drugged driving problem that do not raise similar constitutional concerns. Among these solutions, guided by the *Birchfield* Court, I urge law enforcement to adopt less intrusive means. As legalization continues to become a conspicuous reality, it is imperative that policymakers, state governments, and law enforcement not shy away from innovative and creative solutions for purposes of convenience, but instead employ means and methods to preserve and protect the privacy interest guaranteed by the Fourth Amendment.

DOT HS 812 440, MARIJUANA-IMPAIRED DRIVING: A REPORT TO CONGRESS 27 (2017) [hereinafter MARIJUANA-IMPAIRED DRIVING] (“[T]he poor correlation of THC level in the blood or oral fluid with impairment precludes using THC blood or oral fluid levels as an indicator of driver impairment.”); Gemma Sapwell, *‘Passive Smoking’ Defence Clears Woman of Drug Driving as Research Casts Doubt on Roadside Testing*, ABC NEWS (May 22, 2019, 4:28 PM), <https://www.abc.net.au/news/2019-05-23/study-casts-doubt-on-roadside-cannabis-testing/11104544> (noting that research conducted by Sydney University indicates that roadside saliva tests produced both false positives and false negatives).

I. THE CURRENT STATE OF THE LAW ON CANNABIS-IMPAIRED DRIVING

A. *Absence of a Federal Standard*

The National Highway Traffic Safety Administration (NHTSA), a branch of the United States Department of Transportation (DOT) charged with enforcing vehicle performance standards,¹² has long studied alcohol and its effects on driving.¹³ After extensive research on the effect of alcohol on an individual's central nervous system, the NHTSA determined that "[a]t a BAC [blood alcohol concentration] of .08 grams of alcohol per deciliter (g/dL) of blood, crash risk increases exponentially."¹⁴ Subsequently, all fifty states, the District of Columbia, and Puerto Rico adopted the .08 standard and have made it illegal to drive with a BAC of .08 or higher.¹⁵

As compared to the commonly known .08 BAC standard for drunk driving, there is no analogous federal standard for driving under the influence of drugs (DUID) cases.¹⁶ Unlike alcohol, which is absorbed in the blood stream and metabolizes at a steady rate, the psychoactive component of cannabis, tetrahydrocannabinol (THC), is fat soluble.¹⁷ This means that, once ingested, THC can be stored in the body's fatty tissues and released into the blood stream long after ingestion.¹⁸ Because of its fat solubility, studies dedicated to the relationship between THC levels and a user's degree of impairment have shown that the amount of THC found in a driver's blood and the degree of impairment do not appear to be closely associated.¹⁹ For this reason, it is seemingly impossible to develop a per se level of impairment standard to guide states, as well as to determine who is truly driving while impaired. This variability in the effects of THC, coupled with the NHTSA's admission that the topic is ridden with a "relative lack of research,"²⁰ does not bode well for states attempting to effectuate DUID laws.

¹² *About NHTSA*, U.S. DEP'T OF TRANSP., <https://www.nhtsa.gov/about-nhtsa> (last visited Jan. 3, 2020).

¹³ *See* U.S. DEP'T OF TRANSP., NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., DOT HS 812 864, TRAFFIC SAFETY FACTS 2018 DATA: ALCOHOL-IMPAIRED DRIVING 1 (2019) (explaining the NHTSA's 2018 alcohol-impaired driving report, including the number of alcohol-impaired fatalities, the economic cost of alcohol-impaired crashes, and other pertinent trends).

¹⁴ *Drunk Driving*, U.S. DEP'T OF TRANSP., <https://www.nhtsa.gov/risky-driving/drunk-driving> (last visited Jan. 3, 2020).

¹⁵ *Id.* On December 30, 2018, Utah changed its per se limit from .08 to .05 BAC. Nicole Nixon, *Utah First in the Nation to Lower Its DUI Limit to .05 Percent*, NPR (Dec. 26, 2018, 12:00 PM), <https://www.npr.org/2018/12/26/679833767/utah-first-in-the-nation-to-lower-its-duc-limit-to-05-percent>.

¹⁶ *See* Angus Chen, *Why Is It So Hard to Test Whether Drivers Are Stoned?*, NPR (Feb. 9, 2016, 12:27 PM), <https://www.npr.org/sections/health-shots/2016/02/09/466147956/why-its-so-hard-to-make-a-solid-test-for-driving-while-stoned> ("But marijuana isn't like [alcohol]. The height of your intoxication isn't at the moment when blood THC levels peak, and the high doesn't rise and fall uniformly based on how much THC leaves and enters your bodily fluids The instinct . . . is to come up with a law that parallels the 0.08 BAC standard for alcohol. 'Everyone is looking for one number And it's almost impossible to come up with one number.'").

¹⁷ MARIJUANA-IMPAIRED DRIVING, *supra* note 11, at 4.

¹⁸ *Id.* "Some studies have detected THC in the blood at 30 days post ingestion." *Id.* (citation omitted).

¹⁹ *Id.* at 7.

²⁰ *Id.*

This absence of research is likely exacerbated by the fact that cannabis is federally illegal.²¹ According to the NHTSA, because cannabis is a Schedule I substance under the Controlled Substances Act, extra precautions must be taken when researching it.²² Despite admitted gray areas in research, studies have shown that cannabis can have serious effects on an individual's driving abilities, as THC can "lower a driver's vigilance, slow reaction times, alter perceptions of time and distance, and affect the driver's balance and ability to 'track lanes.'"²³ In sum, various research studies have demonstrated that cannabis has the potential to impair driving-related skills, yet there is a glaring lack of research to inform state legislation. Despite cannabis's potentially dangerous impacts on traffic safety, recognized by the NHTSA,²⁴ legalization continues, and states are forced to respond by enacting their own laws to combat cannabis-impaired driving.

B. *The State Approaches: From Zero-Tolerance to Per Se and Beyond*

State laws on cannabis-impaired driving vary widely. Five states, including Washington and Illinois, have created per se laws, which "prohibit[] driving with a detectable amount of THC in the body that exceeds the legal limit."²⁵ The per se limit is typically five ng/ml of THC, though in some states, the threshold is as minimal as one ng/ml.²⁶ Twelve states, including Utah, Arizona, and Pennsylvania, have implemented zero-tolerance laws, which "prohibit[] driving with any amount of THC and/or its metabolites in the body."²⁷ Because of the chemical properties of cannabis (specifically, its fat solubility, which allows it to remain in a user's system long after ingestion), these per se limits and zero-tolerance laws are particularly problematic and may incriminate drivers who are not actually high.²⁸ Indeed, the American Automobile Association (AAA) "concluded

²¹ Jean Lotus, *Drugged Driving: Traffic Stops Changing in Pot-Legal States*, UPI (July 25, 2019, 3:00 AM), https://www.upi.com/Top_News/US/2019/07/25/Drugged-driving-Traffic-stops-changing-in-pot-legal-states/6121563804207/.

²² MARIJUANA-IMPAIRED DRIVING, *supra* note 11, at 6–7. Extra precautions may include obtaining a government license to store and use cannabis, meeting the security requirements for storage, securing necessary documentation, and disposing properly. *Id.* at 7.

²³ Lotus, *supra* note 21.

²⁴ MARIJUANA-IMPAIRED DRIVING, *supra* note 11, at 11–12.

²⁵ *Drugged Driving: Marijuana-Impaired Driving*, NCSL (Mar. 8, 2019), <http://www.ncsl.org/research/transportation/drugged-driving-overview.aspx> [hereinafter *Drugged Driving*].

²⁶ JAMES LYNCH & LUCIAN MCMAHON, INS. INFO. INST., A ROCKY ROAD SO FAR: RECREATIONAL MARIJUANA AND IMPAIRED DRIVING 13 (2019), <https://www.iii.org/sites/default/files/docs/pdf/marijuanaanddui-wp-031119.pdf>.

²⁷ *Drugged Driving*, *supra* note 25.

²⁸ LYNCH & MCMAHON, *supra* note 26, at 13. Importantly, the study notes that the opposite may be true; because high levels of THC dissipate quickly before impairment subsides, impaired drivers may not always be prosecuted. *Id.* "One study found that only 10 percent of its participants would have been prosecuted for impaired driving, even though many self-reported recent marijuana use." *Id.* (footnote omitted).

that ‘a quantitative threshold for per se laws for THC following cannabis use cannot be scientifically supported.’”²⁹

The majority of states employ “under the influence DUID”-style laws, which “require[] the driver to be under the influence of or affected by THC.”³⁰ Officers in these states use behavioral markers to determine whether a driver is impaired.³¹ But this method, too, is flawed, as “[t]here is currently no scientifically sound roadside impairment test”—such as a breathalyzer equivalent—to empirically evaluate whether a driver is impaired.³² This absence in technology and resources to aid law enforcement has led some to argue for a verifiable assessment to measure a driver’s THC levels.

The solution? Saliva swab testing.³³

C. *Introducing Saliva Swab Testing*

Though roadside saliva testing technology first premiered in the United States in 2009,³⁴ its presence has steadily increased within the past three years, emerging in major cities like San Diego,³⁵ Boston,³⁶ and, most recently, Carol Stream,³⁷ a suburb of Chicago. In these cities, saliva swab testing is generally administered as part of a standard field sobriety test, of which the saliva swab testing is simply one component.³⁸

Roadside saliva swab testing generally proceeds as follows: when an officer stops a driver, suspecting they are under the influence of cannabis, the officer—trained to recognize the symptoms of impairment—will look for “indicators that a driver is high, such as an unsafe driving maneuver, bloodshot eyes, the odor of marijuana and blank stares.”³⁹ Once there is ample physical evidence to support a suspicion of drug use, the officer may then request to perform a field sobriety test, including a saliva swab test.⁴⁰

²⁹ *Id.* at 14 (quoting BARRY LOGAN, SHERRI L. KACINKO & DOUGLAS J. BEIRNESS, AAA FOUND. FOR TRAFFIC SAFETY, AN EVALUATION OF DATA FROM DRIVERS ARRESTED FOR DRIVING UNDER THE INFLUENCE IN RELATION TO PER SE LIMITS FOR CANNABIS 3 (2016), <http://publicaffairsresources.aaa.biz/wp-content/uploads/2016/04/Evaluation-of-Drivers-in-Relation-to-Per-Se-Report-FINAL.pdf>).

³⁰ *Drugged Driving*, *supra* note 25. Unique to Colorado is the permissible inference law, which “applies if THC is identified in a driver’s blood in quantities of 5ng/ml or higher. If so, it is permissible to assume that the driver was under the influence.” *Id.*

³¹ LYNCH & MCMAHON, *supra* note 26, at 14.

³² *Id.*

³³ *Id.*

³⁴ Kristina Davis, *Police Are Using New Mouth-Swab Tests to Nab Drivers Under the Influence of Marijuana and Other Drugs*, L.A. TIMES (Mar. 17, 2017, 9:00 AM), <https://www.latimes.com/local/lanow/la-me-mouth-swab-drugs-test-police-pot-20170317-story.html>.

³⁵ *Id.*

³⁶ Mary Markos, *State Police Testing Saliva Swab to Catch Stoned Drivers*, BOS. HERALD (Aug. 9, 2018, 12:00 AM), <https://www.bostonherald.com/2018/08/09/state-police-testing-saliva-swab-to-catch-stoned-drivers/>.

³⁷ McCoppin, *supra* note 8.

³⁸ *Id.*

³⁹ Davis, *supra* note 34.

⁴⁰ *Id.*; McCoppin, *supra* note 8. Typically, police departments are equipped with one of two devices to perform the testing: the Dräger DrugTest 5000 or the SoToxa Mobile Test System. For more information on the Dräger DrugTest 5000, see *Dräger DrugTest 5000*, DRÄGER, <https://www.draeger.com>.

Ultimately, after performing the field sobriety test (and the saliva swab component), police make a probable cause determination. If police have probable cause to arrest the driver, they may apply for a warrant for a blood draw, which will determine the driver's actual level of impairment.⁴¹

Some jurisdictions have gone so far as to implement penalties for those they deem uncooperative drivers. In San Diego, a driver's refusal to submit to saliva testing permits an officer to force the driver to submit to a blood test,⁴² and in Michigan, failure to submit to the roadside saliva test will result in a civil infraction.⁴³ Though each state has implemented these roadside saliva tests with slight alterations, one thing remains common among them all: state laws do not require officers to procure a warrant before proceeding with the buccal swab.

II. A FRAMEWORK FOR DISCUSSION: THE FOURTH AMENDMENT ANALYSIS AND EXAMINATION OF PRECEDENT

A. *The Constitutional Framework: A Buccal Swab as a "Search" Protected by the Fourth Amendment*

The Fourth Amendment, binding on the states through the Fourteenth Amendment,⁴⁴ reads, in relevant part, that "[t]he 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"⁴⁵ Its central purpose is to prevent the government from conducting overly broad, open-ended searches, whereby law enforcement officers can essentially search any person for any purpose at any time.⁴⁶

According to the United States Supreme Court in *Skinner v. Railway Labor Executives' Association*, extracting a blood sample or administering a breath test during a traffic stop is a search within the meaning of the Fourth Amendment.⁴⁷ Because virtually any invasion into the human body will work as an "'intrusion upon cherished personal security' that is subject to

om/en-us_us/Applications/Products/Alcohol-and-Drug-Testing/Drug-Testing-Devices/DrugTest-5000#benefits (last visited Jan. 6, 2020). For more information on the SoToxa Mobile Test System, see *A New Era for Roadside Testing: SoToxa™ Mobile Test System*, ABBOTT (2020), <https://ensur.invmed.com/ensur/contentAction.aspx?key=ensur.329259.S2R4E4A3.20180424.4770.4178856>.

⁴¹ McCoppin, *supra* note 8.

⁴² Davis, *supra* note 34.

⁴³ Brad Devereaux, *Kent, Washtenaw Among 5 Counties Selected for Roadside Drug Testing*, MLIVE (Nov. 2, 2017), https://www.mlive.com/news/2017/11/kent_washtenaw_among_5_countie.html ("Refusal to submit to a preliminary oral fluid analysis upon lawful demand of a police officer is a civil infraction.").

⁴⁴ *Mapp v. Ohio*, 367 U.S. 643, 655–57 (1961).

⁴⁵ U.S. CONST. amend. IV.

⁴⁶ *Coolidge v. New Hampshire*, 403 U.S. 443, 467 (1971) (noting that the Fourth Amendment's warrant requirement is aimed at preventing unnecessary, overly general searches and explaining that the requirement arose out of colonists' anger towards warrants that allowed for "general, exploratory rummaging in a person's belongings").

⁴⁷ *Skinner v. Ry. Lab. Execs.' Ass'n*, 489 U.S. 602, 616–17 (1989).

constitutional scrutiny,”⁴⁸ “using a buccal swab on the inner tissues of a person’s cheek in order to obtain DNA samples is [also] a search.”⁴⁹

Even in the realm of DNA extraction, it has been recognized that intrusion upon an individual’s privacy is sometimes warranted and, in fact, necessary because of some other countervailing interest. Whether the government may infringe upon the Fourth Amendment right to privacy depends upon “the reasonableness in all the circumstances of the particular governmental invasion of a citizen’s personal security.”⁵⁰ Courts have developed several tests to assess the reasonableness of a particular search, and the applicable test largely depends on the circumstances of the search.⁵¹

For a given search or seizure to be reasonable, ordinarily, “the government must obtain a search warrant.”⁵² The Warrant Clause of the Fourth Amendment requires that law enforcement officers demonstrate, to a neutral magistrate, that they have probable cause to believe that their search will reveal evidence of a crime.⁵³ However, a warrant and probable cause are not always necessary for a search to be deemed “reasonable.”⁵⁴ In certain circumstances, even DNA can be collected absent a warrant because “a person’s privacy expectation has decreased or the government’s need is increased.”⁵⁵ In these cases, the reasonableness of the search is determined by weighing “the promotion of legitimate governmental interests” against “the degree to which [the search] intrudes upon an individual’s privacy,”⁵⁶ and the Fourth Amendment’s warrant requirement may be circumvented.

In *Missouri v. McNeely*, the United States Supreme Court was called to answer whether the warrant requirement could be circumvented in drunk driving cases.⁵⁷ More specifically, the question presented was whether the natural metabolization of alcohol in the bloodstream constitutes what the Court termed a “per se exigency,” justifying the warrantless taking of a blood sample.⁵⁸ The State argued for a per se categorical rule, presenting evidence that the percentage of alcohol in an individual’s body decreased by approximately .015% to .02% per hour once the alcohol was fully absorbed.⁵⁹ Therefore, said the State, the significant delay in testing—between

⁴⁸ *Cupp v. Murphy*, 412 U.S. 291, 295 (1973) (quoting *Terry v. Ohio*, 392 U.S. 1, 25 (1968)).

⁴⁹ *Maryland v. King*, 569 U.S. 435, 446 (2013).

⁵⁰ *Terry*, 392 U.S. at 19.

⁵¹ Kelly Lowenberg, *Applying the Fourth Amendment When DNA Collected for One Purpose Is Tested for Another*, 79 U. CIN. L. REV. 1289, 1300 (2011).

⁵² *Id.*

⁵³ *See King*, 569 U.S. at 467 (“As ratified, the Fourth Amendment’s Warrant Clause forbids a warrant to ‘issue’ except ‘upon probable cause,’ and requires that it be ‘particula[r]’ (which is to say, *individualized*) to ‘the place to be searched, and the persons or things to be seized.’”) (alteration in original).

⁵⁴ Lowenberg, *supra* note 51, at 1300. “For example, if a person consents to being searched, then nothing else—neither warrant nor probable cause—is necessary.” *Id.*

⁵⁵ *Id.*

⁵⁶ *Wyoming v. Houghton*, 526 U.S. 295, 300 (1999).

⁵⁷ *Missouri v. McNeely*, 569 U.S. 141, 145 (2013).

⁵⁸ *Id.*

⁵⁹ *Id.* at 152.

apprehending the individual and obtaining a warrant—would negatively impact the blood test’s probative value.⁶⁰ The plurality wrote that even the natural evanescence of alcohol could not always constitute an exigency justifying an exception to the Fourth Amendment’s warrant requirement for nonconsensual blood testing, thereby rejecting a categorical rule.⁶¹ Instead, the plurality noted that warrantless testing of drunk driving suspects could apply in “exigent circumstances,”⁶² the exigency of which must be determined on a case-by-case basis depending on the totality of the circumstances.⁶³

The *McNeely* plurality emphatically pronounced its dedication to the Fourth Amendment privacy guarantees, making clear that “the Fourth Amendment will not tolerate adoption of an overly broad categorical approach that would dilute the warrant requirement in a context where significant privacy interests are at stake.”⁶⁴ Practically then, for law enforcement, procuring a warrant before a blood draw is the general rule and warrantless testing is the exception.⁶⁵ The plurality’s firm affirmation of an individual’s right to privacy set the stage for its subsequent decision in *Birchfield*, which ultimately addressed a gap in *McNeely* and reiterated the sacredness of an individual’s bodily right to privacy. In *McNeely*, the Court deliberately did not address potential justifications for warrantless testing of drunk driving suspects, except for the exigent circumstances exception. In *Birchfield*, the Court was called to determine whether warrantless alcohol testing to determine a driver’s level of impairment, incident to drunk driving arrests, violates the Fourth Amendment.⁶⁶

B. The Birchfield “Pillars”: DNA Privacy Versus the State Interest

In *Birchfield v. North Dakota*, the Supreme Court was called to resolve yet another potential circumvention of the Fourth Amendment’s warrant requirement. In *Birchfield*, a consolidation of three cases involving alleged drunk driving arrestees, the Court was tasked with determining how the search-incident-to-arrest doctrine⁶⁷ applies to breath and blood tests.⁶⁸

⁶⁰ *Id.*

⁶¹ *Id.* at 165.

⁶² *Id.* at 156.

⁶³ *Id.* at 158.

⁶⁴ *Id.* Note, here, that the plurality wrote that even though drivers are accorded less privacy in their automobiles (due to the compelling government need to regulate motor vehicle safety), this does not diminish a driver’s privacy interest in preventing law enforcement from drawing the driver’s blood. *Id.* at 159. The plurality also dismissed the argument that the importance of combatting the drunk driving epidemic justifies departing from the warrant requirement. *Id.* at 159–60.

⁶⁵ Jordan D. Santo, Comment, *Waiting is Warranted: Giving Meaning to the Supreme Court’s Ruling in Missouri v. McNeely*, 24 TEMP. POL. & C.R. L. REV. 247, 266 (2014).

⁶⁶ *Birchfield v. North Dakota*, 136 S. Ct. 2160, 2166–67 (2016).

⁶⁷ The search-incident-to-arrest doctrine is defined as comprising two separate propositions. “The first is that a search may be made of the *person* of the arrestee by virtue of the lawful arrest. The second is that a search may be made of the area within the control of the arrestee.” *United States v. Robinson*, 414 U.S. 218, 224 (1973).

⁶⁸ *Birchfield*, 136 S. Ct. at 2172.

Accordingly, the *Birchfield* Court evaluated the constitutionality of both warrantless blood and breath tests incident to drunk driving to resolve whether states could criminalize a driver's refusal to submit to BAC testing.

Ultimately, to reach its conclusion that the Fourth Amendment permits warrantless breath tests incident to drunk driving arrests but not warrantless blood tests,⁶⁹ the Court employed the framework set out in *Riley v. California*.⁷⁰ The *Riley* test required the Court to balance two factors, hereinafter referred to as the "Twin Pillars of *Birchfield*": (1) an individual's privacy interest and (2) the government's need for warrantless searches in order to promote its own legitimate interests.⁷¹ For the purposes of this Note, the governmental interest (in "preserving the safety . . . of public highways" and deterring individuals from driving under the influence⁷²) will only be addressed briefly,⁷³ as these governmental interests are common among all drunk driving or drug-impaired driving cases. Clearly, in the realm of cannabis-impaired driving, identical governmental interests exist.

The subsequent sections in this Note are devoted to *Birchfield* Pillar One—the desire to preserve and protect an individual's Fourth Amendment privacy guarantees. The following subsection will parse out the *Birchfield* Court's treatment of blood and breath testing, paralleling the Court's separate analyses concerning the constitutionality of blood and breath tests under the search-incident-to-arrest exception to the Fourth Amendment's warrant requirement.⁷⁴

1. *Warrantless Breath Tests Deemed Constitutional*

The *Birchfield* Court's analysis of warrantless breath and blood testing centered on two distinct, yet interrelated concerns: (1) the invasiveness of the respective test⁷⁵ and (2) the degree to which the accompanying samples could be preserved (and, relatedly, the private, hereditary material contained

⁶⁹ *Id.* at 2184.

⁷⁰ *Id.* at 2176 (referring to *Riley v. California*, 573 U.S. 373 (2014)).

⁷¹ *Id.* at 2188 (quoting *Riley*, 573 U.S. at 385 (quoting *Wyoming v. Houghton*, 526 U.S. 295, 300 (1999))).

⁷² *Id.* at 2178–79 (citation omitted).

⁷³ Of course, these concerns qualify as compelling governmental interests, but an emphasis on this second pillar simply proves too much—of course, municipalities would always prefer that there be no warrant requirement (keeping in mind the various procedural hurdles and delays imposed by the warrant process). For the purposes of this Note, which seeks to compare the *Birchfield* Court's central concern about DNA privacy and an individual's right to their own genetic information with states' warrantless taking of buccal swabs, the governmental interest is not in dispute; therefore, arguments contradicting the governmental interest are simply unfounded. For this reason, it is more important to frame the question (and following analysis) around *Birchfield* Pillar One—the right to privacy—and ask, instead: what is so compelling about this situation (i.e., roadside saliva testing) that law enforcement can circumvent the warrant requirement? Can the government provide granular reasons that there is something so pressing (whether it be exigency or some other "compelling need") that they can search—pursuant to probable cause—without first having to secure a warrant from a neutral magistrate?

⁷⁴ *Birchfield*, 136 S. Ct. at 2176.

⁷⁵ *Id.* at 2176–77.

within those samples).⁷⁶ First, in its analysis of the intrusiveness posed by a breathalyzer, the Court cited supporting case law “that breath tests do not ‘implicat[e] significant privacy concerns,’”⁷⁷ summarily dismissing petitioners’ arguments for a warrant requirement for breath testing. In its rather short analysis, the Court deemed the physical intrusion of a breath test “almost negligible”⁷⁸ and refused to recognize a possessory interest in the air in one’s lungs.⁷⁹ Accordingly, the Court found that the breathalyzer test itself was not excessively intrusive.⁸⁰

The Court then shifted its attention to the preservability of the “fruits” of a breath test. Weighing in favor of warrantless breath tests, said the Court, was the sheer impossibility that law enforcement could retain a sample (and, by extension, the DNA contained within that sample).⁸¹ In comparing breathalyzers and buccal swab samples, the Court noted: “[B]reath tests are capable of revealing only one bit of information, the amount of alcohol in the subject’s breath,”⁸² whereas buccal swabs (like those at issue in *Maryland v. King*) put law enforcement in possession of “a sample from which a wealth of additional, highly personal information could potentially be obtained.”⁸³ Therefore, because breath tests do not leave police officers with a preservable sample, coupled with a breathalyzer’s insignificant intrusiveness, the Court held that warrantless breathalyzer tests are constitutionally permissible.⁸⁴

2. *Warrantless Blood Tests Deemed Unconstitutional*

Having determined the constitutionality of warrantless breathalyzer testing, the Court—utilizing the same two factors in its analysis (intrusiveness and preservability)—ultimately held that warrantless blood tests are unconstitutional.⁸⁵ First, in regard to the level of intrusion, the Court was cognizant of the fact that blood tests “require piercing the skin” and

⁷⁶ *Id.* at 2177.

⁷⁷ *Id.* at 2176 (quoting *Skinner v. Ry. Lab. Execs.’ Ass’n*, 489 U.S. 602, 626 (1989)) (alteration in original).

⁷⁸ *Id.*

⁷⁹ *Id.* at 2177 (“The air that humans exhale is not part of their bodies.”).

⁸⁰ *Id.*

⁸¹ *Id.*

⁸² *Id.* (“A breath test . . . results in a BAC reading on a machine, nothing more.”).

⁸³ *Id.*

⁸⁴ *Id.* at 2177–78. For an interesting argument on the *Birchfield* decision, which contends that the majority’s holding regarding breath tests is a “misstep in Constitutional analysis,” see Catherine Norton, Comment, *Keeping Faith with the Fourth Amendment: Why States Should Require a Warrant for Breathalyzer Tests in the Wake of Birchfield v. North Dakota*, 87 MISS. L.J. 237, 258 (2018) (“First, the distinction between breath tests and blood tests is an arbitrary line that chips away at well-established Fourth Amendment jurisprudence. Second, warrantless breath tests do not fall within the rationale of the search incident to arrest exception, and therefore cannot be justified under traditional search incident to arrest doctrine. Third, the significant privacy implications of breath tests outweigh the minimal burden that a warrant requirement would impose on the states.”).

⁸⁵ *Birchfield*, 136 S. Ct. at 2178.

extracting a part of the person's body.⁸⁶ Other considerations noted by the majority included an individual's limited supply of blood (as compared to the air exhaled from human lungs), the unpleasantness of the blood-draw process, and the degree of intrusiveness as compared to blowing into a breathalyzer.⁸⁷

Arguably, most interesting in its analysis was the Court's almost palpable concern regarding the preservation and potential misuse of the blood sample. The majority wrote:

[A] blood test, unlike a breath test, places in the hands of law enforcement authorities a sample that can be preserved and from which it is possible to extract information beyond a simple BAC reading. Even if the law enforcement agency is precluded from testing the blood for any purpose other than to measure BAC, the potential remains and may result in anxiety for the person tested.⁸⁸

Here, the Court recognized the potential for abuse surrounding warrantless blood draws. Though law enforcement may insist that a sample will only be used for a single purpose (in this case, to measure levels of cannabis impairment), DNA collected for one purpose has the potential to be used for another distinct, unrelated purpose.⁸⁹ Additionally, if a person's genetic profile is created in a state or federal database, the "person can be implicated in future crimes and will constantly be compared to crime scene DNA samples, which some have referred to as lifelong 'genetic surveillance.'"⁹⁰ Recognizing these dangers (in addition to the level of intrusion inherent in a blood test), the majority wrote that the reasonableness of a blood test must be judged in light of the availability of a "less invasive alternative": the breath test.⁹¹ Because respondents were not able to offer adequate reasons for requiring a more intrusive alternative absent a warrant, nor did they dispute the effectiveness of breath tests in measuring BAC, the Court concluded that blood tests may not be administered absent a warrant.⁹² Simply put, "[b]ecause breath tests are significantly less intrusive than blood tests and in most cases amply serve law enforcement interests," the Court concluded that breath tests, but not blood tests, can be administered without a warrant as a search-incident-to-arrest for drunk driving.⁹³

⁸⁶ *Id.* (quoting *Skinner v. Ry. Lab. Execs.' Ass'n*, 489 U.S. 602, 625 (1989)).

⁸⁷ *Id.*

⁸⁸ *Id.*

⁸⁹ See Lowenberg, *supra* note 51, at 1316–17 (noting that DNA collected for identification and medical screening has been used for research analyses). "Law enforcement is also analyzing DNA, which was originally collected for identification, to show familial relationships." *Id.* at 1317.

⁹⁰ *Id.* at 1317 (quoting Jeffrey Rosen, *Genetic Surveillance for All*, SLATE (Mar. 17, 2009, 4:52 PM), <https://slate.com/news-and-politics/2009/03/genetic-surveillance-for-all.html>).

⁹¹ *Birchfield*, 136 S. Ct. at 2184.

⁹² *Id.* at 2184–85.

⁹³ *Id.* at 2185.

III. A SOLUTION OR YET ANOTHER PROBLEM? THE ARGUMENT AGAINST WARRANTLESS ROADSIDE SALIVA SWAB TESTING

Though warrantless saliva testing has not yet faced a constitutional challenge, its implementation has sparked concerns among commentators who recognize its potential for constitutional violations.⁹⁴ In fact, a representative of the National Motorists Association (NMA), in response to Michigan's implementation of the roadside testing program, went so far as to describe the saliva swab tests as "one of the most invasive methods of drug testing in the country," as "the test violates the [Fourth] Amendment."⁹⁵ Despite identifiable constitutional uncertainties, states continue to implement saliva swab testing programs at the expense of drivers' civil liberties and, in particular, Fourth Amendment privacy guarantees. According to the Commissioner of the Vermont Department of Public Safety, Thomas Anderson, the question of whether the saliva testing should require a warrant should be left to the courts, who "are uniquely qualified to make that determination."⁹⁶ It is my contention that the *Birchfield* Court, based on its predominant concern for informational privacy, would resoundingly answer that a warrant is required prior to conducting a saliva swab test.

A. *The Fourth Amendment Concerns: Saliva is More Like "Blood" Than "Breath"*

Proceeding with the *Birchfield* decision as a framework for analysis, this Part advances the argument that saliva testing is more akin to blood testing than it is to breath testing.⁹⁷ Inherent in saliva testing are the same two

⁹⁴ See White, *supra* note 6 (noting that roadside saliva testing poses "serious due process and equal protection concerns," as "[r]oadside stops are considered seizures under the Fourth Amendment, and many factors contribute to whether or not a given seizure is legitimate"); Chloé White, *Roadside Saliva Testing Violates Civil Liberties and Offends Common Sense. Why is the Vermont Legislature Talking About it Again?*, ACLU VT. (Feb. 1, 2018, 9:30 AM), <https://www.acluvt.org/en/news/roadside-saliva-testing-violates-civil-liberties-and-offends-common-sense-why-vermont> (arguing that Vermont's proposed bill to implement saliva testing raises Due Process concerns and positing that "[s]aliva testing without a warrant is an infringement on personal privacy").

⁹⁵ Steph Willems, *Michigan's Roadside Drug-Testing Program Violates Constitutional Rights, Say Advocates*, TTAC (Aug. 2, 2016), <https://www.thetruthaboutcars.com/2016/08/michigans-roadside-drug-testing-program-violates-constitutional-rights-say-advocates/> (noting the potential evidentiary problems raised by saliva testing, quoting the NMA as saying that "a good saliva or oral fluid device to test for the presence of key drugs are not yet of evidential quality apparently"). "Because of the . . . apparent constitutional overreach, the NMA calls on Michigan to classify the saliva test on the same level as a blood test," meaning to require that law enforcement obtain a warrant before performing the buccal swab test. *Id.*

⁹⁶ Alan J. Keays, *Warrant Requirement for Saliva Testing Gets Cool Reception from Scott Administration*, VTDIGGER (Apr. 25, 2019), <https://vtdigger.org/2019/04/25/warrant-requirement-saliva-testing-gets-cool-reception-scott-administration/> ("The only question is whether [saliva swab testing] should be done with a warrant or without a warrant . . . that is a legitimate question," Anderson testified Thursday before the House Judiciary Committee. "To me, the courts are the ones that are uniquely qualified to make that determination . . .").

⁹⁷ *But see* John Flannigan, Stephen K. Talpins & Christine Moore, *Oral Fluid Testing for Impaired Driving Enforcement*, POLICE CHIEF, Jan. 2017, at 58, 61 ("[I]t is probable that the court will treat oral fluid drug testing the same way it has treated oral fluid DNA testing and breath testing. In other words,

concerns that worried the *Birchfield* Court in its Fourth Amendment analysis of warrantless blood testing: (1) saliva testing is intrusive, and (2) saliva tests provide law enforcement with a sample that can be preserved. These shared concerns (present in both blood and saliva testing) lead to the conclusion that warrantless saliva testing, particularly prior to arrest, would be ruled unconstitutional should it face constitutional scrutiny.

1. *More Intrusive Than a Breath Test?*

Though admittedly less intrusive than a blood test, which inevitably requires the piercing of skin, a buccal swab test is nevertheless invasive, especially when compared to a breath test.⁹⁸ First, a saliva test requires an officer to insert a swab into a person's mouth, thereby compromising an individual's bodily integrity.⁹⁹ A breathalyzer, by contrast, does not require entrance into the body. Additionally, saliva tests require "physical removal of oral fluids and DNA,"¹⁰⁰ just as a blood test requires extraction of blood. A breath test, however, does not entail the physical taking of a part of one's body. In fact, the Court has refused to recognize an individual's possessory interest in air exhaled from the lungs.¹⁰¹ But comparatively, a possessory interest in bodily fluids has been recognized.¹⁰² If, as this Note presumes, the *Birchfield* Court was worried about both bodily integrity and the extraction of fluids in which an individual has a possessory interest, saliva is more analogous to blood than to breath.

2. *Saliva Testing Creates a Sample that can be Preserved: Informational Dynamics and DNA Privacy*

Leaning on Pillar One of the *Birchfield* decision, entrenched in the *Birchfield* majority's analysis of the constitutionality of warrantless blood and breath testing is its underlying concern surrounding informational dynamics and DNA privacy. In comparing blood and breath tests, the Court gave considerable weight to the fact that breath tests do not create a sample ridden

it appears that law enforcement officers may obtain oral fluid samples for drug testing without needing to obtain a warrant, and states may pass laws criminalizing oral fluid test refusals.").

⁹⁸ *DUID—Driving Under the Influence of Drugs Just Took a Turn: NMA E-Newsletter #394*, NAT'L MOTORISTS ASS'N (July 31, 2016), <https://www.motorists.org/alerts/duid-driving-under-the-influence-of-drugs-just-took-a-turn-nma-e-newsletter-394/> (describing one state's saliva swab testing plan as "one of the most invasive methods of drug testing in the country").

⁹⁹ *Contra* Maryland v. King, 569 U.S. 435, 446 (2013) (quoting Winston v. Lee, 470 U.S. 753, 760 (1985)) ("A buccal swab is a far more gentle process than a venipuncture to draw blood. It involves but a light touch on the inside of the cheek; and although it can be deemed a search within the body of the arrestee, it requires no 'surgical intrusions beneath the skin.'").

¹⁰⁰ White, *supra* note 6.

¹⁰¹ *Birchfield v. North Dakota*, 136 S. Ct. 2160, 2177 (2016).

¹⁰² *Skinner v. Ry. Lab. Execs.' Ass'n*, 489 U.S. 602, 617 n.4 (1989) ("Taking a blood or urine sample might also be characterized as a Fourth Amendment seizure, since it may be viewed as a meaningful interference with the employee's possessory interest in his bodily fluids." (citing *United States v. Jacobsen*, 466 U.S. 109, 113 (1984))).

with information,¹⁰³ but strongly emphasized the wealth of information contained within a blood sample.¹⁰⁴ The Court noted the potential for abuse of that private, identifying information contained in a blood sample¹⁰⁵ and the lack of a comparable potential for abuse present in a simple breath test.

Like a blood test, DNA can be extracted from saliva¹⁰⁶ and later preserved via the buccal test swab. From that sample, additional information can be determined, “including the person’s entire genome.”¹⁰⁷ According to some scholars, this considerable invasion of privacy should require additional safeguards beyond probable cause¹⁰⁸—namely, the requirement of a warrant because of (1) the sacredness of an individual’s identifying information contained within their DNA and (2) the potential for later abuse by law enforcement.

i. DNA: A Wealth of Information

First, to emphasize the importance of DNA privacy, it is necessary to understand the volume of information contained within an individual’s unique DNA profile and the ways in which law enforcement can use—and potentially exploit—that information. DNA contains hereditary material and genes—the things that make a person individually unique.¹⁰⁹ These identifying features of DNA are particularly useful in the legal system, as DNA typing technology can be used to apprehend offenders.¹¹⁰ For instance, law enforcement officers can compare the DNA of a known person to DNA left at a crime scene by an unknown, unidentified offender. In the past decade alone, DNA evidence has advanced to identify criminals with incredible accuracy,¹¹¹ even with infinitesimal amounts of biological material.¹¹²

Expectedly, the advancements in and opportunities presented by DNA

¹⁰³ *Birchfield*, 136 S. Ct. at 2177 (“[B]reath tests are capable of revealing only one bit of information, the amount of alcohol in the subject’s breath.”).

¹⁰⁴ *Id.* at 2178.

¹⁰⁵ *Id.*

¹⁰⁶ Andrei Nedelcu, Note, *Blood and Privacy: Towards a “Testing-As-Search” Paradigm Under the Fourth Amendment*, 39 SEATTLE U. L. REV. 195, 214 (2015) (noting that DNA can be derived from a host of sources, including blood and saliva) (footnote omitted).

¹⁰⁷ Kiel Brennan-Marquez & Stephen E. Henderson, *Fourth Amendment Anxiety*, 55 AM. CRIM. L. REV. 1, 12 (2018). See also Lowenberg, *supra* note 51, at 1293–98 (explaining how variations in DNA, an information-rich material contained in every cell in our bodies, stores information about a subject’s identity, genealogy, and phenotype).

¹⁰⁸ Brennan-Marquez & Henderson, *supra* note 107, at 12 (“This potentially massive privacy invasion might be guarded against by laws . . . that restrict the extraction of such information.”).

¹⁰⁹ Jill Seladi-Schulman, *DNA Explained and Explored*, HEALTHLINE (Aug. 14, 2019), <https://www.healthline.com/health/what-is-dna#what-is-dna>.

¹¹⁰ COMM. ON DNA TECH. IN FORENSIC SCI., NAT’L RSCH. COUNS., *DNA TECHNOLOGY IN FORENSIC SCIENCE* 142–43 (1992).

¹¹¹ *Using DNA to Solve Crimes*, U.S. DEP’T JUST. ARCHIVES, <https://www.justice.gov/archives/ag/advancing-justice-through-dna-technology-using-dna-solve-crimes> (last updated Mar. 7, 2017).

¹¹² Stephen Mercer & Jessica Gabel, *Shadow Dwellers: The Underregulated World of State and Local DNA Databases*, 69 N.Y.U. ANN. SURV. AM. L. 639, 643 (2014) (“The biological properties of DNA make it an ideal piece of evidence for police to focus on when investigating crime. Only a miniscule amount of biological material is needed to produce the DNA profile that law enforcement uses to compare crime scene DNA to DNA collected from a known person.”).

technology prompted law enforcement to expand the collection and preservation of DNA samples from individuals and crime scenes.¹¹³ The expansion commenced with the creation of the Combined DNA Index System (CODIS), a national and state database of convicted offenders and arrestees.¹¹⁴ But as the aphorism often attributed to Voltaire famously stated, “with great power comes great responsibility.” Arguably, federal and state governments, equipped with the “great power” of DNA, have not held up their end of the bargain. Despite Congress’s initial objective of collecting DNA of individuals convicted of a limited set of felonies, DNA samples can now be collected from a wider range of offenders than ever before.¹¹⁵

While the expansion of CODIS has been integral in apprehending guilty offenders,¹¹⁶ the rapid growth of DNA collection is worrisome, particularly in the context of saliva swab testing. If law enforcement has a blatant interest in the collection of DNA (and in the expansion of DNA databases), will the court find itself increasingly willing to allow for warrantless saliva testing? Or, alternatively, are the *courts* the entity uniquely situated to take on the “great responsibility,” illustrated by the court’s exclusive power to issue warrants?¹¹⁷

ii. *Potential for Abuse: A Far-Fetched Reality or Recognized Truth?*

Second, on the topic of potential abuses, the same preservability concerns contemplated by the *Birchfield* Court exist with roadside saliva tests. Law enforcement officers could easily collect the saliva sample from a buccal swab and use it for other, potentially illegitimate, purposes, a reality (at least implicitly) contemplated by the *Birchfield* majority.¹¹⁸ In this realm of possibilities, a saliva sample could be used by law enforcement “to reliably compare the genetic profile of a known person with a genetic profile left at a crime scene by an unknown individual”¹¹⁹ or for collection and

¹¹³ *Id.* at 647.

¹¹⁴ *Id.* For more information on CODIS, which is beyond the purview of this Note, see DNA Analysis Backlog Elimination Act of 2000, 42 U.S.C. § 14135 (2000) (codifying congressional authorization to create a CODIS database for DNA samples).

¹¹⁵ Mercer & Gabel, *supra* note 112, at 652 (“In 2000, Congress . . . required DNA collection and analysis from individuals convicted of a limited set of federal offenses. Congress extended that requirement in 2004 to all individuals convicted of federal felonies. In 2004, Congress expressly permitted the FBI to accept into the national DNA databank DNA profiles of arrested individuals. In 2005 and 2006, Congress extended federal DNA testing to all arrestees. Similarly, today all fifty states require DNA collection from all individuals convicted of felonies, and twenty-eight states require DNA collection and analysis from at least some arrestees.”).

¹¹⁶ Valerie Ross, *Forget Fingerprints: Law Enforcement DNA Databases Poised to Expand*, NOVA (Jan. 2, 2014), <https://www.pbs.org/wgbh/nova/article/dna-databases/>.

¹¹⁷ See discussion *infra* Section III.C (discussing how warrants “help” the reliability problem).

¹¹⁸ See Brennan-Marquez & Henderson, *supra* note 107, at 11 (“[T]he Court is effectively saying that legal ‘preclusion’ of subsequent use of the blood sample does not suffice to extinguish the anxiety that accompanies collection. In other words, the ‘potential’ imagined by the Court is the potential of *unauthorized* testing . . . Why is this so radical? Because judges are not normally in the business of protecting citizens against potential intrusions of privacy *that are already prohibited by law.*”).

¹¹⁹ Nedelcu, *supra* note 106, at 214 (footnote omitted).

storage in a DNA database, like CODIS.¹²⁰ Without a warrant requirement to safeguard such integrally private information against possible police indiscretions, there is simply no limit to the number of samples law enforcement could obtain, particularly those extracted under the auspices of a “routine DUID stop.”¹²¹

Essentially, if the *Birchfield* majority’s true worry about warrantless blood testing was improper and unfettered access to DNA, as well as the potential for misuse of a DNA sample, saliva swab testing presents identical concerns. For these reasons, in order to comply with constitutional requirements, as stated by *Birchfield*, law enforcement should be required to procure a warrant before performing a saliva test.

B. Addressing Counterarguments

1. What About *Maryland v. King*?

One potential source of confusion (and surface-level “ripple”) in this *Birchfield* framework is the Supreme Court’s *Maryland v. King* decision. In *King*, the Court held that taking a cheek swab to verify a person’s identity through DNA testing is a legitimate booking procedure and, therefore, permissible under the Fourth Amendment, even absent a warrant.¹²² To reach its conclusion, the Court employed the traditional Fourth Amendment reasonableness analysis in order to ultimately determine whether the collection of DNA (via buccal swab) of those arrested for a serious crime violated the Fourth Amendment.¹²³ The Court found that although swabbing an arrestee’s cheek constituted a search within the meaning of the Fourth Amendment, both the minimal intrusion and an arrestee’s diminished expectation of privacy—coupled with the strong government interest in identifying arrestees—weighed strongly in favor of collecting DNA samples.¹²⁴

On the surface, *King* may be of use to proponents of warrantless saliva testing, as it suggests that once an individual is arrested, law enforcement has the power to engage in—what it termed—a “minimal” bodily intrusion that is authorized for purposes of identification during an arrest. Additionally, potentially hopeful for buccal swab proponents, in *King*, the government succeeded in convincing the Court that there were persuasive reasons to allow it to collect DNA samples absent a warrant.¹²⁵ Though a

¹²⁰ *Id.* “Even where an individual is never prosecuted or convicted of a crime, a significant number of states now have statutory schemes authorizing the warrantless DNA sampling of certain arrestees.” *Id.* at 215.

¹²¹ See discussion *infra* Section III.D.2 (discussing the Equal Protection concerns raised by warrantless saliva swab testing).

¹²² *Maryland v. King*, 569 U.S. 435, 465–66 (2013). Note that it is the Court’s holding in *King* that underlies Flannigan, Talpins, and Moore’s argument that the Court will treat saliva testing like breath testing. Flannigan, Talpins & Moore, *supra* note 97, at 61.

¹²³ *King*, 569 U.S. at 461.

¹²⁴ *Id.* at 462–64.

¹²⁵ *Id.* at 465–66.

Maryland v. King-style argument might have been compelling immediately post-*King*, there are important distinctions, particularly post-*Birchfield*, that would preempt a proponent of saliva testing from advancing such an argument.

At a foundational level, because warrantless saliva swab testing is generally conducted prior to a valid arrest, the search-incident-to-arrest exception to the warrant requirement is inapplicable.¹²⁶ The *King* holding applies to *arrestees*, whereas warrantless roadside saliva testing is generally conducted as part of a field sobriety test, before an individual has been apprehended and before there is sufficient evidence to arrest.¹²⁷ Because the saliva swab precedes an arrest, *King* is largely unusable to proponents of warrantless saliva testing; because the buccal swabs are taken before a valid arrest, the search-incident-to-arrest exception to the warrant requirement is inapplicable, and the government must offer some other well-delineated exception to the warrant requirement to justify its search and seizure.

However, even if states were to conduct the saliva swab testing post-arrest, it is the *Birchfield* Court's concern about DNA privacy and protection of informational dynamics—a concern ironically shared by Justice Scalia in his *Maryland v. King* dissent¹²⁸—that precludes the government from using any *Maryland v. King*-style argument to attempt to circumvent the warrant requirement. Because of the *Birchfield* Court's worries about unchecked police access to DNA information,¹²⁹ any potential expansion of *Maryland v. King* to extend the circumvention of the Fourth Amendment warrant requirement (to individuals undergoing a field sobriety test, or those stopped at a routine traffic stop, or any other similar permutation) would be irreconcilable with *Birchfield*. After *Birchfield*, where the distinction between blood and breath tests largely boiled down to the preservability of the sample and potential for misuse of that sample, the Court would likely be unwilling to allow yet another exception to the warrant requirement where, again, law enforcement could collect a sample that can be preserved and has the potential to be exploited by the government.

¹²⁶ *Knowles v. Iowa*, 525 U.S. 113, 118–19 (1998) (adopting a “bright-line rule” that the search-incident-to-arrest exception to the warrant requirement applies only when there is an actual arrest).

¹²⁷ It is for this reason that I contend Flannigan, Talpins, and Moore misinterpreted the *Maryland v. King* decision by conflating “taking a cheek swab to verify a person’s identity through DNA testing” with an oral saliva test conducted as part of a field sobriety test. Flannigan, Talpins & Moore, *supra* note 97, at 61.

¹²⁸ Justice Scalia’s dissent interestingly foreshadows some of the Court’s concerns in *Birchfield*. Justice Scalia takes issue with the majority’s elaboration of the ways in which the DNA sample served the special purpose of “identifying” King, but for Justice Scalia, that “identifying” was really “searching for evidence that [King] ha[d] committed crimes unrelated to the crime of his arrest.” *King*, 569 U.S. at 469–70 (Scalia, J., dissenting) (“Searching every lawfully stopped car, for example, might turn up information about unsolved crimes the driver had committed, but no one would say that such a search was aimed at ‘identifying’ him, and no court would hold such a search lawful.”). Justice Scalia argued that the government’s primary purpose was not “identification” at all, as the actual DNA testing at issue in *King* did not begin until after arraignment and bail decisions were already made. *Id.* at 475–76.

¹²⁹ See discussion *supra* Section III.A.2 (detailing the *Birchfield* Court’s concerns surrounding warrantless blood testing).

2. *What About Exigency?: Arguing for a Categorical Rule*

A common concern among law enforcement, understandably, is the reliability and probativeness of evidence. Clearly, in the majority of DUI and DUID cases, time is of the essence, as both alcohol and active THC levels dissipate over time.¹³⁰ However, as discussed in a previous section, the chemical properties of cannabis render the exigency argument much less persuasive and even, perhaps, unworkable.¹³¹

Nevertheless, assuming an exigency argument can actually be made, this style of argument is preempted post-*Birchfield* (and even post-*McNeely*).¹³² The exigency argument posed by the evanescence of alcohol and drugs cannot stand to justify a per se rule. Still, the exigent circumstances “carve out,” where the Court reasoned that a warrantless search is permissible “when an emergency leaves police insufficient time to seek a warrant,”¹³³ persists. However, in the realm of warrantless saliva testing, this exception would only apply to a narrow subset of unique cases, further solidifying the “exigent circumstances exception”¹³⁴ as just that, an *exception*, not the universal rule.

C. *Warrants and the Reliability Problem: Why are Warrants Important?*

Having laid out the Fourth Amendment analysis and *Birchfield* framework, yet before proceeding onward to the “solution,” we must shift the discussion and unpack the “why” behind the warrant requirement. Namely, why are warrants so important, and why do they help the “reliability” problem? What is it about the procurement of a warrant that

¹³⁰ See *Alcohol (BAC, Gender, etc)*, AAA, <https://duijusticelink.aaa.com/for-the-public/get-educated/alcohol/> (last visited Mar. 1, 2020) (“On average, BAC is eliminated from the body at a rate of .015–.017% per hour.”); Priyamvada Sharma, Pratima Murthy & M.M. Srinivas Bharath, *Chemistry, Metabolism, and Toxicology of Cannabis: Clinical Implications*, 7 *IRANIAN J. PSYCHIATRY* 149, 151–52 (2012) (noting that the concentration of delta-tetrahydrocannabinol, the most psychoactive component of cannabis, “decreases to 1-4 ng/mL within 3-4 hour[s]”).

¹³¹ For more detail on the chemical properties of cannabis, including information about its fat solubility, see discussion *supra* Section I.A.

¹³² In *McNeely*, the Court held that the natural dissipation of alcohol from the bloodstream does not always constitute an exigency justifying the warrantless taking of a blood sample. *Missouri v. McNeely*, 569 U.S. 141, 165 (2013). Though the Court in *Schmerber v. California*, 384 U.S. 757 (1966), had previously deemed constitutional the warrantless taking of a blood sample from a defendant suspected of driving under the influence, the *McNeely* Court carefully cautioned that this does not mean that the warrantless taking of a blood draw is always constitutionally permissible, thereby rejecting a categorical rule. *McNeely*, 569 U.S. at 152. Accordingly, in circumstances where law enforcement can reasonably obtain a warrant before a blood sample, “the Fourth Amendment [requires] that they do so.” *Id.* The *McNeely* Court also recognized the array of changes since *Schmerber* was decided. *Id.* at 154–55 (noting that federal magistrate judges can consider information communicated by phone to issue a warrant; states have innovated to allow law enforcement or prosecutors to “apply for search warrants remotely through . . . telephonic or radio communication, electronic communication such as e-mail, and video conferencing”; and jurisdictions have found other ways to streamline the warrant process, such as by using form warrant applications for drunk driving cases).

¹³³ *Birchfield v. North Dakota*, 136 S. Ct. 2160, 2173 (2016) (citing *Michigan v. Tyler*, 436 U.S. 499, 509 (1978)).

¹³⁴ *Id.* at 2173.

eases our concerns about police misconduct? And even more fundamentally, why is it so important to advocate for a *warranted* roadside saliva test?

The answer to these questions primarily lies in the constitutional requisite that a warrant may only be issued by a “neutral and detached magistrate” capable of determining whether probable cause exists.¹³⁵ Naturally divorced from the situation, the judge can appropriately determine whether or not probable cause exists, sufficient to justify the issuing of the desired warrant. Aptly put by the Court in *Johnson v. United States*:

The point of the Fourth Amendment . . . is not that it denies law enforcement the support of the usual inferences which reasonable men draw from evidence. Its protection consists in requiring that those inferences be drawn by a neutral and detached magistrate instead of being judged by the officer engaged in the often competitive enterprise of ferreting out crime.¹³⁶

The warrant requirement, in effect, acts as a “check” on law enforcement, a check necessary to ensure neutrality, objectivity,¹³⁷ and accuracy (meaning that sufficient evidence exists to permit the sought-after search).

Particular to the case of saliva swab testing, warrants ease the worry that law enforcement might swab an alleged DUID suspect for improper, illicit reasons or obtain a driver’s DNA sample with the purpose of later misusing it. Because an officer needs probable cause before submitting a warrant application, it is presumed that law enforcement will have a sufficient belief, based on actual evidence, that a motorist is under the influence. We hope that a law enforcement officer would not submit a frivolous request before a magistrate.¹³⁸ But even if the officer did submit a warrant application without sufficient basis, it is the “check” of the warrant requirement that ensures that the neutral magistrate will not issue the warrant.

Additionally, the warrant requirement helps ensure that police use the desired saliva swab for its true purpose—identifying whether an individual is impaired—as there must be a “nexus . . . between the item to be seized and the criminal behavior.”¹³⁹ Officers cannot request a saliva sample at a routine DUID stop for the purposes of obtaining a DNA sample to run through CODIS, for example. The nexus requirement, too, is bolstered by the particularity requirement (namely, that the warrant must describe the

¹³⁵ *Johnson v. United States*, 333 U.S. 10, 13–14 (1948).

¹³⁶ *Id.*

¹³⁷ *See Steagald v. United States*, 451 U.S. 204, 212 (1981) (noting that the warrant requirement is necessary because law enforcement “may lack sufficient objectivity to weigh correctly the strength of the evidence supporting the contemplated action against the individual’s interests in protecting his own liberty . . .”).

¹³⁸ *See Aguilar v. Texas*, 378 U.S. 108, 114–15 (1964) (noting that an officer’s own suspicions or beliefs, by themselves, are not sufficient to establish probable cause).

¹³⁹ *The Warrant Requirement*, 46 GEO. L.J. ANN. REV. CRIM. PROC. 3, 26 (2017) (quoting *Warden v. Hayden*, 387 U.S. 294, 307 (1967)).

place to be searched and the persons or things to be seized),¹⁴⁰ effectively safeguarding drivers “against ‘the wide-ranging exploratory searches the Framers . . . intended to prohibit.’”¹⁴¹

And finally, in the modern world, where the uses of DNA span the gamut and continue to grow, it is important to secure and enforce our rights to our genetic information. Allowing the government to effectively chip away at these rights—through warrantless saliva tests or the like—allows for governmental intrusion into a private sphere deserving of Fourth Amendment protection. Fighting for a warrant prior to roadside saliva testing is imperative, as the fight demonstrates to our leaders that there must be a “check” before police can essentially take and preserve a driver’s genetic profile.

D. *Associated Problems with Saliva Swab Testing: A Brief Survey*

Beyond Fourth Amendment privacy concerns, commentators have noted a wide range of potential issues when it comes to warrantless roadside saliva testing. The following section will consist of a brief survey of some of these trepidations, including issues with the reliability of the testing devices (and accompanying evidentiary concerns surrounding the roadside test’s ability to pass *Daubert*),¹⁴² as well as potential Equal Protection violations exacerbated by the circumvention of the warrant requirement.

1. *Unreliability Concerns Spawn Evidentiary Concerns*

Researchers have raised concerns over the reliability of roadside saliva testing.¹⁴³ A study conducted by the University of Sydney found that THC testing devices often failed to detect high amounts of THC but sometimes produced positive readings for exceptionally low levels of THC.¹⁴⁴ The study, which examined two commonly used saliva testing devices in Australia, found that the tests yielded both false positives and negatives at significant rates.¹⁴⁵ The Draeger DrugTest 5000, one of the two saliva testing devices utilized in the United States, produced false positive readings (when

¹⁴⁰ FED. R. CRIM. P. 41(e)(2) (“[T]he warrant must identify the person or property to be searched, identify any person or property to be seized, and designate the magistrate judge to whom it must be returned.”).

¹⁴¹ *The Warrant Requirement*, *supra* note 139, at 33 (quoting *Maryland v. Garrison*, 480 U.S. 79, 84 (1987)).

¹⁴² *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579 (1993).

¹⁴³ In fact, the Vermont legislature recently rejected a bill which would allow police officers to conduct warrantless roadside saliva tests on DUID suspects, largely because the “saliva tests have been proven to be only partially effective.” Xander Landen, *Vt. House Rejects Warrantless Saliva Tests, Defying Scott’s Terms for Legal Pot Market*, VALLEY NEWS (Feb. 28, 2020, 10:33 PM), <https://www.vnews.com/Vermont-House-rejects-warrantless-saliva-tests-defying-Scott-s-terms-for-legal-pot-market-33000369>. Representative Nader Hashim, an opponent of the bill, commented, “Vermonters aren’t guinea pigs to try out new tools that have not been accepted by the wider scientific community.” *Id.*

¹⁴⁴ Sarah Keogh, *Mobile Cannabis Tests on Drivers Gave Inaccurate Results, Researchers Say*, SYDNEY MORNING HERALD (Sept. 12, 2019, 4:09 PM), <https://www.smh.com.au/national/nsw/mobile-cannabis-tests-on-drivers-gave-inaccurate-results-researchers-say-20190912-p52qm6.html> (noting that senior author of the study, Iain McGregor, deemed the devices “wildly inaccurate”).

¹⁴⁵ *Id.*

THC concentrations were very low or negligible) 10% of the time and a false negative result 9% of the time.¹⁴⁶ A review of a Michigan county's saliva testing pilot program revealed similar concerns.¹⁴⁷ Despite accolades concluding the roadside instruments "performed well," the roadside tests sometimes showed the presence of drugs that were not present in the follow-up blood tests.¹⁴⁸ Specifically, this phenomenon occurred in eleven of the seventy-four tests for active THC.¹⁴⁹

Further, according to the researchers from the University of Sydney study,¹⁵⁰ whether a cannabis user tests positive roadside might also depend on the make-up of the individual's saliva.¹⁵¹ This poses a serious problem for assessing the tests' reliability. Remarkably, researchers observed that a user might avoid a positive THC reading by the manner in which they use their drugs.¹⁵² According to Professor Iain McGregor, the senior author of the study, "[i]f [someone] were to take THC capsules, then no THC goes into [the] saliva; it just goes straight into . . . [the] bloodstream. . . . [A user] could take 10 of these and be completely intoxicated with THC and it wouldn't come up in [a] saliva [swab test]."¹⁵³

These inaccuracy concerns elucidate yet another problem with roadside saliva testing. If the test is inaccurate in testing for the presence of THC, and if there is no scientifically reliable, standard level of THC in the body that can be associated with driver impairment,¹⁵⁴ what purpose does the roadside saliva test actually serve?

Unreliability problems surrounding the testing devices are not only problematic on a surface level, but also on an evidentiary level, like whether the roadside testing devices meet the *Daubert* evidentiary standard. Among other factors, when determining whether a methodology is valid, a court may

¹⁴⁶ *Id.* The other device tested was the Securetec DrugWipe, which gave a false positive reading 5% of the time and gave a false negative reading 16% of the time. *Id.*

¹⁴⁷ See generally Amy Biolchini, *Marijuana Most Prevalent Drug in Michigan Roadside Testing, Police Find*, MLIVE (Feb. 22, 2019), <https://www.mlive.com/news/2019/02/marijuana-most-prevalent-drug-in-michigan-roadside-testing-police-find.html> (describing the results of Washtenaw County's roadside saliva test pilot program). See also Sean Boynton, *Roadside Drug Testing Device Picks Up False Positives from Poppy Seeds and Tea, B.C. Lawyers Find*, GLOBAL NEWS (May 5, 2019, 7:00 PM), <https://globalnews.ca/news/5242672/drager-roadside-tester-false-positives/> (reporting a Canadian study that found that the Drager was unable to differentiate between THC, the psychoactive component of cannabis, and CBD, the non-psychoactive component used for medical treatment and pain relief).

¹⁴⁸ Biolchini, *supra* note 147.

¹⁴⁹ *Id.* The same occurred in six of the sixteen tests for amphetamines, in two of the seven tests for cocaine, and in one of the three tests for methamphetamines. *Id.*

¹⁵⁰ For more information on the study, see Thomas R. Arkell, Richard C. Kevin, Jordyn Stuart, Nicholas Lintzeris, Paul S. Haber, Johannes G. Ramaekers & Iain S. McGregor, *Detection of Δ^9 THC in Oral Fluid Following Vaporized Cannabis with Varied Cannabidiol (CBD) Content: An Evaluation of Two Point-of-Collection Testing Devices*, 11 DRUG TESTING & ANALYSIS 1486 (2019), <https://onlinelibrary.wiley.com/doi/epdf/10.1002/dta.2687>.

¹⁵¹ Keoghan, *supra* note 144.

¹⁵² *Id.*

¹⁵³ *Id.*

¹⁵⁴ See discussion *supra* Section I.A (discussing the uniqueness of THC and its metabolization in the body, coupled with gaps in research, which pose problems for states that endeavor to create some type of standard).

consider: whether the methodology has been tested, whether it has been subjected to peer review and publication, its known or potential rate of error of the method, the existence and maintenance of standards controlling the method's operation, and its general acceptance in the relevant scientific community.¹⁵⁵ Using these factors as a framework, it is clear that saliva testing may face trouble with the courts. The reported error rate, mentioned above, coupled with the lack of an agreed-upon scientific standard (preventing the maintenance of standards), are just some of the associated *Daubert* concerns.

2. Equal Protection Concerns

Another common concern surrounding warrantless saliva swab testing is the potential for covert Equal Protection violations. On one hand, because the saliva tests will also detect commonly prescribed medications (like anti-depressants and pain management medicines), they may result in prolonged interrogations, searches, and seizures of drivers with disabilities or mental health conditions.¹⁵⁶ Commentators note that “[t]his is the essence of disparate and unequal treatment – people with any presence of those particular drugs in their system are always going to be seized for a longer time, no matter their actual impairment.”¹⁵⁷

From a racial justice perspective, warrantless saliva testing poses additional problems, as people of color are more likely to be stopped than white drivers.¹⁵⁸ Therefore, more likely than not, people of color will be subjected to roadside testing at a disproportionate rate, as well.¹⁵⁹ Scholars have noted that an officer's own perceptions, usually based on the officer's biases, are indicative of whether an officer will decide to stop a particular driver.¹⁶⁰ Further, officers' ability to stop individuals based on pretext “makes it easy for an officer to construct a legal basis of investigating virtually anyone in a vehicle because of the sheer scope of traffic regulations.”¹⁶¹

For this reason, law enforcement often “use traffic stops to enforce laws unrelated to traffic violations, such as drug laws.”¹⁶² Accordingly, officers will stop drivers who fit within their preconceived notions of a “drug courier[.]”

¹⁵⁵ *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 593–94 (1993).

¹⁵⁶ White, *supra* note 6.

¹⁵⁷ *Id.*

¹⁵⁸ *Id.*; see also SENT'G PROJECT, REPORT OF THE SENTENCING PROJECT TO THE UNITED NATIONS SPECIAL RAPPORTEUR ON CONTEMPORARY FORMS OF RACISM, RACIAL DISCRIMINATION, XENOPHOBIA, AND RELATED INTOLERANCE 5 (2018) (“In recent years, black drivers have been somewhat more likely to be stopped than whites but have been far more likely to be searched and arrested. . . . [P]olice are more likely to stop black and Hispanic drivers for discretionary reasons—for ‘investigatory stops’ Once pulled over, black and Hispanic drivers were three times as likely as whites to be searched (6% and 7% versus 2%) and blacks were twice as likely as whites to be arrested.”).

¹⁵⁹ White, *supra* note 6.

¹⁶⁰ Rachel Cox, Note, *Unethical Intrusion: The Disproportionate Impact of Law Enforcement DNA Sampling on Minority Populations*, 52 AM. CRIM. L. REV. 155, 163 (2015).

¹⁶¹ *Id.* (internal quotations and footnote omitted).

¹⁶² *Id.*

which may include racial classifications.¹⁶³ The “stop” then effectively becomes an opportunity to conduct a warrantless search under the guise of a normal, routine traffic stop. In sum, warrantless roadside tests effectively broaden police search and arrest powers, thereby increasing the chance that racial disparities in traffic stops, searches, and arrests will persist and worsen.

IV. PROPOSED SOLUTIONS: EMBRACING CREATIVITY AND MOVING TOWARDS INNOVATION

Having established the array of potential problems posed by warrantless roadside saliva swab testing, the question remains—how can states apprehend suspected drugged drivers while simultaneously complying with constitutional mandates? The answer to that question involves a dynamic shift—a paradigmatic change in how we think about the Fourth Amendment—complemented by a general movement toward innovation.

A. *The Drawbacks of Probable Cause Formalism & Moving Towards a Holistic Reasonableness Analysis*

Generally, when analyzing, post hoc, whether a given warrantless search was justified, courts engage in the standard probable cause analysis. Per the analysis, when reviewing a warrantless search or seizure, the court will determine whether the respective search or seizure was carried out “upon a belief, reasonably arising out of circumstances known to the seizing officer”¹⁶⁴—namely, upon a belief of probable cause. So, if law enforcement can articulate a justifiable reason for conducting a search or seizure—notwithstanding whether it is a “good” reason—the search or seizure will stand.

This formalistic framework is problematic. Professor Josh Bowers, in calling for a “two-ply . . . reasonableness test” in place of the legalistic probable cause analysis,¹⁶⁵ raised one major problem with traditional probable cause doctrine: its capacity to provide a “safe harbor” for law enforcement.¹⁶⁶ Professor Bowers wrote:

[O]fficers with probable cause retain terrific discretion to choose when, whether, and how to act. . . . [P]robable cause . . . also empowers. . . . [I]t thereby . . . produce[s] an identifiable domain of choice within which a law enforcer may “define the law” that he wishes to enforce. . . . [P]robable cause . . .

¹⁶³ *Id.*

¹⁶⁴ *Carroll v. United States*, 267 U.S. 132, 149 (1925).

¹⁶⁵ Josh Bowers, *Probable Cause, Constitutional Reasonableness, and the Unrecognized Point of a “Pointless Indignity”*, 66 STAN. L. REV. 987, 995 (2014). Professor Bowers’s two-ply test requires that “an arrest . . . be supported by *both* probable cause *and* general reasonableness (with a fair, but not full, measure of deference to the arresting officer).” *Id.*

¹⁶⁶ *Id.* at 1031–32.

describe[s] “a means of insulating officials” from legal challenges to searches and seizures.¹⁶⁷

And, according to Professor Bowers, this wide exercise of law enforcement discretion is inadequately “checked” by the courts.¹⁶⁸ Other commentators have recognized a need for *more*—beyond a showing of probable cause—to support a post hoc justification for a warrantless search or seizure, recognizing the dangers inherent in such an immense grant of law enforcement power. Professor William J. Mertens, for instance, cautioned that overly broad discretionary search and seizure power can be used to discriminate against people in ways that contradict both the constitutional order and public policy.¹⁶⁹ Such latitude afforded to officers permits unreasonable searches and seizures, often offending “rights and values that are found outside the fourth amendment itself.”¹⁷⁰

Recognizing these dangers, consistent with the position advocated for by Professor Bowers, the true focus, the epicenter, of the Fourth Amendment analysis should be the “reasonableness” of the respective warrantless search and seizure. Professor Bowers envisions a two-ply test with a focus on reasonableness, requiring officers to provide just that: a reason. Under typical Fourth Amendment analysis, “probable cause means never having to give a reason.”¹⁷¹ But under Professor Bowers’s alternative approach, as part of the analysis, the officer would be required to provide “satisfactory qualitative reasons for the . . . action taken.”¹⁷² At minimum, at this juncture, an officer must communicate “a nonarbitrary reason for the peacekeeper’s action.”¹⁷³ Though, here, there is certainly potential for abuse, the need to articulate a reason stands as, at minimum, a “check” on this relatively “unchecked” grant of law enforcement power.

For the purposes of this Note, adopting the view that “reasonableness” is the appropriate framework for analyzing the constitutionality of Fourth Amendment practices, then the methods and techniques employed by police are equally as important as any one individual search and seizure. If we truly envision a Fourth Amendment analysis centered on reasonableness, then we, too, care about which technique—among those available—police use to carry out a given search or seizure. We care to ensure that the actual method—the procedure—is reasonable, or “nonarbitrary”¹⁷⁴ or a product of “equitable discretion.”¹⁷⁵ We care, as did the Court in *Birchfield*, about the least intrusive

¹⁶⁷ *Id.* at 1032–33 (footnotes omitted).

¹⁶⁸ *Id.* at 1033.

¹⁶⁹ William J. Mertens, *The Fourth Amendment and the Control of Police Discretion*, 17 U. MICH. J.L. REFORM 551, 564 (1984).

¹⁷⁰ *Id.*

¹⁷¹ Bowers, *supra* note 165, at 1001.

¹⁷² *Id.* at 1028.

¹⁷³ *Id.*

¹⁷⁴ *Id.*

¹⁷⁵ *Id.* at 1029.

means to the same end.¹⁷⁶ And, as argued below, absent an existing solution, it is the duty of the legal innovator to come up with new, constitutionally permissible, “reasonable” solutions to the drugged driving epidemic.

B. *A Means to an End: Expanding Current Techniques and Encouraging Creativity*

Guided by the *Birchfield* Court, and Professor Bowers’s emphasis on the “reasonableness” of a given warrantless search and seizure, I hypothesize that the answer to the cannabis-impaired driving problem is threefold and involves the interposition of three things: (1) the maintenance and expansion of current procedures, (2) designated research, federally, and (3) a general movement towards innovation.

Currently, states nationwide use a standard field sobriety test, the Drug Recognition Expert (DRE) protocol, to determine whether a DUID suspect is impaired.¹⁷⁷ The DRE protocol is a twelve-step process including a breath test, an interview with the officer, an eye examination, and a series of psychophysical tests.¹⁷⁸ DREs, who conduct these examinations, are specially trained officers who are qualified to identify signs of impairment in drivers who are under the influence of drugs.¹⁷⁹ It is left to the discretion of the states and individual departments to decide how many DREs to employ, but the DOT advocates for *all* law enforcement personnel to receive training to help officers properly identify impaired drivers.¹⁸⁰ One solution to apprehending drugged drivers, then, is to train more officers to become DRE-certified and recognize the signs of a drugged driver through the twelve-step DRE protocol. If an officer can quickly and efficiently make the determination that someone is impaired (and subsequently make a probable cause determination), they can expediently apply for a warrant to require the suspect to submit to a toxicological exam, which will provide reliable, admissible evidence to support the DRE’s opinion. Additionally, the DOT recommends developing a field sobriety test—a special iteration of the

¹⁷⁶ *Birchfield v. North Dakota*, 136 S. Ct. 2160, 2185 (2016) (“Because breath tests are *significantly less intrusive than blood tests and in most cases amply serve law enforcement interests*, we conclude that a breath test, but not a blood test, may be administered as a search incident to a lawful arrest for drunk driving.”) (emphasis added).

¹⁷⁷ *12 Step Process*, INT’L ASS’N CHIEFS POLICE, <https://www.theiacp.org/12-step-process> (last visited Jan. 15, 2020).

¹⁷⁸ *Id.*

¹⁷⁹ *Drug Recognition Experts (DREs)*, INT’L ASS’N CHIEFS POLICE, <https://www.theiacp.org/drug-recognition-experts-dres> (last visited Jan. 15, 2020).

¹⁸⁰ NAT’L HIGHWAY TRAFFIC SAFETY ADMIN., GOVERNORS HIGHWAY SAFETY ADMIN. & VOLPE NAT’L TRANSP. SYS. CTR., *IMPACT OF THE LEGALIZATION AND DECRIMINALIZATION OF MARIJUANA ON THE DWI SYSTEM 5* (2017), https://www.ghsa.org/sites/default/files/2017-06/ncrep_062617.pdf [hereinafter *IMPACT OF LEGALIZATION*]. The DOT emphasizes the importance in training in Standardized Field Sobriety Testing, Advanced Roadside Driving Enforcement, and Drug Evaluation and Classification. *Id.*

standardized twelve-step DRE protocol—specifically for cannabis,¹⁸¹ as cannabis impairment is largely distinctive from alcohol impairment.¹⁸²

One major impediment in the traditional twelve-step DRE protocol, as applied to cannabis impairment, is the absence of a breathalyzer equivalent for cannabis. Should a breathalyzer equivalent be developed to test for the presence of THC, the *Birchfield* privacy concerns would fall away, as the Court held that warrantless breath tests are constitutionally permissible. Luckily for Fourth Amendment advocates, scientists have been working to create a cannabis breathalyzer, which is expected to premiere in 2021.¹⁸³ According to Hound Labs, the device will show whether a driver had smoked weed in a three-hour period before driving.¹⁸⁴ Whether or not the device will be able to detect levels of impairment, and, if so, how it will determine if a driver is impaired at that particular THC concentration, is unclear. However, these uncertainties and gaps in knowledge can only be rectified by more robust research.

One major obstacle to states' endeavors to conduct this "robust research" has, ironically, been the federal government. Because the federal government classifies cannabis as a Schedule I drug, research on cannabis or THC is "highly restricted" and even "discouraged" in some instances.¹⁸⁵ For this reason, scientists have been hindered in conducting high-quality research,¹⁸⁶ a clear roadblock to proposing solutions to drugged driving. If there is any chance in regulating drugged driving—and informing the public on how to safely use cannabis (for instance, how long one must wait before using cannabis and subsequently driving)—more research must be devoted to the topic. State legislators must demand that the federal government address this pressing issue before it becomes a true nationwide crisis.

Finally, and relatedly, researchers have noted the wide array of problems surrounding the regulation of cannabis. Its chemical properties, coupled with its varied effect on individual users, have posed challenges for scientists, as well as for states that have attempted to develop a per se level of impairment. However, these challenges should not deter scientists and lawmakers alike

¹⁸¹ *Id.* at 11.

¹⁸² See *supra* notes 17–19 and accompanying text. Noting gaps in education and awareness surrounding cannabis impairment, the DOT also recommends that the federal and state governments "conduct 'wet labs' to train and educate law enforcement, prosecutors, judges, and the media about the broad spectrum of marijuana types and users." IMPACT OF LEGALIZATION, *supra* note 180, at 12.

¹⁸³ See *Wait List*, HOUND LABS, <https://houndlabs.com/wait-list/> (last visited Jan. 27, 2021) (noting that Hound Labs "currently anticipate[s] that initial units will be available in 2021").

¹⁸⁴ Jim Guy, *Driving While Stoned? Marijuana Breathalyzers Expected to Hit the Street in 2020*, SACRAMENTO BEE (Sept. 12, 2019, 1:33 PM), <https://www.sacbee.com/news/california/california-weed/article234714067.html>.

¹⁸⁵ Marisa Taylor & Melissa Bailey, *Medical Marijuana's 'Catch-22': Limits on Research Hinder Patient Relief*, NPR (Apr. 7, 2018, 7:00 AM), <https://www.npr.org/sections/health-shots/2018/04/07/60209754/medical-marijuanas-catch-22-limits-on-research-hinders-patient-relief>.

¹⁸⁶ *Id.* Dr. Orrin Devinsky, director at New York University's Comprehensive Epilepsy Center, commented, "We have the federal government and the state governments driving a hundred miles an hour in the opposite direction when they should be coming together to obtain more scientific data." *Id.*

from developing a cannabis DUID solution. It is the job of the lawyer, the policymaker, and the scientist to move towards a world of innovation and not to shy away from creative solutions. The *Birchfield* Court's message in steering law enforcement towards "less intrusive" means is part of the broader principle—a principle that the law should strive for creative solutions despite the surrounding growing pains. Though the regulation of cannabis-impaired driving may be difficult today, continued education and research will inevitably lead to new solutions. And it is the duty of the courts, in this quest for knowledge, to hold law enforcement accountable—to remind officers that law enforcement convenience is irrelevant to the Fourth Amendment question—and to encourage creativity despite an arduous road ahead.

CONCLUSION

While roadside safety is undoubtedly an important state interest, and drugged driving is a problem that needs to be addressed, warrantless roadside saliva testing is not the solution. Though certainly alluring in some respects, the "appeal" of warrantless saliva tests is outweighed by the tests' fundamental erosion of individuals' Fourth Amendment privacy guarantees. Warrantless saliva swab tests are riddled with problems—from reliability concerns (namely, the potential for inaccurate readings) to an array of practical legal issues, including evidentiary and Equal Protection concerns. Most egregiously, however, warrantless saliva swab testing runs afoul of the *Birchfield* Court's central concerns about informational privacy and the potential for police misuse of DNA obtained without a warrant.

As a final response to the inevitable "combatting drugged driving is an important state interest" argument, I am reminded of the Court's words in *Maryland v. King*: "Urgent government interests are not a license for indiscriminate police behavior."¹⁸⁷

Extending this logic to the saliva swab testing context before us, it becomes apparent that the "urgency" of the drugged driving problem does not justify the sacrifice of a driver's constitutional, civil, and informational rights, a sacrifice that cannot be divorced from warrantless saliva swab testing. If states are to truly work towards a solution to address cannabis-impaired driving, it is *innovation* and *education* that stand as the greatest sources of promise. And ultimately, it is the duty of the courts to ensure that—in pursuit of apprehending drugged drivers—law enforcement heed the Court's admonition in *King* and ensure that the "appeal" of warrantless saliva swab testing does not eclipse its host of constitutional concerns.

¹⁸⁷ 569 U.S. 435, 448 (2013).