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Molly E. O'Connell*

Abstract

The proliferation of marijuana legalization has changed the relationship between driving and marijuana use. While impaired driving remains illegal, marijuana use that does not result in impairment is not a bar to operating a motor vehicle. Scientists have yet to find a reliable way for law enforcement officers to make this distinction. In the marijuana impairment context, there is not a scientifically proven equivalent to the Blood Alcohol Content standard nor are there reliable roadside assessments. This scientific and technological void has problematic consequences for marijuana users that get behind the wheel and find themselves suspected of impaired driving. Without a marijuana breathalyzer or reliable Field Sobriety Tests, law enforcement officers are forced to find another way to determine impairment. Searching the vehicle for evidence of recent marijuana use can be an attractive option. However, the Fourth Amendment prohibits "search first, find probable cause later" policing. A roadside vehicle search violates a driver's

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Fourth Amendment rights if sufficient evidence of impairment is lacking. Until law enforcement can reliably determine marijuana impairment at the roadside, drivers need protection from these unconstitutional searches. This Note addresses how states can disincentivize potential Fourth Amendment violations.

To provide context for this discussion, this Note begins by outlining the history of marijuana's legal status and summarizing the relevant Fourth Amendment case law. Next, it contrasts the challenges of determining marijuana impairment with the relative ease of testing for alcohol impairment during motor vehicle stops. This Note then presents case studies of three states that each have a distinct legal approach to determining marijuana impairment amongst drivers. Finally, this Note provides prescriptive recommendations for states that have legalized or plan to legalize marijuana. Ultimately, this Note provides the reader with a primer on an important legal issue: how the inability to reliably establish marijuana impairment during a traffic stop creates an incentive for the police to search the vehicle first and find probable cause later.

INTRODUCTION

Since 2012, eighteen states and the District of Columbia have legalized marijuana for adults over the age of twenty-one.[1] Additionally, medical marijuana is legal in thirty-seven states.[2] While many Americans now have access to marijuana, operating a motor vehicle while impaired by marijuana remains illegal in every state.[3] However, a 2019 report by the Centers for Disease Control and Prevention ("CDC") revealed that approximately twelve million (4.7 percent) Americans reported driving under

1. Jeremy Berke et al., *Marijuana Legalization is Sweeping the US. See Every State Where Cannabis is Legal*, BUS. INSIDER (July 9, 2021, 9:20 AM), https://perma.cc/2HCR-87ZQ.

2. *Id.*

3. *Drugged Driving: Marijuana Impaired Driving*, NAT'L CONF. OF STATE LEGISLATURES (July 20, 2021), https://perma.cc/VJK7-MZH3.

the influence of marijuana.[4] In 2020, a survey conducted by Mothers Against Drunk Driving found that number to be even higher.[5] According to the survey results, 12 percent of respondents admit to having driven within two hours of consuming marijuana.[6] Despite the prevalence of driving under the influence of marijuana, there is no reliable way to identify whether a driver is impaired by marijuana. To identify a drunk driver, police rely on Blood Alcohol Concentration standards ("BAC") and roadside assessments specifically designed to test for alcohol impairment.[7] Yet, when it comes to determining marijuana impairment, there is no scientifically-proven BAC-equivalent standard and no reliable roadside assessments on which police can rely.[8]

During a traffic stop, the inability to determine whether a driver is impaired by marijuana creates an incentive to search the vehicle for evidence of recent marijuana use. However, a police officer's suspicions alone do not establish the probable cause required to support a warrantless search.[9] Thus, a roadside vehicle search constitutes a violation of the driver's Fourth Amendment right if the police officer lacks sufficient evidence demonstrating the driver is impaired. This Note will address how states can protect the Fourth Amendment rights of drivers suspected of operating under the influence of marijuana in the absence of technology and assessments that can reliably determine marijuana impairment at the roadside.

To provide context for this discussion, Part I of this Note offers a history of the legal status of marijuana in the United

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4. Alejandro Azofeifa et al., *Driving Under the Influence of Marijuana and Illicit Drugs Among Persons Aged ≥16 Years—United States, 2018*, 68 CTRS. FOR DISEASE CONTROL & PREVENTION MORBIDITY & MORTALITY WKLY. REP. 1153, 1153 (2019).

5. *See The Cannabis Report: America's Perception on Consumption & Road Risk*, MOTHERS AGAINST DRUNK DRIVING (Sept. 10, 2020), https://perma.cc/PG4E-KGXK

(detailing the results from a survey of a random sample of 1,020 adults, eighteen years of age and older, from across the United States).

6. *Id.*

7. *Drugged Driving*, *supra* note 3.

8. *Id.; see infra* Part 0.

9. *See* Carroll v. United States, 267 U.S. 132, 158–59 (1925) (holding that a police officer must have "reasonable cause" to believe an automobile contains evidence of illegal activity to justify a warrantless search).

States.[10] Part I traces both federal marijuana prohibition[11] and state legalization efforts.[12] Part II summarizes the Fourth Amendment case law relevant to roadside motor vehicle searches, focusing on the Supreme Court's decision in *Carroll v. United States*[13] that established the automobile exception.[14] Part III contrasts the challenges of determining marijuana impairment with the relative ease of testing for alcohol impairment during motor vehicle stops.[15] Part III concludes by reiterating the crux of the problem this Note seeks to address—that the inability to reliably establish impairment during a traffic stop creates an incentive for police to search the vehicle first and find probable cause later.[16] Part IV presents three state-based case studies.[17] The selected states, Washington, Massachusetts, and Virginia, have all legalized marijuana, but each offers a distinct legal approach to determining marijuana impairment amongst drivers.[18] Lastly, Part V will provide prescriptive recommendations. First, Part V will address scientific research aimed at determining marijuana impairment and will advocate for further funding of such studies.[19] Second, Part V will discuss how states can protect drivers' Fourth Amendment rights in the absence of a reliable method of determining marijuana impairment.[20] Specifically, Part V will advocate for repealing per se marijuana driving under the influence ("DUI") laws and for the legislative enactment of probable cause-related protections for drivers.[21]

10. *See infra* Part 0.
11. *See infra* Parts 0–0.
12. *See infra* Part 0.
13. 267 U.S. 132 (1925).
14. *See infra* Part 0.
15. *See infra* Part 0.
16. *See infra* Part 0.
17. *See infra* Part 0.
18. *Id.*
19. *See infra* Parts 0–0.
20. *See infra* Part 0.
21. *Id.*

I. THE LEGAL STATUS OF MARIJUANA IN THE UNITED STATES

A. Initial Prohibition and Criminalization

In the United States, prohibition and criminalization of marijuana began in the first half of the twentieth century.[22] During this period, marijuana use was restricted at both the state and the federal level.[23] Initially, the federal government relied on taxation to control and regulate the use of marijuana and other drugs.[24] The first measure of this kind was the Harrison Narcotics Act of 1914,[25] which imposed taxation requirements on importers, manufacturers, and distributors of drugs, including marijuana.[26] Following the passage of the Harrison Act, twenty-six states also enacted laws regulating

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22. *See* Stephen Siff, *The Illegalization of Marijuana: A Brief History*, ORIGINS (May 2014), https://perma.cc/68LG-TAR3

> While there were fads for cannabis across the nineteenth century, strictly recreational use was not widely known or accepted. . . . [T]he practice of smoking marijuana leaf in cigarettes or pipes was largely unknown in the United States until it was introduced by Mexican immigrants during the first few decades of the twentieth century.

23. *See id.* (discussing the enactment of state-level marijuana laws that were largely "uncontroversial and passed, for the most part, with an absence of public outcry or even legislative debate"); *see also* Scott C. Martin, *A Brief History of Marijuana Law in America*, TIME (Apr. 20, 2016), https://perma.cc/TE8G-YAES (discussing Congress's enactment of taxation measures that effectively outlawed possession or sale of marijuana).

24. LISA N. SACCO, CONG. RSCH. SERV., R43749, DRUG ENFORCEMENT IN THE UNITED STATES: HISTORY, POLICY, AND TRENDS 2 (2014); *see also* Martin, *supra* note 23 ("Congress deemed an act taxing and regulating drugs, rather than prohibiting them, less susceptible to legal challenge.").

25. Pub. L. No. 63-223, 38 Stat. 785 (replaced by the Comprehensive Drug Abuse Prevention and Control Act of 1970, Pub. L. 91-513, 84 Stat. 1236 (codified at 21 U.S.C. § 801 et seq.)).

26. *See* SACCO, *supra* note 24, at 2–3 (describing the Harrison Act's mandates and impacts). Under the Harrison Act, drug importers, manufacturers, and distributors were required to register with the U.S. Department of Treasury, pay a tax on the drugs, and record each drug transaction in which they engaged. *Id.* The Act was used to arrest, prosecute, and jail physicians and to close state and city narcotics clinics. *Id.* at 3. Fearing these legal consequences, physicians ultimately stopped prescribing drugs regulated by the Harrison Act. *Id.*

marijuana.[27] While these restrictions had the effect of sending most drug users to the black market,[28] the growth and use of marijuana remained legal until 1937.[29]

The passage of the federal Marijuana Tax Act of 1937[30] ("MTA") marked a significant shift in the legal status of marijuana.[31] The MTA required that a "high-cost transfer tax stamp" accompany every sale of marijuana.[32] However, the federal government largely refused to issue these stamps.[33] The result was an unofficial federal ban on marijuana.[34] State legislatures quickly followed suit, formally banning possession of marijuana.[35] These restrictions on marijuana were largely uncontroversial at the time of their enactment and remained so through the 1950s.[36] Neither the government nor the media bothered to distinguish between varying types of illegal drugs[37] and Congress continued to pass legislation controlling and

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27. *See* Siff, *supra* note 22 ("[B]etween 1914 and 1925, twenty-six states passed laws prohibiting the plant.").

28. *See* SACCO, *supra* note 24, at 3 (describing how the Harrison Act, by discouraging physicians from prescribing covered drugs, had the effect of driving drug users to the black market to seek out these substances).

29. *See id.* (discussing marijuana's legal status at both the state and federal level prior to further Congressional action that took place in 1937).

30. Pub. L. No. 75-238, 50 Stat. 551, *invalidated by* Leary v. United States, 395 U.S. 6 (1969) and *repealed by* Comprehensive Drug Abuse Prevention and Control Act of 1970, Pub. L. 91-513, 84 Stat. 1236 (codified at 21 U.S.C. § 801 et seq.).

31. *See* SACCO, *supra* note 24, at 3 (describing how the supporters of increased federal controls on marijuana characterized drug users as the root of criminal activity in the United States).

32. *Id.* at 4.

33. *Id.*

34. *Id.*

35. *See id.* ("Shortly after passage of the MTA, all states made the possession of marijuana
illegal.").

36. *See* Siff, *supra* note 22 ("The 1937 Marijuana Tax Act, which regulated the drug by requiring dealers to pay a transfer tax, passed in the House after less than a half-hour of debate and received only cursory attention in the press. House members seem not to have known a great deal about the drug.").

37. *See id.* ("[L]awmakers and journalists seemed to have little patience or interest for fine distinctions among illegal drugs. Heroin, cocaine, or marijuana were all 'dope': dangerous, addicting, frightening, and bad.").

criminalizing drug use.[38] For example, the Boggs Act,[39] enacted in 1951, included marijuana offenses among the drug crimes that it subjected to stiff mandatory sentences.[40]

B. Changing Attitudes Met with Stagnant Federal Policies

Views towards drugs began to change in the mid-1960s as marijuana use on college campuses proliferated.[41] With marijuana becoming increasingly common among the "best and brightest" of America's youth, attitudes soured toward the harsh criminal penalties marijuana use carried.[42] However, despite this cultural shift, state-level arrests for marijuana offenses increased dramatically between 1965 and 1970.[43] Action at the federal level was also out of sync with the increasing acceptance of marijuana use.[44] In 1970, Congress enacted the Controlled Substances Act[45] ("CSA"), which was designed to "replace previous federal drug laws with a single comprehensive statute."[46] The CSA created a system of five schedules under which controlled substances were classified.[47] Under the CSA,

38. SACCO, *supra* note 24, at 4.

39. Pub. L. 82-225, 65 Stat. 767 (repealed 1970).

40. *See* Martin, *supra* note 23 (describing the shift in federal laws from those that used taxation and regulation to prohibit marijuana to the more stringent measures that imposed sentencing requirements for marijuana-related offenses).

41. *See* Siff, *supra* note 22 (discussing the media attention surrounding "a new type of marijuana smoker: college students").

42. *See id.* ("In 1967, not only hippie activists but the solidly mainstream voices of *Life*, *Newsweek*, and *Look* magazines questioned why the [marijuana] plant was illegal at all.").

43. *See id.* (discussing the tenfold increase in marijuana arrests that occurred at the state level in the later part of the 1960s).

44. *See id.* (describing the anti-marijuana actions of the Nixon Administration despite growing public support for decriminalizing possession of small amounts of marijuana).

45. Comprehensive Drug Abuse Prevention and Control Act of 1970, Pub. L. 91-513, 84 Stat. 1236 (codified at 21 U.S.C. § 801 et seq.).

46. *See* SACCO, *supra* note 24, at 5.

47. *See id.* (describing the factors used to assign a controlled substance to one of the five schedules). Controlled substances were evaluated in terms of "(1) how dangerous they are

considered to be, (2) their potential for abuse and addiction, and (3) whether they have legitimate medical use." *Id.*

Schedule I substances are the most restricted.[48] Marijuana, heroin, and LSD were all classified as a Schedule I substances.[49] That designation legally defined marijuana as medically useless and subjected it to the heaviest range of criminal penalties.[50]

Despite its Schedule I status, support for the decriminalization of marijuana continued to grow during the late 1970s.[51] By 1977, President Jimmy Carter had publicly called for the decriminalization of marijuana, arguing that "anti-marijuana laws cause[d] more harm to marijuana users than the drug itself."[52] However, these increasingly favorable sentiments toward marijuana use did not translate into legislative action at the federal level. Elected in 1980, President Reagan maintained the anti-decriminalization stance he adopted as governor of California and launched an extensive anti-drug media campaign.[53] Following President Reagan's lead, Congress passed three significant pieces of anti-drug legislation during the 1980s.[54] Each law was successively more punitive, further entrenching the federal government's anti-marijuana stance.[55]

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48. *Id.*

49. *See* Martin, *supra* note 23 ("Schedule 1, the most restrictive category, contained drugs that the federal government deemed as having no valid medical uses and a high potential for abuse. Part of Richard Nixon's war on drugs, the Controlled Substances Act placed cannabis into Schedule 1 . . . .").

50. *See id.* ("The Schedule I designation made it difficult even for physicians or scientists to procure marijuana for research studies."); *see also* SACCO, *supra* note 24, at 6–7 (discussing the Drug Enforcement Administration's (DEA) creation and CSA enforcement authority).

51. *See id.* ("[T]here was a growing consensus that criminal punishments for pot were contrary to the public interest; and medical and legal authorities were disputing the logic of harsh anti-marijuana laws.").

52. *Id.*

53. *See id.* (describing President Reagan's opposition to drug use and perceived "lack of sympathy" for drug users).

54. *See id.* (discussing how the anti-drug legislation of the 1980s was largely motivated by fears over crack cocaine, but nonetheless, continued to punish marijuana use because of its CSA Schedule I status).

55. Siff, *supra* note 22; *see* SACCO, *supra* note 24, at 7 (describing the sharp rise in the number of drug convictions during the 1980s). In 1984, Congress passed the Crime Control Act, which enhanced penalties for CSA violations. *Id.* at 8. Two years later, Congress enacted the Anti-Drug Abuse Act of 1986, most well-known for establishing mandatory minimum penalties for drug trafficking offenses. *Id.* at 9. The Anti-Drug Abuse Act of 1988 quickly followed. *Id.* It created additional criminal penalties for CSA violations on

In the late 1980s and throughout the 1990s, both the Bush Administration and the Clinton Administration maintained the federal government's firmly anti-drug position.[56] Ending the "scourge of drugs" was part of then-Vice President Bush's platform in his successful 1988 campaign for the Presidency.[57] Upon taking office, President Bush further highlighted the issue, devoting his first prime-time Oval Office speech to his anti-drug program.[58] Shortly after that address, "64 percent of respondents in a *New York Times/CBS News* poll identified drugs as the single most pressing issue facing the nation."[59] President Clinton, despite having admitted to smoking marijuana,[60] continued to warn the public about the threat of drug use and pledged to fight its proliferation.[61] President Clinton even appointed a drug czar, who from 1998 to 1999 led an expensive effort to incorporate anti-drug messages into prime time television shows.[62] Despite these efforts, President Clinton

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federal property and established mandatory minimum penalties for drug offenses involving minors. *Id.*

56. *See* Siff, *supra* note 22 (describing the anti-drug stances held by both the Bush and Clinton Administrations).

57. *See id.* (stating that even with government surveys showing drug use had declined during the Reagan Administration, President Bush still opted to incorporate antidrug rhetoric into his campaign).

58. *See* Michael Isikoff, *Drug Buy Set Up for Bush Speech: DEA Lured Seller to Lafayette Park*, WASH. POST, Sept. 22, 1989, at A01 (describing the preparation for the speech in which President Bush unveiled his anti-drug program). To help the President illustrate how widespread the drug trade had become, White House Communications Director, David Demarest, worked with the Justice Department and the Drug Enforcement Administration ("DEA") to arrange an undercover drug buy. *Id.* DEA agents met a suspected Washington, D.C. drug dealer in Lafayette Park, located just outside the White House, in advance of the President's speech. *Id.* The agents purchased crack cocaine from the suspect and four days later, the President held up a bag of the "white chunky substance in his Sept. 5 speech on drug policy." *Id.*

59. Siff, *supra* note 22.

60. *See id.* (describing how President Clinton, in making this admission, was careful to clarify that he did not "inhale").

61. *See id.* (detailing President Clinton's "undying effort" to fight against drug use and suggesting that this position was the most politically strategic option at the time).

62. *See id.* ("Clinton's drug czar, Barry McCaffery, paid out $25 million to five major television networks for writing anti-drug messages into specific prime-time shows, with the White House reviewing and signing off on scripts in advance.").

ultimately changed his stance, and indicated support for decriminalizing marijuana use a month before he left office.[63]

If President Clinton's eleventh-hour admission represented progress for marijuana at the federal level, that progress was fleeting. Clinton's successor, President George W. Bush, took office in 2001 and devoted additional money and resources to the war on drugs.[64] John Walters, President Bush's drug czar, largely focused his efforts on marijuana, making student drug testing a major tenet of the Administration's anti-drug policy.[65]

C. First Signs of Federal Progress

Ultimately, it was the Obama Administration that first acknowledged the disparity between the federal government's marijuana policies and progress that was happening at the state level.[66] In 2009, President Obama's Justice Department issued a memo encouraging federal prosecutors not to prosecute distribution of medical marijuana done in accordance with state law.[67] In 2013, following decisions by Colorado and Washington

63. *See* Jann S. Wenner, *Bill Clinton: The Rolling Stone Interview*, ROLLING STONE (Dec. 28, 2000, 12:00 PM), https://perma.cc/Z3XY-KB2C (quoting the President in response to a question regarding whether criminal punishment is appropriate for possessing, using, or selling small amounts of marijuana). After being assured that the interview would not be published until after the 2000 election, President Clinton told *Rolling Stone* magazine that he supported marijuana decriminalization and advocated for a reexamination of the government's drug incarceration policies. *Id.*

64. *See A History of the Drug War*, DRUG POL'Y ALL., https://perma.cc/LF57-TXSD (characterizing the drug was as "running out of steam" when George W. Bush arrived in the White House but noting that the President "allocated more money than ever to it").

65. *See id.* (describing Walters' anti-marijuana efforts as "zealous" despite state-level reforms beginning to slow the federal government's war on drugs).

66. *See infra* Part 0 (summarizing the marijuana legalization at the state level).

67. *See* TODD GARVEY ET AL., CONG. RSCH SERV., R43435, MARIJUANA: MEDICAL AND RETAIL — SELECTED LEGAL ISSUES 15 (2015) (discussing the 2009 Ogden Memorandum, issued by Obama Administration Deputy Attorney General David W. Ogden, which directed federal prosecutors not to focus federal resources "on individuals whose actions are in clear and unambiguous compliance with existing state laws providing for the medical use of marijuana" (citing U.S. Dep't of Just., Memorandum for Selected U.S. Attorneys from David W. Ogden, Deputy Attorney General, Investigations and

to legalize recreational use of marijuana, the Obama Justice Department issued the Cole Memorandum.[68] That memorandum announced that the federal government would not pursue legal challenges against states that authorized marijuana use, assuming state governments established strict regulatory and enforcement mechanisms.[69]

In 2018, the Trump Administration rescinded the 2013 Cole Memorandum.[70] Then-Attorney General Jeff Sessions directed federal prosecutors to enforce existing federal laws relating to marijuana activities.[71] This regression was short lived. Four months after Sessions' recission of the 2013 Cole Memorandum, President Trump reversed course.[72] Facing political pressure, the President made a commitment that his Administration would not interfere with the marijuana industry in states where marijuana use was legal.[73]

Prosecutions in States Authorizing the Medical Use of Marijuana (Oct. 19, 2009), https://perma.cc/4SYT-P7ZU [hereinafter Ogden Memorandum])).

68. *See id.* at 17 (describing the August 2013 memo, issued by Deputy Attorney General James M. Cole, as the "Obama Administration's official response to the Colorado and Washington initiatives").

69. *See id.* (discussing the expectation established by the Obama Justice Department in the Cole Memorandum that states control the "cultivation, distribution, sale, and possession" of marijuana in a way that limits public safety and public health risks (citing U.S. Dep't of Just., Memorandum for U.S. Attorneys from James M. Cole, Deputy Attorney General, Guidance Regarding Marijuana Enforcement (Aug. 29, 2013), https://perma.cc/466E-GNSN (hereinafter [2013 Cole Memorandum])).

70. *State Medical Marijuana Laws*, NAT'L CONF. OF STATE LEGISLATURES (Jan. 1, 2022), https://perma.cc/DY45-RDUR (discussing California's enactment of Proposition 215).

71. *See* U.S. Dep't of Just., Memorandum for U.S. Attorneys from Jefferson B. Sessions, III, Attorney General, Marijuana Enforcement (Jan. 4, 2018), https://perma.cc/3KH2-SZ39 (encouraging federal prosecutors, in deciding whether to prosecute marijuana-related cases, to "weigh all relevant considerations, including federal law enforcement priorities set by the Attorney General, the seriousness of the crime, the deterrent effect of criminal prosecution, and the cumulative impact of particular crimes on the community").

72. *See* Evan Halper, *Trump Administration Abandons Crackdown on Legal Marijuana*, L.A. TIMES (Apr. 13, 2018), https://perma.cc/9ZUD-N52Q (describing President Trump's decision to abandon a "Justice Department threat to crack down on recreational marijuana in states where it is legal").

73. *See id.*

D. Current Federal Status

Today, marijuana remains classified as a Schedule I substance under the CSA.[74] Accordingly, distribution of marijuana remains a federal offense.[75] The Biden Administration has not formally reinstated the policy outlined in the 2013 Cole Memorandum. However, Attorney General Merrick Garland has expressed support for limiting prosecutions, indicating that the initial Obama-era policy effectively remains in place.[76] Although the policies underlying the Ogden and Cole Memorandums do indicate progress at the federal level, that progress is purely reactionary. While federal protections for marijuana users have remained largely stuck in the 1970s, at the state level, marijuana use has been trending towards legalization since the 1980s.[77]

E. Legalization at the State Level

In the 1980s and 1990s, while both the White House and Congress continued to obstruct a more favorable legal status for marijuana,[78] a divergence developed between the federal

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> President Trump personally directed the abrupt retreat, which came at the behest of Republican Sen. Cory Gardner of Colorado. . . . Gardner was incensed in January when the Justice Department announced that it was rescinding an Obama-era policy that directed federal prosecutors not to target marijuana businesses that operate legally under state law. The senator had blocked Justice Department nominees in retaliation.

74. *State Medical Marijuana Laws*, *supra* note 70.

75. *Id.*

76. During testimony in front of the House Appropriations Committee's Subcommittee on Commerce, Justice, Science, and Related Agencies, Garland stated that "the department's view on marijuana use is that enforcement against use is not a good use of our resources." Garland went on to testify that "it's probably not a good use of our resources where [marijuana] is regulated by the state." House Appropriations Committee, *Fiscal Year 2022 Budget Request for the Department of Justice*, YOUTUBE (May 4, 2021), https://perma.cc/7EHA-JGYJ.

77. *See infra* Part 0 (summarizing the marijuana legalization at the state level).

78. *See supra* notes 56–62 and accompanying text.

government and numerous state governments.[79] Over the last three decades, states have deviated from the strict federal restrictions on marijuana by enacting new laws and policies permitting marijuana's use.[80] These initiatives can generally be divided into three categories: those permitting marijuana use for medical purposes, those decriminalizing marijuana, and those legalizing marijuana's recreational use.[81]

1. Medical Use

In 1996, California became the first state to permit legal access to and use of marijuana for medical purposes under physician supervision.[82] Today, thirty-six states, the District of Columbia, Guam, Puerto Rico, and the U.S. Virgin Islands have approved "comprehensive, publicly available medical marijuana programs."[83] While there is significant variation among states regarding enforcement of medical marijuana laws, state medical-use statues generally follow a standardized pattern.[84] Influenced largely by the CSA and the Ninth Circuit's decision in *Conant v. Walters*,[85] state medical marijuana laws are not predicated on a doctor's prescription.[86] Rather, the state statutory schemes rest on a doctor's recommendation[87] and

79. *See* Martin, *supra* note 23 (juxtaposing the federal government's categorization of marijuana as a medically useless, Schedule I substance with the essentially simultaneous emergence of medical marijuana at the state level).

80. SACCO, *supra* note 24, at 14–15.

81. *Id.* at 15.

82. *See State Medical Marijuana Laws*, *supra* note 70 (discussing California's enactment of Proposition 215).

83. *Id.*

84. GARVEY, *supra* note 67, at 8.

85. 309 F.3d 629 (9th Cir. 2002). In *Conant*, "a California physician, sought to enjoin the federal government from revoking his authority to prescribe controlled substances at all in retaliation for his recommending marijuana to some of his patients." GARVEY, *supra* note 67, at 8. The Ninth Circuit affirmed the district court's order enjoining a DEA enforcement action, holding that the First Amendment protected a physician's right to recommend medical marijuana to patients. Conant v. Walters, 309 F.3d 629, 639 (9th Cir. 2002).

86. GARVEY, *supra* note 67, at 9.

87. *Id.* State laws permit physicians to recommend medical marijuana only to patients suffering at least one statutorily defined "debilitating" or

require that the medicinal marijuana be dispensed at a location other than a pharmacy.[88] The laws also protect registered "patients, care givers, cultivators, and distributors" from criminal prosecution.[89] Further, most states restrict the amount of marijuana that a person may possess for medical purposes and prohibit patients from using marijuana in public.[90]

2. Decriminalization

Typically, decriminalization of marijuana means that "no arrest, prison time, or criminal record will result from first-time possession of a small amount of marijuana for personal consumption."[91] In 1973, Oregon became the first state to decriminalize marijuana possession, reclassifying the offense as a civil violation punishable by a fine.[92] Ten other states also decriminalized marijuana possession in some fashion in the 1970s.[93] However, in 1979, the decriminalization movement came to an abrupt halt, with more than a dozen state legislatures introducing decriminalization bills, but none becoming law.[94] Marijuana decriminalization remained stalled for the next twenty years as an increase in drug enforcement resources led to heightened enforcement of marijuana prohibitions.[95] In 2001, Nevada became the first since Nebraska,

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"qualifying" medical condition. *Id.* The list of qualifying conditions typically includes a broad, catchall condition such as "severe pain" or "chronic pain." *Id.*

88. *Id.* While some state medical marijuana laws only allow the patient or the patient's caregiver to cultivate marijuana, most states have established a regulatory scheme for medical marijuana dispensaries. *Id.* at 10.

89. *Id.* at 9.

90. *See id.* at 10 ("The limit is usually an amount less than three ounces.").

91. *Decriminalization*, NORML, https://perma.cc/43HF-NRFM.

92. Wayne A. Logan, *After the Cheering Stopped: Decriminalization and Legalism's Limits*, 24 CORNELL J.L. & PUB. POL'Y 319, 324–25 (2014).

93. *See id.* at 325 (identifying Colorado, Alaska, Ohio, California, Maine, Minnesota, Mississippi, North Carolina, New York, and Nebraska as the ten states that decriminalized marijuana possession in the 1970s). Colorado, Alaska, Ohio, and California all decriminalized in 1975. *Id.* Maine and Minnesota followed suit in 1976, Mississippi, North Carolina, and New York in 1977, and Nebraska in 1978. *Id.*

94. *Id.*

95. *See id.* (explaining that the growth of cocaine in the 1980s "prompt[ed] a dramatic infusion of resources for drug enforcement, which as cocaine

which had decriminalized marijuana in 1978, to enact a decriminalization statute.[96] By 2014, Massachusetts, Connecticut, Rhode Island, Vermont, Maryland, and the District of Columbia had also decriminalized marijuana possession.[97] Currently, twenty-seven states have either fully or partially decriminalized certain marijuana possession offenses.[98] Generally, in these states, small, personal-consumption amounts of marijuana warrant only a civil infraction or the lowest misdemeanor, which carries no possibility of jail time.[99]

3. Recreational Use

States began to legalize recreational use of marijuana in 2012.[100] As of October 2021, eighteen states, along with the

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receded, resulted in a rededication of attention to enforcing marijuana prohibition").

96. *See id.* (describing Nevada's decision to decriminalize marijuana as evidence that the "decriminalization pendulum ha[d] swung back the other way"); *see also supra* note 93 and accompanying text (discussing Nebraska's decriminalization of marijuana).

97. *See id.* at 325–26

> In 2008, 65% of Massachusetts voters backed the "Massachusetts Sensible Marijuana Policy Initiative," which changed simple marijuana possession from a misdemeanor to a "civil offense." In 2011, Connecticut's decriminalization statute went into effect; in 2013 Rhode Island and Vermont both became decriminalization jurisdictions; and Maryland and the District of Columbia (pending congressional approval) joined the ranks in 2014.

98. *See Decriminalization*, *supra* note 91 (listing the states that have decriminalized marijuana in some fashion and discussing how in those states, marijuana possession is treated like minor traffic violations). Localities have also enacted decriminalization measures. *See* Logan, *supra* note 92, at 326 ("In Chicago, for instance, a city in which police made over 33,000 marijuana possession arrests in 2010, the city council in 2012 voted overwhelmingly (43–3) to have police ticket but not arrest individuals who possess less than fifteen grams of marijuana, making it a fine-only offense.").

99. *See Cannabis Overview*, NAT'L CONF. OF STATE LEGISLATURES (July 6, 2021), https://perma.cc/S58U-T2WW (outlining a range of state decriminalization enactments).

100. *See* Casey Leins et al., *States Where Recreational Marijuana is Legal*, U.S. NEWS & WORLD REP. (Oct. 14, 2021), https://www.usnews.com/news/best-

District of Columbia and Guam, have legalized recreational marijuana.[101] In general, recreational use laws regulate the quantity of marijuana a person can possess and the number of marijuana plants that can be grown at home.[102] Many states also differentiate between the permissible amount of marijuana and the permissible amount of "concentrated marijuana"[103] that a person can possess.[104] In all states that permit recreational use, only adults over the age of twenty-one are allowed to possess and grow marijuana.[105]

II. THE LAW REGARDING WARRANTLESS ROADSIDE MOTOR VEHICLE SEARCHES

The proliferation of marijuana legalization at the state level has given rise to numerous constitutional concerns.

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states/slideshows/where-is-pot-legal (discussing legalization of recreational use of marijuana in Colorado and Washington in 2012), https://archive.ph/uFWxu.

101. *Id.*

102. *See id.* (summarizing the guidelines in each of the eighteen states that have legalized marijuana for recreational use). In Colorado, Washington, Oregon, Nevada, Vermont, and Virginia, a person can possess up to one ounce of marijuana. *Id.* Connecticut and New Mexico legalized slightly higher amounts, 1.5 ounces and two ounces, respectively. *Id.* Maine and Michigan permit possession of up to 2.5 ounces. *Id.* New York allows a person to possess three ounces of marijuana. *Id.* In Massachusetts, a person can keep up to ten ounces of marijuana in their home, but any quantity greater than one ounce must be secured in a locked container. *Id.* Most recreational use states, including Colorado, Alaska, Oregon, California, Maine, Massachusetts, and Vermont, permit six marijuana plants per household. *Id.* However, Virginia only allows four marijuana plants to be grown at home, while Nevada, Michigan, and New Mexico allow up to twelve plants. *Id.*

103. Concentrated marijuana contains higher levels of THC than the marijuana flower. Lisa Marshall, *Marijuana Concentrates Sharply Spike THC Levels But Don't Necessarily Get Users Higher*, CU BOULDER TODAY (June 10, 2020), https://perma.cc/H8AK-5F4Q.

104. *See* Leins, *supra* note 100 (comparing the legally permissible quantity of marijuana with the legally permissible quantity of concentrated marijuana in states where possession for recreational use is allowed). California permits one ounce of marijuana and eight grams of concentrated marijuana. *Id.* Maine allows 2.5 ounces of marijuana and five grams of concentrated marijuana. *Id.* In Nevada, possession of up to one ounce of marijuana and one-eighth of an ounce of concentrated marijuana is legal. *Id.* Illinois permits possession of thirty grams of the marijuana flower and five grams of marijuana concentrate. *Id.*

105. *See id.* (discussing the age restriction on recreational marijuana use).

Legalization's impact on drivers' Fourth Amendment rights has proved particularly problematic. An overview of the Fourth Amendment case law surrounding warrantless roadside searches provides context for analyzing this issue.[106]

A. The Fourth Amendment

The Fourth Amendment provides the following protections:

> The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no warrants shall issue, but upon probable cause, supported by oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.[107]

The first part of the amendment mandates that all searches and seizures be reasonable.[108] The second portion sets the parameters for the warrant requirement.[109] The amendment does not state that a warrantless search cannot also be a reasonable search.[110] However, in interpreting the Fourth Amendment, the Supreme Court has established an expectation of privacy that protects against warrantless searches absent a recognized exception.[111] When it comes to warrantless, roadside vehicle searches, the relevant exception is most often the automobile exception.[112]

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106. *See infra* Parts 0–0.

107. U.S. CONST. amend. IV.

108. *Id.*

109. *Id.*

110. *See* Catherine A. Shepard, *Search and Seizure: From Carroll to Ross, the Odyssey of the Automobile Exception*, 32 CATH. U. L. REV. 221, 221 (1983) ("There is nothing in

either clause [of the Fourth Amendment] to suggest that a warrantless search and a reasonable search are mutually exclusive.").

111. *See* Katz v. United States, 389 U.S. 347, 361 (1967) (Harlan, J., concurring) (articulating the twofold requirement for the expectation of privacy—that the person have a subjective expectation of privacy and that the expectation is one that society recognizes as reasonable).

112. *See* Shepard, *supra* note 110, at 222 ("Most warrantless searches of automobiles are conducted under the search incident to arrest exception or the automobile exception.").

B. The Automobile Exception

The Supreme Court first articulated the automobile exception in *Carroll v. United States*.[113] In *Carroll*, federal prohibition agents, tasked with enforcing the Eighteenth Amendment's ban on alcoholic beverages,[114] stopped a vehicle driven by George Carroll and John Kiro.[115] The agents proceeded to conduct a warrantless search of the vehicle based on the belief that Carroll and Kiro were transporting bootleg alcohol.[116] The agents discovered liquor hidden in the vehicle's seat cushions.[117] Carroll and Kiro were convicted of "transporting in an automobile intoxicating spirituous liquor."[118] They challenged the constitutionality of the search, and the admissibility of evidence obtained through it.[119]

In deciding *Carroll*, the Court distinguished the warrantless search of a motor vehicle from the warrantless search of a physical building.[120] The crucial difference, the Court

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113. 267 U.S. 132 (1925).

114. *See* U.S. CONST. amend. XVIII, *repealed by* U.S. CONST. amend. XXI.

115. *See* Carroll v. United States, 267 U.S. 132, 160–61 (1925) (discussing the circumstances surrounding the traffic stop). The agents were conducting regular patrol along the Michigan highway that runs between Detroit and Grand Rapids. *Id.* at 160. At the time, Detroit, located on an international boundary, was an active location for the illegal importation and distribution of alcohol. *Id.* The agents spotted Carroll and Kiro driving westward, presumably from Detroit, on this stretch of highway and conducted a traffic stop. *Id.*

116. *See id.* at 171 (discussing one of the agent's prior interactions with Carroll and Kiro, in which the agent, acting undercover, attempted to purchase whiskey from the two men).

117. *See id.* at 172 (describing how the agent felt that back of the vehicle's seat, felt that it was hard, and proceeded to tear the cushion to find bottles of liquor concealed in the seatback).

118. *Id.* at 134.

119. *See id.*

> The ground on which they assail the conviction is that the trial court admitted in evidence two of the 68 bottles, one of whisky and one of gin, found by searching the automobile. It is contended that the search and seizure were in violation of the Fourth Amendment, and therefore that use of the liquor as evidence was not proper.

120. *See id.* at 151 (articulating the "necessary difference between a search of a store, dwelling house, or other structure in respect of which a proper

said, was a vehicle's inherent mobility, which facilitated the removal of evidence from the scene.[121] Ultimately, the Court held that a police officer may conduct a warrantless motor vehicle search if the officer has probable cause to believe the vehicle contains evidence of illegality.[122]

Since *Carroll*, the Supreme Court has further defined the scope of the automobile exception. Of relevance to warrantless, roadside searches are the Court's decisions in *United States v. Di Re*,[123] *United States v. Ross*,[124] and *California v. Acevedo*.[125]

In *Di Re*, the Court addressed whether to "extend the assumed right of a car search" to a search of the people occupying the car.[126] The Court held that a person's mere presence in a "suspected car" does not mean that the person "loses the immunities from search of his person to which he would otherwise be entitled."[127] Accordingly, a warrantless vehicle search, justified by the reasonable belief that the vehicle contains contraband, does not give officers the right to incidentally search the vehicle's occupants.[128] In so deciding, the Court declined to expand the scope of the automobile exception.

In *Ross*, the Court was again presented with the opportunity to expand the scope of the automobile exception.[129] The issue in *Ross* was whether the search of a vehicle's compartments and containers was justified by probable cause

official warrant readily may be obtained and a search of a ship, motor boat, wagon, or automobile for contraband goods").

121. *See id.* (describing how "goods subject to forfeiture" in a "movable vessel" could readily "be put out of reach of search warrant").

122. *See id.* at 158–59 ("The right to search and the validity of the seizure . . . are dependent on the reasonable cause the seizing officer has for belief that the contents of the automobile offend against the law.").

123. 332 U.S. 581 (1948).

124. 456 U.S. 798 (1979).

125. 500 U.S. 565 (1991).

126. *Di Re*, 332 U.S. at 586.

127. *Id.* at 581.

128. *See id.* at 587 ("We see no ground for expanding the ruling in the Carroll case to justify this arrest and search as incident to the search of a car.").

129. *See* United States v. Ross, 456 U.S. 798, 799–800 (1979) (stating that the *Carroll* decision did not explicitly address the scope of the vehicle search that is permissible under the automobile exception).

that a vehicle contained contraband.[130] The Court held that if "probable cause justifies the search of a lawfully stopped vehicle, it justifies the search of every part of the vehicle and its contents that may conceal the object of the search."[131] The Court explained that a warrantless search's scope can be neither narrower nor broader than the scope of a search authorized by a warrant.[132] Further, the Court articulated that the search's object, and the places where that object may reasonably be found, define the search.[133] Therefore, while the automobile exception waives the warrant requirement, the warrantless search can only be as extensive as the search a warrant could allow.[134]

In *Acevedo*, the Court was confronted with a question that it had declined to address in *Ross*.[135] *Ross* did not answer

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130. *See id.* at 800

> In this case, we consider the extent to which police officers—who have legitimately stopped an automobile and who have probable cause to believe that contraband is concealed somewhere within it—may conduct a probing search of compartments and containers within the vehicle whose contents are not in plain view.

131. *Id.* at 825.

132. *See id.* at 823 ("An individual undoubtedly has a significant interest that the upholstery of his automobile will not be ripped or a hidden compartment within it opened. These interests must yield to the authority of a search, however, which—in light of Carroll — does not itself require the prior approval of a magistrate.").

133. *See id.* at 824

> Just as probable cause to believe that a stolen lawnmower may be found in a garage will not support a warrant to search an upstairs bedroom, probable cause to believe that undocumented aliens are being transported in a van will not justify a warrantless search of a suitcase. Probable cause to believe that a container placed in the trunk of a taxi contains contraband or evidence does not justify a search of the entire cab.

134. *See id.* at 823 ("Only the prior approval of the magistrate is waived; the search otherwise is as the magistrate could authorize.").

135. *See* California v. Acevedo, 500 U.S. 565, 573 (1991) (discussing the *Ross* court's recognition that it is "arguable that the same exigent circumstances that permit a warrantless search of an automobile would justify

whether a warrant was needed to open a container within a vehicle if probable cause to search the entire vehicle did not exist.[136] The Court determined that "a container found after a general search of the automobile and a container found in a car after a limited search for the container are equally easy for the police to store and for the suspect to hide or destroy."[137] Further, the Court concluded that separate rules governing these two situations may encourage broader warrantless searches that pose greater threats to privacy interests.[138] Accordingly, the Court held that the "Fourth Amendment does not compel separate treatment for an automobile search that extends only to a container within the vehicle."[139] Thus, if police have probable cause to believe only a container within a vehicle contains contraband, they can search that container without a warrant.[140] Police do not have to hold the container until they can obtain a warrant simply because they lack the probable cause to search the entirety of the vehicle.[141]

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the warrantless search of a movable container" and the court's decision not to answer that question out of deference to existing precedent).

136. *See id.* ("We now must decide the question deferred in *Ross*: whether the Fourth Amendment requires the police to obtain a warrant to open the sack in a movable vehicle simply because they lack probable cause to search the entire car.").

137. *Id.* at 574.

138. *See id.* at 574–75

> At the moment when officers stop an automobile, it may be less than clear whether they suspect with a high degree of certainty that the vehicle contains drugs in a bag or simply contains drugs. If the police know that they may open a bag only if they are actually searching the entire car, they may search more extensively than they otherwise would in order to establish the general probable cause required by *Ross*. . . . We cannot see the benefit of a rule that requires law enforcement officers to conduct a more intrusive search in order to justify a less intrusive one.

139. *Id.* at 576.

140. *See id.* at 580 (articulating that *Carroll* provides "one rule to govern all automobile searches").

141. *See id.*

C. Traffic Stops

To properly contextualize the warrantless searches permitted by the automobile exception, it is important to understand the ease with which these roadside situations arise. The Supreme Court's decision in *Whren v. United States*[142] addressed the standard for conducting traffic stops.[143] In *Whren*, the Court explained that temporary police detention of an individual during a roadside vehicle stop, however brief, constitutes a seizure under the Fourth Amendment.[144] Accordingly, a roadside stop is unconstitutional if its duration or purpose renders it unreasonable.[145]

The Petitioners in *Whren* argued that because automobile use is so highly regulated, perfect compliance with traffic rules

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> In the case before us, the police had probable cause to believe that the paper bag in the automobile's trunk contained marijuana. That probable cause now allows a warrantless search of the paper bag. The facts in the record reveal that the police did not have probable cause to believe that contraband was hidden in any other part of the automobile and a search of the entire vehicle would have been without probable cause and unreasonable under the Fourth Amendment.

142. 517 U.S. 806 (1996).

143. *See id.* at 808

> In this case we decide whether the temporary detention of a motorist who the police have probable cause to believe has committed a civil traffic violation is inconsistent with the Fourth Amendment's prohibition against unreasonable seizures unless a reasonable officer would have been motivated to stop the car by a desire to enforce the traffic laws.

144. *See id.* at 809–10 ("Temporary detention of individuals during the stop of an automobile by the police, even if only for a brief period and for a limited purpose, constitutes a 'seizure' of 'persons' within the meaning of [the Fourth Amendment].").

145. *See id.* at 810 ("An automobile stop is thus subject to the constitutional imperative that it not be 'unreasonable' under the circumstances.").

is effectively impossible.[146] According to Petitioners, the high likelihood of noncompliance meant that a "police officer will almost invariably be able to catch any given motorist in a technical violation."[147] The result, in Petitioners' view, was the opportunity for police to use traffic stops to investigate other illegality, despite a lack of probable cause or other articulable suspicion.[148] The Court did not reject the Petitioners' contention.[149] However, the Court declined to permit the subjective motivations of a police officer to factor into the Fourth Amendment analysis.[150] Instead, the Court held that if there is probable cause that a traffic violation occurred, then the officer's decision to stop the vehicle is reasonable.[151] This holding foreclosed the argument that an officer's ulterior motive can invalidate conduct based on probable cause,[152] even if the motive is a desire to confirm suspicions of other criminal activity.[153] Thus, a police officer that suspects a driver of criminal activity, but lacks probable cause to act on that suspicion, can almost certainly find a traffic violation to justify initiating a stop.[154] Once the driver has been stopped, the automobile exception permits an officer to conduct a warrantless search of the vehicle if he believes there is probable cause that it contains evidence of illegality.[155]

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146. *See id.* (discussing Petitioners' contention that "total compliance with traffic and safety rules is nearly impossible" given that the "use of automobiles is so heavily and minutely regulated").

147. *Id.*

148. *See id.* (discussing the Petitioners' claim that police officers were using traffic stops as a pretext for investigating other crimes even when the requisite probable cause was lacking).

149. *Id.*

150. *See id.* at 813 ("Subjective intentions play no role in ordinary, probable-cause Fourth Amendment analysis.").

151. *See id.* at 810 ("As a general matter, the decision to stop an automobile is reasonable where the police have probable cause to believe that a traffic violation has occurred.").

152. *See id.* at 813 ("We think these cases foreclose any argument that the constitutional reasonableness of traffic stops depends on the actual motivations of the individual officers involved.").

153. *See id.* at 810 (acknowledging "the temptation to use traffic stops as a means of investigation other law violations, as to which no probable cause or even articulable suspicion exists").

154. *See supra* note 58 and accompanying text.

155. *See supra* note 122 and accompanying text.

In the absence of a concrete probable cause standard, the decision to conduct the warrantless search rests fully in the officer's discretion. Accordingly, the lack of a reliable standard for probable cause makes suspected marijuana impairment an attractive basis for initiating a warrantless search. To keep whatever is discovered during the search out of court, the officer's word is pitted against the driver's word with no established standard by which to judge the reasonableness of the search.

III. ROADSIDE DETERMINATION OF MARIJUANA IMPAIRMENT

Scientific limitations and a lack of technological advancement make determining marijuana impairment during a traffic stop particularly challenging. Comparing how police evaluate marijuana impairment with the established testing scheme in place for alcohol impairment is illustrative.

A. Roadside Determination of Alcohol Impairment

The proliferation of the automobile in the early twentieth century coincided with the prohibition movement.[156] Predictably, "drunk driving" laws first appeared during this era.[157] Crucial to the effective enforcement of these new laws was the question of how impairment could be proven in court.[158] Initially, drunk driving convictions were based solely on contemporaneous observations of the driver at the time of

156. *See* William J. McNichol, Jr., *Toward a Rational Policy for Dealing with Marijuana Impairment—Moving Beyond "He Looked Buzzed to Me, Your Honor"*, 45 S. ILL. U. L.J. 1, 4 (2020) ("The beginning of widespread use of automobiles in the United States roughly coincided with the alcohol prohibition era, which began with the long campaigns that led to the adoption of the Eighteenth Amendment in 1919 and ended with its repeal by the Twenty-First Amendment in 1933.").

157. *See id.* ("New Jersey enacted what is believed to be the United States' first drunk driving law in 1906, which consisted of a single sentence: 'No intoxicated person shall drive a motor vehicle.' New York followed suit in 1910 . . . .").

158. *See id.* ("With the enactment of these laws America embarked on its long journey to set evidentiary rules by which the fact of impairment can be proven in court.").

arrest.[159] Courts, "believing the attributes of alcohol intoxication are so well-known and generally understood," permitted anyone to testify regarding a driver's level of impairment.[160] No specific observation methods were required and opinion testimony was sufficient to sustain a conviction.[161]

The unreliability and inconsistency of relying on the observations and opinions of laypersons quickly became evident as did the need for an objective standard.[162] By the 1950s, epidemiologist Dr. William Haddon was attempting to discover a scientific connection between alcohol and dangerous driving.[163] Dr. Haddon's work revealed that fatal automobile accidents were strongly correlated with a BAC of 0.08 – 0.10 percent.[164] Subsequent scientific research confirmed Dr. Haddon's finding.[165] Ultimately, a BAC of 0.08 percent became recognized as a scientifically-sound proxy for alcohol impairment.[166] As a result, drunk driving statutes were

159. *See id.* at 5 ("At the time of the early drunk driving laws, there was only one way to prove impairment: contemporaneous observation of the accused. Indeed, a conviction 'could be based solely on the defendant's conduct and demeanor at the time of arrest.'").

160. *See id.* ("The widespread and frequent occurrence of alcohol intoxication led courts to accept testimony of this sort from anyone.").

161. *See id.*

> Courts have received factual testimony concerning things like an odor of alcohol, stumbling, or general lack of physical coordination. But witnesses in alcohol impairment cases have not been limited to factual testimony. . . . [C]ourts early on ruled that any person is competent to testify as to their opinion that a driver was alcohol impaired . . . .

162. *See id.* at 6–7 (discussing how the limitations of human memory, the existences of implicit biases, and the disparities in police enforcement made relying on lay witnesses' accounts of alcohol impairment problematic).

163. *See id.* at 7 (discussing Dr. Haddon's "effort to find a science-based standard for alcohol impairment").

164. *See id.* (describing how Dr. Haddon initially used reports of single-vehicle fatal accidents to identify the relevant BAC range and how subsequent studies and laboratory simulations confirmed his findings).

165. *See id.* (discussing the subsequent studies and laboratory simulations that confirmed Dr. Haddon's findings).

166. *See id.* ("As a result of the rigorous epidemiologic studies by Dr. Haddon and his colleagues, a BAC of 0.08% has come to be recognized as a valid, science-based proxy for alcohol impairment.").

supplemented by per se prohibitions against driving with a BAC of 0.08 percent or above.[167] The use of the BAC standard constituted a significant improvement over the prior reliance on lay opinion evidence.[168] However, the standard did not "eliminate bias and inconsistency in the enforcement of drunk driving laws."[169]

The advent of the Breathalyzer in 1954 brought the BAC standard to the roadside.[170] The technology offered a compact, reliable, and easy to operate means for law enforcement to determine impairment during a traffic stop.[171] Its use quickly became common practice.[172] Since the 1950s, breath test devices have continued to progress and now operate both more quickly and more accurately.[173] Today, the preliminary breath test ("PBT"), conducted using a portable breathalyzer machine, is the most reliable means by which a police officer can establish probable cause.[174] If the results of a PBT estimate that a driver's

167. *See id.* ("Statutes containing the general prohibition against driving while impaired were not repealed, but merely supplemented by the per se prohibition against driving with a BAC of 0.08%.").

168. *See id.* (discussing how the BAC standard "makes it possible to perform a biochemical test that, if properly executed, gives an objective, verifiable result that can be compared to a bright line standard—a remarkable advance over reliance upon lay opinion testimony that 'he looked drunk to me'").

169. *Id.*

170. *See* A.W. Jones, *Measuring Alcohol in Blood and Breath for Forensic Purposes—A Historical Review*, 8 FOR. SCI. REV. 13, 34 (1996) (discussing Indiana State Police Lt. R. F. Borkenstien's development of the Breathalyzer).

171. *See id.* (describing the Breathalyzer as the "singly most important contribution to methods of breath-alcohol analysis for law enforcement purposes").

172. *See* Birchfield v. North Dakota, 579 U.S. 438, 446 (2016) (discussing the "more practical machine, called the 'Breathalyzer,'" which "came into common use beginning in the 1950's").

173. *See id.* ("Over time, improved breath test machines were developed. Today, such devices can detect the presence of alcohol more quickly and accurately than before, typically using infrared technology rather than a chemical reaction.").

174. *See* Nick Surma, Comment, Searches and Automobiles—Grounds or Cause: Assessing the Constitutionality of Warrantless Pre-Arrest Breath Tests and the Grounds on Which Such Tests May Be Required, 93 N.D. L. REV. 161, 165 (2018) (discussing the agreement among courts that probable cause is not required before a police officer can request that a driver submit to roadside screening in the form of a PBT—reasonable suspicion that the driver is intoxicated is sufficient).

BAC is above the legal limit, the officer is practically certain to have sufficient grounds to make an arrest.[175]

Once an arrest is made, a police officer often does not have to rely on the automobile exception to search the driver's vehicle.[176] When the flow of traffic is disrupted or the public safety is threatened, the police are authorized to take a vehicle into their custody.[177] Generally, an impounded vehicle is then subjected to a warrantless inventory search.[178] The Supreme Court has upheld the constitutionality of inventory searches of lawfully impounded vehicles, finding that the search is reasonable under the Fourth Amendment so long as police follow standardized procedures.[179] Any evidence obtained during a lawfully-conducted inventory search can be used against a defendant at trial.[180] However, it is crucial to

175. *See id.* at 174 (describing how DUI cases are unlikely to be dismissed when a PBT was administered roadside, and the results indicated impairment above the legal limit).

176. *See* South Dakota v. Opperman, 428 U.S. 364, 368–69 (1976) (discussing the public safety and community caretaking interests that support the authority of police to impound automobiles).

177. *See id.* at 369 ("The authority of police to seize and remove from the streets vehicles impeding traffic or threatening public safety and convenience is beyond challenge.").

178. *See id.*

> When vehicles are impounded, local police departments generally follow a routine practice of securing and inventorying the automobiles' contents. These procedures developed in response to three distinct needs: the protection of the owner's property while it remains in police custody, the protection of the police against claims or disputes over lost or stolen property and the protection of the police from potential danger. The practice has been viewed as essential to respond to incidents of theft or vandalism. In addition, police frequently attempt to determine whether a vehicle has been stolen and thereafter abandoned. (citations omitted).

179. *See id.* at 372 ("The decisions of this Court point unmistakably to the conclusion reached by both federal and state courts that inventories pursuant to standard police procedures are reasonable.").

180. *See* Colorado v. Bertine, 479 U.S. 367, 369 (1987) (holding that the Fourth Amendment does not prohibit the admissibility of evidence discovered during an authorized inventory search).

remember that in the DUI context, the police must first have had probable cause to arrest the driver before conducting a warrantless inventory search.[181] The BAC standard provides an established and reliable metric by which to judge the sufficiency of an officer's probable cause determination.[182] In contexts where no BAC-like standard exists, police need other evidence to establish probable cause before making an arrest. In those situations, a pre-arrest warrantless search under the automobile exception is an attractive option.

B. The Lack of a BAC Standard Equivalent in the Marijuana Impairment Context

Currently, there is no reliable bright-line test for marijuana impairment that is equivalent to the BAC standard for alcohol impairment.[183] While tetrahydrocannabinol ("THC") is generally considered to be the "psychoactive compound responsible for marijuana impairment," scientific evidence suggests that THC blood levels are not a scientifically reliable indicator of impairment.[184] Studies by both the National Highway Traffic Safety Administration ("NHTSA") and the American Automobile Association ("AAA") have failed to find a statistically significant correlation between THC concentration and driving skills.[185] Numerous other studies have reached similar, or in some instances, more unfavorable conclusions.[186] Some research suggests a *negative* correlation between THC

181. *See supra* notes 174–175 and accompanying text.

182. *See supra* note 89 and accompanying text.

183. *See* McNichol, *supra* note 156, at 36 (discussing how the "success of Dr. Haddon's work establishing 0.08% BAC as a proxy for alcohol impairment naturally led to interest in finding a biochemical proxy for marijuana intoxication that would serve as the basis for a per se marijuana impairment statute").

184. *See id.* (challenging the assumption that blood THC concentration is a biochemical proxy for marijuana intoxication).

185. *See id.* at 37 (citing the findings of the two studies). The NHTSA study found that when other risk factors, such as age, gender, ethnicity, and alcohol use, were accounted for, blood THC was not correlated with an increased crash risk. *Id.* The AAA study concluded that impairment cannot be inferred from THC blood concentration. *Id.*

186. *See id.* at 37–38 (discussing seven studies that rejected the notion of a connection between THC blood levels and driving performance).

concentration and impairment.[187] In these studies, researchers observed little to no impairment when THC levels were highest.[188] Instead, the evidence showed that impairment manifested only "well after blood THC had declined well below its peak level."[189] These findings indicated that THC levels do not "provide an accurate and reliable indicator" for determining whether driving performance is negatively impacted by marijuana use.[190] Further, a study surveying the field of existing research concluded that "a *per se* impairment rule based on a blood THC concentration" is a "mirage."[191]

The scientific community has yet to settle on a definitive explanation for why blood THC concentration does not correlate with impairment.[192] Some scientists believe that THC is not marijuana's impairment-inducing compound.[193] Other research indicates that regular or long-term marijuana users may develop a tolerance to THC.[194] These habitual users may not show signs of impairment at THC blood levels that would impair less-frequent users.[195] Additionally, there is some evidence to suggest a gender disparity in the effects of marijuana.[196] Further, various studies have reported the possibility of a lag between when THC is traceable in blood and when it enters the

187. *See id.* at 38 (citing the following studies: K. Papafotiou et al., The Relationship Between Performance on the Standardized Field Sobriety Tests, Driving Performance and the Level of Δ9-tetrahydrocannabinol (THC) in Blood, 155 FORENSIC SCI. INT'L 172 (2005) and Giovanni Battstella et al., Weed or Wheel! fMRI, Behavioural, and Toxicological Investigations of How Cannabis Smoking Affects Skills Necessary for Driving, 8 PLOS ONE 1, 13 (2013)).

188. *Id.*

189. *Id.*

190. *Id.*

191. *See id.* (citing Gary M. Reisfield et al., The Mirage of Impairing Drug Concentration Thresholds: A Rationale for Zero Tolerance Per Se Driving Under the Influence of Drug Laws, 36 J. ANALYTICAL TOXICOLOGY 354, 353–56 (2012)).

192. *See id.* ("Why is it that the blood levels of THC are not correlated with impairment? The answer is not entirely known, and may be the result of a combination of factors.").

193. *See id.* (suggesting that marijuana impairment may be caused by THC's metabolites, such as THCC or THC-COOH, rather than by THC itself).

194. *Id.*

195. *Id.*

196. *Id.*

brain.[197] One of these factors, or a combination of several of them, may explain why THC is not a valid biochemical proxy for marijuana impairment.[198] These factors may also explain why finding a THC substitute that can act as a reliable impairment proxy remains elusive.[199]

C. The Limitations of the Currently-Utilized Roadside Assessments

The absence of a BAC-equivalent proxy highlights the challenges of determining marijuana impairment as compared to the relative ease of determining alcohol impairment during motor vehicle stops. A BAC-like standard is a prerequisite for developing and using any breathalyzer-like technology in the marijuana-impairment context. Without an objective standard, there can be no objective method of roadside testing for marijuana impairment. Thus, during a traffic stop, assessments of marijuana-impairment are currently limited to police officer observations and the results of Field Sobriety Tests ("FSTs").[200]

This reality is startingly problematic as neither a police officer's observations nor FST results are dispositive indicators of whether a driver is impaired by marijuana. A police officer's observations and analysis of a driver's appearance, behavior, and statements are inherently subjective.[201] Consider a police

197. *See id.* at 38–39 (concluding that this lag time would put THC blood levels out of synch with other indicators of impairment).

198. *Id.* at 39.

199. *Id.*

200. *See id.* at 13 (describing the components of the twelve-step protocol for identifying drug-impaired drivers used by Drug Recognition Expert ("DRE") police officers). A police officer becomes certified or accredited as a DRE after completing an approved educational course in the relevant jurisdiction. *Id.* at 12. These courses purport to train officers to administer a standardized twelve-step protocol and to observe and interpret the results of each step to determine drug-impairment. *Id.* at 13. The protocol is conducted following a driver's arrest. *Id.* Thus, it does not establish a roadside method by which arresting officers are expected to determine impairment. *Id.* However, the arresting officer's observations and the results of common FSTs are key components of the protocol. *Id.* The inclusion of these factors in the DRE protocol is evidence of their centrality to roadside impairment assessments. *Id.*

201. *See* U.S. DEP'T OF TRANSP. NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., MARIJUANA-IMPAIRED DRIVING—A REPORT TO CONGRESS 8 (2017), https://perma.cc/4SXC-7VW9 (describing the role of a police officer's

officer that conducts a traffic stop and observes that the driver's hands are shaking, and that the driver is hesitant to answer questions. These observations may be interpreted as signs of impairment or may just as reasonably be interpreted as nervousness resulting from an interaction with law enforcement. Further, while marijuana use can impair important driving-related skills,[202] current research indicates an observation-based assessment is not a sufficiently reliable means of determining impairment.[203]

Scientific research regarding the use of traditional FSTs for determining marijuana impairment demonstrates that these assessments are similarly unreliable.[204] FSTs were created to detect alcohol impairment.[205] The two FSTs that are most frequently administered during traffic stops are the Walk and Turn ("WAT")[206] and the One Leg Stand ("OLS")[207] assessments.[208] These Divided Attention Psychophysical Tests

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observation-based suspicions in the impaired-driving detection process that takes place during a traffic stop).

202. *See id.* at 18 (discussing marijuana's problematic effects on "psychomotor abilities like reaction time, tracking ability, and target detection, cognitive skills like judgment, anticipation, and divided attention, and executive functions like route planning and risk taking").

203. *See id.* ("[A]vailable research does not support the development of such a psychomotor, behavioral or cognitive test that would be practical and feasible for law enforcement use at this time.").

204. *See* Commonwealth v. Gerhardt, 81 N.E.3d 751, 757 (Mass. 2017) (citing conflicting studies regarding the reliability of FSTs in the marijuana-impairment context).

205. *Id.* at 756.

206. During the administration of a WAT test, the police officer directs the driver to "take nine steps, walking heel-to-toe, along a real or imaginary straight line." *Id.* The driver is then directed to turn around on one foot and return along the line in the same manner. *Id.* In observing the driver during a WAT assessment, the police officer looks for eight indicators of impairment: "losing balance while listening to the instructions, beginning before the instructions are finished, stopping to regain balance while walking, failing to walk heel-to-toe, stepping off the line, using arms to balance, making an improper turn, or taking an incorrect number of steps." *Id.*

207. During the administration of an OLS test, the police officer instructs the driver to "stand on one foot raised approximately six inches off the ground while counting aloud for thirty seconds." *Id.* at 757. In observing the driver during an OLS assessment, the police officer looks for four indicators of impairment: "swaying while balancing, using arms to balance, hopping to maintain balance, and putting the foot down." *Id.*

208. *Id.* at 756.

are designed to test a driver's balance, coordination, dexterity, ability to follow directions, and capacity to simultaneously focus attention on multiple subjects.[209] Scientific studies have concluded that there is an established correlation between performance on the WAT and OLS tests and a driver's BAC.[210] Research shows that 79 percent of drivers who exhibited two or more of the eight WAT impairment indicators had BACs of 0.08 percent or higher.[211] The correlation was even stronger for the four OLS impairment indicators.[212] As many as 83 percent of drivers exhibiting two or more of the indicators were found to have a BAC of 0.08 percent or above.[213]

Scientists have conducted analogous studies aimed at determining whether a similar correlation exists between performance on FSTs and marijuana impairment.[214] These studies have not produced a conclusive answer.[215] One study found that FSTs are "mildly sensitive" to effects of marijuana use with the OLS test being the most sensitive.[216] However, the results of that same study also included a significant number of false positives from the OLS test.[217] Other research suggests that the WAT test is a more reliable indicator of marijuana impairment than the OLS.[218] Still other studies found no

209. *Id.* Alcohol depresses the central nervous system, impairing functions throughout the body, including functions that are crucial to a driver's ability to safely operate a vehicle. *Id.* at 757. Those crucial functions are the ones that Divided Attention Psychophysical Tests are designed to assess. *Id.*

210. *See id.* at 756–57 (citing studies that have found a correlation between the presence of two or more WAT or OLS impairment indicators and a BAC above the 0.08 legal limit).

211. *Id.*

212. *Id.* at 757.

213. *Id.*

214. *Id.*

215. *See id.* (describing the ongoing disagreement among scientists regarding whether FSTs are indicative of marijuana impairment).

216. *See id.* (citing Bosker et al., A Placebo-Controlled Study to Assess Standardized Field Sobriety Tests Performance During Alcohol and Cannabis Intoxication in Heavy Cannabis Users and Accuracy of Point of Collection Devices for Detecting THC in Oral Fluid, 223 PSYCHOPHARMACOLOGY 439, 443–44 (2012) [hereinafter Bosker Study]).

217. *See id.* (citing additional results from the Bosker Study).

218. *See id.* at 758 (citing Declues et al., A 2-Year Study of Delta-9-tetrahydrocannabinol Concentrations in Drivers: Examining Driving and Field Sobriety Test Performance, 61 J. FORENSIC SCI. 1664, 1669 (2016)).

correlation at all between marijuana use and performance on FSTs.[219]

In part, these varied results can be explained by the fact that marijuana, unlike alcohol, does not act as a general central nervous system depressant.[220] Thus, while marijuana use can impair driving ability, it does not do so in the same way that alcohol does.[221] The depressant effects of alcohol consumption impair functions throughout the body.[222] Marijuana use operates differently. Some scientists believe marijuana impairment is linked to the effects of THC, which has been found to impact certain brain functions relevant to driving performance.[223] Accordingly, assessments, like FSTs, that are designed to detect alcohol impairment, are not appropriately transferable to the marijuana-impairment context.

In marijuana impairment cases, courts are aware of the limitations of the arresting police officer's subjective observations[224] and of the unreliability of the results of FSTs.[225] While evidence of this nature may be adequate proof of impairment in the alcohol context, it likely will not suffice in marijuana cases. Therefore, a police officer, suspicious that a driver is operating under the influence of marijuana, will be looking for additional proof of impairment during the traffic

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219. *See id.* (citing Neavyn et al., Medical Marijuana and Driving: A Review, 10 J. MED. TOXICOLOGY 269 (2014) and Jones et. al, Driving Under the Influence of Cannabis: The Problem and Potential Countermeasures, 87 CRIME & JUST. BULLETIN 1 (2005)).

220. *Id.* at 757.

221. *See id.* (contrasting the effects of marijuana use with the way in which alcohol impairs bodily functions by depressing the central nervous system).

222. *See supra* note 209 and accompanying text.

223. *See* Commonwealth v. Gerhardt, 81 N.E.3d 751, 757 (Mass. 2017) (explaining that THC has been found to decrease a driver's divided attention capacity, impair balance, and slow information processing); *see also supra* Part 0 (discussing various studies that suggest THC is not correlated with marijuana impairment).

224. *See, e.g.*, State v. Bealor, 902 A.2d 226, 227–28 (N.J. 2006) (holding that competent lay observations of the fact of marijuana intoxication do not constitute proofs sufficient to allow the fact-finder to conclude that a driver was impaired unless coupled with additional independent proof of the driver's consumption of marijuana at the time of arrest).

225. *See, e.g.*, *Gerhardt*, 81 N.E.3d at 758 ("It is clear . . . that the scientific community has yet to reach a consensus on the reliability of FSTs to assess whether a driver is under the influence of marijuana.").

stop. That proof may be concealed within the driver's vehicle. However, a police officer's mere suspicions do not constitute probable cause sufficient to support a search of the vehicle under the automobile exception.[226] Thus, the officer, lacking a BAC-equivalent standard, a breathalyzer-like device, and reliable FSTs, must establish probable cause that the vehicle contains evidence of illegality another way. Without the ability to reliably establish impairment during a traffic stop, police officers have an incentive to search the vehicle first and find probable cause later.

IV. CASE STUDIES

Part IV consists of three state-based case studies. The selected states, Washington, Massachusetts, and Virginia, have all legalized marijuana in some capacity.[227] Despite that commonality, each of these states presents a distinct legal approach to determining marijuana impairment amongst drivers.[228] Washington has imposed a per se THC impairment level analogous to the BAC standard for alcohol impairment.[229] Massachusetts has resisted acting legislatively to establish impairment standards, instead leaving the courts to set the parameters for making marijuana intoxication determination.[230] Virginia, the most recent of the three states to legalize marijuana,[231] has acted legislatively to ban searches based solely on the odor of marijuana.[232] But beyond that action, Virginia has taken few steps towards defining the boundaries of marijuana impairment determinations.[233] The case studies will further elaborate on each of these approaches, laying a

226. *See supra* note 122 and accompanying text.

227. *See infra* Parts 0–0 (discussing the legal status of marijuana in Washington, Massachusetts, and Virginia).

228. *Id.*

229. *See infra* Part 0.

230. *See infra* Part 0.

231. *See* JM Pendi, *Virginia: Marijuana Decriminalization Takes Effect July 1*, NORML (May 21, 2020), https://perma.cc/7NHS-66VQ (discussing Virginia's decriminalization of marijuana, which took effect in July of 2020).

232. VA. CODE. ANN. § 4.1-1302(a) (2021).

233. *See infra* Part 0.

foundation for the prescriptive recommendations that follow in Part V.[234]

A. Case Study: Washington

On November 6, 2012, voters in Washington replaced marijuana prohibition with a framework that legalized marijuana for adults over the age of twenty-one.[235] Initiative Measure No. 502 ("I-502") removed all civil and criminal penalties for possession and use of a limited amount of marijuana.[236] Per I-502, adults aged 21 and older can possess, use, and purchase up to one ounce of marijuana without violating state law.[237]

Marijuana-impaired driving remained illegal after the enactment of I-502.[238] A Washington driver "under the influence or affected by" marijuana is guilty of driving under the influence.[239] Further, I-502 established a per se limit that is analogous to the 0.08 BAC standard for alcohol impairment.[240] In Washington, a driver can also be found guilty of a marijuana DUI if "the person has, within two hours after driving, a THC concentration of 5.00 [nanograms per milliliter of blood] or higher."[241] This determination is made by a blood test conducted in accordance with Wash. Rev. Code § 46.61.506 and the

234. *See infra* Part 0.

235. *See* MARIJUANA POLICY PROJECT, I-502: AN OVERVIEW OF WASHINGTON'S NEW APPROACH TO MARIJUANA 1, https://perma.cc/RFN3-KMFK (discussing voters' approval of the new marijuana policy by a margin of 56 percent to 44 percent). The new law became effective on December 6, 2012. *Id.* Washington's State Liquor and Cannabis Board spent 2013 drafting rules and regulations for I-502's implementation. *Id.* The marijuana retailers in the state opened on July 8, 2014. *Id.*

236. *See* WASH. REV. CODE § 69.50.360 (2015) (codifying the limits for legal possession and use of marijuana established by I-502).

237. *Id.*

238. *See* WASH. REV. CODE § 46.61.502(1) (2017) (codifying I-502's prohibition on marijuana-impaired driving).

239. *Id.* § 46.61.502(1)(c) (2017).

240. *See id.* § 46.61.502(1)(b) (2017) (codifying the per se marijuana impairment standard established by I-502).

241. *Id.* A driver with a THC concentration equal to or greater than the 5.00 standard can be arrested and charged without any additional proof of impairment. *Id.*

methods approved by the state toxicologist.[242] To obtain the blood test, a police officer must satisfy two requirements. First, the officer must have "reasonable grounds to believe" the driver is impaired by marijuana in violation of Washington DUI law.[243] Second, the officer must obtain a search warrant.[244]

In practice, these two requirements create only a low bar. In *State v. Tibbets*,[245] the Washington Supreme Court affirmed that "the odor of marijuana in a vehicle may provide probable cause to arrest the sole occupant."[246] Thus, it follows that the smell of marijuana alone would suffice as "reasonable grounds to believe" a driver has violated Washington DUI law. Accordingly, the odor of marijuana brought about by a driver's *legal* possession or prior *legal* use of marijuana would satisfy the first requirement. Regarding the second requirement, Washington State Superior Court Criminal Rule 2.3 mandates a showing of probable cause for the issuance of warrant.[247] However, under Rule 2.3, a police officer's unsworn statement, provided to the court by "any reliable means," is sufficient evidence of probable cause.[248] The ease of obtaining a warrant coupled with the minimal evidence needed to establish "reasonable grounds" is concerning. In theory, a driver in compliance with Washington's marijuana laws and not exhibiting any signs of impairment can be subjected to a court-ordered blood test. Given the lack of scientific evidence supporting a correlation between THC blood levels and marijuana impairment, [249] guilt based solely on this THC standard is problematic.

242. *See id.* § 46.61.506 (2017) (codifying the blood testing process). The 5.00 concentration standard is equivalent to 5 nanograms of THC per milliliter of blood. *Id.* § 46.61.506(2)(b).

243. *Id.* § 46.20.308(4) (2019).

244. *Id.*

245. 236 P.3d 885 (Wash. 2010).

246. State v. Tibbets, 236 P.3d 885, 888 (Wash. 2010).

247. Wash. State Super. Ct. Crim. R. 2.3(c) (2021).

248. *Id.*

249. *See supra* Part 0.

B. Case Study: Massachusetts

On November 8, 2016, Massachusetts voters legalized marijuana by ballot initiative.[250] The measure authorized "possession, use, and purchase of 1 ounce or less of marijuana for adults 21 and older" beginning on December 15, 2016.[251] The measure was silent on the question of how police would determine drugged driving.[252] At the time of the ballot initiative's passage, state law prohibited driving under the influence of marijuana.[253] However, the state did not have a BAC-equivalent standard for marijuana impairment and the ballot initiative did not establish one.[254]

In the five years since Massachusetts legalized marijuana, state lawmakers have declined to enact legislation that would impose a per se impairment standard. A 2021 bill, backed by Governor Charlie Baker, would institute other measures aimed at giving law enforcement more tools to enforce impaired driving laws.[255] House Bill No. 4255 would expand the deployment of DRE-trained police officers and require courts to accept their

250. *See* Joshua Miller, *Mass. Voters Say "Yes" to Legalizing Marijuana*, BOS. GLOBE (Nov. 9, 2016, 7:08 AM), https://perma.cc/RG52-J9C6 (discussing the passage of Question 4 by a 53 percent of the vote despite opposition from Governor Charlie Baker and Boston Mayor Martin Walsh).

251. *Id.*

252. *Id.*

253. *See* MASS. GEN. LAWS ch. 90, § 24 (2021)

> Whoever, upon any way or in any place to which the public has a right of access, or upon any way or in any place to which members of the public have access as invitees or licensees, operates a motor vehicle . . . while under the influence of intoxicating liquor, or of marijuana, narcotic drugs, depressants or stimulant substances . . . shall be punished by a fine of not less than five hundred nor more than five thousand dollars or by imprisonment for not more than two and one-half years, or both such fine and imprisonment.

254. *See* Miller, *supra* note 250 (describing the ballot initiative as "set[ting] up a cascade of tough decisions for officials across the state," including how police would measure drugged driving in the absence of a 0.08 BAC-like standard).

255. H.B. 4255, 192d Gen. Ct., Reg. Sess., (Mass. 2021).

testimony as that of expert witnesses.[256] Additionally, the bill would allow police officers to seek electronic search warrants for evidence of marijuana intoxication, including blood draws.[257] Further, H.B. 4255 would suspend the license of any driver suspected of marijuana impairment that refused to submit to such chemical testing.[258] The bill has met opposition from state legislators.[259] That opposition prompted the Judiciary Committee to send the proposal to study—a procedural action that effectively ensures the bill will not pass during the current legislative session.[260]

In the absence of legislative directives, the parameters of Massachusetts law regarding the roadside determination of marijuana impairment have come from Supreme Judicial Court ("SJC") decisions. The SJC began redefining marijuana case law following the substance's decriminalization in 2008 and has continued to do so since legalization took effect in 2016.[261] In 2013, SJC decisions established that the presence of less than one ounce of marijuana in a vehicle did not amount to probable

256. *Id.*

257. *See id.* (permitting magistrates to grant search warrants authorizing a medical professional to conduct a blood draw on a driver suspected of marijuana impairment).

258. *See id.* (imposing a six-month driver's license suspension for refusing a chemical test for impairment).

259. *See* State House News Service, *Study Order Snufs Out Baker's Drugged Driving Bill*, WHDH 7NEWS BOS. (Feb. 7, 2022), https://perma.cc/6J55-EMG7

> "I just think we don't yet have a reliable device like we do with alcohol to determine if someone is impaired," said Sen. Jamie Eldridge, an Acton Democrat and co-chair of the Judiciary Committee. "I think it's really, really important to emphasize the measure in the governor's proposal to allegedly detect marijuana intoxication while driving is deeply flawed, using biofluids."

260. *See id.* ("The Judiciary Committee last week put the governor's bill (H 4255) into a study order, essentially sealing its fate as a proposal that won't pass this legislative session. The committee did the same thing to Baker's similar legislation during the previous two-year session.").

261. *See* Commonwealth v. Cruz, 945 N.E.2d 899, 911 (Mass. 2011) (holding that in the wake of the 2008 ballot initiative, "the odor of burnt marijuana alone cannot reasonably provide suspicion of criminal activity.").

cause.[262] Further, the SJC has held that the odor of marijuana alone does not constitute probable cause sufficient to support a warrantless motor vehicle search.[263] Currently, the Commonwealth's highest court permits warrantless searches based on the officer's observations of the driver's appearance and behavior during a roadside stop.[264] However, the SJC has explicitly acknowledged the lack of "scientific agreement on whether, and, if so, to what extent [FSTs] are indicative of marijuana intoxication."[265] For this reason, the SJC prohibits police officers from offering an opinion "as to whether a driver was under the influence of marijuana" unless the officer has been qualified as an expert.[266] Accordingly, a police officer's

262. *See* Commonwealth v. Pacheco, 985 N.E.3d 839, 842 (Mass. 2013) (holding that "signs of recent marijuana use, and the presence in the vehicle of less than an ounce of what the officer believed to be marijuana" did not amount to probable cause to conduct a warrantless search of the vehicle); Commonwealth v. Daniel, 985 N.E.2d 843, 849 (Mass. 2013) (holding that "absent articulable facts supporting a belief that either occupant of the vehicle possessed a criminal amount of marijuana," the warrantless search of the vehicle was not justified).

263. *See* Commonwealth v. Overmyer, 11 N.E.3d 1054, 1059–60 (Mass. 2014)

> In sum, we are not confident . . . that a human nose can discern reliably the presence of a criminal amount of marijuana, as distinct from an amount subject only to a civil fine. In the absence of reliability, "a neutral magistrate would not issue a search warrant, and therefore a warrantless search is not justified based solely on the smell of marijuana," whether burnt or unburnt. (quoting Commonwealth v. Daniel 985 N.E.2d 843, 847 (Mass. 2013)).

264. *See* Commonwealth v. Davis, 114 N.E.3d 556, 564 (Mass. 2019) (finding probable cause to support a warrantless search during a roadside stop based on the police officer's observations). The police officer's observations of the driver's appearance and behavior included red and glassy eyes, slow coordination, and the inability to keep his head upright, to focus, and to follow simple directions. *Id.* The officer also observed the smell of marijuana was emanating from the driver and testified that the driver admitted to having smoke marijuana earlier in the day. *Id.*

265. Commonwealth v. Gerhardt, 81 N.E.3d 751, 754 (Mass. 2017).

266. *Id.*

testimony on the subject of marijuana impairment is limited to the officer's observations of the driver.[267]

By resisting the adoption of bright-line intoxication standards, the Massachusetts legislature has demonstrated an awareness of the scientific inaccuracies associated with defining marijuana impairment.[268] The SJC has been similarly cognizant of these technical limitations and has attempted to protect driver's Fourth Amendment rights in the absence of conclusive scientific findings.[269]

C. Case Study: Virginia

Marijuana became legal in Virginia on July 1, 2021.[270] Adults over the age of twenty-one may possess up to one ounce of marijuana for personal use and may grow up to four plants per household.[271] Like in Massachusetts, the legislation authorizing legalization did not alter existing state law that prohibited driving a motor vehicle under the influence of marijuana.[272] At the time, Virginia already had per se limits for certain drug-related DUI offenses.[273] However, when the

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267. *See id.* ("The introduction in evidence of the officer's observations of what will be described as 'roadside assessments' shall be without any statement as to whether the driver's performance would have been deemed a 'pass' or a 'fail,' or whether the performance indicated impairment.").

268. *See supra* Part 0.

269. *See supra* notes 261–267 and accompanying text.

270. *See* Cannabis in Virginia: Frequently Asked Questions, https://perma.cc/XYU2-XMRX

> On April 7, 2021, Virginia became the first state in the South to begin the process of legalizing adult-use cannabis. . . . These changes began on July 1, 2021 with the authorization of a new state authority to regulate the industry and with the legalization of simple possession and cultivation for adults 21 years and over.

271. *Id.*

272. *See* VA. CODE ANN. § 18.2-266(iii) (2021) (making it unlawful for any person to drive or operate a motor vehicle while under such person is under the influence of any "narcotic drug or any other self-administered intoxicant or drug of whatsoever nature, or any combination of such drugs, to a degree which impairs his ability to drive or operate any motor vehicle . . . .").

273. *See id.* § 18.2-266(v) (making it unlawful for any person to drive or operate a motor vehicle "while such person has a blood concentration of any of the following substances at a level that is equal to or greater than" the

Commonwealth legalized marijuana, it opted not to add a per se limit for marijuana DUI offenses.[274]

Prior to the state's legalization of marijuana, Virginia legislators had attempted to enact a per se standard.[275] In 2006, House Bill No. 1182 was introduced.[276] The measure provided that "a person who drives with 0.003 milligrams of tetrahydrocannabinol per liter of his blood is driving under the influence of drugs."[277] The measure passed the House of Delegates by a vote of 98-0.[278] However, the Senate never brought the bill up for a vote.[279]

Thirteen years later, the Commonwealth's Attorney for Albemarle County urged the legislature to renew its efforts to enact a per se standard for marijuana impairment.[280] In 2019, prosecutor Robert Tracci lost a high-profile case involving a truck driver that drove across railroad tracks and was hit by an Amtrak train.[281] According to Tracci, the truck driver had a THC level of 6.6 nanograms per milliliter of blood more than five hours after the crash.[282] When Tracci's office brought charges, the judge dismissed the DUI claim after declining to admit

established limits). Per the law, a driver is guilty of a drug-related DUI if a blood test reveals levels equal to or greater than 0.02 milligrams of cocaine per liter of blood, 0.1 milligrams of methamphetamine per liter of blood, 0.01 milligrams of phencyclidine per liter of blood, or 0.1 milligrams of 3,4-methylenedioxmethamphetmaine per liter of blood. *Id.*

274. *See id.* (failing to include a per se limit for marijuana impairment).

275. *See* Sandy Hausman, *Prosecutor Pushes for Standards for Marijuana DUI*, NPR (Apr. 2, 2019, 12:45 PM), https://perma.cc/E2RK-68JT (discussing the Virginia state legislature's failed attempt to enact a per se standard for prosecuting marijuana-impaired drivers).

276. *Id.*

277. H.B. 1182, 2006 Sess. (Va. 2006).

278. *See* DUI of Alcohol or Drugs; Offense Considered if Certain Milligrams in Blood, H.B. 1182, 2006 Sess. (Va. 2006), https://perma.cc/8ZJR-HJQR (listing the 98 members of the Virginia House of Delegates that voted in favor of H.B. 1182 and noting that no members voted against the measure).

279. *See* Hausman, *supra* note 275 (noting that because the Senate never voted on H.B. 1182, the bill failed).

280. *Id.*

281. *Id.*

282. *See id.* (quoting Tracci, who compared Colorado's THC impairment level of 5 nanograms per milliliter to the truck driver's 6.6 nanogram per milliliter result to illustrate what he believed was evidence of impairment).

evidence regarding the THC in the driver's blood.[283] The judge based his exclusion of this evidence on the unreliability of the scientific data linking THC to impairment.[284] In response, Tracci attempted to build support for a per se THC impairment standard in Virginia.[285]

Thus far, Tracci's efforts have proven unsuccessful, and Virginia has not adopted a per se marijuana impairment standard.[286] However, in 2020, the Virginia legislature did adopt a measure that prohibited searches based on the odor of marijuana alone.[287] Beyond that measure, neither the legislature nor the Virginia Supreme Court have provided much guidance regarding what constitutes probable cause in instances of suspected marijuana-impairment. Virginia's limited case law—relative to a state like Massachusetts — may be explained by the fact that marijuana was not decriminalized in Virginia until 2020.[288] While Massachusetts has been grappling with questions regarding marijuana impairment and probable cause since the state decriminalized the plant in

283. *Id.*

284. *Id.*

285. *See id.* ("[Tracci has] been lobbying lawmakers and working with the association of commonwealth's Attorneys and Mothers Against Drunk Driving to build support for a measure that could come up in the next legislative session.").

286. *See* Cannabis in Virginia, *supra* note 270 (noting that Virginia does not have per se marijuana DUI standard).

287. *See* VA. CODE ANN. § 4.1-1302(a) (2021)

> No law-enforcement officer . . . may stop, search, or seize any person, place, or thing and no search warrant may be issued solely on the basis of the odor of marijuana and no evidence discovered or obtained pursuant to a violation of this subsection, including evidence discovered or obtained with the person's consent, shall be admissible in any trial, hearing, or other proceeding.

288. *See* Pendi, *supra* note 231 ("Democratic Governor Ralph Northam has signed legislation . . . decriminalizing marijuana possession. The new law . . . reduces penalties for offenses involving personal possession of up to one ounce of marijuana to a civil violation—punishable by a maximum $25 fine, no arrest, and no criminal record.").

2008,[289] Virginia is new to the arena.[290] The unchartered territory provides an opportunity for Virginia's legislators and judges to heed lessons from states that have already attempted to resolve the issue.

V. WHERE DO STATES GO FROM HERE?

The inability to reliably determine whether a driver is impaired by marijuana is a problem that scientific advancement will eventually solve. Dr. Haddon's research, which culminated in the 0.08 BAC standard, and the advent of the breathalyzer made scientifically-sound alcohol impairment determinations a reality.[291] Ultimately, analogous breakthroughs will produce the same result in the marijuana-impairment context. Promising results have stemmed from studies that are currently underway[292] and additional funding for relevant scientific research is crucial to realizing a lasting solution.[293] These topics are discussed below.[294]

In the meantime, states should not respond to these scientific and technological limitations by imposing laws that have the effect of criminalizing legal marijuana use. Currently, scientific research does not support per se standards based on THC-blood levels.[295] States, like Washington, that have enacted these standards should repeal the authorizing statute.[296] Further, states should endeavor to protect drivers' Fourth Amendment rights by clearly indicating what constitutes probable cause in instances of suspected marijuana impairment. The lack of a reliable means of determining impairment is not an excuse for relaxing protections against unjustified

289. *See supra* note 261 and accompanying text.

290. *See* Pendi, *supra* note 231 (discussing Virginia's 2020 decriminalization of marijuana).

291. *See supra* Part 0.

292. *See infra* Part 0.

293. *See infra* Part 0.

294. *See infra* Parts 0–0.

295. *See supra* Part 0.

296. *See infra* Part 0. Currently six states—Colorado, Illinois, Montana, Nevada, Ohio, and Washington— have per se THC standards for marijuana impairment. GOVERNORS HIGHWAY SAFETY ASSOCIATION, MARIJUANA-RELATED LAWS 1 (2021), https://perma.cc/7DK4-39YG.

warrantless searches. Decisions by the Massachusetts SJC have established some protections for individuals suspected of driving under the influence of marijuana.[297] While Massachusetts can still do more to firmly define the parameters of probable cause, it serves as a model for states like Virginia. Having only recently legalized marijuana, Virginia should act legislatively to provide probable cause-related protections like and beyond those recognized by the Massachusetts SJC.[298] Other states that have recently legalized marijuana or that plan to decriminalize or legalize marijuana in the future should do the same.

A. Scientific Research

Scientific research into roadside testing for marijuana impairment is already underway.[299] Yet despite this progress, funding should continue to be allocated towards additional research and technological development in this area.[300]

1. Recent Developments

In a January 2022 study, researchers at Massachusetts General Hospital ("MGH") announced that they had developed a "new, noninvasive technique for detecting marijuana highs."[301] The functional near-infrared spectroscopy ("fNIRS") measures "photon reflections from low-power LED bulbs mounted on a skullcap and shined into the skull."[302] In the study, volunteers were given either THC capsules or a placebo.[303] The MGH researchers then classified the volunteers as impaired or not impaired based on a combination of self-reporting by the study subjects and observations of clinicians.[304] Subsequent brain

297. *See supra* Part 0.

298. *See infra* Part 0.

299. *See infra* Part 0.

300. *See infra* Part 0.

301. Dan Adams, *MGH Claims Breakthrough in Detecting Marijuana Impairment*, BOS. GLOBE (Feb. 4, 2022, 4:55 PM), https://perma.cc/8QC6-DB55.

302. *Id.*

303. *Id.*

304. *See id.* (describing how "multiple clinicians who were unaware of which subjects had eaten the 'real' edible" reached a consensus regarding

scans revealed that "people classified as impaired had significantly higher levels of oxygenated hemoglobin" than both those who ate the placebo or were not considered impaired.[305] As part of the study, MGH scientists also developed a computer program that could detect the difference in oxygenated hemoglobin between impaired and non-impaired subjects.[306]

The results of the study are crucial to pursuit of reliable roadside testing for two reasons. First, the computer program rarely indicated impairment in subjects who had consumed THC edibles but were not deemed functionally impaired.[307] Thus, it seems that the technology could ultimately differentiate between marijuana users that are fit to drive and those that are not.[308] Second, unlike the massive MRI machines that hospitals use to conduct brain scans, fNIRS technology is relatively portable.[309] Thus, MGH researchers are optimistic that the technology could be developed into a roadside device.[310]

2. Funding Avenues

More funding should be appropriated for studies like the one underway at MGH. Potential funding avenues include government research programs and public-private partnerships.

A government research program is a reliable source of funding that has the potential to spur scientific development. Appropriating funding through the Congressionally Directed Medical Research Programs ("CDMRP") is an attractive option.

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which subjects were impaired through "thorough before-and-after observation of [the subjects'] behavior").

305. *Id.*

306. *Id.*

307. *Id.*

308. *See id.* (stating the technology is "far ahead of older methods that automatically designate anyone with a high level of marijuana metabolites in their system as impaired, regardless of how well they're actually functioning").

309. *See id.* (describing how fNIRS-like technology is already being used in widely available smartwatches and fitness monitoring devices that measure wearers' heartrates and blood oxygenation).

310. *See id.* (stating that such a device "would allow police to catch dangerously stoned drivers without sweeping up law-abiding cannabis consumers and medical marijuana patients that have THC in their system but are not actively impaired").

The CDMRP is a "Department of Defense (DOD) program that receives congressional appropriations explicitly for biomedical research in specific, congressionally identified health matters."[311] Members of Congress request funding for medical research during the annual defense appropriations process.[312] The U.S. Army Medical Research and Development Command then administers the appropriated funds through a competitive grant process.[313] Politically, seeking funding through a DOD program increases the likelihood that the money will ultimately be appropriated.[314]

Another means of obtaining funding for scientific research is through a public-private partnership. The Driver Alcohol Detection System for Safety ("DADSS") Research Program could serve as the model for a marijuana-equivalent partnership. The DADSS "brings together the Automotive Coalition for Traffic Safety (ACTS), which represents the world's leading automakers, and the National Highway Traffic Safety Administration (NHTSA)."[315] Beginning in 2008, the program has focused on research and creation of accurate, precise, and reliable alcohol-impairment technology that would prevent drunk drivers from being able to operate a vehicle.[316] In December 2021, the Virginia Department of Motor Vehicles and Schneider, a transportation and logistics company, announced the first trial deployment of DADSS technology.[317] In 2022, eight

311. Bryce H. P. Mendez, Cong. Rsch Serv., IF10349, Congressionally Directed Medical Research Programs Funding for FY2021 1 (2021).

312. *Id.*

313. *Id.*

314. *See The Military Spending Debate*, CHARLES KOCH INST. (Jan. 30, 2019), https://perma.cc/8LM3-XS2S (discussing how both the Republican and Democratic parties "enthusiastically" accommodate military spending).

315. *See* Alexander Stoklosa, *Take a Shot of This: In-Car Drunkness Detection Systems Being Tested by NHTSA*, CAR & DRIVER (July 5, 2015), https://perma.cc/G3ZW-2XJB (discussing the development of the DADSS program's in-car drunk-detection technology solutions).

316. *See* DRIVER ALCOHOL DETECTION SYSTEM FOR SAFETY, https://perma.cc/HTA2-DNF3 (articulating the DADSS program's history and purpose).

317. *See* Press Release, Driver Alcohol Detection System for Safety, The Next Phase of Driven to Protect in Virginia (Dec. 8, 2021), https://perma.cc/9J24-L4GZ (describing the trial program as a "new milestone toward the commercialization of the DADSS technology and an important next step in testing).

Schneider trucks will be outfitted with DADSS's newest breath sensors.[318] Each truck will log more than 100,000 miles during the trial period, exposing the system to a wide range of new drivers and environmental conditions.[319] By helping to refine the technology, the trial program is expected to bring DADSS closer to its goal of "commercializing fully passive vehicle-integrated breath technology."[320] Similar scientific and technological progress could be achieved through public-private partnerships devoted to marijuana impairment research.

B. Interim Legal Solutions

Scientific research into marijuana's effects and the development of reliable impairment indicators will take time. In the interim, legal avenues must be pursued to protect drivers' Fourth Amendment rights in the marijuana-impairment context. Repeal of per se marijuana DUI laws as well as the legislative enactment of probable cause-related protections are important steps.

1. Repeal Per Se Marijuana DUI Laws

Currently, six states have established a threshold limit for the presence of THC.[321] Like in Washington, drivers in Colorado, Illinois, and Montana with a THC level of five nanograms per milliliter of blood are per se guilty of a marijuana DUI.[322] In Nevada and Ohio, a driver is per se guilty of a marijuana DUI if a blood test reveals a THC level above two nanograms per milliliter.[323]

It is not surprising that states would adopt this per se approach to addressing marijuana-impaired driving. Using the well-established alcohol-impairment scheme as a model for constructing a marijuana-impairment scheme seems inherently logical. However, as Part III establishes, the science simply does

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318. *Id.*

319. *Id.*

320. *Id.*

321. GOVERNORS HIGHWAY SAFETY ASSOCIATION, MARIJUANA-RELATED LAWS 1 (2021), https://perma.cc/K5ZB-J2TS.

322. *Id.*

323. *Id.*

not support this exercise in analogizing.[324] The problem with using an impairment threshold that is not scientifically-sound is that it puts legal users of marijuana at risk of a DUI conviction.

Consider the following series of events: a driver is pulled over by a police officer for a minor traffic infraction. After the officer approaches the vehicle, he becomes suspicious that the driver may be impaired by marijuana. The officer's suspicions could be based on any number of observations, including the driver's behavior, the visible contents of the vehicle, or an emanating odor of marijuana. However, these observations are not necessarily indicative of impairment.[325] Even if the driver submits to FSTs at the officer's request, the results of those assessments are not a reliable indicator of impairment.[326]

At this stage of the traffic stop, the officer may decide to search the vehicle for additional evidence of impairment. Citing his observations as sufficient probable cause that the vehicle contains evidence of illegality, the officer can proceed under the automobile exception. In the vehicle, the officer may discover marijuana or marijuana paraphernalia.[327] In states where marijuana is legal, there likely is nothing illegal about these items' presence in the vehicle. However, the presence of marijuana combined with the officer's prior observations may lead the officer to arrest the driver. Having been arrested, the driver is often forced to submit to a blood test. Refusal of a blood test will typically result in a driver having his license suspended [328] and the refusal can also be used against the driver in a criminal trial.[329] If the driver submits to testing and the result indicates his THC blood level is above the legal limit, the driver

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324. *See supra* Part 0.

325. Further, in states where marijuana is legal, these observations are not necessarily indicative of *any* criminal activity.

326. *See supra* Part 0.

327. The officer may discover that the car contains other illicit items. In that instance, the warrantless search, which was initially based on questionable showing of probable cause, could result in severe criminal liability for the driver.

328. *See, e.g.*, WASH. REV. CODE § 46.20.308(2)(a) (2019) (stating that refusing a blood test will result in a driver's license suspension for at least one year).

329. *See, e.g.*, *id.* § 46.20.308(2)(b) ("If the driver refuses to take the test, the driver's refusal to take the test may be used in a criminal trial . . . .").

is per se guilty. Accordingly, a driver that had legally used marijuana and whose alleged impairment had not been proven in a scientifically-sound manner, is guilty of a DUI. Per se marijuana DUI statutes pose a significant risk to innocent marijuana users who are not driving in violation of the law. This result is not acceptable. In states where these per se THC standards exist, the authorizing law must be repealed.

2. Legislatively Enact Probable Cause-Related Protections

In all states where marijuana is legal, the lack of a reliable means of determining marijuana impairment poses a risk to drivers' Fourth Amendment rights. Without an objective impairment standard, police officers must amass a collection of evidence to demonstrate that an individual was not fit to drive. The incentive to conduct a warrantless search of the vehicle in the pursuit of more definitive evidence of impairment is high. If the standard for what constitutes sufficient probable cause to initiate that warrantless search is unclear, then drivers are even more vulnerable.

To protect drivers from unconstitutional searches in the marijuana impairment context, states should establish parameters for what does and does not amount to probable cause. The Massachusetts SJC has recognized some protections of this kind.[330] Currently, Massachusetts case law dictates that the presence of less than one ounce of marijuana in a vehicle does not amount to probable cause.[331] Additionally, neither poor performance on FSTs nor the odor of marijuana alone is sufficient evidence to support a warrantless search.[332] However, a police officer's observations of the driver's appearance and behavior are.[333] Through these holdings, the SJC has demonstrated awareness regarding the scientific limitations associated with determining marijuana impairment and has fortified drivers' Fourth Amendment rights.[334]

Other states should follow a similar course of action albeit legislatively. Rather than waiting for motions to suppress

330. *See supra* Part 0
331. *See supra* note 262 and accompanying text.
332. *See supra* notes 263, 265 and accompanying text.
333. *See supra* note 264 and accompanying text.
334. *See supra* notes 261–267 and accompanying text.

evidence in marijuana DUI cases to make their way to the state's highest court, legislatures should be proactive. After decriminalizing marijuana in 2020, Virginia took one important step in this direction, enacting legislation that prohibited searches based on the odor of marijuana alone.[335] A similar law should exist in all states where marijuana has been decriminalized or legalized. Among states that have not yet, but do ultimately decide to legalize marijuana, a similar provision should accompany any legalization measure. Virginia, and other similarly situated states, should also codify other protections recognized by the Massachusetts SJC. Particularly important are legislative prohibitions against finding probable cause based solely on poor FST performance and the presence of legal amounts of marijuana in a vehicle.

CONCLUSION

Throughout history, the law has often played a reactionary role to scientific advancements and technological developments. As new frontiers emerged, courts, legislatures, and legal scholars have had to modernize old doctrines and create new regulatory schemes. However, in the context of marijuana impairment, it is legal progress that blazed the trail, leaving scientific and technological innovation to follow in its wake.

The proliferation of marijuana legalization has provided many Americans with access to marijuana. As it pertains to the relationship between driving and marijuana use, legalization has adjusted the permissible range of behaviors. While it remains illegal to drive while impaired by marijuana, use of the drug that does not result in impairment is not a bar to driving.[336] The law recognizes this distinction, but science has not produced a reliable way for law enforcement to make it.[337]

To identify a drunk driver, police officers rely on BAC standards and FSTs specifically designed to test for alcohol impairment.[338] Yet, for determining marijuana impairment, there is not a scientifically-sound BAC-equivalent standard and

335. VA. CODE ANN. § 4.1-1302(a) (2021).

336. *See supra* Part 0.

337. *See supra* Parts 0–0.

338. *See supra* Part 0.

there are no roadside assessments on which police can rely.[339] This scientific and technological void has problematic consequences for marijuana users that get behind the wheel, regardless of whether they are impaired.

In some states, legislators have ignored the science, opting to impose per se marijuana DUI laws based on standards that do not correlate with impairment.[340] These laws threaten innocent drivers, whose THC blood levels are above the legal limit, but who are not impaired.[341] For that reason, these laws should be repealed.[342]

In all states, the lack of an established impairment standard threatens drivers' Fourth Amendment rights. The inability to determine whether a driver is impaired during a traffic stop creates an incentive to search the vehicle for evidence of impairment.[343] However, that incentive does not equate to the probable cause sufficient to justify a warrantless a search.[344] Until science produces a reliable method for determining marijuana impairment, states must protect drivers' Fourth Amendment rights in instances of suspected marijuana DUIs.[345] Ideally, these protections should take the form of legislative enactments that firmly define the parameters of probable cause in the marijuana impairment context.[346]

339. *See supra* Parts 0–0.
340. *See supra* Part 0.
341. *See supra* Part 0.
342. *Id.*
343. *See supra* Part 0.
344. *Id.*
345. *See supra* Part 0.
346. *Id.*