

Reconsidering Federal Marijuana Regulation

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ABSTRACT

The Controlled Substances Act (CSA) prohibits the cultivation and distribution of marijuana by placing it in a category (Schedule I) reserved for drugs that are unhelpful and dangerous. The CSA has remained unchanged since its birth, but numerous states have changed their penal code and now allow the sale of marijuana for medical or recreational purposes. The current legal status of cannabis is therefore nonsensical because, try as they might, the states cannot grant private parties a license to violate federal law. Congress needs to address that problem. In so doing, Congress should recognize that the CSA approached this problem from the wrong direction. People use drugs for medical or recreational purposes, and each one requires a separate regulatory scheme.

Medical Marijuana Use: For more than eighty years, the nation has entrusted the Commissioner of Food and Drugs with the responsibility to decide whether a particular substance is a “drug” and, if so, whether that drug is “safe” and “effective” and therefore can be sold throughout the nation. Those decisions are neither moral nor political ones. They require the scientific expertise of professionals in the fields of medicine, biochemistry, pharmacology, and the like, not the legal knowledge of lawyers or the ethical sensibilities of the electorate. Congress should leave to the judgment of the Commissioner the decision of how federal law should regulate medical-use marijuana.

Recreational Marijuana Use: The disparities between federal and state law demand reconciliation. Congress and the president should assume that responsibility and, in so doing, should consider a number of relevant factors: What effect would legalization have on marijuana use by adults and juveniles? What percentage of people who engage in long-term use

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will become physically dependent or addicted, as well as suffer serious mental problems? What regulatory scheme—the ones governing the sale of tobacco or alcohol, or an entirely new scheme—would best serve the public? What effect would legalization have on roadway safety, given the likely increase in the number of crashes and fatalities attributable to driving under the influence of cannabis?

The bottom line is that Congress should decide whether the benefits of recreational marijuana use outweigh its harms, but it should act responsibly in answering that question.

I. INTRODUCTION

“The nature of all addictive drugs is to promise bliss but deliver woe.”¹ For that reason, federal law criminalizes the distribution of various addictive substances.² Among them is the plant known as cannabis or marijuana.³

The federal government has regulated or banned marijuana distribution for more than eighty years.⁴ The first federal law governing its distribution was the Marihuana Tax Act of 1937.⁵ Technically, that act did not prohibit the distribution of marijuana; instead, it barred anyone from distributing marijuana without registering with the federal government and paying a tax.⁶ Yet, the 1937 act had the effect of making marijuana distribution a crime because by then every state had

¹ ED GOGEK, *MARIJUANA DEBUNKED: A HANDBOOK FOR PARENTS, PUNDITS AND POLITICIANS WHO WANT TO KNOW THE CASE AGAINST LEGALIZATION* 140 (2015).

² See Paul J. Larkin, Jr., *Swift, Certain, and Fair Punishment: 24/7 Sobriety and Hope: Creative Approaches to Alcohol- and Illicit Drug-Using Offenders*, 105 J. CRIM. L. & CRIMINOLOGY 39, 42–52 (2016) [hereinafter Larkin, *24/7 Sobriety and Hope*] (discussing regulation of alcohol and controlled substances, such as opioids). Alcohol and tobacco cause more morbidity and mortality than controlled substances. See, e.g., Nora D. Volkow et al., *Adverse Health Effects of Marijuana Use*, 370 NEW ENG. J. MED. 2219, 2225–26 (2014) (Dr. Volkow is the Director of the National Institute on Drug Abuse: “[L]egal drugs (alcohol and tobacco) offer a sobering perspective, accounting for the greatest burden of disease associated with drugs not because they are more dangerous than illegal drugs but because their legal status allows for more widespread exposure.” (footnote omitted)). Alcohol and tobacco are sold, not because they are safe, but as a concession to the reality that they are an ineradicable part of our culture. See, e.g., Family Smoking Prevention and Tobacco Control Act, Pub. L. No. 111–31, 123 Stat. 1776 (2009); *Nicopure Labs, LLC v. FDA*, 944 F.3d 267, 270–71 (D.C. Cir. 2019); LISA MCGIRR, *THE WAR ON ALCOHOL: PROHIBITION AND THE RISE OF THE AMERICAN STATE* (2015); DANIEL OKRENT, *LAST CALL: THE RISE AND FALL OF PROHIBITION* (2010).

³ For a recent, layperson discussion of the woes that marijuana use can lead to, see ALEX BERENSON, *TELL YOUR CHILDREN: THE TRUTH ABOUT MARIJUANA, MENTAL ILLNESS, AND VIOLENCE* (2019).

⁴ For a history of marijuana and its federal regulation, see DAVID F. MUSTO, *THE AMERICAN DISEASE: ORIGINS OF NARCOTICS CONTROL* passim (Oxford Univ. Press, 3d ed. 1999) (1973); RICHARD J. BONNIE & CHARLES H. WHITEBREAD II, *THE MARIJUANA CONVICTION: A HISTORY OF MARIJUANA PROHIBITION IN THE UNITED STATES* (Bookworld Serv. 1999) (1974); MARTIN BOOTH, *CANNABIS: A HISTORY* (2005); John F. Galliher & Allyn Walker, *The Puzzle of the Social Origins of the Marihuana Tax Act of 1937*, 24 SOC. PROBS. 367 (1977).

⁵ Marihuana Tax Act, ch. 553, 50 Stat. 551 (1937) (repealed 1970).

⁶ Responsibility for enforcing the Marijuana Tax Act of 1937 initially rested with the Department of the Treasury Internal Revenue Service Prohibition Unit, Narcotics Division. That agency, over time, became the Prohibition Bureau, later the Federal Bureau of Narcotics (FBN), later still the Justice Department Bureau of Narcotics and Dangerous Drugs (BNDD), and, ultimately, the Drug Enforcement Administration. See THE PRESIDENT’S ADVISORY COMMISSION ON NARCOTIC AND DRUG ABUSE, FINAL REPORT 32–39 (1963); BONNIE & WHITEBREAD II, *supra* note 4; Thomas M. Quinn & Gerald T. McLaughlin, *The Evolution of Federal Drug Control Legislation*, 22 CATH. U. L. REV. 586, 599, 605 (1973) (citing Reorganization Plan No. 1 of 1968, § 2(a), 28 U.S.C. § 509 (1970)).

outlawed possession or distribution of cannabis.⁷ This meant that every federal registrant automatically incriminated himself under state law. For that reason, the Supreme Court of the United States held the act unconstitutional in 1969.⁸ The following year, Congress replaced that statute with the Controlled Substances Act of 1970 (CSA).⁹

The CSA took a different approach than the Marihuana Tax Act did. By 1970, the Supreme Court read the Article I Commerce Clause¹⁰ to grant Congress far more authority than the Court had allowed Congress to have in 1937.¹¹ As a result, the CSA prohibited the distribution of cannabis by placing it in Schedule I of the new drug regulation plan,¹² a category reserved for drugs that are, as a practical matter, unhelpful and dangerous.¹³ Congress authorized the U.S. Attorney General to reclassify marijuana if, after consulting with the Secretary of Health and Human

⁷ *Gonzales v. Raich*, 545 U.S. 1, 11 n.14 (2005).

⁸ *Leary v. United States*, 395 U.S. 6 (1969).

⁹ Comprehensive Drug Abuse Prevention and Control Act of 1970, Pub. L. No. 91-513, 84 Stat. 1242 (codified as amended at 21 U.S.C. §§ 801-904 (2019)). The Controlled Substances Act was Title II of the Comprehensive Drug Abuse Prevention and Control Act of 1970. Title I addressed prevention and treatment of narcotics addiction, and Title III dealt with the import and export of controlled substances. *Raich*, 545 U.S. at 12 n.19. A “controlled substance” is “a drug or other substance, or immediate precursor, included in Schedule I, II, III, IV, or V of part B of this title,” except for “distilled spirits, wine, malt beverages, or tobacco, as those terms are defined or used in subtitle E of the Internal Revenue Code of 1954.” 21 U.S.C. § 802(6) (2018). The Controlled Substances Act incorporates the definition of a “drug” from the Federal Food, Drug, and Cosmetic Act, 21 U.S.C. § 201(g)(1) (2019).

¹⁰ *See* U.S. CONST. art. I, § 8, cl. 3 (“[The Congress shall have Power] . . . To regulate Commerce with foreign nations, and among the several States, and with the Indian Tribes [.]”).

¹¹ *See* *Hammer v. Dagenhart*, 247 U.S. 251 (1918) (holding unconstitutional a federal minimum working age requirement). *Compare, e.g.,* *A.L.A. Schechter Poultry Corp. v. United States*, 295 U.S. 495 (1935) (ruling that Congress cannot regulate under the Commerce Clause the local slaughtering and sale of poultry), *with, e.g.,* *Wickard v. Filburn*, 317 U.S. 111 (1942) (upholding the constitutionality of a federal statute regulating the production of wheat for home consumption).

¹² The CSA assigns drugs to one of four schedules according to a drug’s potential benefits and risks. The schedule system came from several international agreements to which the United States was (and still is) a signatory that require participating nations to outlaw the distribution of controlled substances. *See infra* note 64 and accompanying text.

¹³ *See Federal Drug Abuse and Drug Dependence Prevention, Treatment, and Rehabilitation Act of 1970: Hearings on S.B. 3562 Before the Special Subcomm. on Alcoholism and Narcotics of the S. Comm. on Labor and Public Welfare*, 91st Cong. 473 (1970) (Statement of John E. Ingersoll, Dir., Bureau of Narcotics and Dangerous Drugs, U.S. Dep’t of Justice) (stating that marijuana had “no recognized medical use”). Schedule I controlled substances have a high potential for abuse, no currently accepted domestic medical use, and no accepted safe use. 21 U.S.C. § 812(b)(1)(A)–(C) (2018). The CSA prohibits physicians from prescribing Schedule I drugs to anyone for any use. 21 U.S.C. § 841 (2015); *see* *United States v. Moore*, 423 U.S. 122 (1975) (holding that a physician can be convicted for distributing methadone, a Schedule II controlled substance, outside the boundaries of professional medical practical).

Services, he found that doing so would be appropriate.¹⁴ No attorney general has done so, however, and marijuana remains in the same category that Congress chose fifty years ago, as contraband.¹⁵

Since 1996, a majority of states have legalized marijuana for medical and recreational use even though federal law still prohibits the conduct that the states have removed from their penal codes.¹⁶ This conflict has created legal and practical problems for the federal government, the states, and private parties, whether or not they are involved in the marijuana business, a conflict only the federal government can resolve. Indeed, the current state of the law is nothing short of nonsensical.

My goal in this article is two-fold: to encourage Congress and the White House to accept the burden of rationalizing the law governing cannabis, however they resolve it, and to suggest an answer to the medical marijuana aspect of the dispute. Congress approached this issue from the wrong direction in 1970 because of a mistake that it made more than three decades earlier. One year after Congress passed the Marihuana Tax Act of 1937, Congress enacted the Federal Food, Drug, and Cosmetic Act of 1938 (FDCA).¹⁷ The FDCA completely revamped the then-existing federal drug regulatory scheme¹⁸ and vested in the Commissioner of Food and Drugs, aided by his lieutenants in the newly created U.S. Food and Drug Administration (FDA), the responsibility to determine whether drugs are safe and (via subsequent legislation) effective.¹⁹ In passing the FDCA, Congress should have revisited the approach adopted by the Marihuana Tax Act and transferred regulatory authority over marijuana from the Secretary of the Treasury to the FDA Commissioner.²⁰ Congress made a similar mistake in 1970 when the CSA prohibited

¹⁴ 28 U.S.C. § 811(a)–(c) (2015). The Attorney General has delegated his authority to the Administrator of Drug Enforcement. 21 C.F.R. § 0.100(b) (2018).

¹⁵ 21 C.F.R. § 1308.11(d)(31) (2020).

¹⁶ As of January 2, 2020, thirty-three states permit medical use of cannabis, while eleven states and the District of Columbia also allow recreational use. *Marijuana: Effects, Medical Uses, and Legalization*, DRUGS.COM, <https://www.drugs.com/illicit/marijuana.html> (last visited Jan. 2, 2020) [<https://perma.cc/4KJM-PCAL>].

¹⁷ Federal Food, Drug, and Cosmetic Act, ch. 675 § 1, 52 Stat. 1040 (1938) (codified as amended at 21 U.S.C. § 301 *et seq.* (2019)).

¹⁸ Federal Food and Drugs Act of 1906, ch. 3915, 34 Stat. 768 (prohibiting the manufacture or interstate shipment of adulterated or misbranded food and drugs); *see, e.g.*, *Savage v. Jones*, 225 U.S. 501, 530 (1912). For the background to the 1906 law, *see* JAMES HARVEY YOUNG, *PURE FOOD: SECURING THE FEDERAL FOOD AND DRUGS ACT OF 1906* (1989).

¹⁹ *See, e.g.*, CHARLES WESLEY DUNN, *FEDERAL FOOD, DRUG, AND COSMETIC ACT: A STATEMENT OF ITS LEGISLATIVE RECORD* (1938); David F. Cavers, *The Food, Drug, and Cosmetic Act of 1938: Its Legislative History and Its Substantive Provisions*, 6 L. & CONTEMP. PROBS. 2 (1939); Drug Efficacy Amendment of 1962, Pub. L. No. 87-781, 76 Stat. 780 (requiring a manufacturer to prove that a drug is effective before the company can market it in interstate commerce).

²⁰ Responsibility for enforcing the Marijuana Tax Act of 1937 rested with the Department of the Treasury. It was within the bailiwick of the Internal Revenue Service Prohibition Unit Narcotics

the distribution of marijuana as contraband rather than directing the FDA Commissioner to make that decision.²¹

Since the states began to revisit their treatment of marijuana in 1996, Congress has made two other, different mistakes. One is failing to reiterate the FDCA's message that only the federal government should set national drug policy. The other is failing to recognize that people use marijuana for only two purposes—either its alleged medical or known recreational effects—and that each one requires a different approach.

This Article proceeds as follows. Part I describes the problems created by the existing conflict between federal and state law. Part II recommends that, because there is no legitimate therapeutic justification for smoking botanical marijuana or eating agricultural marijuana-laden food, the FDA should finally assume the responsibility it has abjured for more than two decades of shutting down businesses that sell smokable or edible cannabis for medical use.²² Part III identifies questions that Congress should answer as part of any debate over the future treatment of recreational-use marijuana. Finally, Part IV urges that Congress forthrightly rethink

Division, which later became the Prohibition Bureau and ultimately the Federal Bureau of Narcotics (FBN). From 1965 to 1968, the FBN and the FDA Bureau of Drug Abuse Control (BDAC) operated in parallel universes: the FBN had jurisdiction over marijuana and opiates; the FDA, for depressants, stimulants, and hallucinogens. In 1968, a presidential reorganization plan merged the FBN and BDAC into the newly created Bureau of Narcotics and Dangerous Drugs (BNDD) and transferred that new unit to the Justice Department as part of the CSA. Three years later, the BNDD became the DEA. *See* Drug Abuse Control Amendments of 1965, Pub. L. No. 89-74, §§ 2 & 9, 79 Stat. 226, 226-27, 234 (1965); THE PRESIDENT'S ADVISORY COMMISSION ON NARCOTIC AND DRUG ABUSE, FINAL REPORT 32-39 (1963); BONNIE & WHITEBREAD II, *supra* note 4; MATTHEW R. PEMBLETON, CONTAINING ADDICTION: THE FEDERAL BUREAU OF NARCOTICS AND THE ORIGINS OF AMERICA'S GLOBAL DRUG WAR (2017); Quinn & McLaughlin, *supra* note 6, at 599, 605 & n.89 (citing Reorganization Plan No. 1 of 1968, § 2(a), 28 U.S.C. § 509 (1970)).

²¹ The FDA should have only drug classification authority. The federal law enforcement agencies, such as the DEA, should have criminal investigatory authority. The latter should be able to comment on the FDA's decisions, but the FDA should have the power to classify drugs.

²² Two caveats are in order. First, nowadays marijuana products (perhaps especially edible foods containing THC) come in a host of varieties and can be used in a host of different ways. JOHN HUDAK, MARIJUANA: A SHORT HISTORY 17-18 (2016) (noting that edibles come in "countless forms including cookies, brownies, candies, granola, salad dressing, and even pasta sauce."); Paul J. Larkin, Jr., *Marijuana Edibles and "Gummy Bears,"* 66 BUFF. L. REV. 313, 318-19 (2018) [hereinafter Larkin, *Gummy Bears*]. My argument below focuses on the traditional practice of smoking cannabis in its botanical form. *See infra* note 76. Second, the FDA has authority only over food and drugs that have travelled "in" interstate commerce. *See, e.g.,* 21 U.S.C. §§ 321(b), 331 (2018). That element is satisfied if marijuana itself or any ingredient or component of a finished product at any time has travelled in interstate commerce, however remote that travel might be to the party involved. *See, e.g.,* Scarborough v. United States, 431 U.S. 563 (1977); United States v. Regenerative Scis., LLC, 741 F.3d 1314, 1320-21, 1326 (D.C. Cir. 2014); Baker v. United States, 932 F.2d 813 (9th Cir. 1991); United States v. Dianovin Pharm., Inc., 475 F.2d 100, 102-03 (1st Cir. 1973); United States v. Detroit Vital Foods, Inc., 330 F.2d 78, 82 (6th Cir. 1964); United States v. Premo Pharm. Labs., Inc., 511 F. Supp. 958, 977 n.23 (D.N.J. 1981).

its fifty-year treatment of marijuana. Whatever its ultimate decision, Congress should reconsider the CSA's approach to marijuana regulation.²³

I. THE CONFLICTING FEDERAL AND STATE MARIJUANA REGULATORY REGIMES

There was considerable public controversy over the proper treatment of marijuana before Congress enacted the CSA in 1970,²⁴ and the debate has not let up since then.²⁵ Many people think that the CSA's classification is entirely wrongheaded; others just as vehemently disagree. With the law on the supporters' side and the critics unwilling to "tap out," the result has resembled a Texas Death

²³ Much of the law journal literature on marijuana discusses legal issues, not policy decisions. The latter are more interesting. As Professor Kleiman once wrote, "Cannabis legalization will indeed provide a solution to the manifold ills of prohibition, but, as James Q. Wilson once observed, the chief cause of problems is solutions. We seem to be about to lurch all the way from making the cannabis trade a felony to making it an industry, as we did with alcohol and gambling. There are stopping places in between, and finding one of them might prevent a good deal of avoidable misery." Mark A.R. Kleiman, *Cannabis, Conservatively*, NAT'L REV. (Dec. 8, 2014, 4:00 AM), <https://www.nationalreview.com/magazine/2014/12/08/cannabis-conservatively/> [hereinafter Kleiman, *Cannabis Conservatively*] [<https://perma.cc/5GMJ-QNDS>]. For discussion of policy alternatives to complete legalization, see JONATHAN P. CAULKINS ET AL., CONSIDERING MARIJUANA LEGALIZATION: INSIGHTS FOR VERMONT AND OTHER JURISDICTIONS (2015) [hereinafter CAULKINS, INSIGHT]; Jonathan Caulkins, *Against a Weed Industry*, NAT'L REV. (Mar. 15, 2018, 12:06 PM) [hereinafter Caulkins, *Weed Industry*], <https://www.nationalreview.com/magazine/2018/04/02/legal-marijuana-industry-leap-unknown/> [<https://perma.cc/79W2-FGED>]; Jonathan P. Caulkins, *The Real Dangers of Marijuana*, NAT'L AFF. 21 (Winter 2016) [hereinafter Caulkins, *Marijuana Dangers*]; Mark A.R. Kleiman, *The Public-Health Case for Legalizing Marijuana*, NAT'L AFF. 68 (Spring 2019) [hereinafter Kleiman, *Marijuana and Public Health*].

²⁴ See, e.g., BONNIE & WHITEBREAD II, *supra* note 4, at 222–47; LESTER GRINSPOON, MARIJUANA RECONSIDERED (1971); JOHN KAPLAN, MARIJUANA: THE NEW PROHIBITION (1970); HERBERT L. PACKER, THE LIMITS OF THE CRIMINAL SANCTION 333 (1968) ("A clearer case of misapplication of the criminal sanction would be difficult to imagine."); Geoffrey Richard Wagner Smith, *Possession of Marijuana in San Mateo County: Some Social Costs of Criminalization*, 22 STAN. L. REV. 101, 103 (1969) ("In the same week that the President of the United States declared an all-out war on marijuana smuggling, . . . the Wall Street Journal reported discussion in the business world on the potential profit in legalized marijuana." (footnote omitted)).

²⁵ See, e.g., Gabriel G. Nahas & Albert Greenwood, *The First Report of the National Commission on Marihuana (1972): Signal of Misunderstanding or Exercise in Ambiguity*, 50 BULL. N.Y. ACAD. MED. 55 (1974); INST. OF MED., MARIJUANA AND MEDICINE: ASSESSING THE SCIENCE BASE (Janet E. Joy et al. eds., 1999); COMMITTEE ON THE HEALTH EFFECTS OF MARIJUANA, NAT'L ACAD. OF SCI., ENG'G, & MED., THE HEALTH EFFECTS OF CANNABIS AND CANNABINOIDS: THE CURRENT STATE OF EVIDENCE AND RECOMMENDATIONS FOR RESEARCH (2017) [hereinafter NAT'L ACAD. REPORT]; OFFICE OF NAT'L DRUG CONTROL POLICY, MARIJUANA MYTHS AND FACTS: THE TRUTH BEHIND 10 POPULAR MISCONCEPTIONS (2004); DIV. OF MENTAL HEALTH AND PREVENTION OF SUBSTANCE ABUSE, WORLD HEALTH ORG., CANNABIS: A HEALTH PERSPECTIVE AND RESEARCH AGENDA (1997); WAYNE HALL & ROSALIE LICCARDO PACULA, CANNABIS USE AND DEPENDENCE: PUBLIC HEALTH AND PUBLIC POLICY (2003); ROBIN ROOM ET AL., CANNABIS POLICY: MOVING BEYOND STALEMATE (2010); Wayne Hall & Louisa Degenhardt, *Adverse Health Effects of Non-Medical Cannabis Use*, 374 LANCET 1383, 1389 (2009); Volkow et al., *supra*, note 2.

Match. For more than thirty years, critics sought to persuade the U.S. Attorney General to move marijuana out of Schedule I, but those efforts uniformly failed.²⁶ Critics also sought to persuade the federal courts that the government's refusal to reschedule marijuana was arbitrary and capricious or that Congress's scheme was unconstitutional. Those efforts also came a cropper.²⁷

In 1996, California took the law into its own hands. Voters passed a state initiative called "The Compassionate Use Act" permitting the possession, sale, and use of cannabis for medical purposes.²⁸ Other states followed that path. Today, more than forty states allow adults to use marijuana or one of its biologically active and unique constituents (known as "cannabinoids") for therapeutic purposes. Moreover, eleven states permit adults to use marijuana recreationally.²⁹ Accordingly, today most states have regulatory schemes directly at odds with federal law.³⁰

The Supreme Court has twice upheld the federal government's authority to ban any use of cannabis for medical or (by implication) recreational purposes when authorized by a state code. Each case involved California law. In 2001, the Court in *United States v. Oakland Cannabis Buyers' Cooperative* declined to construe the CSA to include a "medical necessity" exception to the CSA's strict ban on marijuana distribution, even in a state that had approved medical marijuana use.³¹ Four years later, in *Gonzales v. Raich*, the Court rejected the argument that Congress lacked the

²⁶ See, e.g., Michele M. Leonhart, Adm'r, Drug Enf't Adm'n, *Denial of Petition to Initiate Proceedings to Reschedule Marijuana*, 76 Fed. Reg. 40,552, 40,567 (July 8, 2011); John C. Lawn, Adm'r, Drug Enf't Adm'n, *Marijuana Scheduling Petition; Denial of Petition*, 54 Fed. Reg. 53,767, 53,784 (Dec. 29, 1989); Proposed Recommendations to the Drug Enf't Adm'n Regarding the Scheduling Status of Marijuana and Its Components and a Notice of a Public Hearing, 47 Fed. Reg. 28,141 (proposed June 7, 1982).

²⁷ See, e.g., *Gonzales v. Raich*, 545 U.S. 1, 32–33 (2005) (upholding Congress's Commerce Clause authority to prohibit the local cultivation of marijuana); *United States v. Oakland Cannabis Buyers' Co-op.*, 532 U.S. 483, 494–95 (2001) (holding that medical necessity is not a defense under federal law to a charge of unlawfully distributing marijuana); *United States v. Christie*, 825 F.3d 1048, 1065–66 (9th Cir. 2016) (rejecting argument that Congress's Schedule I classification of marijuana is unconstitutionally arbitrary); *Americans for Safe Access v. DEA*, 706 F.3d 438 (D.C. Cir. 2013) (ruling that substantial evidence supported the DEA's conclusion that no well-controlled studies had established a current medical use for marijuana); *United States v. Rosenthal*, 454 F.3d 943, 948 (9th Cir. 2006) (ruling that the City of Oakland cannot "deputize" someone to distribute marijuana under state law and render him immune from prosecution under federal law); *All. for Cannabis Therapeutics v. DEA*, 15 F.3d 1131 (D.C. Cir. 1994) (upholding DEA's interpretation of "currently accepted medical use" to require (inter alia) "well-controlled studies proving efficacy").

²⁸ Paul J. Larkin, Jr., *Medical or Recreational Marijuana and Drugged Driving*, 52 AM. CRIM. L. REV. 453, 468 (2015) [hereinafter Larkin, *Drugged Driving*].

²⁹ See NAT'L ACAD. REPORT, *supra* note 25, at 68 & Fig. 3-1, 74.

³⁰ For popular accounts of the reform efforts, see BRUCE BARCOTT, *WEED THE PEOPLE: THE FUTURE OF LEGAL MARIJUANA IN AMERICA* (2015); EMILY DUFTON, *GRASS ROOTS: THE RISE AND FALL AND RISE OF MARIJUANA IN AMERICA* (2017).

³¹ 532 U.S. 483, 491–95 (2001).

power under the Article I Commerce Clause to regulate the wholly intrastate cultivation, distribution, and possession of cannabis for individual, non-commercial, medical use as authorized by California law.³² *Oakland Cannabis Buyers' Cooperative* and *Raich* effectively eliminated any challenge to the federal government's ability to outlaw cannabis nationwide.³³

Nonetheless, since 1996 more and more states have authorized marijuana to be used for medical or recreational purposes under their own laws, and an increasing number of businesses have entered the business of cultivating or distributing cannabis. The elected branches of the federal government have largely been bystanders to the continuing growth of the marijuana industry against the background of an increasing divergence between federal and state law. The last four administrations have alternated between threatening to enforce federal law and promising not to do so. The Bill Clinton and George W. Bush Administrations had said that they would continue to enforce federal law, at least against large distributors.³⁴ The Obama Administration adopted a policy of declining to enforce federal law against businesses that sold marijuana in compliance with state law.³⁵

³² *Raich*, 545 U.S. at 15–31.

³³ The respondents in *Raich* also claimed that application of the CSA to them violated the Due Process Clause, but the Court did not reach that issue. *Id.* at 31. (On remand, the Ninth Circuit rejected that argument on the merits. *Raich v. Gonzales*, 500 F.3d 850, 866 (9th Cir. 2007).) Had the Court done so, it is most unlikely that a majority would have ruled in the respondents' favor. The Court has afforded Congress considerable freedom in deciding how to regulate controlled substances and their harms. *See* *N.Y.C. Transit Auth. v. Beazer*, 440 U.S. 568, 587–94 (1979) (rejecting an Equal Protection Clause challenge to a city policy refusing to hire methadone users); *United States v. Rutherford*, 442 U.S. 544 (1979) (rejecting the argument that there is an express or implied exception to the FDCA for drugs that can be used to treat the terminally ill); *cf.* *Marshall v. United States*, 414 U.S. 417, 422–30 (1974) (rejecting due process and equal protection challenges to Title II of the Narcotic Addict Rehabilitation Act, 18 U.S.C. §§ 4251–55 (2018), which excludes repeat offenders from discretionary rehabilitative addiction treatment in lieu of incarceration). The federal circuit courts have repeatedly rejected claims that the CSA's Schedule I classification of marijuana is unconstitutional. *See, e.g., United States v. Christie*, 825 F.3d 1048, 1065–66 (9th Cir. 2016); *United States v. Kiffer*, 477 F.2d 349, 352–57 (2d Cir. 1973).

³⁴ *See, e.g., Barry McCaffrey, Dir. Off. of Nat'l Drug Control Policy, Administration Response to Arizona Proposition 200 and California Proposition 215*, 62 Fed. Reg. 6164, 6164 (Feb. 11, 1997) (warning that the “DEA will seek to revoke the DEA registrations of physicians who recommend or prescribe Schedule I controlled substances”); Larkin, *Drugged Driving*, *supra* note 28, at 469 & nn.72–74. Their bark, however, was far worse than their bite. Trevor Wong, *AB 1578: The End of Marijuana Prohibition as We Know It?*, 49 U. PAC. L. REV. 449, 452 (2018) (stating that, from 1996–2009, the Justice Department “largely gave a ‘free pass’ to medical marijuana users who complied with state law.” (footnote omitted)); *see, e.g., Larkin, Gummy Bears*, *supra* note 22, at 343 & n.74, 353–54 & nn.96–98.

³⁵ *See* Memorandum from James M. Cole, Deputy Att'y Gen., U.S. Dep't of Justice, for U.S. Att'ys on Guidance Regarding the Ogden Memo in Jurisdictions Seeking to Authorize Marijuana for Medical Use (June 29, 2011); Memorandum from James M. Cole, Deputy Att'y Gen., U.S. Dep't of Justice, for U.S. Att'ys on Guidance Regarding Marijuana Enf't (Aug. 29, 2013); Memorandum from James M. Cole, Deputy Att'y Gen., U.S. Dep't of Justice, for U.S. Att'ys on Guidance Regarding

The Obama Administration, however, seems to have done little to ensure that state distributors actually complied with state law.³⁶ During the Trump Administration, Attorney General Jeff Sessions repealed the Obama Administration's hands-off policy and left enforcement decisions to each separate U.S. Attorney,³⁷ but the U.S. Attorneys' Offices have not aggressively enforced the CSA. Congress has watched the different administrations dither.³⁸

Recently, however, Congress has taken some baby steps toward re-examining the CSA's ban on any use of marijuana. Since 2014, Congress has regularly passed appropriations bills containing a rider that prohibits the U.S. Department of Justice from halting state efforts to experiment with medical marijuana programs.³⁹ In 2019, Congress decided to treat the hemp form of marijuana differently from the one that

Marijuana Related Financial Crimes (Feb. 14, 2014); Larkin, *Drugged Driving*, *supra* note 28, at 470 & n.75 (summarizing the Obama Administration's policy and listing department memoranda adopting it).

³⁶ See U.S. GOV'T ACCOUNTABILITY OFF., GAO-16-1, STATE MARIJUANA LEGALIZATION: DOJ SHOULD DOCUMENT ITS APPROACH TO MONITORING THE EFFECTS OF STATE MARIJUANA LEGALIZATION (2015) [hereinafter, GAO, STATE MARIJUANA LEGALIZATION].

³⁷ See Memorandum from U.S. Att'y General Jeff Sessions to U.S. Att'ys, Marijuana Enforcement (Jan. 4, 2018).

³⁸ Larkin, *Gummy Bears*, *supra* note 22, at 322–28.

³⁹ See Consolidated and Further Continuing Appropriations Act, 2015, Pub. L. No. 113-235, § 538, 128 Stat. 2130, 2217 (2014); Continuing Appropriations Act, 2016, Pub. L. No. 114-53, § 104, 129 Stat. 502, 506 (2015); Further Continuing Appropriations Act, 2016, Pub. L. No. 114-96, 129 Stat. 2193 (2015); Consolidated Appropriations Act, 2016, Pub. L. No. 114–113, § 542, 129 Stat. 2242, 2332–33 (2015); Continuing Appropriations and Military Construction, Veterans Affairs, and Related Agencies Appropriations Act, 2017, and Zika Response and Preparedness Act, Div. C, Pub. L. No. 114-223, 130 Stat. 857, 908-20 (2016); Further Continuing and Security Assistance Appropriations Act, 2017, Pub. L. No. 114-254, § 101, 130 Stat. 1005, 1006 (2016); H.R.J. Res. No. 99, Pub. L. No. 115-30, 131 Stat. 134 (2017); Consolidated Appropriations Act, 2017, Pub. L. No. 115-31, 131 Stat. 135 (2017); Continuing Appropriations Act, 2018 and Supplemental Appropriations for Disaster Relief Requirements Act 2017, Div. D, Pub. L. No. 115-56, §§ 103-04, 131 Stat. 1129, 1139-47 (2018); H.R.J. Res. No. 123, Further Continuing Appropriations Act, 2018, Div. A, Pub. L. No. 115-90, § 101, 131 Stat. 1280 (2017); H.R. Res. 1370, 115th Cong. (2017); Fourth Continuing Appropriations for Fiscal Year 2018, Federal Register Printing Savings, Healthy Kids, Health-Related Taxes, and Budgetary Effects, Pub. L. No. 115-120, Div. B, §§ 2001-2003, 132 Stat. 28 (2018); Consolidated Appropriations Act, 2018, Pub. L. No. 115-141, Div. A, Tit. II, § 538, 132 Stat. 348 (2018); Department of Defense and Labor, Health and Human Services, and Education Appropriations Act, 2019 and Continuing Appropriations Act, 2019, Pub. L. No. 115-245, Div. C, §§ 101-103, 132 Stat. 2981(2018); H.J. Res. 143, Pub. L. No. 115-298, 132 Stat. 4382 (2018); Further Additional Continuing Appropriations Act, 2019, Pub. L. No. 116-5, § 101, 113 Stat. 10 (2019); Consolidated Appropriations Act, Pub. L. No. 116-6, Div. C, Tit. V, § 537, 133 Stat. 13 (2019); Continuing Appropriations Act, 2020, and Health Extenders Act of 2019, Pub. L. No. 116-59, Div. A, § 101, 113 Stat. 1093 (2019); Further Continuing Appropriations Act, 2020, and Further Health Extenders Act of 2019, Pub. L. No. 116-69, Div. A, § 101, 133 Stat. 1134 (2019); Consolidated Appropriations Act, 2020, Pub. L. No. 116-93, Div. A, Tit. V, § 531, 133 Stat. 2317 (2019); Further Consolidated Appropriations Act, 2020, Pub. L. No. 116-94, § 5, 133 Stat. 2534 (2019). For a discussion of how far that prohibition reaches, see Larkin, *Gummy Bears*, *supra* note 22, at 356–65.

consumers ordinarily smoke,⁴⁰ ostensibly because hemp contains a low concentration of delta-9-tetrahydrocannabinol (THC), the principal psychoactive ingredient in marijuana, one that is too low for hemp to have a psychoactive effect.⁴¹ Numerous members, however, have introduced various proposals to modify the CSA to make it easier for individuals to possess and distribute marijuana.⁴²

The open—some might say defiant—clash between federal and state law is unhealthy. At the Convention of 1787, the Framers proposed the Constitution because they realized that the Articles of Confederation did not create a national government that could govern the nation on matters of common interest, as well as avoid the interstate and the internecine economic warfare that had led to a “Balkanization that had plagued relations among the Colonies and later among the States.”⁴³ To ensure that the federal government would have the final word on matters within its delegated authority, the Article VI Supremacy Clause of the Constitution preempts a state law that conflicts with federal law.⁴⁴ The current federal and state marijuana regulatory schemes—the former prohibiting the distribution of marijuana, whether interstate or intrastate,⁴⁵ the latter creating

⁴⁰ See Additional Supplemental Appropriations for Disaster Relief Act, 2019, § 107, Pub. L. No. 116-20, 133 Stat. 871 (2019); Consolidated Appropriations Act, 2019, Pub. L. No. 116-6, § 537, 738, 133 Stat. 13 (2019); Agricultural Improvement Act of 2018, Pub. L. No. 115-334, § 10113, 132 Stat. 4490 (2018); H.R. REP. NO. 98-1072 (2018) (Conf. Rep); Memorandum from Stephen Alexander Vaden, Gen'l Couns., U.S. Dep't of Agric., on Exec. Summary of New Hemp Authorities (May 28, 2019) and Memorandum from Stephen Alexander Vaden, Gen'l Couns., U.S. Dep't of Agric., on Regarding Legal Opin. on Certain Provisions of the Agric. Improvement Act of 2018 Relating to Hemp to Sonny Perdue, Sec'y of Agric., (May 28, 2019).

⁴¹ See MITCH EARLEYWINE, UNDERSTANDING MARIJUANA: A NEW LOOK AT THE SCIENTIFIC EVIDENCE 4 (2002). I say “ostensibly” because hemp growers in Kentucky have long urged Congress to exempt hemp from Schedule I, and the Senate Majority Leader, Mitch McConnell, is from Kentucky. See BONNIE & WHITEBREAD II, *supra* note 4, at 3, 69; Tom Angell, *Here's Mitch McConnell's New Hemp Legalization Bill*, FORBES (Apr. 12, 2018, 12:24 PM), <https://www.forbes.com/sites/toman-gell/2018/04/12/heres-mitch-mcconnells-new-hemp-legalization-bill/#16d0acb55b5b> [<https://perma.cc/FHN5-HKJ6>]; Susan David Dwyer, *The Hemp Controversy: Can Industrial Hemp Save Kentucky?*, 86 KY. L.J. 1143 (1998).

⁴² Consider some of the bills introduced just in the 116th Congress. See, e.g., STATES Act, H.R. 2093, 116th Cong. (2019) (matching federal to individual state laws); Cannabidiol and Marijuana Research Expansion Act, S. 2032, 116th Cong. (2019) (expanding research on cannabidiol and marijuana); Medical Marijuana Research Act of 2019, H.R. 3797, 116th Cong. (2019) (streamlining the approval process for applications to conduct marijuana research).

⁴³ *Hughes v. Oklahoma*, 441 U.S. 322, 325 (1979).

⁴⁴ U.S. CONST. art. VI, cl. 2; see, e.g., *Armstrong v. Exceptional Child Center, Inc.*, 575 U.S. 320, 324 (2015) (“It is apparent that this Clause states a rule of decision: Courts ‘shall’ regard the ‘Constitution,’ and all laws ‘made in Pursuance thereof,’ as ‘the supreme Law of the Land.’ They must not give effect to state laws that conflict with federal laws.”); THE FEDERALIST No. 33, at 200 (Alexander Hamilton) (Clinton Rossiter ed., 2003) (stating that the Supremacy Clause “declares a truth, which flows immediately and necessarily from the institution of a Federal Government”).

⁴⁵ *Gonzales v. Raich*, 545 U.S. 1 (2005).

administrative schemes to regulate intrastate cannabis sales—on their face appear to create the type of problem that the Framers sought to avoid through the Supremacy Clause: state efforts to nullify a federal regulatory program.

Although that state-caused discord would seem to violate the Supremacy Clause, the issue is more complicated than it first appears. Much of the apparent inconsistency is attributable to the oddity of the relatively new state programs. For almost sixty years, 1937 to 1996, federal and state laws both prohibited marijuana distribution. Now, the criminal codes in states with medical or recreational cannabis programs no longer parallel the CSA ban. Yet, it is important to view that divergence in context. A difference between state and federal law does not automatically translate into a conflict between the two.

Neither the Constitution nor the CSA requires the states to outlaw cannabis distribution. Section 10 of Article I lists a variety of actions that the states *cannot* take, such as enter into a treaty with a foreign government, allow paper money to be used to pay debts, and pass an *ex post facto* law, a bill of attainder, or a law impairing the obligation of contracts.⁴⁶ Neither Section 10 nor any other constitutional provision, however, lists actions that a state *must* take, such as adopt a penal code.⁴⁷ What the state legalization acts do, generally speaking, is eliminate the distribution and possession of marijuana from criminal liability under the state's criminal law as long as those activities comply with the new state regulatory program. One effect is to sideline state and local law enforcement officers from their traditional investigative functions, which includes collaborating with their federal counterparts, such as Drug Enforcement Administration special agents. Yet, just as Congress cannot order the states to treat marijuana distribution as a crime,⁴⁸ so, too, Congress cannot conscript state or local police officers into enforcing federal law.⁴⁹ If that seems odd, remember that there are areas where only federal law criminalizes certain conduct.⁵⁰ The federal ban on marijuana distribution therefore would not be so surprising if it operated on a completely stand-alone basis. The dramatic change in state marijuana enforcement strategies is what creates the striking anomaly.

⁴⁶ See, e.g., U.S. CONST. art. I, § 10, cls. 1–3.

⁴⁷ Although each of the original thirteen states did. See, e.g., DOUGLAS GREENBERG, CRIME AND LAW ENFORCEMENT IN THE COLONY OF NEW YORK, 1691–1776 (1974); Hugh Rankin, *Criminal Trial Proceedings in the General Court of Colonial Virginia*, 72 VA. MAG. HIST. & BIOGRAPHY 50 (1964).

⁴⁸ See *Murphy v. NCAA*, 138 S. Ct. 1461 (2018) (ruling that Congress cannot order a state not to change state law).

⁴⁹ See *Printz v. United States*, 521 U.S. 898 (1997) (ruling that Congress cannot require state law enforcement officers to enforce a federal criminal law).

⁵⁰ See, e.g., 8 U.S.C. Ch. 6, 11–12 (2019) (Immigration and Nationalization Agencies, Officers, and Stations); 10 U.S.C. Ch. 47 (2019) (Uniform Code of Military Justice); 18 U.S.C. Ch. 118 (2012) (War Crimes); 50 U.S.C. Ch. 56 (2018) (Export Administration), *repealed and replaced* by the John S. McCain National Defense Authorization Act for Fiscal Year 2019, Pub. L. No. 115-232, 132 Stat. 1636 (2018).

Consider the preemption issue as a matter of technical legal analysis under the Supremacy Clause.⁵¹ To start, there is no literal conflict between them. The state initiatives do not purport to make the distribution of cannabis legal under federal law, nor do they compel someone to violate federal law, both of which would conflict with the CSA. They also do not penalize someone for complying with federal law or reward someone for committing a federal crime, either of which would frustrate the latter's purposes. Moreover, the new state laws are limited substantively and jurisdictionally. Substantively, they exempt the sale of marijuana only from the per se rules that previously existed under the state's penal code in favor of using a regulatory scheme to govern their distribution and use. Jurisdictionally (or geographically), they operate only on an in-state basis; they do not purport to allow an in-state business to sell marijuana elsewhere. The state legalization measures, therefore, do not expressly or impliedly conflict with the CSA.

To be sure, the state legalization schemes place state law out of sync with federal law and, particularly when viewed from an historical perspective, certainly seem likely to frustrate Congress's goal of deterring the sale of marijuana. But the states have only exercised authority that they are entirely free to pursue: revising their penal codes. Remember that the Supremacy Clause is not a substantive command to the states to legislate in any particular fashion, nor is it a restraint on their legislative authority, like the Bill of Attainder and Ex Post Facto Clause, to make normative judgments or accomplish desired outcomes via the criminal law. The Supremacy Clause is just a "rule of decision" that exists to protect Congress's legislative authority.⁵² If so, the clause cannot require a state to do what Congress itself cannot do: order a state to outlaw particular conduct.⁵³ Accordingly, state laws establishing medical or recreational cannabis programs do not violate the Supremacy Clause.

Nonetheless, there is more going on in those states than a simple revision or repeal of their criminal codes. The states with liberalized marijuana laws have elaborate administrative mechanisms to regulate their new medical or recreational marijuana programs.⁵⁴ Take Colorado. State constitutional amendments legalized

⁵¹ State law can conflict with federal law in several ways. Congress can enact a statute expressly barring any supplemental state regulation. Congress can implicitly preempt state law via a comprehensive regulatory approach that leaves no room for supplemental state regulation. State law can conflict with federal law by making it impossible to comply with both federal and state law, or by obstructing the purposes of federal law. *See, e.g., Murphy*, 138 S. Ct. at 1480.

⁵² *Id.* (quoting *Armstrong*, 575 U.S. at 324).

⁵³ *Supra* note 48 and accompanying text.

⁵⁴ *See, e.g., CAL. HEALTH & SAFETY CODE*, Div. 10, Ch. 6, Art. 2, §§ 11357-11362.5 (2019); *COLO. REV. STAT.* Tit. 44, arts. I (Medical Marijuana) & II (Colorado Retail Marijuana Code) (West 2019) (repealed and replaced by 2018 Colo. Legis. Serv. Ch. 55 (H.B. 18-1023)).

the medical and recreational use of marijuana in 2000 and 2012, respectively.⁵⁵ The state agency responsible for implementing those medical and recreational marijuana programs, including the licensing of distributors and enforcement of state law, is the Colorado Marijuana Enforcement Division (CMED), a component of the Colorado Department of Revenue.⁵⁶ That feature of the state programs makes them stand out. We have a “rather bizarre system” in place today where “state officials hand out licenses to commit federal felonies.”⁵⁷ Nowhere else do we see established state agencies whose entire function is to enable the public to commit acts that violate federal criminal law. Even in the area of controlled substances, the state marijuana programs are outliers. No state—yet, at least—has legalized the distribution of heroin or other Schedule I controlled substances.⁵⁸ The state programs might not technically violate the Supremacy Clause, but they are an extreme oddity generating disrespect for the rationality of the law, a rationality that is necessary for the public to deem the criminal legitimate and therefore comply with its dictates.⁵⁹

Defenders of the state programs argue that Congress should continue to leave to the states the issue of whether marijuana should be available for medical and recreational use.⁶⁰ Yet, for the last eighty-plus years—if not the last 110-plus—we

⁵⁵ See COLO. CONST. art. 18, § 14 (medical marijuana); *id.* § 16 (recreational marijuana).

⁵⁶ See, e.g., COLO. REV. STAT. ANN. §§ 44-11-101 to 44-11-1102 (West 2018) (regulation of medical marijuana); *id.* §§ 44-12-101 to 44-12-1101 (2018) (regulation of retail marijuana sales); COLO. DEP’T OF REVENUE, *Marijuana Enforcement*, <https://www.colorado.gov/pacific/enforcement/marijuanaenforcement> [<https://perma.cc/NZ4A-E59M>] (last updated Oct. 7, 2019); COLO. DEP’T OF REG. AGENCIES, COLO. OFF. OF POL’Y, RES., AND REG. REFORM, *2018 Sunset Reviews: Colorado Medical Marijuana Code & Colorado Retail Marijuana Code* (Oct. 15, 2018), <https://www.sos.state.co.us/CCR/GenerateRulePdf.do?ruleVersionId=8439&file-Name=1%20CCR%20212-3>.

⁵⁷ Kleiman, *Marijuana and Public Health*, *supra* note 23, at 75.

⁵⁸ It’s just a matter of time. See, e.g., *United States v. Safehouse*, 408 F. Supp. 3d 583 (E.D. Pa. 2019) (ruling that the so-called federal “Crack House” statute, 21 U.S.C. § 856(a)(2) (2018), which forbids anyone from knowingly operating or managing a permanent or temporary location for the purpose of unlawfully distributing or using a controlled substance, does not bar a city from opening a so-called “safe injection” site where people can inject heroin or other controlled substances under medical supervision); Am. Psychological Ass’n, Symposium: *Can Psychedelic Drugs Heal?* (Aug. 9, 2018), <https://www.apa.org/news/press/releases/2018/08/psych-edelic-drugs-heal>; Patricia Mazzei, *Denver Voters Support ‘Magic’ Mushrooms*, N.Y. TIMES (May 8, 2019), <https://www.nytimes.com/2019/05/08/us/denver-magic-mushrooms-decriminalization.html> [<https://perma.cc/HYF7-XLH9>] (noting the Denver voters effectively decriminalized hallucinogenic mushrooms).

⁵⁹ See, e.g., TOM R. TYLER, *WHY PEOPLE OBEY THE LAW* (2006) (concluding that people generally follow the law because they respect it, not because they fear it); PETER C. YEAGER, *THE LIMITS OF LAW: THE PUBLIC REGULATION OF PRIVATE POLLUTION* 9 (1991) (“As criminologists have long known, where laws lack legitimacy, violation rates are likely to be relatively high, other factors held constant.”).

⁶⁰ One argument is that Congress should leave that decision to the states as part of their authority to regulate medical practice. See *Dent v. West Virginia*, 129 U.S. 114, 121–24 (1889) (upholding the state’s authority to regulate the practice of medicine); Patricia J. Zettler, *Pharmaceutical Federalism*, 92 IND. L.J. 845, 849 (2017) (noting the consensus that “state jurisdiction is reserved for medical

have entrusted the FDA with that responsibility. Since Congress enacted the Pure Food and Drug Act of 1906 (PFDA), no one has challenged the basic principle that medical and scientific problems need and deserve a medical or scientific answer. Since Congress replaced that act with the FDCA in 1938, no one has challenged the consensus that the FDA should have the responsibility to make those medical and scientific judgments. The decisions that Congress made in 1906 and 1938 to vest decision-making responsibility in experts in the federal government is now a settled feature of American law and public policy. No one seriously argues that we should reconsider that judgment, and no one in Congress is likely to do so.

There is no reason to exempt botanical marijuana from that rule. No other drug is subject to approval by plebiscite because, though it is impolitic to say, we do not want to trust public health decisions to an electorate that generally lacks even a college degree, let alone an advanced one in medicine, biochemistry, or pharmacology.⁶¹ Whatever your view of the relevance and merit of an administrative agency's view of the law,⁶² no one seriously maintains that we should empower individuals lacking the necessary scientific education, training, and expertise to make dispositive judgments on questions of medical or scientific *fact*. In sum, we should continue to leave to the FDA the responsibility to decide whether the marijuana plant (or any of its components) is a safe, effective, and pure drug.⁶³

practice—the activities of physicians and other health care professionals—while federal jurisdiction covers “medical products, including drugs”) (emphasis in original; footnote omitted). The Supreme Court once said that Congress lacked the authority to regulate medical practice. *See Linder v. United States*, 268 U.S. 5, 18 (1925) (“[D]irect control of medical practice in the states is beyond the power of the federal government.”). Whether or not the Supreme Court would reaffirm that position today, the Court has upheld Congress’s authority to ban inter- or intrastate distribution of drugs, including marijuana. *Gonzales v. Raich*, 545 U.S. 1 (2005).

⁶¹ See Paul J. Larkin, Jr., *The Folly of Requiring Complete Knowledge of the Criminal Law*, 12 LIBERTY U. L. REV. 335, 344 (2018) (according to 2015 data from the U.S. Census Bureau, nearly 90% of adults had a high school diploma or a graduate equivalency degree, roughly 59% had completed at least some amount of college, only 42% received an associate’s degree, only 33% received a bachelor’s degree, and only 12% received an advanced degree).

⁶² Compare *Kisor v. Wilkie*, 139 S. Ct. 2400, 2410, 2413 (2019) (lead opinion of Kagan, J.), with *id.* at 24–25 (Roberts, C.J., concurring in part), and with *id.* at 2442–43 (opinion of Gorsuch, J.); see Paul J. Larkin, Jr., *Baseball, Legal Doctrines, and Judicial Deference to an Agency’s Interpretation of the Law: Kisor v. Wilkie*, 2018-2019 CATO SUP. CT. REV. 69 (2019).

⁶³ See, e.g., BRIAN F. THOMAS & MAHMOUD A. ELSOHLY, *THE ANALYTICAL CHEMISTRY OF CANNABIS* xiv (2016) (arguing that the FDA needs to be closely involved in marijuana regulation than the Drug Enforcement Administration); Sean M. O’Connor & Erika Lietzan, *The Surprising Reach of FDA Regulation of Cannabis, Even After Descheduling*, 68 AM. U. L. REV. 823 (2019) (explaining that descheduling cannabis transfers regulatory authority to the FDA). Besides, a “states’ rights” approach makes little sense as a matter of economics. As long as there is a demand for marijuana (a very safe assumption), smugglers will find a way to transport it from states where it is available and cheap to states where it is not. Consider cigarettes. States like Virginia and North Carolina lightly tax cigarettes; New York State and City tax them heavily. The result is that more than half of the cigarettes sold by convenience stores in New York City are contraband, having been purchased and trucked from the former states north. The same would be true with respect to marijuana, which is why a national solution

Regardless of their effect on federal *domestic* policy, state liberalization measures pose a risk of interfering in the nation's *foreign* policy. The international community created several international agreements designed jointly to combat trafficking in dangerous drugs, such as heroin and marijuana, by criminalizing their distribution within the jurisdiction of each participating country. The United States is a signatory to three such agreements.⁶⁴ Article I of the Constitution vests in the federal government the exclusive authority to enter into international agreements,⁶⁵ and the Necessary and Proper Clause empowers Congress to implement those treaties via domestic laws such as the CSA.⁶⁶ Foreign nations could decide (honestly or otherwise) that the federal government's unwillingness to enforce federal law in the face of the post-1996 state liberalization efforts indicates that the United States has abandoned its international obligations without paying the other signatories the respect of forthrightly withdrawing from those agreements. That risk provides an additional justification for Congress's action.⁶⁷

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Where does that leave us? With these two points.

First, it is irrelevant whether the state liberalization measures would survive a challenge in federal court under the Supremacy Clause. They create substantial uncertainty in the law, they generate considerable disrespect for its authority, and they encourage millions of dollars in investment and state taxes that could be undone

is desirable. Kleiman, *Marijuana and Public Health*, *supra* note 23, at 75–76. Any “states’ rights” claim is more slogan than argument. See Paul J. Larkin, Jr., *States’ Rights and Federal Wrongs: The Misguided Attempt to Label Marijuana Legalization Efforts as a “States’ Rights” Issue*, 16 GEO. J.L. & PUB. POL’Y 495 (2018) [hereinafter Larkin, *States’ Rights*].

⁶⁴ Single Convention on Narcotic Drugs, Mar. 30, 1961, 18 U.S.T. 1407, *amended by* 1972 Protocol, Mar. 25, 1972, 26 U.S.T. 1439; Convention on Psychotropic Substances, Feb. 21, 1971, 32 U.S.T. 543; United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, Dec. 20, 1988, 1582 U.N.T.S. 164. Marijuana is a covered substance. See INT’L NARCOTICS CONTROL BD., UNITED NATIONS, LIST OF PSYCHOTROPIC SUBSTANCES UNDER INTERNATIONAL CONTROL 5 (28th ed. 2017).

⁶⁵ U.S. CONST. art. I, § 10, cl. 1 (“No State shall enter into any Treaty, Alliance, or Confederation[.]”); *id.* art. II, § 2, cl. 2 (“[The President] shall have Power, by and with the Advice and Consent of the Senate, to make Treaties, provided two-thirds of the Senators present concur[.]”).

⁶⁶ U.S. CONST. art. I, § 8, cl. 18 (“[The Congress shall have Power] To make all Laws which shall be necessary and proper for carrying into Execution the foregoing Powers, and all other Powers vested by this Constitution in the Government of the United States, or in any Department of Officer thereof.”).

⁶⁷ The question, of course, is not whether the growth of those state programs would prove in court that the United States has abandoned its treaty obligations. Other nations could decide, for their own domestic or international purposes, that the United States has walked away from those agreements, or that they should use the state programs as an excuse to withdraw from different international obligations by saying that sauce for the goose is sauce for the gander.

by strict federal enforcement. That scenario demands a federal response. It is no longer possible to ignore the state-law developments and retain credibility about the public welfare. The questions for Congress are similar to the ones that every first-year law student learns in torts class. What are the potential harms and benefits of permitting recreational marijuana use? What is the likelihood and extent of each? What preventative measures can avoid the harms while not interfering with the benefits? What is the cost of those safeguards? What is the likelihood of error of making each of those judgments? Can a mistaken judgment be remedied at a reasonable cost? The federal government must answer those questions.

Second, so far neither Congress nor the president has displayed any interest in accepting that responsibility. Marijuana is a “hot button” issue—viz., a dispute that will cause elected officials to lose votes regardless of which side they support. That is why our elected federal officials have generally sat on the sidelines for the last two decades. Yes, they have taken some limited actions. With respect to the medical use of marijuana, Congress has handcuffed the Justice Department through appropriations riders that seek to bar the department from challenging state medical marijuana programs. With respect to the recreational use of marijuana, Congress is considering legislation that nibbles around the edges of the issue, like the 2018 hemp law. With respect to the medical or recreational use of marijuana, the last four administrations have declined to interfere through FDA civil enforcement actions with the increasing prevalence of new state medical and recreational cannabis initiatives, or even to urge Congress to resolve this problem. Every elected federal official knows the trend in state marijuana laws and is waiting—some hoping, others praying—for a *fait accompli* to occur before taking a stand on the issues. Yet, entreating the Almighty for deliverance from a difficult decision⁶⁸ is not a responsible plan. No one should seriously believe that elected federal officials could reasonably ask this cup to pass forever or should want Congress and the president to adopt a Sergeant Schultz-like posture toward the state-law developments.⁶⁹ It is time for our elected officials to earn their pay.

II. MEDICAL-USE MARIJUANA

Throughout history, amateur apothecaries created primitive nostrums from available plants to cure disease or alleviate misery. Marijuana was one such plant.⁷⁰ Relying on that history (or a preference for natural herbal medicines), critics of the CSA’s marijuana regulatory regimen argue that Congress went wrong when it concluded that there is no legitimate medical use for the plant form of cannabis. By

⁶⁸ *Matthew* 26:39 (King James) (“O my Father, if it be possible, let this cup pass from me[.]”).

⁶⁹ *Hogan’s Heroes* (CBS 1965-71) <https://www.youtube.com/watch?v=OsXrpxo4uC0> (the all-seeing, all-hearing, all-knowing Sergeant Hans Schultz).

⁷⁰ Sunil K. Aggarwal et al., *Medicinal Use of Cannabis in the United States: Historical Perspectives, Current Trends, and Future Directions*, 5 J. OPIOID MGMT. 153, 153–57 (2009).

contrast, defenders of prohibition or regulation of marijuana, pointing to our recent, fifty-year effort to quell cigarette smoking,⁷¹ maintain that botanical marijuana is not a legitimate delivery system for whatever medicinal benefits cannabis might provide. The debate has persisted for decades in legislatures, academic journals, and public discussion without either side winning a clear victory.⁷²

Now, it is not surprising for members of Congress or drug policy experts to disagree over that issue. The former respond to separate, discrete electorates with different views; the latter are members of those electorates. Yet, even physicians can take opposite sides on what, at first blush, appears to be largely a scientific issue. Some firmly believe that, contrary to the CSA's Schedule I designation, agricultural cannabis has legitimate medical uses as a treatment for various maladies and their symptoms.⁷³ Others just as strongly disagree.⁷⁴

⁷¹ See, e.g., DAVID KESSLER, *A QUESTION OF INTENT: A GREAT AMERICAN BATTLE WITH A DEADLY INDUSTRY* (2002).

⁷² See, e.g., *MEDICAL MARIJUANA* (Margaret Haerens & Lynn N. Zott eds., 2013) (summarizing the pro and con arguments for treating cannabis as a medicine); Larkin, *Drugged Driving*, *supra* note 28, at 461–63 & nn.30–36 (same); see generally Rebecca S. Eisenberg & Deborah E. Leiderman, *Cannabis for Medical Use: FDA and DEA Regulation in the Hall of Mirrors*, 74 *FOOD & DRUG L.J.* 246 (2019); Lewis A. Grossman, *Life, Liberty, [and the Pursuit of Happiness]: Medical Marijuana Regulation in Historical Context*, 74 *FOOD & DRUG L.J.* 280 (2019).

⁷³ See, e.g., NAT'L ACAD. REPORT, *supra* note 25, at 53–54 (listing conditions for which marijuana is a treatment for which there are varying degrees of scientific support, such as nausea, appetite loss, pain, and anxiety); DAVID CASARETT, *STONED: A DOCTOR'S CASE FOR MEDICAL MARIJUANA* (2015); PATRICIA C. FRYE & DAVID SMITHERMAN, *THE MEDICAL MARIJUANA GUIDE: CANNABIS AND YOUR HEALTH* (2018); BONNI GOLDSTEIN, *CANNABIS REVEALED: HOW THE WORLD'S MOST MISUNDERSTOOD PLANT IS HEALING EVERYTHING FROM CHRONIC PAIN TO EPILEPSY* (2016); LESTER GRINSPOON & JAMES B. BAKALAR, *MARIJUANA: THE FORBIDDEN MEDICINE* (1997); MICHAEL H. MOSKOWITZ, *MEDICAL CANNABIS: A GUIDE FOR PATIENTS, PRACTITIONERS, AND CAREGIVERS* (2017); J. Michael Bostwick, *Clinical Decisions: Medicinal Use of Marijuana—Recommend the Medical Use of Marijuana*, 368 *NEW ENG. J. MED.* 866 (2013); Jerome P. Kassirer, *Federal Foolishness and Marijuana*, 336 *NEW ENG. J. MED.* 366 (1997). Some physicians recommend inhalation (e.g., smoking or vaporizing). See DAVID BEARMAN & MARIA PETTINATO, *CANNABIS MEDICINE: A GUIDE TO THE PRACTICE OF CANNABINOID MEDICINE* 46, 48 (2018). Others are unclear whether people should smoke cannabis.

⁷⁴ See, e.g., ROBERT L. DUPONT, *THE SELFISH BRAIN: LEARNING FROM ADDICTION* 147–54 (2019 ed. 1997); GOGK, *supra* note 1; KEVIN P. HILL, *MARIJUANA: THE UNBIASED TRUTH ABOUT THE WORLD'S MOST POPULAR WEED* (2015); Gary M. Reisfield & Robert L. DuPont, *Clinical Decisions: Medicinal Use of Marijuana—Recommend against the Medical Use of Marijuana*, 368 *NEW ENG. J. MED.* 866, 868 (2013); see also BERTHA K. MADRAS, *UPDATE OF CANNABIS AND ITS MEDICAL USE* (2015), http://www.who.int/medicines/access/controlled-substances/6_2_cannabis_update.pdf [<https://perma.cc/SA4P-SRA6>] (commissioned monograph to 37th Expert Committee on Drug Dependence, World Health Organization). Some experts and commentators believe that we do not yet know the likely long-term harms from cannabis use and that the state laws creating medical marijuana schemes have greatly outdistanced the science necessary to justify a medical version of “the Great Leap Forward.” See, e.g., Archie Bleyer & Brian Barnes, *Opioid Death Rate Acceleration in Jurisdictions Legalizing Marijuana Use*, 178 *JAMA INTERNAL MED.* 1280, 1280 (2018); Wilson M. Compton et al., *Medical Marijuana Laws and Cannabis Use: Intersections of Health and Policy*, 74 *JAMA PSYCHIATRY* 559, 559 (2017); Wayne Hall et al., *Public Health Implications of Legalising the Production and Sale of Cannabis for Medicinal and Recreational Use*, 394 *LANCET* 1580 (2019); Janni Leung et al.,

I am not a physician, a biochemist, or a botanist, but I am familiar with the longstanding approach that American law has used to regulate the safety and effectiveness of food, food additives, and drugs, as well as the consensus belief that this approach best protects the public without trammeling the legitimate interests of any particular individual or group. Marijuana falls under the FDA's jurisdiction as a drug or a food additive.⁷⁵ Given that legal framework, I believe that it is a mistake to claim that smoking or eating botanical marijuana is a legitimate treatment.⁷⁶

What Have Been the Public Health Impacts of Cannabis Legalisation in the USA? A Review of Evidence on Adverse and Beneficial Effects, CURR. ADDICTION REP. 418 (2019).

⁷⁵ See, e.g., Larkin, *Gummy Bears*, *supra* note 22, at 345–48, 373–78 (concluding that the FDA has authority to regulate cannabis edibles as a food additive); O'Connor & Lietzan, *supra* note 63, at 851–96 (concluding that the FDA has authority to regulate cannabis edibles as a food additive or a drug); Zettler, *supra* note 60, at 878–79 (concluding that the FDA has authority to regulate cannabis as a drug). The FDA agrees. See, e.g., “*Cannabis Policies for a New Decade: Hearing on Before the House Commerce Comm. Subcomm. on Health*, 116th Cong. 1-4 (2020) [hereinafter *House Cannabis Hearing*] (statement of Douglas C. Throckmorton, Dep. Dir. For Reg’y Programs, U.S. Food & Drug Adm’n), <https://docs.house.gov/meetings/IF/IF14/20200115/110381/HHRG-116-IF14-Wstate-ThrockmortonD-20200115.pdf> [<https://perma.cc/Y2PF-X36D>]; Statement from FDA Commissioner Scott Gottlieb, M.D., on signing of the Agriculture Improvement Act and the agency’s regulation of products containing cannabis and cannabis-derived compounds (Dec. 20, 2018) [hereinafter Gottlieb Statement], <https://www.fda.gov/news-events/press-announcements/statement-fda-commissioner-scott-gottlieb-md-signing-agriculture-improvement-act-and-agencys> [<https://perma.cc/RP9Y-CBDP>]; Warning Letters and Test Results for Cannabidiol-Related Products: 2015-2019 (Nov. 26, 2019; last accessed Jan. 14, 2020) <https://www.fda.gov/news-events/public-health-focus/warning-letters-and-test-results-cannabidiol-related-products> [<https://perma.cc/55EV-KMLC>] (warning letters issued to companies selling unapproved new drugs containing cannabidiol, a non-psychoactive substance in marijuana that the FDA has not approved for use in any drug for any purpose); Larkin, *Gummy Bears*, *supra* note 22, at 374–77 & nn.137–46 (same).

⁷⁶ It is critical to distinguish the *plant form of cannabis* from *pharmaceutically processed cannabinoids*. Some cannabinoids have therapeutic value. The FDA has approved the synthetic delta-9-THC analogues dronabinol (Marinol) and nabilone (Cesamet) for treatment of chemotherapy-induced nausea and emesis, as well as appetite stimulation in cachexic patients suffering from cancer or HIV/AIDS wasting syndrome. The FDA has also approved Epidiolex, a purified form of CBD, for use in the treatment of Dravet’s Syndrome and Lennox-Gastaut Syndrome, two severely debilitating forms of childhood-onset epilepsy. U.S. Food & Drug Adm’n, FDA Regulation of Cannabis and Cannabis-Derived Products, Including Cannabidiol (CBD), Questions and Answers 3 & 4 (Dec. 6, 2019), <https://www.fda.gov/news-events/public-health-focus/fda-regulation-cannabis-and-cannabis-derived-products-including-cannabidiol-cbd#approved> [<https://perma.cc/SB3X-9V2U>]. Further research is needed to learn whether other cannabinoids also have therapeutic benefits and can pass FDA scrutiny. BEARMAN & PETTINATO, *supra* note 73, at 26–39, 49, 64–78; THOMAS & EL-SOHLI, *supra* note 63, at 111–14; Richard A. Grucza & Andrew D. Plunk, *Where Is Cannabis Legalization Leading?*, 77 JAMA PSYCHIATRY 119, 120 (2020) (“[R]esearch on recreational cannabis legalization is in its infancy.”); Throckmorton, *House Cannabis Hearing*, *supra* note 75, at 9–10; compare, e.g., Chao Liu et al., *Cannabinoids Promote Progression of HPV Positive Head and Neck Squamous Cell Carcinoma via p38 MAPK Activation*, CLINICAL CANCER RESEARCH (Jan. 13, 2020), <https://clincancerres.aacrjournals.org/content/early/2020/01/11/1078-0432.CCR-18-3301> (finding that THC in the bloodstream activates a mechanism preventing apoptosis of cancer cells), with, e.g., Donald I. Abrams & Manuel Guzman, *Can Cannabis Cure Cancer?*, JAMA ONCOLOGY (Jan. 16, 2020),

Indeed, the claim that either activity can cure various diseases falls along the spectrum somewhere between risible and fraudulent.⁷⁷

For more than eight decades,⁷⁸ the nation has accepted the proposition that the federal government, rather than the states, should regulate the nationwide distribution of drugs used for the treatment of disease and injuries to prevent the public against harm from adulterated, misbranded, or ineffective drugs.⁷⁹ Congress has vested that responsibility in the FDA, and it has extensively regulated the manufacture and marketing of pharmaceuticals. Any company seeking to market a “new drug”⁸⁰ must prove (*inter alia*) that the drug is safe, effective, and pure for its intended use,⁸¹ that the company uses “current good manufacturing practice” to

<https://jamanetwork.com/journals/jamaoncology/fullarticle/2758576> [<https://perma.cc/3CL-C-NFP7>] (suggesting that cannabinoids, including THC, might have anti-tumor effects).

⁷⁷ See, e.g., GOGEK, *supra* note 1, at 111–12 (“Political campaigns sell marijuana laws to the voting public with ads that feature cancer patients using marijuana for nausea. But it’s a bait and switch The patients using medical marijuana in real life are disproportionately young and male, and few of them have serious illnesses Dates from 2012 show that in Arizona, 90 percent of the marijuana patients claimed pain while only 4 percent got the drug for cancer. In Colorado, 94 percent claimed pain; 3 percent claimed cancer. In Oregon, 94 percent also claimed pain. [¶]A 2014 study that used data from seven states found that 91 percent of all the medical marijuana patients got their marijuana for pain while only 3 percent reported cancer. AIDS, glaucoma, Alzheimer’s, Hepatitis C and ALS accounted for another 2 percent.”) (footnote omitted); Caulkins, *Marijuana Dangers*, *supra* note 23, at 30 (“Unfortunately, there is very little in the way of intellectually honest marijuana-policy analysis.”); *id.* at 21 (“In the 1990s, several states introduced ‘medical marijuana’ programs. Though marijuana use was made legal only for medical purposes, the regulations were often so loose that essentially anyone could get a physician’s ‘recommendation,’ authorizing that person to purchase marijuana. Suppliers were euphemistically called ‘caregivers’ (even though some never met the ‘patients’ they were caring for), and they sold out of brick-and-mortar retail stores known as ‘dispensaries.’ At one point, there were thousands of dispensaries in California alone.”); Kleiman, *Marijuana and Public Health*, *supra* note 23, at 73 (describing the medical marijuana reform campaign as being “largely fraudulent,” but “worked like a charm”); Larkin, *Gummy Bears*, *supra* note 22, at 374–77 & nn.137–46 (discussing FDA’s issuance of warning letters to companies that had marketed dietary supplements containing cannabidiol for treatment of cancer, Alzheimer’s and other diseases).

⁷⁸ More than eleven, if you start counting from the Pure Food and Drug Act of 1906.

⁷⁹ See Larkin, *States’ Rights*, *supra* note 63, at 496–97, 499–500 (“We do not . . . make scientific decisions in the same manner that we elect politicians: by ballot.”).

⁸⁰ A “new drug” includes “[a]ny drug . . . [that] is not generally recognized, among experts qualified by scientific training and experience to evaluate the safety and effectiveness of drugs, as safe and effective for use under the conditions prescribed” 21 U.S.C. § 321(p)(1) (2016); 21 C.F.R. § 310.3(h) (2018). Despite its age, cannabis would constitute a “new drug” under the FDCA and FDA’s rules. See Gottlieb Statement, *supra* note 75 (“Cannabis or cannabis-derived products claiming in their marketing and promotional materials that they’re intended for use in the diagnosis, cure, mitigation, treatment, or prevention of diseases (such as cancer, Alzheimer’s disease, psychiatric disorders and diabetes) are considered new drugs or new animal drugs and must go through the FDA drug approval process for human or animal use before they are marketed in the U.S.”); O’Connor & Lietzan, *supra* note 63, at 861–86.

⁸¹ Proof of safety and effectiveness requires extensive clinical testing, which generally has three phases. Phase I encompass initial clinical testing in human and is primarily designed to assess safety,

assure the drug's quality, that the label's information regarding (for example) the quantity of the drug's active ingredients and excipients (inactive ingredients) is accurate, and that the directions for use are helpful to a consumer.⁸² That information enables a physician to decide whether a drug should benefit a patient.⁸³

Raw, agricultural cannabis cannot satisfy those requirements.⁸⁴ Start with the fact that commercially manufactured prescription and over-the-counter medicines contain “pure and stable” chemicals, which enables the FDA and physicians to know “precisely what their patients are taking.”⁸⁵ Botanicals like marijuana do not. Unlike ordinary pharmaceuticals, marijuana is not a “standardized good”—that is, the plant is not a single chemical compound or a product with precise and uniform ingredients, formulations, and potency.⁸⁶ On the contrary, the marijuana plant is “a chemically complex and highly variable” product⁸⁷—or, put more colorfully, “a complex chemical slush”⁸⁸—containing hundreds of different chemicals.⁸⁹ The chemical composition of a cannabis plant can vary along a host of parameters, such as strain, breeding, region, conditions and process of cultivation, harvesting stage, processing method, storage time, and the like.⁹⁰ Moreover, due to selective breeding, marijuana

tolerability, pharmacodynamics (viz., the effect of a drug on the body), pharmacokinetics (viz., the movement of a drug through a body), and (only preliminarily) potential therapeutic benefits. Phase II testing is designed to explore, and Phase III to confirm or refute, the therapeutic effects of a drug on a particular disease or condition. *See* 21 C.F.R. § 312.21 (2018). Proof of purity, which ensures that every dose is the same, results from manufacturing controls. *See id.* § 314.50.

⁸² *See, e.g.*, 21 U.S.C. §§ 351(a)(2)(B), 352, 352(b), (c)-(f), 355(a), (b) & (d) (2018); 21 C.F.R. Pt. 200 Subpt. A (2018) (General Labeling Provisions); *id.* Pt. 201 (Labeling); *id.* Pt. 211 (Current Good Manufacturing Practices for Finished Pharmaceuticals); FDA, COMPLIANCE PROGRAM GUIDANCE MANUAL § 7346.832 (2010); *Wyeth v. Levine*, 555 U.S. 555, 566–68 (2009); Zettler, *supra* note 60, at 857–59.

⁸³ *See* THOMAS & ELSOHL, *supra* note 63, at 11 (“The quality, safety, and efficacy of starting material are basic prerequisites in the pharmaceutical industry.”).

⁸⁴ *See, e.g.*, CASARETT, *supra* note 73, at 238 (noting that science needs to know exactly what is in an experiment and “that’s pretty much impossible if what you’re putting into an experiment is simply the contents of what you harvested from your garden, dried, and pulverized.”).

⁸⁵ DUPONT, *supra* note 74, at 148; *see also, e.g.*, NAT’L INST. ON DRUG ABUSE, MARIJUANA 34–35 (Sept. 2019) [hereafter NIDA, MARIJUANA], <https://www.drugabuse.gov/node/pdf/1380/marijuana> (“Botanicals may contain hundreds of unknown, active chemicals, and it can be difficult to develop a product with accurate and consistent doses of these chemicals.”).

⁸⁶ JONATHAN P. CAULKINS ET AL., MARIJUANA LEGALIZATION: WHAT EVERYONE NEEDS TO KNOW 34 (2d ed. 2016).

⁸⁷ THOMAS & ELSOHL, *supra* note 63, at 11.

⁸⁸ DUPONT, *supra* note 74, at 142.

⁸⁹ Cannabis includes 545 “cannabinoids” (viz., biologically active ingredients) and other compounds. *See, e.g.*, THOMAS & ELSOHL, *supra* note 63, at xiii–xiv, 5 Tbl. 1.3, 11, 27–37.

⁹⁰ *See, e.g.*, THOMAS & ELSOHL, *supra* note 63, at xiii–xiv (“The number of parameters on which cannabis products can vary is enormous, from strain, growing conditions, harvesting methods,

comes in “hundreds of strains” with different chemical compositions.⁹¹ The lack of certainty and uniformity in the chemical makeup of different varieties of cannabis is a critical shortcoming under the standards demanded by contemporary medicine and law because neither the FDA nor a treating physician could know precisely what substances a patient would use.

The uncertain chemical content of the cannabis plant is not the only problem. The psychoactive component of marijuana—delta-9-tetrahydrocannabinol or THC—has increased remarkably over time as growers have sought to enhance their profits by creating a better, more attractive, psychotropic product. From the 1960s through the 1980s, marijuana had a THC content of approximately 3-4 percent. Today, the THC content can be 12-20 percent in the plant form or in hashish (dried cannabis resin and crushed plants). Hash oil, an oil-based extract of hashish, has a greater THC content in the range of 15-65 percent, while other formulations, such as oil extracts, can be in the 90-plus percent range for THC.⁹² Moreover, the psychoactive effect of THC varies according to an individual’s “set” (viz., user expectation) and the “setting” (viz., environment) in which use occurs.⁹³ Given their variance from person to person and occasion to occasion, a physician could not be confident when predicting the effect of THC use on an individual patient. The result is that neither the FDA nor a recommending physician would know the potency of the cannabis that a patient would use, so neither one could accurately approve or recommend its use, respectively.

THC is not the only cannabinoid; another common one is cannabidiol or CBD. We do not yet know all of the potential psychodynamic properties of CBD, but what we know is promising.⁹⁴ CBD has no known toxicities, and there is no evidence that it is euphoric, intoxicating, cognition impairing, addictive, or psychosis

and handling to storage and processing of the raw material to combination with a wide variety of foods and other excipients in manufacturing to methods of administration (eating, smoking, ‘vaping,’ applying to mucous membranes). At every step, from planting through consumption, myriad influences can alter dose, absorption rate, interactions among constituents, exposure to toxins, and a host of other factors that can result in underdosing, overdosing, and various types and levels of acute and chronic poisoning, not excepting an increase in the probability of lung cancer.”), 11, 30 (“[T]he cannabinoid content and profile changes over time as the plant grows, matures, and ages.”), 34, 63–64, 84.

⁹¹ THOMAS & ELSOHL, *supra* note 63, at 30; *see also, e.g.*, FRYE & SMITHERMAN, *supra* note 73, at 9 (“As we now know, the cannabinoid production varies from plant to plant, and ten drops of one batch might be therapeutic, but ten drops of the next batch might have a much higher content of THC and sicken the patient.”), 43.

⁹² *See, e.g.*, Larkin, *Gummy Bears*, *supra* note 22, at 344–49.

⁹³ *See, e.g.*, KAPLAN, *supra* note 24, at 56–57; JERROLD S. MEYER & LINDA F. QUENZER, *PSYCHOPHARMACOLOGY: DRUGS, THE BRAIN, AND BEHAVIOR* 414 (2d ed. 2018).

⁹⁴ *See, e.g.*, Douglas L. Boggs et al., *Clinical and Preclinical Evidence for Functional Interactions of Cannabidiol and D(9)-Tetrahydrocannabinol*, 43 *NEUROPSYCHOPHARMACOLOGY* 142 (2018); Paul J. Larkin, Jr. & Bertha K. Madras, *Opioids, Overdoses, and Cannabis: Is Marijuana an Effective Therapeutic Response to the Opioid Abuse Epidemic?*, 17 *GEO. J.L. & PUB. POL’Y* 555, 573–76 (2019).

precipitating.⁹⁵ Interestingly, CBD might offset potential adverse results from THC use, such as anxiety, cognitive impairment, amotivational syndrome, addiction, and psychosis.⁹⁶ The reason is that CBD and THC might have possibly antagonistic pharmacological effects.⁹⁷ Yet, while the THC level in street marijuana has risen dramatically over the last twenty years, the CBD level has correspondingly declined, from a THC:CBD ratio of 2:1 to a ratio of 80:1 or higher, as growers seek to cultivate a product with a more powerful “rush.”⁹⁸ The unknown but variant ratio in smokable marijuana would, yet again, make it difficult for the FDA or a recommending physician to make an accurate judgment regarding the effect of commercial marijuana on a large number of people or one particular patient.⁹⁹

Standardizing the THC content and THC:CBD ratio in smokable marijuana still would not solve the problem. THC exists in assorted formulations for different methods of use: inhalation, ingestion, sublingual, intranasal, transdermal, and rectal.¹⁰⁰ That difference matters because THC reaches the brain far more quickly

⁹⁵ See Shanna Babalonis et al., *Oral Cannabidiol Does Not Produce a Signal for Abuse Liability in Frequent Marijuana Smokers*, 172 *DRUG & ALCOHOL DEPENDENCE* 9 (2017); Margaret Haney et al., *Oral Cannabidiol Does Not Alter the Subjective, Reinforcing or Cardiovascular Effects of Smoked Cannabis*, 41 *NEUROPSYCHOPHARMACOLOGY* 1974 (2016); Alex F. Manini et al., *Safety and Pharmacokinetics of Oral Cannabidiol When Administered Concomitantly with Intravenous Fentanyl in Humans*, 9 *J. ADDICTION MED.* 204 (2015); Philip McGuire et al., *Cannabidiol (CBD) as an Adjunctive Therapy in Schizophrenia: A Multicenter Randomized Controlled Trial*, 175 *AM. J. PSYCHIATRY* 225 (2018); Kerstin Iffland & Franjo Grotenhermen, *An Update on Safety and Side Effects of Cannabidiol: A Review of Clinical Data and Relevant Animal Studies*, 2 *CANNABIS & CANNABINOID RES.* 139 (2017).

⁹⁶ Larkin & Madras, *supra* note 94, at 576 (“[W]e cannot yet say that CBD will reduce or eliminate all adverse effects of THC, but preliminary data indicate that CBD does attenuate specific THC-elicited neuroadaptations.”) (footnote omitted); Bertha K. Madras et al., *Dramatic Increase of Dopamine D1–D2 Receptor Heteromers by Tetrahydrocannabinol (THC) in Primate Caudate Nucleus Is Attenuated by Cannabidiol (CBD)*, *NEUROPSYCHOPHARMACOLOGY* (2016), <https://acnp.org/videos/bertha-madras/> [<https://perma.cc/RL84-AGVB>]; Christian D. Schubart et al., *Cannabis with High Cannabidiol Content Is Associated with Fewer Psychotic Experiences*, 130 *SCHIZOPHRENIA RESEARCH* 216 (2011).

⁹⁷ See Amir Englund et al., *Can We Make Cannabis Safer?*, 4 *LANCET PSYCHIATRY* 643 (2017).

⁹⁸ See Mahmoud A. ElSohly et al., *Changes in Cannabis Potency over the Last Two Decades (1995–2014): Analysis of Current Data in the United States*, 79 *BIOLOGICAL PSYCHIATRY* 613 (2016).

⁹⁹ See, e.g., Statement of Nora Volkow, Dir., Nat’l Inst. on Drug Abuse 7 (Jan. 15, 2020), in *House Cannabis Hearing*, *supra* note 75 (“[I]n general, adequate and well-controlled studies are lacking, which means that individuals across the country are using cannabis strains and extracts that have not undergone the rigorous clinical trials required to show that they are safe and effective for medical use, and are not regulated for consistency or quality.”); CASARETT, *supra* note 73, at 116 (“Not knowing—by a factor of ten[—]how much of a drug you’re going to get makes it almost impossible to find the right dose for the right patient.”); MOSKOWITZ, *supra* note 73, at 10 (noting that “most testing is up to the vendors,” and “studies have shown them to be quite inaccurate,” perhaps due to “poor testing, reliance on old testing, the ever-changing nature of harvested cannabis, and/or outright deception”).

¹⁰⁰ See, e.g., THOMAS & ELSOHL, *supra* note 63, at 50.

when a user inhales it rather than ingests or absorbs it.¹⁰¹ That is why many users prefer to smoke marijuana than consume it in pill form. Moreover, many users titrate the amount that they inhale to achieve their desired state of euphoria. Accordingly, there is no standard number of occasions when someone will smoke marijuana, no standard number of total inhalations, and no standard depth or length of any one inhalation.¹⁰² That likely explains why the FDA has never approved any drug in a

¹⁰¹ See, e.g., JOHN BRICK & CARLTON E. ERICKSON, *DRUGS, THE BRAIN, AND BEHAVIOR: THE PHARMACOLOGY OF DRUG USE DISORDERS* 106 (2d ed. 2013); LESLIE L. IVERSEN, *THE SCIENCE OF MARIJUANA* 41–47 (2d ed. 2008). Different THC delivery system can also create different problems. For example, the delay in the onset of the sought-after euphoria from consuming edibles can lead people to consume a quantity that precipitates hallucinations. Moreover, marijuana edibles, particularly ones resembling commercially available food products, pose a serious risk of inadvertent consumption by children. See, e.g., Larkin, *Gummy Bears*, *supra* note 22, at 320–22 & nn. 23–24, 324–39 & nn. 30–63, 382–83 (Appendix); Kathy T. Vo et al., *Cannabis Intoxication Case Series: The Dangers of Edibles Containing Tetrahydrocannabinol*, 71 *ANNALS EMERGENCY MED.* 306 (2018). Moreover, consider “vaping.” On the one hand, THC vaporizes at a lower temperature than it takes to burn marijuana, so you could get the benefits without inhaling burnt carbon products. CASARETT, *supra* note 73, at 109–10. On the other hand, marijuana vaping is a growing problem, particularly among adolescents, who resort to vaping rather than smoking marijuana to avoid its telltale aroma. See, e.g., NAT’L INST. ON DRUG ABUSE, NAT’L INST. OF HEALTH, *VAPING OF MARIJUANA ON THE RISE AMONG TEENS* (Dec. 18, 2019) (“Past year vaping of marijuana, which has more than doubled in the past two years, was reported at 20.8% among 12th graders, with 10th graders not far behind at 19.4% and eighth graders at 7.0%. Past month marijuana vaping among 12th graders nearly doubled in a single year to 14% from 7.5%—the second largest one-year jump ever tracked for any substance in the history of the survey.”); Lucas Drill & Paul J. Larkin, Jr., *Vaping, Marijuana, and Government Regulation*, in *FOCUS* 14, 15 (Winter 2020), <https://www.jewishpolicycenter.org/2020/01/06/vaping-marijuana-and-government-regulation/>; R. Miech et al., *Vaping Trends among Adolescents, 2017–2019*, 381 *NEW ENG. J. MED.* 1490 (2019); see also U.S. DEP’T OF HEALTH & HUMAN SERVS., OFF. OF THE SURGEON GEN’L, *E-CIGARETTE USE AMONG YOUTH AND YOUNG ADULTS: A REPORT OF THE SURGEON GENERAL* 6, 14, 57–58, 203, 241 (2016). The problem appears to be the combination of THC and vitamin E acetate, an additive to e-cigarette liquids. Vitamin e acetate is viscous but harmless when applied to the skin, but can prove deadly when inhaled, because it becomes viscous again after inhalation. See, e.g., B.C. Blount, *Vitamin E Acetate in Bronchoalveolar-Lavage Fluid Associated with EVALI*, *NEW ENG. J. MED.* (Dec. 20, 2019), <https://www.nejm.org/doi/pdf/10.1056/NEJMoa1916433?articleTools=true>; Yasmeen M. Butt et al., *Pathology of Vaping-Associated Lung Injury*, 381 *NEW ENG. J. MED.* 1780 (2019); David C. Christiana, *Vaping-Induced Lung Injury*, *NEW ENGLAND J. MED.*, Sept. 6, 2019, <https://www.nejm.org/doi/pdf/10.1056/NEJMe1912032?articleTools=true>; Drill & Larkin, *supra*, at 15–16; Jennifer E. Layden et al., *Pulmonary Illness Related to E-Cigarette Use in Illinois and Wisconsin—Final Report*, *NEW ENG. J. MED.*, (Mar. 5, 2020), https://www.nejm.org/doi/full/10.1056/NEJMoa1911614?query=recirc_curatedRelated_article. The federal government has found that numerous people who have suffered adverse pulmonary effects from vaping have used marijuana or cannabis oils. See Drill & Larkin, *supra*, at 15–16; Volkow, *supra* note 99, at 5, in *House Cannabis Hearing*, *supra* note 75. The FDA has recently acted against certain vaping products, in part to avoid their contribution to adolescent use. See, e.g., CENTERS FOR DISEASE CONTROL & PREVENTION, *OUTBREAK OF LUNG INJURY ASSOCIATED WITH THE USE OF E-CIGARETTE, OR VAPING, PRODUCTS* (Jan. 9, 2020); U.S. FOOD & DRUG ADM’N, *ENFORCEMENT PRIORITIES FOR ELECTRONIC NICOTINE DELIVERY SYSTEM (ENDS) AND OTHER DEEMED PRODUCTS ON THE MARKET WITHOUT PREMARKET AUTHORIZATION* (Jan. 2020); U.S. FOOD & DRUG ADM’N, *LUNG ILLNESSES ASSOCIATED WITH USE OF VAPING PRODUCTS* (Dec. 26, 2019).

¹⁰² See THOMAS & ELSOHL, *supra* note 63, at 53 (noting a two to fifty-six percent variation in the THC concentration in blood plasma of different persons due to differences in “smoking dynamics”).

smokable form. As University of Pennsylvania Medical School Professor David Casarett succinctly put it, “A joint is hardly a medicine.”¹⁰³ Accordingly, neither the FDA nor a physician can know precisely how much THC and CBD someone would receive by smoking marijuana.¹⁰⁴

Atop all that is another problem. Commercially sold marijuana can contain a “hodgepodge” of dangerous contaminants.¹⁰⁵ Among them are microbials (*e.g.*, *E. coli*, fungi, mold), toxins (*e.g.*, aflatoxins), hazardous chemical solvents remaining from the extraction process (*e.g.*, butane, hexane, propane), pesticides (*e.g.*, organophosphates), heavy metals (*e.g.*, arsenic, cadmium, lead, mercury), and other harmful (*e.g.*, formaldehyde) or distasteful (*e.g.*, insects) substances.¹⁰⁶

All those reasons explain why the FDA has never approved, and could never approve, the crude, plant form of marijuana as a therapeutically useful drug¹⁰⁷ and no reputable pharmaceutical company would distribute any such product.¹⁰⁸ In fact, the presence of toxic substances would render a drug adulterated and subject to

¹⁰³ CASARETT, *supra* note 73, at 249.

¹⁰⁴ *See, e.g., id.* (“That variability [in the presence and amount of cannabinoids in marijuana], it seems to me, makes it very difficult to call marijuana a ‘medicine’ in the same way that, say, penicillin is a medicine. For these reasons, I still think of marijuana as more or less equivalent to an herbal remedy. It’s essentially plant-based stuff with numerous active and inactive ingredients, only some of which we understand. And those ingredients make an appearance in varying doses and ratios among plants and between crops.”).

¹⁰⁵ DUPONT, *supra* note 74, at 148.

¹⁰⁶ *See, e.g.,* CASARETT, *supra* note 73, at 186–88; FRYE & SMITHERMAN, *supra* note 73, at 51–53, 55; THOMAS & ELSOHLY, *supra* note 63, at 30, 44–46; Jenna Hardesty Bishop, *Weeding the Garden of Pesticide Regulation: When the Marijuana Industry Goes Unchecked*, 65 *DRAKE L. REV.* 223, 226 (2016) (“Test samples of marijuana overwhelmingly reveal that growers are choosing to use unapproved and unregulated pesticides, creating a serious public health risk for consumers.”) (footnote omitted); Franziska Busse et al., *Lead Poisoning Due to Adulterated Marijuana*, 358 *NEW ENG. J. MED.* 1641 (2008); David Christiana, *Vaping-Induced Lung Injury*, *NEW ENG. J. MED.*, Sept. 6, 2019, <https://www.nejm.org/doi/pdf/10.1056/NEJMe1912032?articleTools=true>; Tista Ghosh et al., *The Public Health Framework of Legalized Marijuana in Colorado*, 106 *AM. J. PUB. HEALTH* 21, 23 (2016); Todd Subritzky et al., *Issues in the Implementation and Evolution of the Commercial Recreational Cannabis Market in Colorado*, 27 *INT’L J. DRUG POL’Y* 1, 6 (2016); Schubart, *supra* note 96; Larkin, *Gummy Bears*, *supra* note 22, at 346 n.81.

¹⁰⁷ *See, e.g.,* THOMAS & ELSOHLY, *supra* note 63, at 83–97 (discussing quality control and reliability assurance problems with proposing botanical cannabis to be used as an FDA-approved drug); Throckmorton, *House Cannabis Hearing*, *supra* note 75, at 2 (“To date, the FDA has not approved a marketing application for cannabis for the treatment of any disease or condition.”).

¹⁰⁸ The FDA and World Health Organization recommend testing as part of good manufacturing practices. *See* THOMAS & ELSOHLY, *supra* note 63, at 64. Unfortunately, there are businesses that won’t. *See, e.g.,* FRYE & SMITHERMAN, *supra* note 73, at 53 (“While there are some legitimate pesticide-free cannabis growers, for the most part, when cannabis is grown outside of state regulatory guidelines, the plants are typically laden with pesticides.”).

administrative seizure by the FDA, as well as civil action or criminal prosecution by the U.S. Department of Justice.¹⁰⁹

Given the dreadful number of opioid overdose fatalities the nation has suffered over the last decade, perhaps there would be a justification for treating marijuana differently if it were a legitimate therapeutic substitute for opioids.¹¹⁰ If legislation involves a choice between evils, the harms of increased marijuana use might be less than the devastation that we have experienced by witnessing more opioid overdose deaths than the number of fatalities the nation suffered in World Wars I and II combined.¹¹¹ Unfortunately, that choice is not on the table if we are to remain honest. Cannabis is not sufficiently powerful to alleviate serious acute pain and is not a legitimate palliative for chronic pain, certainly not in a smokable or edible form.¹¹² In fact, cannabis use worsens the already severe problems besetting people who are

¹⁰⁹ See, e.g., 21 U.S.C. §§ 331, 333, 334 & 335b (2018); *Ewing v. Mytinger & Casselberry, Inc.*, 339 U.S. 594 (1950); CASARETT, *supra* note 73; Larkin, *Gummy Bears*, *supra* note 22, at 344–49.

¹¹⁰ Some have made that argument. See, e.g., NAT'L ACAD. REPORT, *supra* note 25, at 909 (“Conclusion 4-1 There is substantial evidence that cannabis or cannabinoids is an effective treatment for chronic pain in adults.”); Marcus A. Bachluber et al., *Medical Cannabis Laws and Opioid Analgesic Overdose Mortality in the United States, 1999–2010*, 174 JAMA INTERNAL MED. 1668 (2014); see generally Larkin & Madras, *supra* note 94, at 570–71 & nn.58–61 (collecting studies so arguing).

¹¹¹ Larkin & Madras, *supra* note 94, at 557.

¹¹² See Abhiram R. Bhashyam et al., *Self-Reported Marijuana Use Is Associated with Increased Use of Prescription Opioids Following Traumatic Musculoskeletal Injury*, 100 J. BONE & JOINT SURGERY 2095, 2096 (2018); Fiona A. Campbell et al., *Are Cannabinoids an Effective and Safe Treatment in the Management of Pain? A Qualitative Systematic Review*, 323 BRITISH MED’L J. 1, 6 (2001); Russell Noyes, Jr. et al., *Analgesic Effect of Delta-9-Tetrahydrocannabinol*, 15 J. CLINICAL PHARMACOLOGY 139, 139 (1975); David Raft et al., *Effects of Intravenous Tetrahydrocannabinol on Experimental and Surgical Pain*, 21 CLINICAL PHARMACOLOGY & THERAPEUTICS 26 (1977); see generally Larkin & Madras, *supra* note 94, at 571–89 & n.95.

physically dependent on, or addicted to, opioids.¹¹³ Legalizing botanical marijuana use will not mitigate the opioid crisis.¹¹⁴

The argument to the contrary is not persuasive. Yes, smokable marijuana can alleviate some pain through its euphoric effect. But so does bourbon, and that does not make a distilled spirit into a medication. That's not just my opinion; it's also the opinion of Dr. Peter Bach, a physician and Director of the Center for Health Policy and Outcomes at the Memorial Sloan Kettering Cancer Center.¹¹⁵ In his words, “[c]laims that marijuana relieves pain may be true. But the clinical studies that have been done compare it with a placebo, not even a pain reliever like ibuprofen. That's not the type of rigorous evaluation we pursue for medications.” Moreover, “every

¹¹³ See, e.g., Gabrielle Campbell et al., *Effect of Cannabis Use in People with Chronic Non-Cancer Pain Prescribed Opioids: Findings from a 4-Year Prospective Cohort Study*, 3 LANCET PUB. HEALTH 341 (2018); Theodore L. Caputi, *Medical Marijuana, Not Miracle Marijuana: Some Well-Publicized Studies about Medical Marijuana Do Not Pass a Reality Check*, 114 ADDICTION 1128 (2019); Theodore L. Caputi & Keith Humphreys, *Medical Marijuana Users Are More Likely to Use Prescription Drugs Medically and Nonmedically*, 12 J. ADDICTION MED. 295 (2018); Wayne Hall et al., *It Is Premature to Expand Access to Medicinal Cannabis in Hopes of Solving the US Opioid Crisis*, 113 ADDICTION 987 (2018); Deborah S. Hasin et al., *U.S. Adults with Pain: A Group Increasingly Vulnerable to Nonmedical Cannabis Use and Cannabis Use Disorder: 2001–2002 and 2012–2013*, AM. J. PSYCHIATRY (Jan. 22, 2020), <https://ajp.psychiatryonline.org/doi/10.1176/appi.ajp.2019.19030284>; Heather McBrien et al., *Cannabis Use during Methadone Maintenance Treatment for Opioid Use Disorder: A Systematic Review and Meta-Analysis*, 7 CMAJ OPEN E665 (2019); Shannon Nugent et al., *The Effects of Cannabis Among Adults with Chronic Pain and an Overview of General Harms: A Systematic Review*, 167 ANNALS INTERNAL MED. 319 (2017); Mark Olfson et al., *Cannabis Use and Risk of Prescription Opioid Use Disorder in the United States*, 175 AM J. PSYCHIATRY 47 (2018); Mark Olfson et al., *Medical Marijuana and the Opioid Epidemic: Response to Theriault and Schlesinger*, 175 AM. J. PSYCHIATRY 284 (2018); Chelsea L. Shover et al., *Association between Medical Cannabis Laws and Opioid Overdose Mortality Has Reversed over Time*, PNAS (June 10, 2019), <https://www.pnas.org/content/pnas/early/2019/06/04/1903434116.full.pdf>; see generally Larkin & Madras, *supra* note 94, at 589–90.

¹¹⁴ In 2017, the National Academies of Sciences, Engineering, and Medicine issued a report on the various alleged health effects of marijuana. NAT'L ACAD. REPORT, *supra* note 25, at 13–22 (summary of the report's conclusions). Among the report's conclusions were that there is conclusive or substantial evidence that cannabis is effective for treatment of chronic pain in adults. *Id.* at 13. The report, however, predated the 2018, 2019, and 2020 studies cited above in notes 112 and 113. The bases on which the National Academies relied are also subject to serious challenge. Kevin P. Hill, *Medical Use of Cannabis in 2019*, 322 JAMA 974, 974 (2019) (“The panel relied on a single meta-analysis of 28 studies, few of which were from the United States, that assessed a variety of diseases and compounds. Although they concluded that cannabinoids effectively managed pain, the CIs [viz., Confidence Intervals] associated with these findings were large, suggesting unreliability in the meta-analysis results.”). Otherwise, the report found limited or no evidence that smoking marijuana has any positive health benefits (but can have some negative ones). NAT'L ACAD. REPORT, *supra* note 25, at 13–22.

¹¹⁵ Peter B. Bach, *If Weed Is Medicine, So Is Budweiser*, WALL ST. J. (Jan. 17, 2019, 7:23 PM), <https://www.wsj.com/articles/if-weed-is-medicine-so-is-budweiser-11547770981>.

intoxicant would pass that sort of test because you don't experience pain as acutely when you are high. If weed is a pain reliever, so is Budweiser."¹¹⁶ Amen.

For some time now, the FDA has concluded that botanical cannabis is not a safe, effective, and pure drug for purposes of the FDCA.¹¹⁷ It is not alone. Other allied federal public health agencies—such as the Department of Health and Human Services,¹¹⁸ the Office of the U.S. Surgeon General,¹¹⁹ the Substance Abuse and Mental Health Services Administration,¹²⁰ and the National Institute on Drug Abuse¹²¹—have consistently found that smoking marijuana is not a legitimate

¹¹⁶ *Id.*; see also Charles Krauthammer, *Pot as Medicine*, WASH. POST (Feb. 7, 1997), <https://www.washingtonpost.com/archive/opinions/1997/02/07/pot-as-medicine/84704a96-39b8-485e-96e1-08e798569f05/> (“Take any morally dubious proposition—like assisting a suicide—and pretend it is merely help for the terminally ill, and you are well on your way to legitimacy and a large public following. That is how assisted suicide is sold. That is how the legalization of marijuana is sold. Indeed, that is precisely how Proposition 215, legalizing marijuana for medical use, passed last November in California . . . Marijuana gives them a buzz, all right. But medical effects? Be serious. The medical effects of marijuana for these conditions are nil. They are, as everyone involved in the enterprise knows—and as many behind Prop 215 intended—a fig leaf for legalization.”).

¹¹⁷ See, e.g., U.S. FOOD & DRUG ADMIN., FDA REGULATION OF CANNABIS AND CANNABIS-DERIVED PRODUCTS, INCLUDING CANNABIDIOL (CBD) (Oct. 16, 2019); U.S. FOOD & DRUG ADMIN., WHAT YOU NEED TO KNOW (AND WHAT WE’RE WORKING TO FIND OUT) ABOUT PRODUCTS CONTAINING CANNABIS OR CANNABIS-DERIVED COMPOUNDS, INCLUDING CBD (July 17, 2019); Gottlieb Statement, *supra* note 75.

¹¹⁸ See, e.g., HHS Sec’y Alex M. Azar II, Remarks on Surgeon General’s Marijuana Advisory, Press Conf. (Aug. 29, 2019), <https://www.hhs.gov/about/leadership/secretary/speeches/2019-speeches/remarks-on-surgeon-general-marijuana-advisory.html> (“Especially as the potency of marijuana has risen dramatically over the past several decades, we don’t know everything we might want to know about this drug. But we do know a number of things: It is a dangerous drug. For many, it can be addictive. And it is especially dangerous for adolescents and pregnant women, because of what we know about how it affects the developing brain. We need to be clear: Some states’ laws on marijuana may have changed, but the science has not, and federal law has not.”) (internal paragraphing omitted); U.S. DEP’T OF HEALTH & HUMAN SERVS., GUIDANCE ON PROCEDURES FOR THE PROVISION OF MARIJUANA FOR MEDICAL RESEARCH (May 21, 1999); U.S. DEP’T OF HEALTH & HUMAN SERVS., OFFICE OF POPULATION AFFS., RISKS OF ADOLESCENT MARIJUANA USE (Apr. 8, 2019).

¹¹⁹ See, e.g., U.S. DEP’T OF HEALTH & HUMAN SERVS., OFF. OF THE SURGEON GEN’L, U.S. SURGEON GENERAL’S ADVISORY: MARIJUANA USE AND THE DEVELOPING BRAIN (Aug. 29, 2019), <https://www.hhs.gov/surgeongeneral/reports-and-publications/addiction-and-substance-misuse/advisory-on-marijuana-use-and-developing-brain/index.html>; U.S. DEP’T OF HEALTH & HUMAN SERVS., OFF. OF THE SURGEON GEN’L, THE SURGEON GENERAL’S WARNING ON MARIJUANA (Aug. 13, 1982), <https://www.cdc.gov/mmwr/preview/mmwrhtml/00001143.htm>.

¹²⁰ See, e.g., SUBSTANCE ABUSE & MENTAL HEALTH SERVS. ADMIN. (SAMHSA), MARIJUANA RISKS (Sept. 26, 2019), <https://www.samhsa.gov/marijuana>.

¹²¹ See, e.g., NAT’L INST. ON DRUG ABUSE, MARIJUANA AS MEDICINE (July 2019), <https://www.drugabuse.gov/publications/drugfacts/marijuana-medicine> (“Why isn’t the marijuana plant an FDA-approved medicine? The FDA requires carefully conducted studies (clinical trials) in hundreds to thousands of human subjects to determine the benefits and risks of a possible medication. So far, researchers haven’t conducted enough large-scale clinical trials that show that the benefits of

medical treatment and carries substantial risks. In sum, the expert federal agencies have rejected the argument that Congress and the electorate should approve smokable marijuana as a legitimate drug. We reject their judgment at our peril.

* * * * *

The bottom line is this: Commercially sold marijuana lacks the features of a drug that modern medicine and federal law demand. There is no good reason to depart from the eighty-year consensus that only the Commissioner of Food and Drugs—not state versions of that agency, let alone state legislatures or state voters, or even Congress for that matter—has the expertise to approve the large-scale production, distribution, and prescription of drugs for medical treatment. We should correct the error that we made in 1970 by not leaving to the FDA the decision whether to medicalize cannabis. I, therefore, agree with what Doctors Gary Reisfield and Bob DuPont have written in this regard. Anyone who recommends that the ill or disabled smoke marijuana for whatever symptomatic relief it might offer, even if motivated by a desire to alleviate the suffering of others, mistakenly equates human empathy with scientific validity. “Caring without science is well-intentioned kindness, but not medicine.”¹²²

III. RECREATIONAL-USE MARIJUANA

A. *Questions Congress Should Answer*

We now come to the real issue: Should Congress legalize the recreational use of marijuana and regulate its distribution, perhaps in a manner similar to the way that Congress and the states superintend the sale of tobacco and alcohol? That question is a difficult one. To do the job responsibly, Congress would need to demand, insofar as possible, objective answers to a number of hotly disputed

the marijuana plant (as opposed to its cannabinoid ingredients) outweigh its risks in patients it's meant to treat.”).

¹²² Reisfield & DuPont, *supra* note 74, at 868 (quoting BERNARD LOWN, *THE LOST ART OF HEALING: PRACTICING COMPASSION IN MEDICINE* (1996)). Unfortunately, there are two potential downsides to the approach suggested here. One is that the nomination hearings for persons to head HHS, FDA, NIDA, and the like could become as toxic as Supreme Court nomination hearings have become over the last three decades, with interest groups and senators trying to exact commitments from nominees or torch their reputations. See, e.g., MOLLIE HEMINGWAY & CARRIE SEVERINO, *JUSTICE ON TRIAL: THE KAVANAUGH CONFIRMATION AND THE FUTURE OF THE SUPREME COURT* (2019). Unfortunately, because we cannot extract politics from politics, there is no obvious way to avoid that problem. The other is that subjecting medical-use cannabis to FDA regulation but allowing recreational-use marijuana to be sold under another regimen might discourage pharmaceutical companies from investing in research into the potential beneficial properties of cannabinoids. See Patricia J. Zettler & Erika Lietzan, *A Special Exception for CBD in Foods and Supplements*, 25 *DRUG DISCOVERY TODAY* 467 (2020).

questions where there is no consensus regarding the socially optimal result.¹²³ Among them are the following:

- Would marijuana legalization increase the number of people who consume marijuana, the amount of cannabis they consume, and the number of people harmed by its consumption?¹²⁴
- Is heavy or long-term marijuana use more, less, or equally harmful, physically and psychologically, as the comparable use of tobacco or alcohol (and is marijuana a complement to or substitute for those other drugs)?¹²⁵

¹²³ For a concise summary of the competing arguments, compare Tamar Todd, *The Benefits of Marijuana Legalization and Regulation* 23 BERKELEY J. CRIM. L. 99 (2018) (summarizing the pro-legalization case), with Kevin A. Sabet, *Marijuana and Legalization Impacts*, 23 BERKELEY J. CRIM. L. 84 (2018) (summarizing the anti-legalization case). For a recent collection of different views, *Marijuana and America's Health: Questions and Issues for Policy Makers, Hearing Before the U.S. Senate Caucus on Int'l Narcotics Control*, 116th Cong. (Oct. 23, 2019) [hereinafter Senate Int'l Narcotics Control Hearing] (collecting statements of U.S. Surgeon Gen'l Jerome Adams; NIDA Dir. Nora Volkow; Robert Fitzgerald, Prof. of Pathology U. of Calif.-San Diego; Staci Gruber, Assoc. Prof. of Psychiatry Harvard Med'l School; Sean Hennessy, Prof. of Epidemiology, U. Penn. Perelman School of Med.; and Madeline Meier, Ass't Prof. of Psychiatry Ariz. St. U.).

¹²⁴ See, e.g., Caulkins, *Weed Industry*, *supra* note 23 (“As policy liberalized, cannabis transformed from a weekend party drug to a daily habit, becoming more like tobacco smoking and less like drinking. The number of Americans who self-report using cannabis daily or near-daily grew from 0.9 million in 1992 to 7.9 million in 2016.”); Kleiman, *Marijuana and Public Health*, *supra* note 23, at 76–77 (“Over the past quarter-century, the population of ‘current’ (past-month) users has more than doubled (to 22 million) and the fraction of those users who report daily or near-daily use has more than tripled (to about 35%). Those daily or near-daily users account for about 80% of the total cannabis consumed. Between a third and a half of them report the symptoms of Cannabis Use Disorder: They’re using more, or more frequently, than they intended to; they’ve tried to cut back or quit and failed; cannabis use is interfering with their other interests and responsibilities; and it’s causing conflict with people they care about.”). A major cause of increased marijuana use is commercialization. See Caulkins, *Weed Industry*, *supra*, note 23 (“use in Colorado rose not when its medical-marijuana law passed in 2000, but when dispensaries proliferated in 2009”); Andrew A. Monte et al., *The Implications of Marijuana Legalization in Colorado*, 313 JAMA 241, 241 (2150).

¹²⁵ Overuse and misuse of alcohol has ruined the lives of countless individuals and has cost society billions of dollars in medical, economic, and social expenses. Driving under the influence of alcohol has led to hundreds of thousands of deaths and serious injuries. Alcohol is also a criminogenic drug—*viz.*, by loosening inhibitions it allows people to commit crimes, which gives rise to an entirely different category of costs. See, e.g., Larkin, *24/7 Sobriety and Hope*, *supra* note 2, at 42–46. Smoking cigarettes has caused millions of deaths and has cost individuals and the nation billions of dollars. See, e.g., U.S. DEP’T OF HEALTH & HUMAN SERVS., A REPORT OF THE OFF. OF THE SURGEON GENERAL: THE HEALTH CONSEQUENCES OF SMOKING—50 YEARS OF PROGRESS 11–12, 623–42 (2014); CNTRS. FOR DISEASE CONTROL & PREVENTION, SMOKING AND TOBACCO USE: TOBACCO-RELATED MORTALITY (Apr. 28, 2020), https://www.cdc.gov/tobacco/data_statistics/fact_sheets/health_effects/tobacco_related_mortality/index.htm (“Cigarette smoking causes about one of every five deaths in the United States each year. Cigarette smoking is estimated to cause the following: More than 480,000 deaths annually (including deaths from secondhand smoke).”) (footnotes and internal punctuation omitted); *id.* (“Cigarette smoking causes premature death: Life expectancy for smokers is at least 10 years shorter than for nonsmokers.”) (internal punctuation omitted); Prabhat Jha et al., *21st-Century Hazards of Smoking and Benefits of Cessation in the United States*, 368 NEW ENG. J. MED. 341 (2013). Marijuana

- What effect will legalization have on the lives of the adults who smoke regularly and on their families?¹²⁶

is also a potentially harmful substance. *See, e.g.*, Nora D. Volkow, *Marijuana and Medicine: The Need for a Science-Based Approach*, in 2 PROFESSIONAL PERSPECTIVES ON ADDICTION MEDICINE 23, 28 (Mark Sanford & Donald Avoy ed., 2009); HALL & PACULA, *supra* note 25; James C. Anthony et al., *Comparative Epidemiology of Dependence on Tobacco, Alcohol, Controlled Substances, and Inhalants: Basic Findings from the National Comorbidity Survey*, 2 EXPERIMENTAL & CLINICAL PSYCHOPHARMACOLOGY 244, 251 (1994) (relative percentages of individuals who become dependent after trying tobacco (32 percent), alcohol (15 percent), and marijuana (9 percent)); Wayne Hall, *What Has Research over the Past Two Decades Revealed about the Adverse Health Effects of Recreational Cannabis Use?*, 110 ADDICTION 19 (2014); Deborah S. Hasin et al., *Prevalence of Marijuana Use Disorders in the United States Between 2001–2002 and 2012–2013*, 72 JAMA PSYCHIATRY 1235 (2015). The THC content of marijuana is materially higher than in yesteryear, and new inhalation methods—such as “dabbing” (viz., inhalation of concentrate through using butane)—exacerbate the potential harms. *See, e.g.*, Mahmoud A. ElSohly et al., *Changes in Cannabis Potency Over the Last 2 Decades (1995–2014): Analysis of Current Data in the United States*, 79 BIO. PSYCHIATRY 613 (2016); John M Stogner & Bryan Lee Miller, *Assessing the Dangers of “Dabbing”: Mere Marijuana or Harmful New Trend?*, 136 PEDIATRICS 1 (2015). “Experimental” or infrequent use (particularly long ago) is a different matter. Larkin, *Gummy Bears*, *supra* note 22, at 328 & n.31 (collecting authorities); *see* Caulkins, *Marijuana Dangers*, *supra* note 23, at 22; *id.* at 29–30 (“While alcohol is more dangerous in terms of acute overdose risk, and also in terms of promoting violence and chronic organ failure, marijuana—at least as now used in the United States—creates higher rates of behavioral problems, including dependence, among all its users. Furthermore, even if it were possible to ascertain that alcohol is more dangerous than marijuana or vice versa, that fact would be of no particular relevance. Very few people systematically research the pros and cons of various dependence-inducing intoxicants and then decide to consume just one. Most people who use marijuana also drink alcohol, and the two are often used together.”).

¹²⁶ *See, e.g.*, NIDA, MARIJUANA, *supra* note 85, at 25 (“Several studies have linked marijuana use to increased risk for psychiatric disorders, including psychosis (schizophrenia), depression, anxiety, and substance use disorders, but whether and to what extent it actually causes these conditions is not always easy to determine. Recent research suggests that smoking high-potency marijuana every day could increase the chances of developing psychosis by nearly five times compared to people who have never used marijuana. The amount of drug used, the age at first use, and genetic vulnerability have all been shown to influence this relationship. The strongest evidence to date concerns links between marijuana use and psychiatric disorders in those with a preexisting genetic or other vulnerability.”) (footnotes omitted); GEORGE F. KOOB ET AL., DRUGS, ADDICTION, AND THE BRAIN 306 (2014) (“Marijuana smoke may also have the same potential toxicity as cigarette smoke with regard to lung function.”); Caulkins, *Weed Industry*, *supra* note 23 (“The pro-marijuana movement celebrates legalization as a triumph following in the footsteps of civil rights, women’s rights, and homosexual rights. That is juvenile. Although most marijuana users have no problems with the drug, most sales and profits flow from people who consume so much that it interferes with their lives. The typical session of marijuana use is part of a bad habit, if not a diagnosable substance-use disorder.”); Caulkins, *Marijuana Dangers*, *supra* note 23, at 22 (“The essential problem with marijuana is neither death from overdose nor organ failure from chronic use. Marijuana might better be described as a performance-degrading drug and, more dangerously, as a temptation commodity with habituating tendencies.”); *id.* at 23–25 (“Since 4.2 million people are estimated to meet the criteria for marijuana abuse or dependence, there is one such person for every 4.8 current users. Or, expressing the ratio the other way around, 21% of current users meet diagnostic criteria . . . [W]ithin the context of aggregate use in the United States at this time, the best available data suggest that marijuana creates abuse and dependence at higher rates than does alcohol”); Larkin & Madras, *supra* note 94, at 581 (“According to eleven systematic reviews and thirty-two primary studies, marijuana-use harms include increased risk for motor vehicle accidents, psychotic

- What short- and long-term effects will legalization have on the lives of the adolescents who pick up the habit?¹²⁷
- What number of new users will become addicted to cannabis or suffer from mental disorders due to heavy or long-term use?¹²⁸
- What is the risk that marijuana will serve as a so-called “gateway” drug?¹²⁹
- What regulatory model would best work for marijuana: viz., the one currently used for tobacco or alcohol, or something entirely different?¹³⁰

symptoms, amotivational syndrome, and short-term cognitive impairment.”) (footnote omitted). It turns out that a small number of people consume the vast majority of marijuana. *See, e.g., Caulkins, Marijuana Dangers, supra* note 23, at 29 (“Those who report using every single day, on the other hand, account for 45% of the reported days of use and more than 50% of the weight consumed. Since daily users are thought to consume (on average) the equivalent of three to four joints per day, it seems literally true that the average gram of marijuana is consumed by someone who is under the influence of marijuana more than half of all their waking hours.”); Mark Kleiman, *How Not To Make a Hash Out of Cannabis Legalization*, WASHINGTON MONTHLY (2014), <https://washingtonmonthly.com/magazine/marchaprilmay-2014/how-not-to-make-a-hash-out-of-cannabis-legalization/> (“Cannabis consumption, like alcohol consumption, follows the so-called 80/20 rule (sometimes called ‘Pareto’s Law’): 20 percent of the users account for 80 percent of the volume.”). Another way to put the inquiry is this: What weight should we give to the likelihood that legalization might ruin the lives of perhaps 20 percent of long-term marijuana users?

¹²⁷ *See, e.g., SAMHSA*, an arm of the U.S. Department of Health and Human Services, has found that teenage marijuana use has increased in Colorado but not in Washington from 2011-2015. *See U.S. DEP’T OF HEALTH & HUMAN SERVS., SAMHSA*, HHS Publication No. SMA-17-Baro-16-States-CO (2017); U.S. DEP’T OF HEALTH & HUMAN SERVS., SAMHSA, HHS Publication No. SMA-17-Baro-16-States-WA (2017). As for the effect of long-term use beginning in adolescence, there seems to be unanimity that there is a serious risk of long-term problems. *See, e.g., NIDA, MARIJUANA, supra* note 85, at 2-3; WORLD HEALTH ORG., THE HEALTH AND SOCIAL EFFECTS OF NONMEDICAL CANNABIS USE 15-16 (2016); *see generally* Larkin, *Gummy Bears, supra* note 22, at 324-28 & nn.28-33 (collecting authorities).

¹²⁸ *See, e.g., NIDA, MARIJUANA, supra* note 85, at 2-3; Alan J. Budney et al., *Cannabis, Lowinson and Ruiz’s Substance Abuse: A Comprehensive Textbook* 214, 227-28, 233 (Pedro Ruiz & Eric Strain eds., 5th ed. 2011); Larkin, *Gummy Bears, supra* note 22, at 325 n.29 (collecting scientific studies and reports).

¹²⁹ *See, e.g., NIDA, MARIJUANA, supra* note 85, at 21 (“Some research suggests that marijuana use is likely to precede use of other licit and illicit substances and the development of addiction to other substances.”) (footnote omitted); NAT’L INST. ON DRUG ABUSE, MARIJUANA: DRUGFACTS (last updated Dec. 2019), <https://www.drugabuse.gov/publications/drugfacts/marijuanaa#ref>; *compare, e.g., Roberto Secades-Villa et al., Probability and Predictors of the Cannabis Gateway Effect: A National Study*, 26 INT’L J. DRUG POLICY 135 (2015) (finding a gateway effect), with, e.g., Stephen Nkansah-Amankra & Mark Minelli, “Gateway Hypothesis” and Early Drug Use: Additional Findings from a Population-Based Sample of Adolescents to Adulthood, 4 PREVENTATIVE MED. REPORTS 134 (2016) (finding no gateway effect).

¹³⁰ For example, one model might be the Family Smoking Prevention and Tobacco Control Act, Pub. L. No. 111-31, 123 Stat. 1776 (2009), which authorizes the FDA to regulate the distribution of tobacco products. Unfortunately, federal and state regulatory laws mean little if the government does not enforce them, as has happened in some states that have legalized marijuana use. *See, e.g., GAO, STATE MARIJUANA LEGALIZATION, supra* note 36; OR. SEC’Y OF STATE AUDITS DIV., OREGON’S

- What level of government—federal, state, or local, or perhaps all three—should be permitted to tax the cultivation, processing, and sale of marijuana, and how, if at all, will taxation affect the availability of cannabis on the black market?¹³¹
- Will legalization increase state coffers from new sales tax revenues or create a deficit from new expenses, such as increased emergency room visits?¹³²

FRAMEWORK FOR REGULATING MARIJUANA SHOULD BE STRENGTHENED TO BETTER MITIGATE DIVER-SION RISK AND IMPROVE LABORATORY TESTING (Jan. 2019).

¹³¹ Compare, e.g., COLO. LEGIS. COUNCIL, INTERIM STUDY COMM., LEGALIZED MARIJUANA COST-BENEFIT ANALYSIS: REPORT TO THE COLORADO GEN'L ASSEMBLY (Dec. 2016); COLORADO DEP'T OF REVENUE, MARIJUANA TAX DATA (Oct. 2019) (reporting (approximately) \$223 million in overall revenue from marijuana sales for FY 2019 (Jan. 1 to Sept. 30, 2019) and (approximately) \$1.2 billion since February 1, 2014 (when the Colorado Department of Revenue began reporting data)), <https://www.colorado.gov/pacific/revenue/colorado-marijuana-tax-data>, and JANE G. GRAVELLE & SEAN LOWRY, CONG. RESEARCH SERV., R43785, FEDERAL PROPOSALS TO TAX MARIJUANA: AN ECONOMIC ANALYSIS (Nov. 13, 2014), with, e.g., CENTENNIAL INST., ECONOMIC AND SOCIAL COSTS OF LEGALIZED MARIJUANA 3 (2018) (“For every dollar gained in tax revenue, Coloradans spend approximately \$4.50 to mitigate the effects of legalization. Costs related to the healthcare system and from high school dropouts are the largest cost contributors, but many other costs were included as well. Costs of marijuana ranged from accidental poisonings and traffic fatalities to increased court costs for impaired drivers, juvenile use, and employer related costs.”).

¹³² See GOGK, *supra* note 1, at 131–40 (arguing that marijuana legalization supporters overestimate the tax revenues and underestimate its direct and indirect costs, such as increased healthcare expenses and lost productivity); see also, e.g., JEFF CHAPMAN ET AL., PEW CHARITABLE TRUSTS, FORECASTS HAZY FOR STATE MARIJUANA REVENUE (Aug. 2019), <https://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2019/08/forecastts-hazy-for-state-marijuana-revenue> (noting the difficulty of projecting demand and revenues) (noting the difficulty of projecting demand and revenues); Katelyn E. Hall et al., *Mental-health Related Emergency Department Visits Associated with Cannabis in Colorado*, 25 ACAD. EMERGENCY MED. 526, 531 (2018) (“Colorado experienced a fivefold greater prevalence of mental health diagnoses in ED visits with cannabis-related diagnostic codes compared to ED visits without cannabis-related diagnostic codes.”); Howard S. Kim et al., *Marijuana Tourism and Emergency Department Visits in Colorado*, 374 NEW ENG. J. MED. 797, 798 (2016) (“ED visits related to cannabis use appear to be increasing more rapidly among out-of-state residents than among Colorado residents[.]”), Howard S. Kim et al., *Cyclic Vomiting Presentations Following Marijuana Liberalization in Colorado*, 22 ACAD. EMERGENCY MED. 694, 694 (2015) (“The prevalence of cyclic vomiting presentations nearly doubled after the liberalization of medical marijuana.”); Andrew A. Monte et al., *Acute Illnesses Associated with Cannabis Use, by Route of Exposure*, 170 ANNALS INTERN. MED. 531 (2019); Monte et al., *supra* note 124, at 241–42 (legalization in Colorado is associated with an increase in emergency room usage for problems such as marijuana intoxication, exacerbation of underlying psychotic condition, burns, and cyclic vomiting syndrome); George Sam Wang et al., *Marijuana and Acute Care Health Contacts in Colorado*, 104 PREVENTATIVE MED. 24 (2017) (finding that marijuana legalization in Colorado is correlated with trend of increasing emergency room visits and poison control center calls); George Sam Wang et al., *Unintentional Pediatric Exposures to Marijuana in Colorado, 2009–2015*, 170 JAMA PEDIATRICS e160971 (2016) (concluding that the increase in emergency room visits and regional poison control center calls in the years after marijuana legalization in Colorado was due to legalization); George Sam Wang et al., *Association of Unintentional Pediatric Exposures with Decriminalization of Marijuana in the United State*, 63 ANNALS OF EMERGENCY. MED. 684 (2014) (the nationwide rate of pediatric exposures to marijuana was low, but increased from 2005 to 2011); He Zhu & Li-Tzy Wu, *Trends and Correlates of Cannabis-Involved Emergency Department Visits:*

- How should we deal with the problem that people will consume marijuana in reliance on medical advice offered by marijuana dispensary “budtenders,” by internet websites, or by each other?¹³³
- What effect would permitting recreational marijuana use have on the criminal justice system?¹³⁴

2004-2011, 10 J. ADDICTION MED. 429 (2016) (finding a notable increase in emergency room visits attributable to consumption of cannabis alone or with other drugs).

¹³³ For example, pregnant women should not use marijuana. *See, e.g.*, SURGEON GENERAL ADVISORY, *supra* note 119; CENTERS FOR DISEASE CONTROL & PREVENTION, MARIJUANA AND PUBLIC HEALTH (Mar. 16, 2018); AM. ACAD. PEDIATRICS, CLINICAL REPORT: MARIJUANA USE DURING PREGNANCY AND BREASTFEEDING: IMPLICATIONS FOR NEONATAL AND CHILDHOOD OUTCOMES, 142 PEDIATRICS No. 3 e20181889 (Sept. 2018) [hereinafter AM. ACAD. PEDIATRICS, CLINICAL REPORT]; AM. COLLEGE OF OBSTETRICIANS & GYNECOLOGISTS, COMM. ON OBSTETRIC PRAC., ACOG COMM. OPINION No. 722 (2017); COLO. DEP’T OF PUB. HEALTH & ENV’T, MONITORING HEALTH CONCERNS RELATED TO MARIJUANA 23 (2018); Nora D. Volkow et al., *Self-Reported Medical and Nonmedical Cannabis Use Among Pregnant Women in the United States*, 322 JAMA 167 (2019); Nora D. Volkow et al., *The Risks of Marijuana Use During Pregnancy*, 317 JAMA 129 (2017). No form of regulation, however, might keep some retail clerks (called “bud-tenders”) from mistakenly recommending that pregnant women use marijuana to avoid morning sickness. *See, e.g.*, Betsy Dickson et al., *Recommendations from Cannabis Dispensaries About First-Trimester Cannabis Use*, 131 OBSTETRICS & GYNECOLOGY 1031 (2018); Lisa Rapaport, *Many Cannabis Dispensaries Recommend Pot to Pregnant Women*, REUTERS (May 9, 2018), <https://www.reuters.com/article/us-health-morningsickness-marijuana/many-cannabis-dispensaries-recommend-pot-to-pregnant-women-idUSKBN1IA3BR>; Michael Nedelman, *Marijuana Shops Recommend Marijuana to Pregnant Women, Against Doctors’ Warnings*, CNN (May 10, 2018), <https://www.cnn.com/2018/05/10/health/cannabis-marijuana-dispensaries-pregnancy-study/index.html> (noting that about 70% of cannabis shops in Colorado recommend marijuana to pregnant women for morning sickness); *see also, e.g.*, AM. ACAD. PEDIATRICS, CLINICAL REPORT, *supra* (noting that “marijuana [is being] touted on the Internet as a safe treatment of nausea during pregnancy”). The FDA and federal law enforcement agencies, however, should try. *See United States v. Moore*, 423 U.S. 122, 143 (1975) (ruling that it is illegal for a physician to distribute controlled substances outside the boundaries of professional medical practice).

¹³⁴ Parties arguing in favor of revising the CSA point to studies finding that police enforcement of laws banning recreational cannabis use have a disparate impact on racial and ethnic minorities. *See, e.g.*, REPORT OF THE NYPD WORKING GROUP, ENFORCEMENT OF THE LAW PROHIBITING PUBLIC BURNING OF MARIJUANA IN NEW YORK CITY 5–8 (June 15, 2018) [hereinafter *NYPD Report*], <https://www1.nyc.gov/assets/home/downloads/pdf/press-releases/2018/marijuana-report-20180619.pdf>; Eric Bond et al., *Marijuana Enforcement in New York State, 1970-2017*, Research Brief, Eric Bond et al., John Jay College of Crim. Just., *Marijuana Enforcement in New York State, 1970-2017*, 1, 5 (Feb. 2019), https://datacollaborativeforjustice.org/wp-content/uploads/2019/02/RESEARCH_BRIEF_FINAL.pdf; Smart Approaches to Marijuana, *Lessons Learned from Legalization in Four U.S. States and DC* 4, 28 (Mar. 2018) [hereinafter *SAM, Lessons Learned from Legalization*], <https://learnsaboutsam.org/wp-content/uploads/2018/04/SAM-Lessons-Learned-From-Marijuana-Legalization-Digital.pdf> (all making that finding). The Constitution prohibits only intentional racial discrimination, not actions with only a discriminatory effect. *See, e.g.*, *Ashcroft v. Iqbal*, 556 U.S. 662, 676–77 (2009); *Personnel Adm’r of Mass. v. Feeney*, 442 U.S. 256, 279 (1979) (“‘Discriminatory purpose,’ however, implies more than intent as volition or intent as awareness of consequences It implies that the decisionmaker, in this case a state legislature, selected or reaffirmed a particular course of action at least in part ‘because of,’ not merely ‘in spite of,’ its adverse effects upon an identifiable group.”) (citation and footnotes omitted). Nonetheless, a law enforcement practice with a disparate racial impact is troubling. At the same time, it is important to analyze such findings, because they might

- Given the large number of state medical and recreational marijuana programs and the large-scale marijuana business that has developed since 1996, is the current federal ban sustainable?¹³⁵
- Finally, should Congress act now or wait until the science becomes more certain?¹³⁶

rest on incomplete information or obscure relevant, race-neutral explanations. For example, there is evidence that marijuana stores are disproportionately situated in some minority communities, *see SAM, Lessons Learned from Legalization, supra*, at 29 (“An overlay of socioeconomic data with the geographic location of pot shops in Denver shows marijuana stores are located primarily in disadvantaged neighborhoods.”), and that juvenile offenders might be unaware of the distinction between private and public marijuana use, *id.* at 26 (referring to data from Colorado and Alaska: “Many young people hear the message that ‘pot is legal,’ but are unaware (or unconcerned) that public use is not.”). Moreover, the NYPD report cited above states that pre-2017 data do not distinguish between arrests for simple possession and “public burning”—that is, smoking in public. “This distinction is important because it is typically burning marijuana in public or sale, and not mere possession in public view, that generates calls from the public for the police to take action.” *NYPD Report, supra*, at 4. In addition, studies noting the racial disparity may elide the difference between (1) the crime that precipitated the arrest and (2) the addition of an independent charge for marijuana possession discovered during a search incident to the arrest. *See GOGEK, supra* note 1, at 107–09. Finally, when minorities are predominantly both the perpetrators and victims of crime in a neighborhood, the police cannot legitimately be criticized for enforcing laws that protect law-abiding minority residents. *See Paul J. Larkin, Jr. & David Rosenthal, Flight, Race, and Terry Stops: Commonwealth v. Warren*, 16 *GEO. J. L. & PUB. POL’Y* 163, 194–225 (2018).

¹³⁵ In 2019, Professor Kleiman concluded that the answer is, No. The cannabis industry has become too large for law enforcement to suppress it, and the businesses too wealthy for politicians to ignore them. Moreover, marijuana is easy to smuggle from states with liberalized schemes to one without them. “The serious question is not whether to legalize cannabis, but how.” Kleiman, *Marijuana and Public Health, supra* note 23, at 69; *see also, e.g., Caulkins, Marijuana Dangers, supra* note 23, at 32 (“It is clear we would all be better off if marijuana did not exist. Given the abundance of alternative sources of intoxication and fun, the harm suffered by abusers probably outweighs the pleasure derived by its controlled users. On the other hand, the paucity of third-party harms or ‘externalities’ undermines the standard justification for government intervention. A modern secular state does not arbitrarily declare some items to be forbidden and others to be halal or kosher. We are accustomed to mandates that protect against immediate, tangible physical-health harms, such as seat-belt laws, but many bridle against taxes on sodas or other social engineering designed to fight obesity or promote exercise. And the threats marijuana does pose are obstacles to nebulous objectives like ‘achieving one’s potential’ and bourgeois totems like academic and career success, not concrete harms like heart disease.”).

¹³⁶ Relevant here is the “precautionary principle,” the proposition that regulators should act cautiously when the potential harm is great even if the likelihood of its occurrence is remote (or, put simply, it’s better to be safe than sorry). *See, e.g., CASS R. SUNSTEIN, LAWS OF FEAR: BEYOND THE PRECAUTIONARY PRINCIPLE* (2005); Frank B. Cross, *Paradoxical Perils of the Precautionary Principle*, 53 *WASH. & LEE L. REV.* 851 (1996). The principle is relevant here because “cannabis policy has raced ahead of cannabis science,” Bleyer & Barnes, *supra* note 74, at 1280, and science recently has shown that some medical benefits are smaller and harms greater than expected, *see, e.g., Campbell et al., supra* note 112; Caputi & Humphreys, *supra* note 113; *see generally* Larkin & Madras, *supra* note 94, at 581–92.

A short article cannot do justice to those questions. Answering any one of them might take an article by itself. There might be additional issues that arise once Congress begins to answer the ones I have suggested. Nonetheless, society should examine those issues, and Congress must answer them if it is to legislate responsibly. It is time for that debate to begin.

To help that debate along, I will discuss one issue here: the problems that legalization will create for roadway safety. That issue merits consideration for three reasons. One is an increase in roadway crashes, maimings, and fatalities resulting from drivers who are “one toke over the line.”¹³⁷ Legalization will lead to an increase in the number of people who smoke marijuana, some number of them will get behind the wheel while feeling its impairing effects, and a subset of that number will cause a crash. The nation has spent the last half-century trying to reduce the number of roadway crashes, maimings, and fatalities attributable to alcohol.¹³⁸ We have not reduced that number to zero, but we have significantly reduced it by making it easier to identify and prosecute DUI-Alcohol cases and by changing the public’s attitude toward drunken driving.¹³⁹ The cannabis legalization movement threatens to move the nation in the other direction. In fact, there is evidence that we have already done an about-face. A second reason why I will discuss the problem of DUI-Drugs is that this issue has not received remotely the same amount of consideration in academic journals that the claimed benefits of marijuana legalization already has. Whatever the nation decides to do about the CSA—“end it,” “mend it,” or leave the statute unchanged—we need to be aware of all the consequences of our decision, and this is a critical factor in that mix. Finally, the problem of DUI-Drugs is not limited to cannabis. Benzodiazepines, opioids, other hallucinogens—those and other drugs impair anyone’s ability to operate a motor vehicle safely.¹⁴⁰ We need to be concerned with the use of any substance that degrades one’s operating ability. Cannabis just happens to be the substance *de jour*.

¹³⁷ Brewer & Shipley, “*One Toke Over the Line*” (Kama Sutra Records 1971).

¹³⁸ See, e.g., JAMES B. JACOBS, *DRUNK DRIVING: AN AMERICAN DILEMMA* (1989); BARRON H. LERNER, *ONE FOR THE ROAD: DRUNK DRIVING SINCE 1900* (2011).

¹³⁹ See NATIONAL ACADEMIES OF SCI., ENG’G & MEDICINE, *GETTING TO ZERO: ALCOHOL-IMPAIRED DRIVING FATALITIES* (2018) [hereinafter *GETTING TO ZERO*]; Larkin, *Drugged Driving*, *supra* note 28, at 454–55.

¹⁴⁰ See, e.g., Paul J. Larkin, Jr., Robert L. DuPont & Bertha K. Madras, *The Need to Treat Driving under the Influence of Drugs as Seriously as Driving under the Influence of Alcohol*, THE HERITAGE FOUND., BACKGROUNDER No. 3316, at 4–5 (May 16, 2018), https://www.heritage.org/sites/default/files/2018-05/BG3316_1.pdf.

B. Drug Impaired Driving

Numerous substances have psychoactive properties that hamper a person's ability to drive safely.¹⁴¹ Alcohol has always been the principal worry because adults may lawfully purchase it and because it is still the most commonly used recreational drug.¹⁴² Alcohol-impaired driving has caused more deaths and disabilities each year than have some of the nation's recent wars.¹⁴³

State marijuana legalization programs only worsen that problem. Why? Our choice is not whether to substitute THC-impaired driving for alcohol-impaired driving, but is whether to add the problems caused by the former atop those caused by the latter.¹⁴⁴ Like ethanol, THC hampers a driver's ability to quickly and effectively process information and implement decisions when responding to unexpected, rapidly unfolding roadway challenges,¹⁴⁵ even after a considerable

¹⁴¹ See, e.g., NAT'L HIGHWAY TRAFFIC SAFETY ADM'N, DEP'T OF TRANSP., DRUG-IMPAIRED DRIVING (2017), <https://www.nhtsa.gov/risky-driving/drug-impaired-driving> ("You can't drive safely if you're impaired. That's why it's illegal everywhere in America to drive under the influence of alcohol, marijuana, opioids, methamphetamines, or any potentially impairing drug-prescribed or over the counter.") (last accessed June 22, 2020); MARCELLINE BURNS, MEDICAL-LEGAL ASPECTS OF DRUGS 153 (2003) ("Without exception, all illicit drugs have the potential to impair the cognitive and behavioral skills that allow a person to engage in normal daily activities, such as driving and working."); MEYER & QUENZER, *supra* note 93; Tharaka L. Dassanayake et al., *Effects of Benzodiazepines, Antidepressants and Opioids on Driving: A Systematic Review and Meta-analysis of Epidemiological and Experimental Evidence*, 34 DRUG SAFETY 125 (2011); Markku Linnoila, *Tranquilizers and Driving*, 8 ACCID. ANAL. & PREV. 15 (1976).

¹⁴² Larkin, *Drugged Driving*, *supra* note 28, at 456 n.9; see generally GETTING TO ZERO, *supra* note 139.

¹⁴³ Compare NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEP'T OF TRANSP., SAFETY FACTS: MOTOR VEHICLE CRASHES: OVERVIEW 9 Tbl. 7 (Oct. 2019), <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812826> (in 2018, there were 10,511 alcohol-impaired driving fatalities) with U.S. DEP'T OF DEFENSE, CASUALTY STATUS (Apr. 2020), <https://www.defense.gov/casualty.pdf> (recording 4,431 fatalities in Operation Iraqi Freedom since Sept. 1, 2001, and 2,353 in Operation Enduring Freedom, which began in Afghanistan on October 7, 2001).

¹⁴⁴ Mark R. Rosekind et al., *Reducing Impaired Driving Fatalities: Data Need to Drive Testing, Enforcement and Policy*, JAMA INTERNAL MED. E1 (June 22, 2020), file:///C:/Users/larkin/Downloads/jamainternal_rosekind_2020_ic_200012.pdf ("[E]very year more than 10,000 individuals die on US roads as a result of crashes in which a driver had a blood alcohol concentration of greater than 0.08 g/dL, accounting for about one-third of motor vehicle crash deaths annually. As this significant alcohol-impaired driving problem continues, public health and safety professionals are justifiably concerned by the introduction of an additional legal intoxicant into our communities and onto our roads.") (footnote omitted).

¹⁴⁵ BRITISH MED. ASS'N, THERAPEUTIC USES OF CANNABIS 66 (1997) ("Impairment of psychomotor and cognitive performance, especially in complex tasks, has been shown in normal subjects in many tests. Impairments include slowed reaction time, short-term memory deficits, impaired attention, time and space distortion, and impaired coordination. These effects combine with the sedative effects to cause deleterious effects on driving ability or operation of machinery.") (citations omitted) [hereinafter BRITISH MED. ASS'N, CANNABIS]; see also, e.g., NAT'L ACAD. REPORT, *supra* note 25, at 85–99,

period of abstinence.¹⁴⁶ Moreover, a goodly number of people will use marijuana and drive,¹⁴⁷ perhaps a greater number now than when its sale was unlawful nationwide.¹⁴⁸ Finally, people often consume THC and alcohol together,¹⁴⁹ which

230; NAT'L INST. ON DRUG ABUSE, U.S. DEP'T OF HEALTH & HUMAN SERVS., MARIJUANA 10, 12–13 (Apr. 2020); Robert L. DuPont et al., *Marijuana-Impaired Driving: A Path Through the Controversies*, in CONTEMPORARY HEALTH ISSUES ON MARIJUANA 183, 186 (Kevin A Sabet & Ken. C. Winters eds., 2018) (“Today there is a wealth of evidence that marijuana is an impairing substance that affects skills necessary for safe driving.”); Wayne Hall, *What Has Research Over the Past Two Decades Revealed About the Adverse Health Effects of Recreational Cannabis Use?*, 110 ADDICTION 19, 21 (2014); Rebecca L. Hartman & Marilyn A. Huestis, *Cannabis Effects on Driving Skills*, 59 CLINICAL CHEMISTRY 478 (2013). There is less of an adverse effect in simulators and when drivers perform simple on-road maneuvers, but “if speed increases, as it does on a highway, then reaction time can’t keep up,” and “if a driver faces multiple tasks . . . performance goes to hell pretty quickly.” CASARETT, *supra* note 73, at 160; see generally Larkin, *Drugged Driving*, *supra* note 28, at 473–78 & nn. 87-103 (collecting studies).

¹⁴⁶ See, e.g., M. Kathryn Dahlgren et al., *Recreational Cannabis Use Impairs Driving Performance in the Absence of Acute Intoxication*, 208 DRUG & ALCOHOL DEPENDENCE 107771 (2020) (“The current study demonstrates residual driving impairment in nonintoxicated cannabis users, which appears specific to those with early onset cannabis use.”); DuPont et al., *supra* note 145, at 187 (“A study of chronic, daily marijuana users assessed over a three-week period of abstinence showed prolonged impairment of psychomotor function on critical tracking and divided attention tasks necessary for driving safely[.]”).

¹⁴⁷ See ALEJANDRO AZOFEIFA ET AL., CENTERS FOR DISEASE CONTROL & PREVENTION, 68 MORBIDITY & MORTALITY WEEKLY REP. 1153, 1153 (Dec. 20, 2019) (“During 2018, 12 million (4.7%) U.S. residents reported driving under the influence of marijuana in the past 12 months; 2.3 million (0.9%) reported driving under the influence of illicit drugs other than marijuana. Driving under the influence was more prevalent among males and among persons aged 16–34 years.”); NAT'L HIGHWAY TRAFFIC SAFETY ADM'N, U.S. DEP'T OF TRANSP., TRAFFIC SAFETY FACTS: RESEARCH NOTE, RESULTS OF THE 2013-2014 NATIONAL ROADSIDE SURVEY OF ALCOHOL AND DRUG USE BY DRIVERS (Feb. 2015) (stating that almost twenty percent of drivers tested positive for potentially impairing legal and illegal drugs other than alcohol) [hereinafter NHTSA 2013-2014 ROADSIDE SURVEY]; NAT'L HIGHWAY TRAFFIC SAFETY ADMIN, U.S. DEP'T OF TRANSP., DOT HS 811 415, DRUG INVOLVEMENT OF FATALY INJURED DRIVERS 1 (2010) (“Nationwide in 2009, 63 percent of fatally injured drivers were tested for the presence of drugs. Overall, 3,952 fatally injured drivers tested positive for drug involvement in 2009. This number represents 18 percent of all fatally injured drivers (Table 1) and 33 percent of those with known drug test results (Table 2) in 2009.”); OREGON HEALTH AUTHORITY, MARIJUANA REPORT 62 (2016), <https://digital.osl.state.or.us/islandora/object/osl%3A95678/datastream/OBJ/view> (noting that, in Oregon in 2015, Drug Recognition Experts—viz., specially trained law enforcement officers—found that 50 percent of all drivers they assessed were cannabis-impaired); DuPont, *supra* note 145, at 191.

¹⁴⁸ States like Colorado have seen a considerable increase in marijuana sales. Benjamin Hansen et al., *Early Evidence on Recreational Marijuana Legalization and Traffic Fatalities*, SSRN 19-20 (Feb. 2018), http://faculty.washington.edu/ceweber/HMW_marijuana_traffic.pdf (“The amount of marijuana sold in recreational stores has grown dramatically, increasing . . . in Colorado . . . from 36,031 pounds in 2014 to 102,871 pounds in 2016.”). In 2017, there were three million new marijuana users, one-third was under age nineteen, and one-third was college age. NAT'L FAMILIES IN ACTION, THE MARIJUANA REPORT (Sept. 19, 2018).

¹⁴⁹ See, e.g., AZOFEIFA, *supra* note 147, at 1154 (“In a study of injured drivers aged 16–20 years evaluated at level 1 trauma centers in Arizona during 2008–2014, 10% of tested drivers were simultaneously positive for both alcohol and [THC].”) (footnote omitted); BECKY BUI & JACK K. REED, COLO.

multiplies the disabling effect of each drug on a person's driving ability.¹⁵⁰ The combination can render someone impaired when consuming either drug alone might not.¹⁵¹

Consider the effect on roadway safety of Colorado's 2000 and 2012 decisions to legalize marijuana for medical and recreational use, respectively.¹⁵² The data

DEP'T OF PUBLIC SAFETY, DRIVING UNDER THE INFLUENCE OF DRUGS AND ALCOHOL: A REPORT PURSUANT TO HOUSE BILL 17-1315, at 7 (July 2018) (noting that in 2016 alcohol and THC are the most common drug combination in cases with test results); DARRIN T. GRONDELL ET AL., WASH. TRAFFIC SAFETY COMM'N, MARIJUANA USE, ALCOHOL USE, AND DRIVING IN WASHINGTON STATE 1–2 (Apr. 2018) (“Poly-drug drivers (combinations of alcohol and drugs or multiple drugs) is now the most common type of impairment among drivers in fatal crashes The most common substance in poly-drug drivers is alcohol, followed by THC Since 2012, the number of poly-drug drivers involved in fatal crashes [has] increased an average of 15 percent every year By 2016, the number of poly-drug drivers [was] more than double the number of alcohol-only drivers and five times higher than the number of THC-only drivers involved in fatal crashes.”); ROCKY MTN. HIGH-INTENSITY DRUG TRAFFICKING AREA STRATEGIC INTELLIGENCE UNIT, THE LEGALIZATION OF MARIJUANA IN COLORADO: THE IMPACT, VOL. 6 SUPPLEMENT 10 (Sept. 2019) (chart depicting that sixty-six percent of the drivers who tested positive for marijuana also had used alcohol and that seventy-five percent of marijuana users also used alcohol and another drug) [hereafter ROCKY MTN. HIDTA 2019 REPORT]; CAULKINS, INSIGHT, *supra* note 23, at 44 (“Marijuana users are much more likely than are nonusers to drink and to abuse alcohol. For example, current marijuana users are five times as likely as nonusers to meet DSM-IV criteria for alcohol abuse or dependence (26 percent versus 5 percent); that is, one in four current marijuana users is a problem drinker (calculated using 2012 NSDUH data using the SAMHSA online tool). Indeed, simultaneous use is common. The national household survey asks people what, if any, other substances they used the last time they drank alcohol. Among the 15.4 million people who used both alcohol and marijuana at some time in the past 30 days, 54 percent reported using marijuana along with alcohol the last time they drank, a proportion that rises to 83 percent among daily or near-daily marijuana users.”); ROBERT L. DUPONT, INST. FOR BEHAV. & HEALTH, IMPLEMENT EFFECTIVE MARIJUANA DUID LAWS TO IMPROVE HIGHWAY SAFETY (Oct. 12, 2016); Johannes G. Ramaekers, *Driving Under the Influence of Cannabis: An Increasing Public Health Concern*, 319 JAMA 1433 (2018); *see generally* Larkin, *Drugged Driving*, *supra* note 28, at 478–79 & nn.104–07. The number of THC and ethanol users noted in those studies is likely low because the police often do not drug test a driver arrested for DUI, since testing is costly and a positive test result would not increase the punishment. *See, e.g.*, ROCKY MTN. HIDTA 2019 REPORT, *supra*.

¹⁵⁰ *See, e.g.*, BRITISH MED. ASS'N, CANNABIS, *supra* note 145, at 73 (noting the “additive effect” when marijuana and alcohol are combined); IVERSEN, *supra* note 100, at 96 (“It may be that the greatest risk of marijuana in this context is to amplify the impairment caused by alcohol when, as often happens, both drugs are taken together[.]”); R. Andrew Sewell et al., *The Effect of Cannabis Compared with Alcohol on Driving*, 18 AM. J. ADDICTION 185 (2009); *see generally* Larkin, *Drugged Driving*, *supra* note 28, at 478–80 & nn.105–08 (collecting authorities).

¹⁵¹ *See, e.g.*, Stanford Chihuri et al., *Interaction of Marijuana and Alcohol on Fatal Motor Vehicle Crash Risk: A Case-Control Study*, 4 INJURY EPIDEMIOLOGY 8 (2017); Guohua Li et al., *Role of Alcohol and Marijuana Use in the Initiation of Fatal Two-Vehicle Crashes*, 27 ANNALS OF EPIDEMIOLOGY 342 (2017). *But see* Julian Santaella-Tenorio et al., *US Traffic Fatalities, 1985-2014, and Their Relationship to Medical Marijuana Laws*, 107 AM. J. PUB. HEALTH 336 (2017) (finding a decrease in traffic fatalities in states with medical marijuana programs).

¹⁵² *See, e.g.*, ROCKY MTN. HIDTA 2019 REPORT, *supra* note 149, at 5–17; COLO. DEP'T OF PUBLIC SAFETY, DIV. OF CRIM. JUST., OFF. OF RESEARCH & STATISTICS, IMPACTS OF MARIJUANA

demonstrates a thirty-one percent increase in the number of traffic deaths (from 481 in 2013 to 632 in 2018), and a 109 percent increase in the number of traffic deaths involving drivers who tested positive for marijuana (from fifty-five in 2013 to 115 in 2018).¹⁵³ The 2018 number represents roughly one person killed every three days.¹⁵⁴ That result might be because a considerable number of Coloradans see

LEGALIZATION IN COLO.: A REPORT PURSUANT TO SENATE BILL 13-283 (Oct. 2018); GOG EK, *supra* note 1, at 117; DuPont, *supra* note 74, at 189.

¹⁵³ ROCKY MTN. HIDTA 2019 REPORT, *supra* note 149, at 5; *see also, e.g.*, DuPont, *supra* note 145, at 183–84; Julian Santaella-Tenorio et al., *Association of Recreational Cannabis Laws in Colorado and Washington State With Changes in Traffic Fatalities, 2005-2017*, JAMA INTERNAL MED. (June 22, 2020), <https://jamanetwork.com/journals/jamainternalmedicine/article-abstract/2767647> (finding an increase in marijuana-related traffic fatalities in Colorado but not Washington State). To be sure, other studies have concluded that legalization has not increased the number of crashes. *See, e.g.*, Jayson D. Aydelotte, et al., *Crash Fatality Rates after Recreational Marijuana Legalization in Washington and Colorado*, 107 AM. J. PUB. HEALTH 1329 (2017); Eric L. Sevigny, *The Effects of Medical Marijuana Laws on Cannabis-Involved Driving*, 118 ACCIDENT ANALYSIS & PREVENTION 57 (2018). That difference might be due to a nationwide drop in roadway fatalities due to fewer miles being driven during the pre-COVID-19 Great Recession. *See* Rosekind et al., *supra* note 144, at E1 (“As pointed out by Santaella-Tenorio et al., prior research regarding the effects of recreational cannabis laws on traffic fatalities has been inconsistent. This is likely due, at least in part, to methodologic differences and variations in control for confounding variables. The period of time when these states enacted recreational cannabis laws was particularly challenging because of the extraordinary changes in the number of traffic deaths associated with the Great Recession. During the study periods for the Santaella-Tenorio et al. and Kamer et al. research (2005-2017), the number of traffic deaths nationwide dropped by more than 25%, and fatality counts in the 4 states under investigation had fluctuations between 18% and 30%.”).

¹⁵⁴ ROCKY MTN. HIDTA 2019 REPORT, *supra* note 149, at 5.

nothing wrong with driving shortly after consuming THC,¹⁵⁵ which reflects a rather cavalier attitude toward public safety.¹⁵⁶

Washington State also legalized the recreational use of cannabis in 2012, and the data involving the THC-positive drivers involved in a fatal crash is quite troubling. A recent study by the American Automobile Association Foundation for Traffic Safety found that twenty-one percent of all drivers involved in a fatal crash in 2017 tested positive for THC.¹⁵⁷ In addition, the proportion of drivers involved in a fatal crash who tested positive for THC is twice what that number was before the state legalized recreational-use marijuana.¹⁵⁸ To be sure, the study noted, correctly, that the presence of a detectable amount of THC in a driver's blood does not prove that he was under its influence at the time of the crash.¹⁵⁹ Nonetheless, the psychotropic effect of THC on a driver and the 100 percent increase in fatal-crash-involved drivers a reasonable inference that the state's 2012 has contributed to the increase in roadway deaths.

This is an urgent public health problem.¹⁶⁰ The federal agencies concerned with roadway safety—such as the National Highway Traffic Safety Administration and

¹⁵⁵ A recent Colorado Department of Transportation report confirms that attitude among many Colorado drivers. See COLO. DEP'T OF TRANSP., FY 2020 REPORT, THE CANNABIS CONVERSATION 5 (2020), https://www.codot.gov/safety/alcohol-and-impaired-driving/druggeddriving/assets/2020/cannabis-conversation-report_april-2020.pdf (“People who consume cannabis more often consider driving under the influence of marijuana to be less dangerous Many daily users considered driving under the influence of cannabis to be safe, and some even told us they drove better after using cannabis because they were calmer. Yet others were very cautious and took extra precautions when driving after using cannabis.”). In 2018, eighty-three drivers tested positive for THC in their blood—and therefore in their brain—rather than for a non-psychoactive marijuana ingredient. *Id.* at 9. That finding indicates that the driver used marijuana only hours before getting behind the wheel. See Paul J. Larkin, Jr., *The Problem of “Driving While Stoned” Demands an Aggressive Public Policy Response*, 11 J. DRUG POL'Y ANALYSIS 1, 4 (2018) [hereinafter Larkin, “*Driving While Stoned*”] (“An anonymous November 2017 Colorado Department of Transportation survey concluded that 69 percent of respondents admitted to driving while ‘high’ from marijuana within the prior year, 55 percent said that driving under the influence of marijuana was safe, and 55 percent of that group said that they had driven while high an average of 12 times in the prior 30 days.”) (footnote omitted); see also DuPont, *supra* note 145, at 190–91.

¹⁵⁶ Larkin, “*Driving While Stoned*,” *supra* note 155, at 4 (“The one word that best describes those results is ‘scary.’”).

¹⁵⁷ See B.C. TEFFT & L.S. ARNOLD, CANNABIS USE AMONG DRIVERS IN FATAL CRASHES IN WASHINGTON STATE BEFORE AND AFTER LEGALIZATION, AM. AUTO. ASS'N, FOUND. FOR TRAFFIC SAFETY, RESEARCH BRIEF (2020).

¹⁵⁸ *Id.*

¹⁵⁹ *Id.* at 3.

¹⁶⁰ See Russell S. Kamer et al., *Change in Traffic Fatality Rates in the First 4 States to Legalize Recreational Marijuana*, JAMA INTERNAL MED. E1-E2 (June 22, 2020), <https://jamanetwork.com/journals/jamainternalmedicine/article-abstract/2767643> (“[L]egalization of recreational marijuana is associated with increased traffic fatality rates. Applying these results to

the National Transportation Safety Board—agree.¹⁶¹ So, too, does the White House Office of National Drug Control Policy. In 2010, it concluded that drugged driving poses as great a threat to roadway safety as alcohol-impaired driving and demands an “equivalent” response from the government and society.¹⁶² There is a consensus that drugged driving is a matter of national concern and that the state legalization measures will only worsen that problem.

Any effort to remedy that problem has two hurdles to overcome that, so far, have been insurmountable. A large body of data establishes that a blood-alcohol concentration of 0.08 grams per deciliter impairs a driver’s ability to drive safely, and there are reliable, easily administered, non-invasive roadside testing devices that can measure that amount, such as Breathalyzers.¹⁶³ Unfortunately, we do not and cannot know what concentration of THC in the blood (and therefore in the brain) renders someone incapable of driving safely because (for example) people develop a tolerance to THC, requiring a greater amount of THC to achieve the same psychoactive effect.¹⁶⁴ Even if we knew what that amount is, we do not have an accurate, easily administrable roadside testing device.¹⁶⁵ Nonetheless, there are

national driving statistics, nationwide legalization would be associated with 6800 (95% CI, 4200-9700) excess roadway deaths each year.”).

¹⁶¹ See, e.g., NAT’L HIGHWAY TRAFFIC SAFETY ADM’N, U.S. DEP’T OF TRANSP., DRUG-IMPAIRED DRIVING, <https://www.nhtsa.gov/risky-driving/drug-impaired-driving> (last accessed June 22, 2020); NAT’L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEP’T OF TRANSP., DOT HS 808 939, MARIJUANA, ALCOHOL AND ACTUAL DRIVING PERFORMANCE 4–15 (1999); Heidi King, Deputy Dir., Nat’l Highway Safety Admin., *DUID: A Vision for the Future* (Feb. 27, 2018), <https://www.nhtsa.gov/speeches-presentations/duid-vision-future>; *Planes, Trains, and Automobiles: Operating While Stoned: Hearing Before the Subcomm. on Operations of the H. Comm. on Oversight and Government Reform*, 113th Cong. 9 (2014) (statement of Hon. Christopher Hart, Acting Chairman, National Transportation Safety Bd.); *id.* at 24–25 (statement of Jeffrey P. Michael, Assoc. Adm’r of Research & Program Development, National Highway Traffic Safety Admin. (NHTSA), U.S. Dep’t of Transp.); *id.* at 42 (statement of Patrice M. Kelly, Acting Dir., Office of Drug & Alcohol Policy and Compliance, U.S. Dep’t of Transp.); *id.* at 43 (statement of Ronald Flegel, Dir., Division of Workplace Programs, Center for Substance Abuse Prevention, Substance Abuse & Mental Health Services Admin., U.S. Dep’t of Health & Human Servs.).

¹⁶² OFFICE OF NAT’L DRUG CONTROL, NATIONAL DRUG CONTROL STRATEGY 2010, at 23 (2010) [hereinafter ONDCP 2010].

¹⁶³ See, e.g., HERB MOSKOWITZ & CHRISTOPHER D. ROBINSON, EFFECTS OF LOW DOSES OF ALCOHOL ON DRIVING RELATED SKILLS: A REVIEW OF THE EVIDENCE, DOT HS 807 280 (July 1988); MONROE B. SNYDER, NAT’L HIGHWAY TRAFFIC SAFETY ADM’N, DRIVING UNDER THE INFLUENCE: A REPORT TO CONGRESS ON ALCOHOL LIMITS, DOT HS 807 879 (Oct. 1992).

¹⁶⁴ Larkin, *Drugged Driving*, *supra* note 28, at 485–87.

¹⁶⁵ Larkin, “*Driving While Stoned*”, *supra* note 155, at 2–3; Larkin, *Drugged Driving*, *supra* note 28, at 481–88. There are some in the works, but none has yet reached the same level of acceptance as Breathalyzers.

measures that states and Congress can and should take to address this issue.¹⁶⁶ All that is necessary is the political will to do so.

¹⁶⁶ Some measures are the following:

- Test every driver involved in a crash that results in a fatality or a serious injury (including injury to pedestrians) for alcohol and impairing drugs, including marijuana, a panel of opioids, and prescription drugs.
- Test every driver involved in a crash involving a fatality or serious injury for marijuana in every state with medical or recreational marijuana laws.
- Test every driver arrested for driving while impaired for both alcohol and impairing drugs, including marijuana.
- Apply to every driver under age twenty-one who tests positive for any illicit or impairing drug, including marijuana and impairing prescription drugs, the same zero-tolerance standard specified for alcohol, the use of which in this age group is illegal.
- Apply to every driver found to have been impaired by drugs, including marijuana, the same remedies and penalties that are specified for alcohol-impaired drivers, including administrative or judicial license revocation.
- Require federal, state, and local law enforcement officers to use reliable oral fluid testing technology at the roadside for every driver arrested for impaired driving.
- Authorize the creation of a national database similar to the National Crime Information Center that collects the information for DWI program and policy decisions and that is accessible by state and local law enforcement officers.
- Require states to collect/collate/publish alcohol/drug/polydrug data.
- Require every state with medical or recreational marijuana laws to collect data on all crashes in which marijuana is suspected to have contributed to the crash and report that data to NHTSA.
- Require every state to inform all people applying for a driver's license and renewing a past license of all prescription drugs that can impair driving, as well as all illicit drugs.
- Implement 24/7 Sobriety Programs in every area subject to federal jurisdiction.
- Require that DWI recordkeeping separately classify alcohol, drugs, and polydrug use.
- Lower the Blood-Alcohol Content Threshold from 0.08 g/dL to 0.05 (or lower) in every state that has authorized marijuana to be used for medical or recreational purposes.
- Have the relevant federal agencies—e.g., ONDCP, NHTSA, the National Institute on Drug Abuse, SAMHSA, and the Centers for Disease Control and Prevention—do the following: (1) identify each category of drug-impaired driving information that should be collected by the federal government, states, and localities; (2) identify each category of research that should be conducted collected by the federal government, states, and localities; and (3) define national standards regarding who should be tested in the case of a motor vehicle crash (e.g., fatally or seriously injured drivers, every driver) under what conditions testing should be done (e.g., fatality, serious injury, drunk driving arrest, suspicion of driving while impaired by drugs or alcohol), what should be measured (e.g., which drugs and metabolites), and how testing should be done.

Larkin, “*Driving While Stoned*”, *supra* note 155, at 4; Larkin, Jr., DuPont & Madras, *supra* note 140, at 4–5. For other options, see ONDCP 2010, *supra* note 162, at 24; GOVERNORS HIGHWAY SAFETY ASS'N, DRUG-IMPAIRED DRIVING: A GUIDE FOR STATES (Apr. 2017); ED WOOD, WEAKEST IN THE NATION 90–96 (2018).

* * * * *

Here is the bottom line: The combination of marijuana and motor vehicles can only lead to trouble. Legalizing recreational marijuana use will increase the number of roadway crashes, serious injuries, and deaths. Numerous government agencies, as well as private organizations and parties have expressed that concern.¹⁶⁷ Whether Congress continues to nibble around the edges of reconsidering the CSA or decides to “go big or go home,” Congress must consider that consequence as part of any re-evaluation of marijuana regulation. Lives are at stake. As I have explained elsewhere:

Like the debate over marijuana legalization, the challenge to the constitutionality and morality of capital punishment has been the subject of vigorous dispute for the last several decades. One of the most common and powerful arguments advanced against the death penalty is that the criminal justice system is so riddled with flaws that there is an unacceptable risk that an innocent person will be executed. In any event, the argument goes, the difference between who lives and dies is entirely arbitrary.

Ironically, the adoption of medical and recreational marijuana schemes poses the same risk of killing the innocent. Yet, we do not see any discussion of this cost of reform of the nation’s marijuana laws, let alone any outcry against liberalization that it will cost innocent lives. It is time that we should.

There should be little doubt that the existence of medical and recreational marijuana schemes increases the risk of highway morbidity and mortality. Logic

¹⁶⁷ Numerous government agencies, as well as private organizations and parties have expressed that concern. *See, e.g.*, SAMHSA, MARIJUANA RISKS *supra* note 120; BRIAN C. TEFFT ET AL., AAA, FOUND. FOR TRAFFIC SAFETY, PREVALENCE OF MARIJUANA INVOLVEMENT IN FATAL CRASHES: WASHINGTON, 2010-2014 (2016); AAA, FOUND. FOR TRAFFIC SAFETY, CANNABIS USE AMONG DRIVERS SUSPECTED OF DRIVING UNDER THE INFLUENCE OR INVOLVED IN COLLISIONS: ANALYSIS OF WASHINGTON STATE PATROL DATA (2016); NIDA, MARIJUANA, *supra* note 85, at 11 (“THC also disrupts functioning of the cerebellum and basal ganglia, brain areas that regulate balance, posture, coordination, and reaction time. This is the reason people who have used marijuana may not be able to drive safely.”); Letter from Director Nora D. Volkow, in NIDA, MARIJUANA, *supra* note 85, at 3 (“Because marijuana impairs short-term memory and judgment and distorts perception it can . . . make it dangerous to drive.”); U.S. DEP’T OF HEALTH & HUMAN SERVS., NAT’L INST. ON DRUG ABUSE, DRUGFACTS: DRUGGED DRIVING 2 (2014) (“Considerable evidence from both real and simulated driving studies indicates that marijuana can negatively affect a driver’s attentiveness, perception of time and speed, and ability to draw on information obtained from past experiences.”); WORLD HEALTH ORG., *supra* note 25, at 15; GOGEK, *supra* note 1, at 187 (“Marijuana does not kill by overdose, but it is deadly behind the wheel.”); ROOM ET AL., *supra* note 25, at 18–19 (“Better-controlled epidemiological studies have recently supplied credible evidence that cannabis users who drive while intoxicated are at increased risk of motor vehicle crashes[.]”); D. Mark Anderson et al., *Medical Marijuana Laws, Traffic Fatalities, and Alcohol Consumption*, 56 J. OF L. & ECON. 333 (2013); Ed Wood, *Skydiving without a Parachute*, 4 J. ADDICTION MED. & THERAPY 1020 (2016); *see generally* Larkin, *Drugged Driving*, *supra* note 28, at 476–77 (collecting studies). *But see* NHTSA, DRUG AND ALCOHOL CRASH RISK: A CASE-CONTROL STUDY, REPORT NO. DOT HS 812-355, 67 (2016) (finding no significant increase in crash risk attributable to marijuana in one study of drivers in Virginia).

compels that conclusion. Eliminating criminal penalties for marijuana possession and use will entice some new number of people to use marijuana who avoided it because it had been a crime. Some number of those people will drive after becoming impaired. In turn, some number of those people will contribute to an accident, perhaps one involving a fatality. It certainly is the case that a legislature could decide that marijuana liberalization will lead to an increase in marijuana use and therefore decide to allocate any burden on the party—the marijuana user—who increases the risk of morbidity and mortality to deter people from using marijuana and driving.

* * * * *

The result is this: adoption of medical and recreational marijuana initiatives poses the risk of killing entirely innocent parties, whether they are other motorists, passengers, or pedestrians, in a purely random manner. Those people are no less innocent, and no less dead, than the hypothetical individual who is wrongfully convicted of a capital crime and executed. That omission deserves especial blame in the case of increased *recreational* use of marijuana. Whatever benefit marijuana may offer the people who smoke it, it cannot save lives. It can, however, take them.¹⁶⁸

IV. THE EFFECT OF RECONSIDERING FEDERAL MARIJUANA REGULATION

Congress could intervene with a new federal regulatory program, but it cannot wait forever to do so. We are approaching the point at which the momentum toward leaving the issue to the states might become too overwhelming to stop it and change course in favor of a stricter federal regulatory plan.¹⁶⁹ Moreover, “the larger the state-legal cannabis markets become, the greater the political power of cannabis vendors.”¹⁷⁰ They, along with would-be distributors, will fight any effort to keep them from becoming rich.

Nonetheless, the gravitational force that draws politicians toward the option of kicking down the road difficult choices that could make enemies today—as well as the fact that the two major political parties cannot even agree on what day today is—leaves me pessimistic that we will see Congress reconsider the CSA any time soon.

¹⁶⁸ Larkin, “*Driving While Stoned*”, *supra* note 155, at 5 (emphasis in original). I realize that legislators regularly make decisions with life-or-death consequences. My point is that the decision to legalize marijuana for recreational use fits into that category, not that it is unique.

¹⁶⁹ “The window of opportunity for such policies [other than unrestricted commercialization] will not remain open for many more years.” Kleiman, *Marijuana and Public Health*, *supra* note 23, at 83.

¹⁷⁰ *Id.*; see also, e.g., Larkin, *Gummy Bears*, *supra* note 22, at 355–56 & nn.99–100 (collecting estimates that large-scale commercialized marijuana would earn industry participants billions in revenue); Kelly Beaucar Vlahos, *Cannabis Goes Corporate*, AM. CONSERVATIVE (Apr. 15, 2014, 12:05 AM), <https://www.theamericanconservative.com/articles/fear-the-rise-of-big-pot/> (describing legalization as “the country’s 21st century gold rush”).

Instead, Congress will enact a series of small-scale reforms that do not separately or collectively rejigger the CSA in a dramatic manner, but that over time make it clear which way the law is moving.

Why? Legislation involves making choices, which generates friends and enemies, and making compromises, which generates winners and losers. Today, however, enemies and losers treat the people responsible for their predicament (figuratively at least) in much the same way that Herodias and King Herod treated John the Baptist.¹⁷¹ Few elected officials volunteer for that role. The CSA therefore might celebrate at least a few more birthdays.

Which brings up this question: Is that a good or bad outcome? I am not sure that I can answer that question, certainly not across the board. Yet, I can say this. Legalization is not necessary to make marijuana available; ask any DEA agent.¹⁷² Legalization would put marijuana in the same category as tobacco and alcohol—“disfavored” products, according to Professor Richard Epstein,¹⁷³ or “temptation goods,” in the words of Professor Caulkins¹⁷⁴—that we regulate rather than ban because we are not willing to endure the enforcement costs of outlawing their sale.

That concession to reality, however, comes at a price. Legalization will lead to commercialization and all of the collateral consequences that follow. For example, in theory, Congress should be able to allow parties to sell cannabis only if they do not advertise its availability. Congress prohibited the advertising of cigarettes over radio and television in 1971,¹⁷⁵ and the Supreme Court upheld that law over a Free Speech Clause challenge.¹⁷⁶ Moreover, a law that permits an activity traditionally deemed a “vice” to be undertaken as long as its purveyors do not advertise would be a classic case for application of the argument that the greater power to ban a product altogether includes the lesser power to prohibit only advertising it.¹⁷⁷ Unfortunately,

¹⁷¹ *Mark* 6:14-29 (King James).

¹⁷² See 2019 DRUG ENFORCEMENT ADMIN., NATIONAL DRUG THREAT ASSESSMENT 77 (Dec. 2019) (“As the most commonly used illicit drug . . . marijuana is widely available and cultivated in all 50 states.”).

¹⁷³ Richard A. Epstein, *Unconstitutional Conditions, State Power, and the Limits of Consent*, 102 HARV. L. REV. 4, 65–66 (1988).

¹⁷⁴ See Caulkins, *Marijuana Dangers*, *supra* note 23, at 33.

¹⁷⁵ The Public Health Cigarette Smoking Act, 15 U.S.C. § 1335 (2019).

¹⁷⁶ *Capital Broadcasting Co. v. Mitchell*, 333 F. Supp. 582 (D.C.C. 1971), *summarily aff’d sub nom.* *Capital Broadcasting Co. v. Kleindienst*, 405 U.S. 1000 (1972).

¹⁷⁷ See *Posadas de Puerto Rico Assocs. v. Tourism Co.*, 478 U.S. 328, 346 (1986) (“In our view, the greater power to completely ban casino gambling necessarily includes the lesser power to ban advertising of casino gambling”); Epstein, *supra* note 173, at 65–66. Professor Epstein argued that a strategy of allowing a “disfavored” product, like cigarettes, to be sold but not advertised should receive deference from the courts. *Id.* at 65. “Surely if the issue were the legalization of marijuana and other drugs, a respectable argument could be made to allow their sale, subject to a general tax and to

we might not have that option available if Congress allows private parties to be distributors, given the Supreme Court's unwillingness to endorse a "greater includes the lesser" theory in connection with the advertising of products or services we once categorized as "vices."¹⁷⁸ That option would be available to Congress, however, if it required states to own each component of the vertically integrated cultivation, processing, and distribution processes, or at least the last one, rather than allow private parties to do so, as it now happens in states that have legalized recreational marijuana use.¹⁷⁹ The reason is that Congress has the authority to forbid marijuana distribution altogether,¹⁸⁰ and states *qua* states do not possess First Amendment rights,¹⁸¹ so Congress can condition its approval on a state's agreement not to advertise.¹⁸² That fact alone strongly militates in favor of a state ownership plan.

A state-run system has several additional advantages over a for-profit or not-for-profit system. State ownership of distribution stores would make it easier for a state to monitor marijuana sales (and employees) to prevent unauthorized distribution to minors and to the black market. State ownership would help avoid the problems that arise whenever the law permits only one particular business form—such as not-for-profit concerns—to participate in an activity, even though the members of the industry prefer other forms—such as for-profit concerns. Corporation law is largely within the bailiwick of the states to devise,¹⁸³ and there is a risk that particular states might bend their own laws to encourage or enable parties to obscure the true ownership of a not-for-profit enterprise. That risk might be slight,

prohibitions or restrictions on advertising, which, because of advertising's public visibility, should be reasonably easy to enforce." *Id.* at 65–66.

¹⁷⁸ See, e.g., *Greater New Orleans Broadcasting Ass'n, Inc. v. United States*, 527 U.S. 173, 182–83 (1999); *44 Liquormart, Inc. v. Rhode Island*, 517 U.S. 484, 512 & n.20 (1996); and *Rubin v. Coors Brewing Co.*, 514 U.S. 476, 482 n.2 (1995) (all rejecting a "greater-includes-the-lesser" argument for commercial speech cases based on *Posadas* in favor of a multi-factor analysis adopted in *Central Hudson Gas & Elec. Corp v. Pub. Serv. Comm'n of N.Y.*, 447 U.S. 557, 566 (1980)).

¹⁷⁹ See *Unlocked Potential?: Small Businesses in the Cannabis Industry, Hearing Before the House Small Business Committee*, 116th Cong. (2019) (statement of Paul J. Larkin, Jr., recommending state ownership).

¹⁸⁰ See *supra* at text accompanying note 7.

¹⁸¹ Cf. *South Carolina v. Katzenbach*, 383 U.S. 301, 323–24 (1966) ("The word 'person' in the context of the Due Process Clause of the Fifth Amendment cannot, by any reasonable mode of interpretation, be expanded to encompass the States of the Union, and to our knowledge this has never been done by any court.").

¹⁸² The "greater includes the lesser" rationale of *Posadas* should be viable in at least that setting.

¹⁸³ See, e.g., *Rodriguez v. FDIC*, 140 S. Ct. 713, 718 (2020) ("Corporations are generally creatures of state law and state law is well equipped to handle disputes involving corporate property rights.") (citation and internal punctuation omitted); *O'Melveny & Myers v. FDIC*, 512 U.S. 79, 83–89 (1994).

but there is little or no risk of such legal chicanery if the state itself must own the cannabis distribution business.¹⁸⁴

Regardless, Congress's ability to keep states from advertising alone justifies a state ownership requirement. Congress also has the authority to adopt such a requirement. Congress appropriates funds for interstate highway construction, and it can place reasonable conditions on the receipt of those funds.¹⁸⁵ In any event, Congress can regulate the interstate and intrastate distribution of cannabis under the Commerce Clause.¹⁸⁶

If Congress were to amend the CSA to permit recreational use of marijuana, the issue whether cannabis should be available for medical use would essentially go away. Anyone who wanted to use it to alleviate discomfort from a malady of some type could purchase it without the need to go through the charade that we have seen states wink at in connection with their medical marijuana programs: a patient pretends to have a serious illness, a physician pretends to offer him a serious recommendation, a dispensary pretends to sell a serious medicament, and the legislature pretends not to know that what is going on. That is a serious example of hypocrisy and confirms the adage that hypocrisy is the tribute that vice pays to virtue.¹⁸⁷ It is also a new version of what has been termed the "Victorian Compromise"—viz., the difference between what the law strictly forbids when defining formal public morality and what the law studiously ignores as acceptable for wholly private conduct.¹⁸⁸ Allowing cannabis to be sold for recreational use would eliminate the need to engage in the pretense that state elected officials have pursued for more than 20 years and that federal elected and appointed officials (the attorneys general and FDA commissioners for the last four presidents have their hands dirty too) have studiously ignored for the same time.

That alone would be a boon to society. At a time when lies rain down daily from elected officials onto the public like a monsoon in full swing, eliminating even a portion of the deceit that is the standard fare in public debate would be refreshing. No longer would elected officials need to hide behind the fig leaf that smokable or

¹⁸⁴ States ownership also might not have the same banking problems that for-profit and not-for-profit business would have with using the national banking system for receipts from the sale of marijuana. Banks that accept deposits from private businesses selling marijuana in violation of the CSA would violate the federal money laundering statutes. *See* 18 U.S.C. §§ 1956 & 1957 (2018). States that have a state-owned and operated treasury might be able to deposit the proceeds into its treasury rather than use the interstate banking system. That might avoid the need for Congress to revise the banking laws to address the problems resulting from the operation of a large-scale cash business. The fewer statutes modified, the lesser the risk of unintended statutory consequences.

¹⁸⁵ *See* *South Dakota v. Dole*, 482 U.S. 203 (1987) (holding that Congress has the Article I authority to condition receipt of a small portion of federal highway funds on the adoption of a minimum drinking age).

¹⁸⁶ *See* *Gonzales v. Raich*, 545 U.S. 1 (2005).

¹⁸⁷ *See* *Larkin, Drugged Driving*, *supra* note 28, at 511–14 & nn.275, 279 & 282–83.

¹⁸⁸ *Id.* at 510.

edible cannabis is “Good for what ails you!” as a disguise for doing what the supporters of the original California Compassionate Use Act really wanted: legalization of marijuana for recreational use.¹⁸⁹ Of course, that honesty might last no longer than a winter sunset, but any little bit helps.

What is more, the FDA would be in a position to act against mountebanks claiming that cannabis possesses magical medicinal properties that it lacks. To be sure, the FDA has issued warning letters to companies that have sold products with constituents of marijuana that have claimed their product can treat diseases such as cancer or Alzheimer’s.¹⁹⁰ The FDA, however, has not aggressively sought to halt the sale of cannabis under the banner of a medical treatment, possibly because the FDA chose not to become a combatant in (and therefore a casualty of) the “Marijuana Wars.”¹⁹¹ Yet, if the FDA’s enforcement of the food¹⁹² and drug laws would not prevent someone from obtaining marijuana as part of a recreational marijuana program, perhaps the agency would be less reluctant to use its authority to prevent fraudulent medical claims by dispensaries and reassert its leadership role in the protection of the public against snake oil salesmen. At least, it would be worth a shot.¹⁹³

There is an additional, powerful benefit from a renewed, formal FDA declaration, backed up by enforcement actions, that smoking or swallowing the crude, plant form of marijuana has no legitimate therapeutic use. It would tell adolescents that the marijuana industry and states with medical or recreational marijuana programs have flimflammed them for twenty-plus years by claiming that marijuana is not dangerous. Over the last decade, the perception among high school students that marijuana is harmful has steadily declined, which might explain why

¹⁸⁹ See *supra* note 77; Editorial, *Marijuana for the Sick*, N.Y. TIMES (Dec. 30, 1996), <http://www.nytimes.com/1996/12/30/opinion/marijuana-for-the-sick.html> (“Supporters of the California measure did their cause no good by immediately lighting up marijuana cigarettes after it passed last month and proclaiming that a legitimate medicinal use would include smoking a joint to relieve stress. Dennis Peron, originator of the California initiative, said afterward, ‘I believe all marijuana use is medical—except for kids.’ These actions made it obvious that the goal of at least some supporters is to get marijuana legalized outright, a proposition that opinion polls indicate most Americans reject.”).

¹⁹⁰ See Larkin, *Gummy Bears*, *supra* note 22, at 374–77.

¹⁹¹ See *id.* at 349–58.

¹⁹² Marijuana edibles poses separate but also potentially serious problems. See, e.g., Monte et al., *supra* note 124, at 242; see generally Larkin, *Gummy Bears*, *supra* note 22.

¹⁹³ As University of Pennsylvania Medical School Professor David Casarett has argued: “So if medical marijuana is going to be widely legal—and it certainly looks as though that’s the trend—then these clinics and dispensaries are going to have to do much better. They’re profiting off the legalization of medical marijuana as an officially sanctioned ‘drug,’ which is fine. But clinics and dispensaries need to be held to the same standards of quality control and oversight and education to which we hold medical pharmacies and clinics. Medical marijuana is becoming too widespread, and the risks are too great, to leave the patient to fend for herself, and let the buyer beware.” CASARETT, *supra* note 73, at 212–13; see also, e.g., BEARMAN & PETTINATO, *supra* note 73, at 15 (“Dispensaries need to be professional just as pharmacies are today.”).

3,700 adolescents between twelve and seventeen became first-time marijuana users *every day in 2018*.¹⁹⁴ That fact is troubling. Science has concluded that long-term marijuana use starting during adolescence over time creates serious adverse health risks.¹⁹⁵ That is one reason why there is no debate over the issue whether minors should have access to recreational marijuana use, no state allows it, and no advocate for liberalization supports it.

Yet, that is not how adolescents read the subtext of the state liberalization programs. Operating on the presumption that the federal and state governments would not allow anyone to market a quack remedy as a legitimate medicine, what minors have absorbed over the last two decades is the message that marijuana cannot be harmful because the federal and state governments allow businesses to claim that it has therapeutic purposes. That likely is one reason why adolescents do not see marijuana use as being dangerous.¹⁹⁶ Whatever Congress decides to do, Congress needs to dispel that deceit clearly, firmly, and for all time.

There is another lesson that adolescents need to unlearn: It is “normal and acceptable” to lie to get something you want.¹⁹⁷ Adolescents know that marijuana distribution is generally illegal, but they see adults, physicians, and government officials conspire to take advantage of a phony medical marijuana loophole to evade the state penal code while breaking federal law. We normally attribute the “wink-

¹⁹⁴ *Senate Int’l Narcotics Control Hearing* (Statement of Jerome Adams and Nora Volkow), *supra* note 123, at 3.

¹⁹⁵ A 2019 meta-analysis in the *Journal of the American Medical Association—Psychiatry* found that “cannabis consumption in adolescence is associated with increased risk of developing major depression in young adulthood and suicidality, especially suicidal ideation.” Gabriella Gobi et al., *Association of Cannabis Use in Adolescence and Risk of Depression, Anxiety, and Suicidality in Young Adulthood*, 76 JAMA-PSYCHIATRY 426, 431 (2019).

¹⁹⁶ For other reasons, see Caulkins, *Marijuana Dangers*, *supra* note 23, at 22 (internal paragraph omitted):

The drug’s misleading reputation for harmlessness is based largely on two defining patterns of marijuana use. First, most people who try marijuana never use much of it; perhaps only about one-third of those who try it go on to use it even 100 times in their lifetimes, the common threshold for determining whether someone has ever been a cigarette smoker. Trying marijuana is not dangerous, but using it is. Those who use marijuana on an ongoing basis face a much higher likelihood of becoming dependent than lifetime smokers do of developing lung cancer. Marijuana dependence is neither fatal nor as debilitating as alcoholism, but it is real, harmful, and far more common than is generally acknowledged. Second, marijuana use is highly concentrated among the growing minority who use daily or near daily. Adults who use fewer than ten times per month and who suffer no problems with substance abuse or dependence account for less than 5% of consumption. More than half of marijuana is consumed by someone who is under the influence more than half of all their waking hours. Most marijuana users are healthy; most marijuana use is not. In the resulting confusion, advocates of legalization often argue (effectively) that “Marijuana is safer than alcohol.” It would be far more accurate to say, “Marijuana is safer than alcohol, but it is also more likely to harm its users.”

¹⁹⁷ GOGEK, *supra* note 1, at 119.

wink-nod-nod” that comes with private and public corruption to the immoral behavior of a small number of dishonest individuals and government officials. State medical marijuana schemes, however, built that corruption into the very fabric of our laws. “There might be no better way to teach kids cynicism and distrust.”¹⁹⁸ A world where dishonesty is commonly practiced by members of the public and unofficially blessed by senior officials in our political branches is a world where the difference between being guilty and innocent turns on who gets caught. We should not teach our children that having a “clean” record is a matter of luck, not character.

V. CONCLUSION

Congress passed the CSA at a time when every state prohibited the distribution of marijuana. In 1996, however, legalization advocates persuaded Californians to allow people barely on this side of the River Styx to use marijuana to alleviate their suffering while winking at the reality that the 1996 measure was a thinly veiled effort to legalize recreational marijuana use. Since then, the debate over marijuana legalization has been filled with dishonesty and cowardice. Little has changed except for the birth of state recreational marijuana-use programs, which, if nothing else, at least have the benefit of candidly identifying their purpose. It is long past time for Congress to address the hypocrisy and confusion created by the disparity between federal and state law.

If Congress does, it should make pellucid that the FDA has the prerogative to decide what drugs are safe, effective, and pure. Congress should also emphasize that state laws making any claim to the contrary not only are invalid under the Supremacy Clause, but also offer marijuana distributors the same legal protection against administrative, civil, and criminal enforcement that an empty net gives a hockey team. The FDA then should take up the responsibility it has willfully neglected of protecting the public, especially juveniles and pregnant women, against the beguiling but deceitful claims of anyone who alleges that smoking marijuana is a legitimate therapeutic medicine. Otherwise, those elected and appointed officials will be morally responsible for the physical and psychological harms that marijuana will cause individuals whose use begins during their minority and continues well into their adulthood.

If Congress were to legalize recreational use marijuana, Congress should address the inevitable harmful sequelae of that decision. One of them would be an increase in roadway crashes, injuries, and fatalities caused by a larger number of people who use marijuana and drive. For decades now, the nation has sought to lower the carnage caused by people who drink and drive. Public and private efforts to stop that conduct have successfully driven down the number of alcohol-caused crashes. Legalizing marijuana for recreational use will lead to an about-face in that effort. There will be an increase in marijuana use, some users will get behind the

¹⁹⁸ *Id.* at 120.

wheel, and some drivers who are “one toke over the line” will cause a crash that injures or kills innocent drivers, passengers, or pedestrians. Legalizing marijuana use without also addressing that problem would be as irresponsible as ignoring the federal-state disparity in marijuana regulation. Congress should reconsider federal marijuana regulation, but it should do it responsibly.