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IT IS TIME TO ADMIT DEFEAT IN THE WAR ON DRUGS AND ALLOW ITS VICTIMS TO HEAL

Randall Petronko

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How It's Going

The War on Drugs officially started on June 17, 1971,[1] and it has been a massive failure scientifically, fiscally, and societally. President Richard Nixon declared, "America's public enemy number one in the United States is drug abuse. In order to fight and defeat this enemy, it is necessary to wage a new, all-out offensive."[2] In his address, he requested Congress give him $350 million to fund the War on Drugs, an over 400% increase in the federal drug budget from two years earlier.[3] When President Nixon created the Drug Enforcement Administration ("DEA") in 1973 it had a budget of less than $75 million and around 1,500 agents. Today those numbers have increased to a budget of over $2 billion and over 5,000 agents.[4] The War on Drugs has been going on for fifty-three years and has cost $1 trillion, $39 billion of that in 2022.[5] Despite the massive number of resources devoted, drugs are the clear winner. In 2021, the Government Accountability Office ("GAO") added the war, which they designated "National Efforts to Prevent, Respond to, and

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[1] Benjamin T. Smith, *New Documents Reveal the Bloody Origins of America's Long War on Drugs*, TIME (Aug. 24, 2021 at 12:49 PM), https://time.com/6090016/us-war-on-drugs-origins/.

[2] President Richard Nixon, White House Briefing: Remarks About an Intensified Program for Drug Abuse Prevention and Control (Jun. 17, 1971), *in* THE AM. PRES. PROJECT https://www.presidency.ucsb.edu/documents/remarks-about-intensified-program-for-drug-abuse-prevention-and-control.

[3] David Farber, *The War on Drugs Turns 50 Today. It's Time to Make Peace.*, WASH. POST (June 17, 2021), https://www.washingtonpost.com/outlook/2021/06/17/war-drugs-turns-50-today-its-time-make-peace/.

[4] *War on Drugs*, HIST., https://www.history.com/topics/crime/the-war-on-drugs (last updated Dec. 17, 2019).

[5] Dante Chinni, *Costs in the War on Drugs Continue to Soar*, NBC NEWS (July 2, 2023), https://www.nbcnews.com/meet-the-press/data-download/costs-war-drugs-continue-soar-rcna92032.

Recover from Drug Misuse" to their High-Risk list.[6] The GAO has maintained the list since the 1990s to focus "attention on government operations with greater vulnerabilities to fraud, waste, abuse, and mismanagement, or that are in need of transformation to address economy, efficiency, or effectiveness challenges."[7] In short, the GAO's High-Risk list highlights government programs that are systematically failing. Many factors are used and investigated prior to being added to this list, "We consider qualitative factors . . . public health . . . national security, national defense . . . citizens' rights . . . injury or loss of life; or significantly reduced economy, efficiency, or effectiveness."[8] Additionally, that analysis only occurs if there is $1 billion at risk from the program. The 2021 report notes, "National rates of drug misuse have been increasing, and drug misuse has resulted in significant loss of life and harmful effects to society and the economy."[9] If the war had a positive impact, at least one of those metrics would be decreasing. In fact, the argument can be made that the war has done more harm to the United States than good. Despite increasing efforts fighting the War, there was a 163% increase in drug overdose deaths between 2002-2019.[10] The 2023 GAO report notes that none of the five criteria for removal from the High-Risk list were met; three were partially met and two were not met at all.[11]

"Every 25 seconds, someone in America is arrested for drug possession. The number of Americans arrested for possession has tripled since 1980, reaching 1.3 million arrests per year in 2015."[12] Between 1995-2016, 77% of drug arrests

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[6] U.S. GOV'T ACCOUNTABILITY OFF., GAO-21-119SP, HIGH-RISK SERIES: DEDICATED LEADERSHIP NEEDED TO ADDRESS LIMITED PROGRESS IN MOST HIGH-RISK AREAS, (2021).
[7] *Id.*
[8] *Id.*
[9] *Id.*
[10] *Id.*
[11] U.S. GOV'T ACCOUNTABILITY OFF., GAO-23-106203, HIGH-RISK SERIES: EFFORTS MADE TO ACHIEVE PROGRESS NEED TO BE MAINTAINED AND EXPANDED TO FULLY ADDRESS ALL AREAS (2023).
[12] Betsy Pearl, *Ending the War on Drugs: By the Numbers*, CTR. FOR AM. PROGRESS (June 27,

were for possession.[13] On any given day there are 361,000 incarcerated persons serving sentences for drug offenses, making up 20% of the entire incarcerated population. Of that 20%, there are six times more people serving sentences for possession than for sales.[14] Almost 1 million people are on probation or parole for drug related offenses.[15] "The majority of people (61%) arrested 3 or more times reported having a substance use disorder. Over a quarter (27%) had a serious or moderate mental illness."[16] Despite this, only a fraction of jails provide treatment for substance abuse or mental health problems. Even worse is that incarceration frequently causes a person to be cut off from treatment and medications, putting them into withdrawal in a setting that is ill equipped to handle their medical needs.[17] "Between 2000 and 2018, the number of people who died of intoxication while in jail increased by almost 400%; typically these individuals died within just one day of admission."[18]

It isn't just drug treatment that is stopped, it can take days, if at all, for all medications and treatments to be restarted. Additionally, incarceration actually leads to increased deaths from overdose. Studies have shown that in "the first two weeks after their release from prison, individuals are almost 13 times

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2018), https://www.americanprogress.org/article/ending-war-drugs-numbers/.

[13] FBI, Crime Data Explorer, https://cde.ucr.cjis.gov/LATEST/webapp/#/pages/explorer/crime/arrest (last visited Feb. 26, 2024).

[14] Press Release, Wendy Sawyer & Peter Wagner, *Mass Incarceration: The Whole Pie 2024*, PRISON POL'Y INITIATIVE, (Mar. 14, 2024) (on file with author).

[15] *Probation and Parole in the United States, 2022*, U.S. DEP'T. OF JUST., at 6, https://bjs.ojp.gov/document/ppus22.pdf (last visited Jun. 8, 2025).

[16] Press Release, Alexi Jones & Wendy Sawyer, *Arrest, Release, Repeat: How Police and Jails are Misused to Respond to Social Problems*, PRISON POL'Y INITIATIVE (Aug. 2019), https://www.prisonpolicy.org/reports/repeatarrests.html.

[17] Sawyer & Wagner, *supra* note 13, at 18.

[18] *Id.*

more likely to die"[19] from overdose. Sadly, research has shown that the underlying issues, not violence, are what led to the police contact, and that "jails have become 'the de facto mental health care system in many communities,' and that police are often used to respond to medical and mental health problems, not to matters of public safety."[20]

It costs on average over $42,672 per year, per person, to keep someone incarcerated. In New York that number jumps to over $150,000.[21] The costs aren't always directly associated with agency budgets. Incarceration impacts entire communities by affecting a person's ability to reintegrate back into society and contribute to their community.[22] "The cumulative emotional stress resulting from high incarceration rates in a community may generate feedback loops of its own—perhaps by inducing substance abuse and other behaviors associated with depression and anxiety, and in turn predicting further incarceration."[23] The children of incarcerated parents are six times more likely to be incarcerated in their own lifetimes than other children.[24] Additionally, families are usually the ones

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[19] Pearl, *supra* note 12, at 2.
[20] Jones & Sawyer, *supra* note 16, at 5.
[21] Annual Determination of Average Cost of Incarceration Fee (COIF), 88 Fed. Reg. 65405 (Sept. 22, 2023); Steve Rempe, *The Cost(s) of Incarceration*, PRISON FELLOWSHIP, https://www.prisonfellowship.org/2013/10/the-costs-of-incarceration/ (last visited Apr. 3, 2024) ("[T]he annual cost per inmate in state-run facilities for the year 2012 was an amazing $167,731.").
[22] Laura Bane, *Our Mission*, REMEDY PROJECT ACTION, https://action.theremedyproj.org/our_mission (last visited Apr. 3, 2024) ("The long-lasting psychological and physical damage that incarceration wreaks actually reduces the chance of success or healing and increases the chance of recidivism . . . causing them to struggle to maintain or develop relationships, find housing and employment . . . their family and friends suffer from feelings of loss and abandonment . . . incarcerated people's children experience higher likelihoods of being incarcerated themselves.").
[23] Emily von Hoffmann, *How Incarceration Infects a Community*, ATL. (Mar. 6, 2015), https://www.theatlantic.com/health/archive/2015/03/how-incarceration-infects-a-community/385967/.
[24] Eric Martin, *Hidden Consequences: The Impact of Incarceration on Dependent Children*, NAT'L INST. OF

paying fines or other penalties, and it's estimated that these families spend, "$2.9 billion a year on commissary accounts and phone calls."[25] This is money that could be used to support the rest of their family, or put back into the community. Conversely, the average cost of a drug rehabilitation program is about $5,000,[26] and gives patients the opportunity to address the root issues behind their drug use. Drug courts that utilize substance use treatment and other supportive services have also had great success reducing recidivism. "A national evaluation of drug courts found that participants were 26% less likely to report substance use after completing the program than individuals processed through traditional judicial systems. Drug court participants were also less likely than nonparticipants to report unmet educational, employment, and financial service needs."[27]

History of Prohibition and Criminalization

Although many people likely believe that drug laws were created for health or safety reasons, their true origins are based in economics and racism. The late 1800s and early 1900s saw multiple instances of xenophobia and drug policies intertwined. Marijuana and opiate prevalence was blamed on Chinese immigrants, while cocaine usage was blamed on African Americans.[28] "The Harrison Narcotics Tax Act of 1914 is widely viewed in the scholarly literature as the beginning of the U.S.

JUST., https://nij.ojp.gov/topics/articles/hidden-consequences-impact-incarceration-dependent-children (Apr. 24, 2024).

[25] Beatrix Lockwood & Nicole Lewis, *The Hidden Cost of Incarceration*, MARSHALL PROJECT (Dec. 17, 2019), https://themarshallproject.org/…/the-hidden-cost-of-incarceration?psafe_param=1&gad_source=1….

[26] *Cost Of Rehabilitation Vs Incarceration - Which Is Cheaper*, SANA LAKE RECOVERY CTR., https://sanalake.com/addiction-resources/drug-treatment-vs-incarceration/ (May, 2024).

[27] Pearl, *supra* note 12, at 5.

[28] Kurt L. Schmoke, *An Argument in Favor of Decriminalization*, 18 HOFSTRA L. REV. 501, 507 (1990); Cynthia A. Brown, *Beyond the Money: Expected (and Unexpected) Consequences of America's War on Drugs,* 4 LMU L. REV. 118, 122-28 (2017).

government's war on drugs,"[29] however, it was actually an amendment of the 1909 Opium Exclusion Act. Specifically, it was an amendment that prohibited "the importation and use of opium for other than medicinal purposes."[30] The Act had nothing to do with fighting addiction, it was passed as a part of the United States' obligations under the Hague Convention.[31] It didn't even outlaw opium and its derivatives or cocaine, it merely "required drug manufacturers and sellers to register their activity with the federal government, to keep records of their sales, and to pay taxes on each transaction."[32] The next major regulation of substances, though not narcotics, came in 1919 through the 18th Amendment, prohibiting the manufacture, sale, and transportation of alcohol. Later repealed by the 21st Amendment in 1933, to date, it is the only Amendment ever to be repealed.[33]

In subsequent decades, cannabis would become the next target of federal regulation. Mexican immigration in southwest America is primarily responsible for introducing the United States to recreational use of cannabis.[34] After the Mexican Revolution of 1910, an influx of Mexican migrants entered the U.S., and along with them came horror stories about marijuana use, stoking fears and prejudices about Mexicans.[35] Exacerbated by mass unemployment during the Great Depression, public resentment of Mexicans grew, escalating governmental concern over marijuana. By 1931, twenty-nine states had outlawed the

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[29] Audrey Redford & Benjamin Powell, *Dynamics of Intervention in the War on Drugs: The Buildup to the Harrison Act of 1914*, 20 INDEP. REV. 509, 509 (2016).
[30] U.S. DEP'T OF JUST., OPIUM AND NARCOTIC LAWS, (1981).
[31] Schmoke, *supra* note 28, at 508.
[32] Brown, *supra* note 28, at 130.
[33] *The Constitution: Amendments 11-27*, NAT'L ARCHIVES AND REC. ADMIN., https://www.archives.gov/founding-docs/amendments-11-27 (last visited Apr. 1, 2024).
[34] *Marijuana Timeline*, PBS, https://www.pbs.org/wgbh/pages/frontline/shows/dope/etc/cron.html (last visited Dec. 5, 2023).
[35] *Id.*

drug.[36] Propaganda and scare tactics continued with the 1936 release of the film, *Reefer Madness*. "*Reefer Madness* was an exploitation movie, one of the many films that mined sex, gore, or other tawdry subjects for maximum effect."[37] Federal prohibition came shortly after with the Marihuana Tax Act of 1937. Experts attribute the passing of the act to four men, Harry J. Anslinger of the Federal Bureau of Narcotics, Pierre Samuel du Pont of the DuPont Company, William Randolph Hearst, who owned most of the newspapers of the time, and the John D. Rockefeller of Standard Oil.[38] Hemp was seen as competition to their industries—DuPont's cellophane, rayon, and synthetic nylon, Hearst's paper mills, and Rockefeller's oil—all were threatened by the versatility and cost-effectiveness of hemp-based products.[39] Anslinger used the power of propaganda to stoke people's fears, "arguing that the use of marijuana caused insanity and led to violent crime."[40] To avoid a Constitutional battle, Anslinger used Congress' tax powers to outlaw marijuana. Part of the reason that he was so successful in his campaign was his use of the word, "marijuana," from the Mexican-Spanish word for the plant, playing into the existing resentment of Mexicans.[41] At the time, most people, including members of Congress did not know that cannabis and marijuana were the same thing.[42]

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[36] *Id.*

[37] Kristin Hunt, *Marijuana Panic Won't Die, but Reefer Madness Will Live Forever*, JSTOR DAILY, (Apr. 23, 2020) https://daily.jstor.org/marijuana-panic-wont-die-but-reefer-madness-will-live-forever/.

[38] Dr. David Bearman, *Oil vs. Cannabis: Why Marijuana Became Illegal and Still is Today*, HUFFPOST, https://www.huffpost.com/entry/oil-vs-cannabis-why-marijuana-became-illegal-and_b_592d8b54e4b0a7b7b469cd4d (May 30, 2017 11:50 AM).

[39] *Id.*

[40] Brown, *supra* note 28, at 133.

[41] Matt Thompson, *The Mysterious History of 'Marijuana'*, NPR: CODE SWITCH (July 22, 2013), https://www.npr.org/sections/codeswitch/2013/07/14/201981025/the-mysterious-history-of-marijuana

[42] William C. Shelton, *Medical Cannabis and Beyond*, SOMERVILLE TIMES, (Jan. 4, 2013), https://www.thesomervilletimes.com/archives/33964.

There were skeptics over the claims, notably the American Medical Association ("AMA"),[43] and New York City Mayor Fiorello LaGuardia.[44] LaGuardia tasked the New York Academy of Medicine to study marijuana. They concluded and published their study in 1944. Much to Anslinger's displeasure, every claim that he made was contradicted. "Among its findings were that: smoking marijuana does not lead to addiction or to morphine, heroin, or cocaine use; aggression, violence and belligerence are not common consequences of smoking marijuana; and publicity concerning catastrophic effects of smoking marijuana is unfounded."[45] Despite these findings, the damage was already done.

The country's first mandatory minimum sentences for drug-related offenses were established when the Boggs Act of 1951 modified the Harrison Act and increased penalties fourfold.[46] Over the years both the AMA and the American Bar Association ("ABA") attempted to convince Congress to reassess, "the degree to which narcotic drugs were an issue, and the efficacy of the drug laws in place."[47] They were able to convince Senator Price Daniel to conduct hearings across the country to assess the issue.[48] In 1956 the committee finished their assessment and reported, "a severe drug problem requiring drastic punitive measures."[49] The report chastised the Supreme Court, the Narcotics Bureau and its agents, and drug treatment clinics, blaming them all for not doing enough to stop the increasing intensity of drug issues. Unfortunately, the actions of the AMA and ABA had the opposite effect of what they hoped and the results of the study led to "even more repressive legislation – the Narcotic Control Act of 1956."[50] It should be noted that in the 1950s and 1960s, the Central Intelligence

[43] Brown, *supra* note 28, at 133.
[44] Shelton, *supra* note 42.
[45] *Id.*
[46] Brown, *supra* note 28, at 135.
[47] *Id.* at 135.
[48] *Id.* at 134.
[49] *Id.*
[50] *Id.*

Agency ("CIA") was using various narcotics and hallucinogens, including LSD, in multiple interrogation and mind control experiment programs including the infamous MKULTRA.[51] In fact, Sidney Gotlieb, the director of the program, "was the unwitting godfather of the entire LSD counterculture. In the early 1950s, he arranged for the CIA to pay $240,000 to buy the world's entire supply of LSD."[52]

Marijuana and psychedelic drug use grew with the cultural trends of the 1960s. At the same time, the federal government continued its zero-tolerance policy. The Drug Abuse Control Act of 1965 ("DACA") mandated the "registration, inspection, and record-keeping by all persons concerned with any controlled substance covered under the Act and with the trafficking of those substances."[53] The Act was an amendment of the Federal Food, Drug, and Cosmetic Act and added any drug that had a "hallucinogenic effect"[54] and put them under the authority of the Food and Drug Administration ("FDA"). Although this did not make psychedelics like LSD and psilocybin mushrooms illegal, it did affectively halt the majority of research being done with them and lay the groundwork for Nixon's upcoming War on Drugs. At Senate hearings in 1966, doctors and scientists testified against the criminalization of psychedelics.[55] Despite their testimony, FDA Commissioner James Goddard called LSD "one of the most dangerous drugs with which I am acquainted."[56] In 1968 the House of

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[51] *See Project MKULTRA, The CIA's Program of Research in Behavioral Modification: Joint Hearing Before the Select Subcomm. on Intel. and the Subcomm. on Health and Sci. Rsch.*, 95th Cong. (1977).
[52] Terry Gross, *The CIA's Secret Quest For Mind Control: Torture, LSD And A 'Poisoner In Chief'*, NPR: FRESH AIR (Sept. 9, 2019), https://www.npr.org/2019/09/09/758989641/the-cias-secret-quest-for-mind-control-torture-lsd-and-a-poisoner-in-chief.
[53] Brown, *supra* note 28, at 136.
[54] Drug Abuse Control Amendments of 1965., Pub. L No. 89-74, 79 Stat. 226, 227 (1965).
[55] Conrad Sproul, *"Don't Kill My Buzz, Man!" - Explaining the Criminalization of Psychedelic Drugs*, 19 OR. UNDERGRADUATE RSCH. J. 1, 35 (2021).
[56] *Penalties for Possession of LSD Reluctantly Backed by Goddard*, N.Y. TIMES, Feb. 27, 1968, at A1.

Representatives voted 320-2 to amend DACA and criminalize personal possession of psychedelics.[57] That same year President Johnson combined the Bureau of Narcotics and the Bureau of Drug Abuse Control into the Bureau of Narcotics and Dangerous Drugs ("BNDD"), the predecessor to the Drug Enforcement Administration ("DEA"), and placed it under the control of the Department of Justice ("DOJ").[58]

Despite the push for stricter regulations, the Marihuana Tax Act was ruled unconstitutional in 1969,[59] though this victory was short lived. Using similar tactics as Anslinger, Richard Nixon sensationalized drug use and used the turmoil surrounding anti-civil-rights backlash as cornerstones in his election campaign. Upon his election, he kept his promise, and his administration passed The Comprehensive Drug Abuse Prevention and Control Act of 1970 ("CSA"). In a 1994 interview, John Ehrlichman, President Nixon's domestic policy chief, admitted that the War on Drugs had darker motives.

> We knew we couldn't make it illegal to be either against the war or black, but by getting the public to associate the hippies with marijuana and blacks with heroin, and then criminalizing both heavily, we could disrupt those communities. We could arrest their leaders, raid their homes, break up their meetings, and vilify them night after night on the evening news. Did we know we were lying about the drugs? Of course, we did.[60]

With this, the War on Drugs had officially begun. One of the most significant parts of the CSA is the classification of all drugs into five categories, or "schedules,"[61] as well as giving

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[57] Sproul, *supra* note 55, at 37.
[58] *The DEA Years 1970-1975*, DEA, at 30, https://www.dea.gov/sites/default/files/2021-04/1970-1975_p_30-39_0.pdf (last visited Mar. 22, 2025).
[59] Shelton, *supra* note 41.
[60] HIST., *supra* note 4.
[61] 21 U.S.C. § 812.

marijuana an official definition.[62] The act also created a commission to study marijuana,[63] repealed previous drug legislation, like The Narcotic Drugs Import and Export Act and The Opium and Poppy Control Act of 1942, and repealed sections of the Internal Revenue Code of 1954 that included marijuana.[64] The schedules were "arranged in descending order based on a substance's potential for abuse and ascending order determined by a substance's approved medicinal use."[65] Marijuana, psilocybin, LSD, and were placed in Schedule I,[66] the most restrictive, and deemed to have a high potential for abuse, no medical use, and restricted from all use, including scientific research.[67] The categorization was excessive and did not match available research. It is likely that propaganda and misinformation led to its placement.[68]

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[62] Comprehensive Drug Abuse Prevention and Control Act of 1970, Pub. L. No. 91-513, § 102, 84 Stat. at 1244 ("The term "marihuana" means all parts of the plant Cannabis sativa L., whether growing or not; the seeds thereof; the resin extracted from any part of such plant; and every compound, manufacture, salt, derivative, mixture, or preparation of such plant, its seeds or resin. Such term does not include the mature stalks of such plant, fiber produced from such stalks, oil or cake made from the seeds of such plant, any other compound, manufacture, salt, derivative, mixture, or preparation of such mature stalks (except the resin extracted therefrom), fiber, oil, or cake, or the sterilized seed of such plant which is incapable of germination.").

[63] § 601, 84 Stat. at 1292 ("The Commission shall conduct a study of marihuana including, but not limited to, the following areas: (A) the extent of use of marihuana in the United States to include its various sources, the number of users, number of arrests, number of convictions, amount of marihuana seized, type of user, nature of use; (B) an evaluation of the efficacy of existing marihuana laws; (C) a study of the pharmacology of marihuana and its immediate and long-term effects, both physiological and psychological; (D) the relationship of marihuana use to aggressive behavior and crime; (E) the relationship between marihuana and the use of other drugs; and (F) the international control of marihuana.").

[64] *See* § 1101, 84 Stat. at 1292.

[65] Brown, *supra* note 28, at 138.

[66] 21 U.S.C. § 812.

[67] Farber, *supra* note 3.

[68] *See Drug War History*, DRUG POL'Y ALL., https://drugpolicy.org/drug-war-history/ (last visited Apr. 7, 2024).

Worth mentioning about the original CSA is the lack of differentiation between marijuana and hemp, or mention of hemp at all. Although it was known by some that there was a difference between psychoactive marijuana and non-psychoactive hemp, the issue of the lack of distinction in the CSA was not addressed until the case of *Hemp Industries Association v. DEA* in 2003. The appellants in this case used hemp in their products, and argued that based on the wording in the definition for marijuana, that Congress never meant to include hemp and challenged "[DEA] regulations that, taken together, would ban the sale or possession of such items even if they contain only non-psychoactive trace amounts of tetrahydrocannabinols ("THC")."[69] The 9th Circuit held that the DEA "cannot regulate *naturally-occurring* THC *not* contained within or derived from marijuana—i.e., non-psychoactive hemp products—because non-psychoactive hemp is not included in Schedule I."[70] Despite this win and differentiation by the Court, it would not be until the 2018 Farm Bill that a hemp exception was added to the definition of marijuana in the CSA, and "explicitly preserved FDA's authorities over hemp products."[71] Hemp's official definition became "the plant Cannabis sativa L. and any part of that plant, including the seeds thereof and all derivatives, extracts, cannabinoids, isomers, acids, salts, and salts of isomers, whether growing or not, with a delta-9 tetrahydrocannabinol concentration of not more than 0.3 percent on a dry weight basis."[72] The important distinction in this definition is the concentration level of delta-9 THC, the psychoactive chemical in cannabis.

In 1973, President Nixon merged the BNDD and the Office of Drug Abuse Law Enforcement ("ODALE") into the DEA to end "interagency rivalries" and centralize enforcement of the

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[69] Hemp Indus. Ass'n v. DEA, 357 F.3d 1012, 1013 (9th Cir. 2004).
[70] *Id.* at 1018.
[71] *Hemp Production and the 2018 Farm Bill*: *Hearing on 2018 Farm Bill, PL 115-334 Before S. Comm. on Agric., Nutrition, & Forestry*, 116th Cong. (2019) (testimony of Amy Abernethy, Principal Deputy Comm'r, Office of the Comm'r, FDA, HHS).
[72] 7 U.S.C. § 1639o (1).

CSA, and "declared an all-out global war on the drug menace."[73] The 1970s saw a rise of anti-drug parents due to a spike of teen drug use. "Daily pot smoking among high school seniors alone climbed 80 percent between 1975 and 1978 . . . and marijuana last year accounted for the second largest number of admissions to federally funded drug treatment facilities."[74] Parents across the country were shocked to discover that their children were experimenting with drugs. Some parents sent their children to rehabilitation facilities, or to camps to separate them from the friends that they assumed were a bad influence on their children. Others formed local parenting groups and started lobbying the government for harsher punishments and crackdown on the sale of paraphernalia.[75]

When President Reagan took office in 1981, he continued and expanded Nixon's war on drugs. The President was joined by First Lady Nancy Reagan, who launched her famous "Just Say No" advertising campaign in 1982, which included speeches across the country and publicized visits to rehabilitation centers, as well as an international conference on youth drug abuse with the first ladies of seventeen countries in 1985.[76] The First Lady would go on to lambast and demonize even casual marijuana smokers for the actions of drug cartels. "The casual user may think as he takes a line of cocaine or smokes a joint in the privacy of his nice condominium . . . that he's somehow not bothering anyone . . . . If you're a casual drug user, you're an accomplice to murder."[77]

Due to the growth of indoor cannabis cultivation, the DEA developed Operation Green Merchant in 1988 which "targets

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[73] *DEA Celebrates 50 Years*, DEA, https://www.dea.gov/dea-celebrates-50-years (last visited May 15, 2025).
[74] Peggy Mann, *The Parent War Against Pot*, WASH. POST (Jan. 6, 1980), https://www.washingtonpost.com/archive/opinions/1980/01/06/the-parent-war-against-pot/920b8380-fdbb-4f3b-b205-b2d25831fa21/.
[75] *Id.*
[76] *Nancy Reagan*, HIST. (2009), https://www.history.com/topics/first-ladies/nancy-reagan.
[77] *Casual Users 'Accomplices' to Murder: 1st Lady*, L.A. TIMES (Feb. 29, 1988), https://www.latimes.com/archives/la-xpm-1988-02-29-mn-281-story.html.

the indoor growing industry including suppliers of seeds, equipment and cannabis cultivators."[78] Purportedly, *High Times*, a cannabis and counterculture magazine started in 1974, was the center of this operation due to their frequent advertising of indoor growing equipment.[79] The program was successful, and continued into President George H.W. Bush's term, with the DEA reporting $29.5 million worth of assets seized in 1989 alone.[80]

One of the more significant, yet lesser known, marijuana laws was the Solomon-Lautenberg Amendment in 1990.[81] As part of an amendment to the Department of Transportation and Related Agencies Appropriations Act, it required states to impose a 6-month suspension or revocation of a person's driver's license for "any violation of the Controlled Substances Act . . . or any drug offense"[82] or the state would lose federal highway funding. Although states were able to opt out and still receive funding, by 1995 "30 states, Puerto Rico, and the District of Columbia have implemented some form of these laws."[83] It should be noted that the text of the amendment reads "*any* violation" or "*any* drug offense," not just instances where the person was operating a vehicle. Although most states have since opted out of the amendment, as of 2021 three states, Alabama, Arkansas, and Florida, continue to suspend licenses under the Act.[84]

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[78] U.S. DEP'T OF JUST., 126492, 1989 DOMESTIC CANNABIS ERADICATION/SUPPRESSION PROGRAM, (1989).
[79] *See* United States v. Pollard, 965 F.2d 283, 284 (7th Cir. 1992).
[80] U.S. DEP'T OF JUST., *supra* note 82, at 24.
[81] 23 U.S.C. § 159.
[82] Department of Transportation and Related Agencies Appropriations Act, Pub. L. No. 101-516, §333, 104 Stat. 2155, 2185 (1990).
[83] *"Possess a Joint, Lose Your License": July 1995 Status Report*, MARIJUANA POL'Y PROJECT (July. 1995), https://web.archive.org/web/20071008235035/http://www.mpp.org/site/c.glKZLeMQIsG/b.1087547/k.33C1/Possess_a_Joint_Lose_Your_License.htm.
[84] *Solomon-Lautenberg Amendment*, WIKIPEDIA, https://en.wikipedia.org/wiki/Solomon-Lautenberg_amendment (last visited Dec. 5, 2023).

The Clinton Administration continued the War on Drugs through the 1990s. The Violent Crime Control and Law Enforcement Act of 1994, also known as the 1994 Crime Bill, did not directly target drugs, however it did increase penalties for possession and sales.[85] The crack epidemic and gang violence were used as justification for its passing. Its implementation contributed to the explosion of the prison industrial complex in the U.S., "The number of state and federal adult correctional facilities rose 43 percent from 1990 to 2005. For a period in the 1990s, a new prison opened every 15 days on average."[86]

The last federal legislation of note is the Illicit Drug Anti-Proliferation Act of 2003, also known as the Reducing Americans' Vulnerability to Ecstasy Act or RAVE Act.[87] The Act was a modification of the crack house law and prohibited "knowingly leasing, renting, or using, or intentionally profiting from, any place (as well as opening, maintaining, leasing, or renting any place, as provided under current law), whether permanently or temporarily, for the purpose of manufacturing, storing, distributing, or using a controlled substance."[88] There was immediate pushback as club owners and other event rental spaces feared that the broad language would be used to target and shut down their businesses if drug usage was discovered on their property.[89] Instead of letting the bill fail, then Senator Joe Biden slipped the bill into the PROTECT Act, also known as the

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[85] *See* Violent Crime Control and Law Enforcement Act of 1994, H.R. 3355, 103rd Cong. (1993).
[86] Lauren-Brooke Eisen, *The 1994 Crime Bill and Beyond: How Federal Funding Shapes the Criminal Justice System*, BRENNAN CTR. FOR JUST. (Sept. 9, 2019), https://www.brennancenter.org/our-work/analysis-opinion/1994-crime-bill-and-beyond-how-federal-funding-shapes-criminal-justice.
[87] Illicit Drug Anti-Proliferation Act of 2003, S. 226, 108th Cong. (2003).
[88] SUMMARY: S.226 — 108th Cong. (2003-2004), CONG., https://www.congress.gov/bill/108th-congress/senate-bill/226.
[89] *DEA Must Not Be Allowed to Chill Speech or Shut Down Electronic Music Events*, ACLU (Sept. 11, 2003), https://www.aclu.org/documents/dea-must-not-be-allowed-chill-speech-or-shut-down-electronic-music-events.

Amber Alert Bill.[90] "Even those that opposed the RAVE Act had to vote for the final 'Amber' bill if they wanted to enact the provisions combating child abductions."[91] This questionable move worked, causing people to instantly associate child abduction with raves and ecstasy and furthering misinformation.

Despite all of these efforts from the federal government to curb the sale of drugs, the CIA was found to be linked to the sale of drugs at one point. In 1996, the *San Jose Mercury News* published a three-part series that alleged that the CIA had connections, through their support of Nicaraguan Contras, to the sale of crack in Los Angeles in the 1980s.[92] Although they denied direct involvement, a report from the CIA's own inspector general revealed that the agency was at least aware of the connection between funding the Contras and cocaine/crack sales, and in some cases pressured the DEA away from investigating.[93] The crack epidemic is one of the national issues that led to President Reagan signing the Comprehensive Crime Control Act of 1984 which "raised federal penalties for marijuana possession and dealing," and the Anti-Drug Abuse Act which instituted "mandatory sentences for drug-related crimes."[94] The infamous 'three strikes law' that mandated life sentences for repeat offenders was an amendment to the Anti-Drug Abuse Act added in the early 1990s. The increased

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[90] Erin Treacy, *The Rave Act: A Specious Solution to the Serious Problem of Increased Ecstasy Distribution: Is It Unconstitutionally Overbroad*, 28 HASTINGS COMM. & ENT. L.J. 229, 255 (2006).
[91] *Id.*
[92] *The CIA-Contra-Crack Cocaine Controversy: A Review of the Justice Department's Investigations and Prosecutions*, U.S. DEP'T OF JUST., https://oig.justice.gov/sites/default/files/archive/special/9712/ch01p1.htm (last visited Apr. 8, 2024).
[93] *See* Walter Pincus, *CIA Ignored Tips Alleging Contra Drug Links, Report Says*, WASH. POST (Nov. 3, 1998), https://www.washingtonpost.com/archive/politics/1998/11/03/cia-ignored-tips-alleging-contra-drug-links-report-says/d7ade266-803e-4987-9d01-ce7d98d9ea13/; M. LEVINE & L. KAVANAU-LEVINE, BIG WHITE LIE: THE CIA AND THE COCAINE/CRACK EPIDEMIC, 3 (Thunder Mouth's Press, 1st ed. 1993).
[94] PBS, *supra* note 34.

penalties have been heavily criticized as being racially biased: "[I]t allocated longer prison sentences for offenses involving the same amount of crack cocaine (used more often by black Americans) as powder cocaine (used more often by white Americans). Five grams of crack triggered an automatic five-year sentence, while it took 500 grams of power cocaine to merit the same sentence."[95]

PART 2: CONTROLLED SUBSTANCES

LSD

Lysergic acid diethylamide ("LSD") was discovered by a Swiss chemist named Albert Hofmann while working for Sandoz laboratories in 1938.[96] Hofmann was attempting to "synthesize a chemical compound that would stimulate the respiratory and circulatory systems."[97] According to the DEA, it is a "potent hallucinogen" that can caused impaired depth and time perception, as well as "distorted perception of the shape and size of objects, movements, colors, sound, touch, and the user's own body image."[98] LSD and some other psychedelics cause a neurological phenomenon called synesthesia where the "brains process the same information through two or more brain areas at once."[99] In lay terms, senses can become

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[95] HIST., *supra* note 4.
[96] Paul Massari, *A Long, Strange Trip: LSD's Path from Miracle Drug to Social Menace*, HARV. GRIFFIN GSAS NEWSL. (July 28, 2021), https://gsas.harvard.edu/news/long-strange-trip.
[97] Tom Shroder, *'Apparently Useless': The Accidental Discovery of LSD*, ATL. (Sept. 9, 2014), https://www.theatlantic.com/health/archive/2014/09/the-accidental-discovery-of-lsd/379564/.
[98] *Drug Fact Sheet: LSD*, U.S. DEP'T OF JUST., DRUG ENF'T ADMIN. (Dec. 2024), https://www.dea.gov/sites/default/files/2023-04/LSD%202022%20Drug%20Fact%20Sheet.pdf.
[99] *Synesthesia*, CLEVELAND CLINIC, https://my.cleveland clinic.org/health/symptoms/24995-synesthesia (May 3, 2023) (asserting synesthesia is also found in neurodivergent people and can also be caused by some types of brain injuries)*; see also Trippy Research: Chemically-Induced Synesthesia*,

connected, causing experiences like tasting colors, or seeing and feeling sound.

Hofmann had been working with "ergot, a fungus found in tainted rye that had been used as a folk medicine for generations."[100] It had been used to "hasten childbirth and staunch bleeding after delivery" due to its blood vessel and muscle-constricting properties.[101] Hoffman recreated ergot's active ingredients with its component chemicals, combining these with other organic molecules.[102] Hoffman named and numbered these compounds as LSD 1-25, but they did not end up having the desired effect on the respiratory and circulatory systems that Sandoz was looking for, so they were shelved for a number of years.[103] Years later, Hofmann told his associates, "I did not choose LSD; LSD found and called me."[104] He stated that he had a "feeling that this substance could possess properties other than those established in the first investigations."[105] On April 16, 1943, while resynthesizing it, he "he accidentally ingested a small amount and perceived 'extraordinary shapes with intense, kaleidoscopic play of colors.'"[106] Three days later, on April 19 at 4:20PM, he took 250 millionths of a gram.[107] Thinking it was a small dose, he was not expecting much to happen. About forty minutes later he began to feel the effects, noting in his lab journal, "Beginning dizziness, feeling of anxiety, visual distortions, symptoms of paralysis, desire to laugh."[108] He then asked his lab assistant to help him home on their bicycles. His journey home would become one of the most

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TECH. NETWORKS (July 7, 2015), https://www.technologynetworks.com/neuroscience/articles/trippy-research-chemically-induced-synesthesia-284935;

[100] Shroder, *supra* note 101.

[101] *Id.*

[102] *Id.*

[103] *See id.*

[104] *Id.*

[105] *Id.*

[106] *LSD*, HIST. (Aug. 21, 2018), https://www.history.com/topics/crime/history-of-lsd.

[107] Shroder, *supra* note 87.

[108] *Id.*

famous bicycle rides to this day.[109] Hofmann says that he felt a dramatic shift in consciousness, and he believed that LSD could be valuable in psychiatry.[110] Sandoz then started providing psychiatrists with LSD for research purposes in the 1950s under the brand name Delysid.[111]

Over the next two decades, LSD was studied and used to treat a myriad of issues.[112] Canadian studies in the 1950s that focused on its effects on chronic, treatment-resistant alcoholics "reported an unprecedented 50% improvement rate."[113] Dr. Oscar Janiger, a psychiatrist who pioneered the use of psychedelic substances to expand one's mind, is credited with introducing LSD to Cary Grant, Aldous Huxley, and other celebrities of the time.[114] According to his own records, from 1954 to 1962, Dr. Janiger "administered almost 3,000 doses of LSD to 1,000 volunteers."[115] Despite this, Dr. Janiger has not received the same credit and fame as the infamous counter-culture hero, Timothy Leary. In 1960, Timothy Leary and Richard Alpert, psychologists at Harvard, created the Harvard Psilocybin Project to "explore the effects of psychotropic

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[109] *See* Andrew DeAngelo, *Bicycle Day May Soon Overtake Cannabis Holiday 4/20*, FORBES (Apr. 11, 2023), https://www.forbes.com/sites/andrewdeangelo/2023/04/11/bicycle-day-may-soon-overtake-cannabis-holiday-420/.

[110] *LSD*, NEW SCIENTIST, https://www.newscientist.com/definition/lsd/ (last visited Mar. 26, 2024).

[111] *Id.*

[112] *LSD*, BRITANNICA, https://www.britannica.com/science/LSD (last visited Apr. 1, 2024) ("In the 1960s LSD was proposed for use in the treatment of neuroses, especially for patients who were recalcitrant to more conventional psychotherapeutic procedures. LSD also was tried as a treatment for alcoholism and to reduce the suffering of terminally ill cancer patients. It was studied as an adjunct in the treatment of narcotic addiction, of children with autism, and of the so-called psychopathic personality.").

[113] Matthew Oram, *Prohibited or Regulated? LSD Psychotherapy and the United States Food and Drug Administration*, 27 HIST. PSYCHIATRY 290, 291 (2016).

[114] Associated Press, *Oscar Janiger, 83, Psychiatrist and Early Advocate of LSD Use*, N. Y. TIMES (Aug. 19, 2001), https://www.nytimes.com/2001/08/19/us/oscar-janiger-83-psychiatrist-and-early-advocate-of-lsd-use.html.

[115] *Id.*

substances on the human mind."[116] At first, Leary and Alpert conducted studies only with graduate students and with a physician attending all experiments, but would eventually dismiss the physician from their sessions and begin to use undergraduate students for the experiments.[117] These changes, as well as the fact that they conducted experiments off of Harvard campus and outside of laboratories led the university to dismiss the pair from their academic positions in 1963.[118] However, Leary would go on to become massive proponent of psychedelic use in the counter-culture revolution with his famous words, "turn on, tune in, drop out."[119] Hofmann and other researchers blamed Leary for giving LSD its bad reputation.[120] Their concerns would ring true, as it would Leary's research and reputation that led to LSD being regulated and criminalized. The 1962 Drug Efficacy Amendment to the Food, Drug, and Cosmetic Act of 1938 was said to be partially instigated by complaints from administrators and faculty members at Harvard who were "concerned about the safety of Leary and Alpert's research subjects, and critiqued the rigor of their unorthodox methodology."[121] Similar to Leary, Ken Kesey, a

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[116] *Timothy Leary*, HARV. DEP'T OF PYSCH., https://psychology.fas.harvard.edu/people/timothy-leary (last visited Apr. 1, 2024).

[117] OAKLEY STERN RAY, DRUGS, SOCIETY, & HUMAN BEHAVIOR 381 (3rd ed. 1983).

[118] *Id.*

[119] *See id.* at 282; *Albert Hofmann and Bicycle Day*, HIST. (Aug. 21, 2018), https://www.history.com/topics/crime/history-of-lsd ("Leary founded a psychedelic religion based on LSD called the League for Spiritual Discovery.").

[120] John Horgan, *Tripping in LSD's Birthplace: A Story for "Bicycle Day"*, SCI. AM. (April 19, 2024), https://www.scientificamerican.com/blog/cross-check/tripping-in-lsds-birthplace-a-story-for-e2809cbicycle-daye2809d/. *See also* Nikita Kansra & Cynthia W. Shih, *Harvard LSD Research Draws National Attention*, HARV. CRIMSON (May 21, 2012), https://www.thecrimson.com/article/2012/5/21/harvard-lsd-project-leary/.

[121] HARV. DEP'T OF PSYCH., *supra* note 120. *See also* Sproul, *supra* note 55, at 9; Massari, *supra* note 86 ("The 1962 law essentially created the modern clinical trial"); Kansra & Shih, *supra* note 104 (President Nixon called him "the most dangerous man in America.").

volunteer of the MKULTRA program and author of *One Flew Over the Cuckoo's Nest*, also became a huge proponent of LSD. He created a group called the Merry Pranksters that "hosted a series of LSD-fueled parties in the San Francisco Bay Area" called "Acid Tests."[122] Although the main talking points against LSD were based on health and safety, none of the legislation affected the Army and CIA programs that were dosing unwitting participants.[123] Prior to its full criminalization, in the Senate Subcommittee on the Executive Reorganization of the Senate Committee on Government Operations, Senator Robert F. Kennedy declared, "Perhaps to some extent we have lost sight of the fact that (LSD) can be very, very helpful in our society if used properly."[124] Senator Kennedy's wife was treated with LSD, and through her treatment he witnessed firsthand benefits of the drug.[125] That same year, Sandoz Pharmaceuticals voluntarily withdrew its sponsorship of LSD research, effectively halting legal access.[126] "Kennedy criticized the administration for doing too little to ensure their continuation: 'if they were worth while I would think you would let them continue … If it was helpful [research] 6 months ago, why is it not helpful now?'"[127]

MDMA

3,4-Methylenedioxymethamphetamine ("MDMA"), better known by its street name, "ecstasy," is an empathogen and a stimulant.[128] "Empathogens increase a person's feeling of

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[122] HIST., *supra* note 94.
[123] *See* Sproul, *supra* note 55, at 6; Horgan, *supra* note 104. *See generally Project MKULTRA, The CIA's Program of Research in Behavioral Modification: Joint Hearing Before the Select Subcomm. on Intel. and the Subcomm. on Health and Sci. Rsch.*, 95th Cong. (1977).
[124] *When Bobby Kennedy Defended LSD*, MAPS (July 12, 2012), https://maps.org/news/media/when-bobby-kennedy-defended-lsd/.
[125] *Id.*
[126] Oram, *supra* note 117, at 290.
[127] *Id.*
[128] *MDMA (ecstasy)*, BETTER HEALTH CHANNEL, https://www.betterhealth.vic.gov.au/health/healthyliving/mdma-ecstasy (May 19, 2023).

empathy and benevolence towards others, as well as feelings of being socially accepted and connected."[129] Empathogens work by causing the body to release serotonin and dopamine into the brain.[130] According to the DEA, "MDMA acts as both a stimulant and hallucinogen, producing an energizing effect, distortions in time and perception, and enhanced enjoyment of tactile experiences" and also goes by multiple other names, such as "Adam," "Beans," "Hug Drug," "Lover's Speed," and most notably "Molly."[131] MDMA's effects include euphoria, alertness, reduced inhibition, and empathy as well as increased blood pressure and heart rate, muscle tension, and teeth clenching.[132]

MDMA is actually much older than its tenure as a 'club drug,' and its creation had a far more noble purpose. It was first synthesized and patented in 1912 by Merck Pharmaceuticals in their search for a new blood clotting drug,[133] and was originally called "Methylsafrylaminc."[134] Internal reports indicate that

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[129] *Empathogens*, ALCOHOL & DRUG FOUND. (2023), https://adf.org.au/drug-facts/empathogens/ (last visited Mar. 30, 2024).

[130] *Id.* This brain chemical is involved with neural processes that influence things like sensory perception, mood, sleep, and certain types of movement. It may also be involved in triggering hormones that impact sexual arousal. The MDMA-related increase in serotonin activity is what may result in the elevated mood, emotional closeness, and heightened empathy experienced by those using ecstasy. Dopamine. This brain chemical is associated with increased energy and activating the reward system, which can lead to the pleasurable reinforcement of continued use of the drug. Norepinephrine. This brain chemical increases heart rate and blood pressure, and may play a hand in some of the heightened physiological responses to ecstasy use."); *see also* Tamera Martens, MA*, Ecstasy Overdose: Signs, Symptoms & Treatment for MDMA Overdose*, AM. ADDICTION CTR., https://americanaddictioncenters.org/ecstasy-abuse/overdose (Oct. 28, 2024).

[131] *Ecstasy Or MDMA (also Known As Molly)*, DEA, https://www.dea.gov/factsheets/ecstasy-or-mdma-also-known-molly (last visited Mar. 19, 2024).

[132] *Id.*

[133] Lucca Jaeckel, *The MIND Blog: A History of Ecstasy Science*, MIND FOUND. (Nov. 28, 2022), https://mind-foundation.org/history-of-ecstasy/.

[134] NAT'L INST. ON DRUG ABUSE, MDMA (ECSTASY) ABUSE 7, https://nida.nih.gov/sites/default/files/1763-mdma-ecstasy-abuse.pdf (Sept. 2017).

they were trying to find a way around a competitor's "existing patent for the synthesis of a clotting agent called Hydrastinin."[135] Due to lack of interest, MDMA was shelved for fifteen years until 1927 when Merck was "was interested in adrenaline- or ephetonine-like substances on the basis of safrole."[136] MDMA was converted into a hydrochloride salt, underwent chemical studies, and was renamed "Safryl-methyl-amin" according to a 1927 report.[137] MDMA again disappeared until the 1952 when basic toxicological tests were conducted. MDMA was tested along with mescaline and six other mescaline analogs on five species of animals through a research contract from the Army Chemical Center.[138] It wouldn't be until the 1970s that the effects of MDMA on humans would be seen and studied. Sometime in the late 1960s, MDMA became to be used as a street drug, and was first reported in Chicago in 1970.[139] Based on chemical testing, authorities believed that "MDMA was first synthesized by underground chemists in search of "legal alternatives" for the closely related and highly sought-after drug MDA, which was scheduled under the Controlled Substances Act (CSA) in 1970."[140] The emergence of MDMA as a street drug, and the stories of its effects on people reignited the interest in the scientific community. In the mid-1970s, a

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[135] Roland W. Freudenmann et al., *The Origin of MDMA (Ecstasy) Revisited: The True Story Reconstructed from the Original Documents**, 101 ADDICTION 1241, 1242 (Aug. 8, 2006), http://dx.doi.org/10.1111/j.1360-0443.2006.01511.x (addressing that over the years there have been claims that Merck was originally searching for an appetite suppressant, but those claims have not been substantiated, researchers believe this was caused by confusion with studies done on MDA, an analogue of MDMA).

[136] *Id.* at 118.

[137] *Id.*

[138] Hardman, H.F., et al., *Relationship of the Structure of Mescaline and Seven Analogs to Toxicity and Behavior in Five Species of Laboratory Animal*, 25 TOXICOLOGY & APPLIED PHARMACOLOGY 300 (1973). Although the testing was done in 1953-54, the reports were not declassified until 1969.

[139] Torsten Passie & Udo Benzenhöfer, *The History of MDMA As an Underground Drug in the United States, 1960–1979*, 48 J. PSYCHOACTIVE DRUGS 72 (2016).

[140] *Id.* at 67.

psychopharmacologist named Alexander Shulgin introduced the drug to psychotherapists who gave it to their patients to assist in therapy.[141] They chose to use the name "Adam," a reference to the biblical Adam, when administering it to patients because it "returned their patients to a more innocent state" and made them more willing to open up and participate in therapy sessions.[142] Alexander Shulgin and David Nichols later described the psychological effects of substances chemically related to known psychoactive substances in their 1978 book chapter "Characterization of Three New Psychotomimetics."[143] MDMA was described as "a drug that appears to evoke an easily controlled altered state of consciousness with emotional and sensual overtones."[144] Interestingly enough, it was this unsanctioned use by therapists that led to its increasing recreational use. "Most people were trying 'Adam' for the first time, and their suppliers were usually close friends who wanted to share the therapeutic experience."[145] Although MDMA was gaining popularity among psychiatrists in the 1970s and 1980s,

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[141] At the age of 16, Alexander Shulgin studied organic chemistry Harvard University. He also has a Ph.D. in biochemistry from U.C. Berkeley, and did post-doctorate work in psychiatry and pharmacology at U.C. San Francisco. He is an author, psychopharmacologist, pharmacologist, medicinal chemist, organic chemist, and biochemist. *Alexander Shulgin*, WIKIPEDIA, https://en.wikipedia.org/wiki/Alexander_Shulgin, (last visited Apr. 1, 2024); *Alexander Shulgin*, EROWID, https://www.erowid.org/culture/characters/shulgin_alexander/, (last visited Apr. 1, 2024). *See also* Jaeckel, *supra* note 116.

[142] *MDMA*, HIST. (2018), https://www.history.com/topics/crime/history-of-mdma (last visited Mar. 19, 2024).

[143] Jaeckel, *supra* note 116.

[144] Jaeckel, *supra* note 116; Alexander T. Shulgin and David E. Nichols, *Characterization of Three New Psychotomimetics* in THE PSYCHOPHARMACOLOGY OF HALLUCINOGENS (1978), https://chemistry.mdma.ch/hiveboard/rhodium/shulgin-nichols.three.new.html (last visited Mar. 19, 2024). The effects were compared to psilocybin, cannabis, and MDA. However, notable differences led Nichols to identify it under a new subgroup of psychedelics called entactogens.

[145] Alana R. Pentney, *An Exploration of the History and Controversies Surrounding MDMA and MDA*, 33 J. PSYCHOACTIVE DRUGS 213 (2001), http://dx.doi.org/10.1080/02791072.2001.10400568.

concerns over its recreational use in Texas nightclubs brought it to the attention of the DEA.[146] Using the Comprehensive Crime Control Act of 1984, which allowed "the attorney general to place any substance posing 'an imminent hazard to public safety' onto Schedule I for a period of one year while the final scheduling process is under way," the DEA imposed an emergency prohibition on MDMA in 1985, ten days prior to official hearings on its classification were to begin.[147] A group of researchers and mental health professionals promptly opposed the scheduling, asking to hear from specialists in the field to determine the substance's future legal position. In May 1986, the judge proposed that MDMA be added to Schedule 3, citing his belief that the drug had a recognized medicinal value. This would have permitted study on the drug and its application in therapy.[148] John C. Lawn, the DEA's administrator, overruled the decision arguing that because the FDA was not regulating MDMA, it had no accepted medical use.[149] The move was appealed in December 1987, but was permanently placed in Scheduled I in March 1988.[150]

Despite its scheduling, MDMA would continue to be sold and used in the club and underground music scenes. According to the New York Times, "surveys in the U.S. estimate that 7.5 percent of Americans over the age of 12 have tried Ecstasy at least once" and at least 20 million people have used it recreationally around the world.[151]

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[146] Jaeckel, *supra* note 116.
[147] *What is the History of MDMA?*, NAT'L INST. ON DRUG ABUSE (2021), https://nida.nih.gov/sites/default/files/1763-mdma-ecstasy-abuse.pdf (last visited Mar. 19, 2024); Pentney, *supra* note 129.
[148] Jaeckel, *supra* note 116.
[149] Jaeckel, *supra* note 116.
[150] Pentney, *supra* note 129.
[151] Rachel Nuwer, *MDMA Is One of the Safer Illegal Drugs. But There Are Risks*, N.Y. TIMES (Aug. 18, 2023), https://www.nytimes.com/2023/08/18/well/mind/mdma-ecstasy-risk.html (last visited Apr. 1, 2024).

Psilocybin

"Psilocybin (4-phosphoryloxy-N,N-dimethyltryptamine) is an indole-based secondary metabolite produced by numerous species of mushrooms."[152] It's what puts the "magic" in "magic mushrooms." The primary psychoactive ingredient in hallucinogenic mushrooms, psilocybin is a serotonergic hallucinogen that affects mood and perception and causes hallucinations in those who consume it.[153] According to the DEA the effects are similar to peyote and mescaline, and "the psychological consequences of psilocybin use include hallucinations and an inability to discern fantasy from reality."[154] They are currently a Schedule I substance under the CSA.[155]

"Mushrooms containing psilocybin are found across most ecological zones on all continents aside from Antarctica."[156] Some research suggests that they are older than modern humans dating back 75 million years.[157] Although samples were not seen in the U.S. until the 1930s, their use among the South American Aztec Indians go back centuries.[158] In 1529, Spanish Franciscan friar Bernardino de Sahagún went to Mexico and spent 50 years studying the Aztec. He wrote the *Historia general de las cosas de la Nueva España*, where he described "Teonanacatl, 'God's Flesh,' the sacred mushrooms of

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[152] David E. Nichols, *Psilocybin: From Ancient Magic to Modern Medicine*, 73 J ANTIBIOTICS 679 (2020).
[153] Dominique Strauss et al., *An Overview on the Taxonomy, Phylogenetics and Ecology of the Psychedelic Genera Psilocybe, Panaeolus, Pluteus and Gymnopilus*, 5 FRONTIERS FORESTS & GLOB. CHANGE (2022).
[154] *Psilocybin*, DRUG. ENF'T ADMIN., https://www.dea.gov/sites/default/files/2020-06/Psilocybin-2020.pdf (last visited Apr. 2, 2024)
[155] *Id.*
[156] Mattha Busby, *'Flesh of the Gods': The Trippy History of Magic Mushrooms*, VICE (Sept. 2, 2022), https://www.vice.com/en/article/epzx4p/magic-mushrooms-history.
[157] *Id.*
[158] Nichols, *supra* note 136, at 679.

Mesoamerica."[159] One hundred years later, the physician to the King of Spain, Francisco Hernández de Toledo, wrote a manual for missionaries traveling to the New World in 1656. In it, he discussed the different mushrooms that the natives consumed, mentioning some that led to "a kind of 'madness' by bringing 'before the eyes all kinds of things, such as wars and the likeness of demons.'"[160] There are even historical records that claim guests at the coronation of Montezuma II were given psychedelic mushrooms. "Kingsborough reports that 'wild mushrooms' were given to visitors at Montezuma's coronation, and that the mushrooms intoxicated the visitors and caused them to dance . . . the visions which accompanied the intoxication were believed to constitute divine advice concerning the future."[161] Although stories circulated for years, botanists and other scientists took them as folk tales until 1936 when Robert Weitlaner visited Oaxaca and was told stories of their uses and was able to obtain a few samples.[162] He sent these samples to Harvard University, but unfortunately the samples were too degraded and could not be identified and further studied. Two years later, Richard Evans Shultes, a Harvard botanist, "obtained specimens of three species of sacred mushrooms that were ultimately identified as *Psilocybe caerulescens*, *Panacolus campanulatus*, and *Stropharia cubensis*.[163] R. Gordon Wasson, an amateur mycologist, became aware of the mushrooms through Shultes' work and traveled to Oaxaca in 1955 where they were permitted to take part in a ritual. A 1957 Life Magazine photo-essay called *Seeking the Magic Mushroom* chronicled the trip.[164] Wasson would go on to return to Oaxaca with French mycologist Roger Heim later that

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[159] *Id.* at 679.
[160] *Teonanacatl Mushrooms: Flesh of the Gods*, U.S. FOREST SERV., https://www.fs.usda.gov/wildflowers/ethnobotany/Mind_and_Spirit/teonanacatl.shtml (last visited Mar. 21, 2024).
[161] Richard Evans Schultes, *Teonanacatl: The Narcotic Mushroom of the Aztecs*, 42 AM. ANTHROPOLOGIST 429, 433 (1940).
[162] *Id.* at 434.
[163] Nichols, *supra* note 136, at 680.
[164] *Id.*

year and the latter cultivated 100 grams of dried *Psilocybe mexicana*. The sample was sent to Albert Hofmann, the aforementioned chemist who discovered LSD, for analysis.[165] Believing that there would be "no dramatic effect on the behavior of mice or dogs," Hofmann ingested 2.4 grams to test their effects.[166] He later went on to identify the main component and complete total synthesis of the psilocybin molecule.[167]

In 1960, after psilocybin was identified and synthesized, Hoffman's employer, Sandoz Pharmaceuticals, started selling pills with 2 mg of the drug under the brand name Indocybin.[168] According to Sandoz, it could be helpful as a medication adjuvant for psychotherapy.[169] Over 100 reports would be published between 1960 and 1980 "that included anecdotal reports of human use, as well as analytical and biochemical studies."[170] Over 200 studies focusing on its biochemistry, pharmacology, chemistry, and effects on humans have been published since 1980.

PART 3: MODERN RESEARCH AND USES

Neurogenesis and Neuroplasticity

For the following sections, it is necessary to explain two topics that are central to the medical science behind psychedelics: *neurogenesis* and *neuroplasticity*. Neurogenesis is the process by which the brain produces new neurons.[171] For decades, the prevailing school of thought was that when brain cells died, that was it, they were gone forever.[172] They did not

[165] *Id.*
[166] *Id.*
[167] *Id.*
[168] *Id.* at 681.
[169] Nichols, *supra* note 136, at 681.
[170] *Id.*
[171] Matthew Solan, *The Book of Neurogenesis*, HARV. HEALTH (Aug. 1, 2021), https://www.health.harvard.edu/mind-and-mood/the-book-of-neurogenesis.
[172] *Id.*

repair themselves, regenerate, nor were they replaced by new ones. Science has since advanced, and research shows that damaged brain cells can regenerate through a process called neurogenesis.[173] Studies show that neurogenesis continues throughout a person's life, however, it does decline the older a person gets.[174] Scientists are attempting to further understand the process of neurogenesis, and are searching for ways to boost its processes hoping that it "may solve the puzzle for improving age-related memory loss and perhaps prevent dementia, including Alzheimer's disease."[175]

Neuroplasticity is the brain's capacity for adaptation. "It refers to the physiological changes in the brain that happen as the result of our interactions with our environment."[176] From the time the brain begins to develop in utero until the day we die, the connections among the cells in our brains reorganize in response to our changing needs. This dynamic process allows us to learn from and adapt to different experiences."[177] The term dates back to 1948 when Jerzy Konorski, a Polish neuroscientist, used it to describe observed changes in neuronal structure.[178] Scientists in the 1960s discovered that after traumatic events neurons would restructure themselves to adapt, and "further

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[173] Callum Campbell, *Can Brain Cells Regenerate?*, CTR. OF THE CELL, https://www.centreofthecell.org/blog/science-questions/can-brain-cells-regenerate/ (last visited Feb. 6, 2024).
[174] Solan, *supra* note 154.
[175] *Id.*
[176] *See generally* Eberhard Fuchs & Gabriele Flügge, *Adult Neuroplasticity: More Than 40 Years of Research*, 2014 NEURAL PLASTICITY 1–10 (2014), ("A number of factors such as stress, adrenal and gonadal hormones, neurotransmitters, growth factors, certain drugs, environmental stimulation, learning, and aging change neuronal structures and functions. The processes that these factors may induce are morphological alterations in brain areas, changes in neuron morphology, network alterations including changes in neuronal connectivity, the generation of new neurons (neurogenesis), and neurobiochemical changes.").
[177] Courtney E. Ackerman, *What Is Neuroplasticity? A Psychologist Explains [+14 Tools]*, POSITIVEPSYCHOLOGY.COM (2023), https://positivepsychology.com/neuroplasticity/ (last visited Feb. 6, 2024).
[178] *Id.*

research found that stress can change not only the functions but also the structure of the brain itself," and that "stress can actually kill brain cells."[179] The results of the research weren't all negative. Although they learned that there were multiple ways to kill brain cells, they also discovered there are "other ways for them to adapt and reconnect, and perhaps even ways for them to regrow or replenish."[180] Neuroplasticity was then split into two categories: "Structural neuroplasticity, in which the strength of the connections between neurons (or synapses) changes," and "functional neuroplasticity, which describes the permanent changes in synapses due to learning and development."[181]

Neuroplasticity is linked to how we learn and grow, adapt to our environment, and how we deal with stress and its long-term effects on us. The process of learning causes new neural connections within the brain and changes the way our brain processes information, as well as how we respond to similar situations in the future. However, scientists note that "not all learning is created equal—learning new facts does not necessarily take advantage of the amazing neuroplasticity of the brain, but learning a new language or a musical instrument certainly does."[182] Similarly, our brains are creating connections when we are exposed to prolonged stress and traumatic experiences. "The interactions between chronic stress or a dysregulated stress response and the molecular, cellular, and behavioral changes that attend the development of a depression-like state have become increasingly clear. The relationship between psychosocial stressors and the development of depression in susceptible individuals has long been apparent."[183] Additionally, it was observed that the

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[179] *Id.*
[180] *Id.*
[181] *Id.*
[182] *Id.*
[183] Christopher Pittenger & Ronald S. Duman, *Stress, Depression, and Neuroplasticity: A Convergence of Mechanisms*, 33 NEUROPSYCHOPHARMACOLOGY 88, 88 (2007).

hippocampus of animals would atrophy as a result of stress.[184] Scientists have observed hippocampal atrophy in patients with major depression and suggest that "disruption of hippocampal function, including the capacity for neuroplasticity, could contribute to several aspects of major depression."[185] Similarly, the amygdala is also severely impacted by chronic stress and trauma.[186] However, instead of atrophy, the opposite effect, hyperactivity occurs. The amygdala's control over fear is vital to survival, it interprets what you see and hear and analyzes it to assess danger. Future situations with similar stimuli then trigger fear and anxiety as a defense mechanism to keep you more alert to your surroundings.[187] Under normal conditions, the amygdala's fear-based learning is a benefit, triggering the body's fight or flight responses before our conscious brain has interpreted the situation. However, prolonged exposure to stress or severe trauma damages the amygdala and "disrupts your ability to feel fear or learn from it."[188] Issues with the amygdala have been linked to mood, panic, and personality disorders, phobias, PTSD, Alzheimer's, autism, and even strokes and brain cancer.[189]

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[184] Pittenger & Duman, *supra* note 165*; see also* Anand, K. S., & Dhikav, V., *Hippocampus in Health and Disease: An Overview*, ANNALS INDIAN ACAD. NEUROLOGY, 15(4), 239-246 (2012) ("Hippocampus is a complex brain structure embedded deep into temporal lobe. It has a major role in learning and memory. It is a plastic and vulnerable structure that gets damaged by a variety of stimuli. Studies have shown that it also gets affected in a variety of neurological and psychiatric disorders.").

[185] Pittenger & Duman, *supra* note 184.

[186] *See* Cleveland Clinic Medical Professional*, The Amygdala: A Small Part of Your Brain's Biggest Abilities*, CLEV. CLINIC, https://my.clevelandclinic.org/health/body/24894-amygdala (last visited Feb. 8, 2024) ("Your amygdala is a small, almond-shaped structure inside of your brain. It's part of a larger network in your brain called the limbic system. When it comes to your survival, your amygdala and limbic system are extremely important. These are parts of your brain that automatically detect danger. They also play a role in behavior, emotional control and learning.").

[187] *Id.*

[188] *See id.*

[189] *Id.*

Current Studies

To date, there are over 600 studies involving psychedelics and other similar drugs listed on ClinicalTrials.gov,[190] an online database maintained by the National Institute of Health, including 7 for Peyote,[191] 158 for MDMA,[192] 130 for LSD,[193] 230 for Psilocybin,[194] 208 for DMT,[195] and 9 for Ayahuasca.[196] Every single one of them is a Schedule I narcotic that the DEA claims has "no currently accepted medical use."[197] Despite many states having medical marijuana programs, it too remains in Schedule I. Additionally, the website Psychedelic Alpha is currently tracking over 60 psychedelic drugs undergoing clinical trials.[198] Since 2017, LSD, MDMA, and psilocybin have all been declared "breakthrough therapies" by the FDA for posttraumatic stress disorder ("PTSD"), treatment-resistant depression, and generalized anxiety disorder ("GAD").[199]

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[190] *See* Search: "Psychadelic", NAT'L INST. OF HEALTH, https://clinicaltrials.gov/search?term=psychedelic (last visited Apr. 1, 2024).
[191] Search: "Peyote", NAT'L INST. OF HEALTH https://clinicaltrials.gov/search?term=peyote (last visited Apr. 1, 2024).
[192] Search: "MDMA", NAT'L INST. OF HEALTH, https://clinicaltrials.gov/search?term=mdma (last visited Apr. 1, 2024).
[193] Search: "LSD", NAT'L INST. OF HEALTH, https://clinicaltrials.gov/search?term=lsd (last visited Apr. 1, 2024).
[194] Search: "Psilocybin", NAT'L INST. OF HEALTH, https://clinicaltrials.gov/search?term=Psilocybin (last visited Apr. 1, 2024).
[195] Search: "DMT", NAT'L INST. OF HEALTH, https://clinicaltrials.gov/search?term=dmt (last visited Apr. 1, 2024).
[196] Search: "Ayahuasca", NAT'L INST. OF HEALTH, https://clinicaltrials.gov/search?term=Ayahuasca (last visited Feb. 24, 2025).
[197] *Drug Scheduling*, DRUG ENF'T ADMIN., https://www.dea.gov/drug-information/drug-scheduling (last visited Feb. 24, 2025).
[198] Michael Haichin, *Psychedelics Drug Development Tracker*, PSYCHEDELIC ALPHA, https://psychedelicalpha.com/data/psychedelic-drug-development-tracker (last visited Feb. 24, 2025).
[199] *Breakthrough Therapy*, U.S. FOOD & DRUG ADMIN., https://www.fda.gov/patients/fast-track-breakthrough-therapy-

"Psychedelics are 5-HT2A receptor agonists that can lead to profound changes in perception, cognition, and mood."[200] In contrast to other treatments, psychedelic-assisted psychotherapy has shown in Phase 2 clinical trials to produce long-lasting symptom reductions after one or a few sessions. These factors suggest that psychedelics could revolutionize psychiatry and neuroscience.[201] Most patients using currently available medication therapies respond only mildly to moderately, with over one-third of patients not responding at all

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accelerated-approval-priority-review/breakthrough-therapy (last visited Feb. 24, 2025); Ashley Gallagher, *FDA Accepts New Drug Application for MDMA-Assisted Therapy for PTSD*, PHARMACY TIMES (Feb. 13, 2024), https://www.pharmacytimes.com/view/fda-accepts-new-drug-application-for-mdma-assisted-therapy-for-ptsd*; see also* Sandee LaMotte, *Single Dose of LSD Provides Immediate, Lasting Anxiety Relief, Study Says*, CNN (Mar. 7, 2024, 8:16 AM), https://edition.cnn.com/2024/03/07/health/lsd-anxiety-fda-breakthrough-therapy-wellness/index.html; Yasemin Saplakoglu, *FDA Calls Psychedelic Psilocybin a 'Breakthrough Therapy' for Severe Depression,* LIVE SCI. (Nov. 25, 2019), https://www.livescience.com/psilocybin-depression-breakthrough-therapy.html; Collin M. Reiff et al., *Psychedelics and Psychedelic-Assisted Psychotherapy*, 177 AM. J. PSYCHIATRY 391 (2020).

[200] Alex C. Kwan et al., *The Neural Basis of Psychedelic Action*, 25 NATURE NEUROSCIENCE 1407 (2022); *see also* Ishier Raote et al., *Serotonin 2A (5-HT$_{2A}$) Receptor Function: Lingand-Dependent Mechanisms and Pathways, in* SEROTONIN RECEPTORS IN NEUROBIOLOGY (Amitabha Chattopadhyay ed., 2024). ("The serotonin 2A receptor (5-HT2A) has been implicated in mental disorders . . . in processes such as learning and memory, and also in neurogenesis . . . Though the receptor has been studied largely in relation to its multiple functions in the CNS, high levels of receptor expression in other areas . . . suggest that it could play crucial roles in other aspects of physiology . . . drugs, psychotropic or therapeutic, modify many aspects of receptor functionality.").

[201] *See* Kwan et al., *supra* note 200. ("Psychedelics . . . can profoundly bend sensory processing, alter cognition and produce intense subjective experiences. The abilities of psychedelic drugs to modulate perceptual states provide powerful tools for probing the human mind. Psychedelics [also] afford potential benefits to individuals diagnosed with a wide range of neuropsychiatric disorders, including depression, anxiety and substance-use disorders. Unlike current treatment options, only one or a few sessions of psychedelic-assisted psychotherapy have been reported to yield durable reductions of symptoms in phase II clinical trials. For these reasons, psychedelics hold promise to transform neuroscience and psychiatry.").

(i.e., resistant to treatment). In addition, the majority of currently prescribed pharmaceuticals take several weeks to start working therapeutically, and prolonged use of these medications is frequently linked to unwanted effects leading to a decline in treatment compliance.[202] "Controlled trials using LSD or psilocybin reported fast (days) and enduring (weeks to months) improvements of depression and anxiety symptoms in patients with life-threatening diseases/cancer."[203] Ketamine and serotoninergic psychedelics have been labeled "psychoplastogens" because they enhance neuroplasticity which is believed to be the reason for their antidepressant effects.[204] One theory regarding psilocybin is that it induces "rapid and stable dendritic plasticity."[205] "Other mechanisms of psychedelics could be related to the role of 5-TH2A cortical receptors in improving memory and learning (thus cognitive flexibility) in depression."[206] Psychedelics help deactivate default mode network breaking rumination, the "rigid pattern of negative thinking about oneself and the world," creating an opportunity to relearn new thought patterns.[207] Additionally, psychedelics are showing evidence that they improve the quality of life of people with chronic pain by allowing patients to

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[202] *See* Rafael Guimarães dos Santos et al., *Hallucinogenic/Psychedelic 5HT2A Receptor Agonists as Rapid Antidepressant Therapeutics: Evidence and Mechanisms of Action*, 35 J. PSYCHOPHARMACOLOGY 453 (2021).
[203] *Id*. at 454.
[204] *Id*. at 456.
[205] Sophie A. Rogers et al., *Psilocybin-Enhanced Fear Extinction Linked to Bidirectional Modulation of Cortical Ensembles*, BIORXIV (Feb. 4, 2024), https://www.biorxiv.org/content/10.1101/2024.02.04.578811v1.
[206] Santos, *supra* note 187, at 456; Alejandro Torrado Pacheco et al., *Acute Psilocybin Enhances Cognitive Flexibility in Rats*, 48 NEUROPSYCHOPHARMACOLOGY 1011 (2023) ("Cognitive flexibility is the ability to switch between mental processes in order to appropriately adapt behavior to changes in the environment. Impairments in cognitive flexibility are a prominent feature of many psychiatric disorders, including major depression (MDD) and substance use disorders.").
[207] Santos, *supra* note 187, at 456.

"reset" their thinking about their circumstances.[208] Studies have even shown amazing results treating addiction.

> Participants reported substantial changes, with 43.8% decreasing or ceasing alcohol use, 42.5% ceasing or decreasing antidepressant use, and 42.4% decreasing or ceasing cocaine use. The highest rates of increased use were for cannabis (10.9%) and tobacco products (9.3%). The most common reasons for substance use reductions were feeling more connected with self (73%), nature (55%), and others (54.6%), as well as feeling less anxious or depressed (59.4%).[209]

In a 2018 interview, David Nichols, who has been studying many of these substances since the 1970s, stated "it looks like psychedelics may be, I'm going to hesitate to say, a magic bullet, but they're able to do things at this point that we've seen in these studies that other treatments and medications are unable to do."[210]

One of the most promising events for the future of psychedelics in mental healthcare took place just last year. The FDA "accepted a New Drug Application (NDA) for midomafetamine capsules (MDMA) intended for use in combination with psychological intervention for individuals with posttraumatic stress disorder (PTSD)."[211] Additionally,

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[208] *See* Farah Z. Zia et al., *Are Psychedelic Medicines the Reset for Chronic Pain? Preliminary Findings and Research Needs*, 233 NEUROPHARMACOLOGY 1 (2023).

[209] Kevin F. Boehnke et al., *Changed Substance Use After Psychedelic Experiences Among Individuals in Canada*, 22 INT'L J. MENTAL HEALTH & ADDICTION 842 (2023) (the study had 1639 participants and included MDMA, LSD, psilocybin, and many other psychedelics, dissociatives, and hallucinogens).

[210] Cullen Browder, *'Microdosing' Growing in Popularity Among Tech Workers, but is it Safe?*, ASSOCIATED PRESS (Aug. 10, 2018, 12:33 PM), https://apnews.com/article/steve-jobs-19667206b7418099ef6a9a09f8cc575f.

[211] Erin O'Brien, *FDA Accepts, Grants Priority Review of NDA for MDMA-Assisted Therapy for PTSD*, PSYCHIATRIC TIMES (Feb. 13, 2024), https://www.psychiatrictimes.com/view/fda-accepts-grants-priority-review-of-nda-for-mdma-assisted-therapy-for-ptsd.

they placed it in priority review status "setting a Prescription Drug User Fee Act (PDUFA) target action date of August 11, 2024."[212] If authorized, this would be the first time the agency has recognized psychedelic and MDMA-assisted treatment. It also calls for the removal of MDMA from Schedule I in order to recognize the drug's medical and therapeutic benefits.[213] Lykos Therapeutics included "two randomized, double-blind, placebo-controlled Phase 3 studies" in their NDA submission.[214] Their MAPP2 study had almost unbelievable results. "The study showed in the MDMA-assisted therapy group, 86.5% of participants experienced a clinically meaningful improvement at 18 weeks post-baseline . . . results showed that 71.2% of participants . . . no longer met DSM-5 diagnostic criteria for PTSD at the end of the study."[215]

One notable psilocybin treatment in recent years, Compass Pathways is currently demonstrating having success with COMP360 in Phase 2 trials. In December 2023, they announced that COMP360 "was well-tolerated and the safety profile was as expected, with no treatment emergent serious adverse events recorded."[216] They expected to release "safety

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[212] *Id.*

[213] Gallagher, *supra* note 183.

[214] *Lykos Therapeutics Announces FDA Acceptance and Priority Review of New Drug Application for MDMA-Assisted Therapy for PTSD*, LYKOS THERAPEUTICS (Feb. 9, 2024), https://news.lykospbc.com/2024-02-09-Lykos-Therapeutics-Announces-FDA-Acceptance-and-Priority-Review-of-New-Drug-Application-for-MDMA-Assisted-Therapy-for-PTSD.

[215] *MAPS PBC Announces Publication of Results from Confirmatory Phase 3 "MAPP2" Trial of MDMA-Assisted Therapy for PTSD in Nature Medicine*, DRUGS.COM (Sept. 14, 2023), https://www.drugs.com/clinical_trials/maps-pbc-announces-publication-results-confirmatory-phase-3-mapp2-trial-mdma-assisted-therapy-ptsd-21329.html.

[216] *Compass Pathways Announces Investigational COMP360 Psilocybin Treatment was Well-Tolerated in Phase 2 Study of Post-Traumatic Stress Disorder,* COMPASS PATHWAYS (Dec. 19, 2023), https://www.globenewswire.com/news-release/2023/12/19/2798886/0/en/Compass-Pathways-announces-investigational-COMP360-psilocybin-treatment-was-well-tolerated-in-phase-2-study-of-post-traumatic-stress-disorder.html.

and efficacy data" sometime in the spring of 2024.[217] They have also recently entered into a research collaboration agreement with Hackensack Meridian Health to "inform the delivery model design of investigational COMP360 psilocybin treatment, if FDA-approved."[218] MindMed also had great success in their Phase 2 trials with their LSD medication MM120. Their study of 198 male and female participants concluded in December 2023.[219] The results were amazing. Twelve weeks post administration, they reported a "48% rate of remission from generalized anxiety disorder" and 65% had "improved clinical signs of generalized anxiety disorder" from a single dose.[220] Chief medical officer for MindMed, Dr. Daniel Karlin, also noted impacts on signs of depression, "we saw rapid and robust improvement on depression symptoms in people — depression and anxiety have overlapping disease definitions."[221] They are expected to move into Phase 3 trials sometime in the near future.

PART 4: POLICY SUGGESTIONS

The first thing that must happen is a reassessment and reformation of the drug schedule list, possibly a complete abolishment and reboot. Given what we know now, the years of misinformation and the racist and totalitarian origins of the CSA, we need the opportunity to start fresh. Drug enforcement under the CSA has been a modern dark age that shut down legitimate research and prevented future research because the way certain drugs impacted society didn't fit with the way those in charge

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[217] *Id.*

[218] *Compass Pathways Enters into Research Collaboration Agreement with Hackensack Meridian Health to Develop Optimal Clinical Model for Investigational COMP360 Psilocybin Treatment, if FDA-Approved*, COMPASS PATHWAYS (Jan. 16, 2024), https://www.hackensackmeridianhealth.org/en/news/2024/01/16/compass-pathways-enters-into-research-collaboration-agreement-with-hmh.

[219] *See A Dose-Finding Study of MM-120 (LSD D-Tartrate) for the Treatment of Anxiety Symptoms*, NAT'L INST. OF HEALTH, https://clinicaltrials.gov/study/NCT05407064 (last visited Feb. 26, 2025).

[220] LaMotte, *supra* note 183.

[221] *Id.*

wanted. At a minimum, the U.S. should shift from a policy of criminalization to harm reduction.[222]

Harm Reduction

A recent poll by the American Civil Liberties Union shows that "65 percent of voters support ending the war on drugs" and "66 percent support eliminating all criminal penalties for drug possession and investing the resources saved in treatment and addiction services."[223] The simple fact of the matter is that people will always find a way to get high. The history of the war on drugs is proof of that. There is a phenomenon called the Iron Law of Prohibition that states, "the more intense the law enforcement, the more potent the prohibited substance becomes . . . they will become more potent, will have greater variability in potency, will be adulterated with unknown or dangerous substances, and will not be produced and consumed under normal market constraints."[224] This was seen during alcohol prohibition with bathtub alcohol, and it can been seen today with fentanyl and other synthetic opiates.[225] Part of the reason this happens is that traffickers have to minimize the size of their products to avoid detection. The Global Commission on Drug Policy's 2011 report declared that "the global war on drugs has failed, with devastating consequences for individuals and

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[222] Harm reduction is the process of dealing with individuals from a public health standpoint to prevent deaths among drug users rather than just punish their drug use. *See What is Harm Reduction?*, HARM REDUCTION INT'L, https://hri.global/what-is-harm-reduction/ (last visited Feb. 26, 2025).
[223] Jamila Hodge & Nazish Dholakia, *Fifty Years After Then-President Richard Nixon Declared a "War on Drugs," the United States is Still Mired in the Implications of this Wrongheaded, Racist Policy Decision*, VERA INST. OF JUST. (June 17, 2021), https://www.vera.org/news/fifty-years-ago-today-president-nixon-declared-the-war-on-drugs.
[224] Mark Thornton, *Cato Institute Policy Analysis No. 157: Alcohol Prohibition Was a Failure*, CATO INST. (July 17, 1991), https://www.cato.org/sites/cato.org/files/pubs/pdf/pa157.pdf.
[225] *See* Leo Beletsky & Corey S. Davis, *Today's Fentanyl Crisis: Prohibition's Iron Law, Revisited*, 46 INT'L J. DRUG POL. 156 (2017).

societies around the world."[226] "Repressive efforts directed at consumers impede public health measures to reduce HIV/AIDS, overdose fatalities and other harmful consequences of drug use. "Government expenditures on futile supply reduction strategies and incarceration displace more cost-effective and evidence-based investments in demand and harm reduction."[227]

Thankfully, there is some support for harm reduction in Congress. In 2021, Representative Bonnie Watson Coleman introduced the Drug Policy Reform Act of 2021 that would "transfer regulatory authority over controlled substances from the Department of Justice to the Department of Health and Human Services (HHS).[228] Though the bill did not get very far, it did send an important message to Capitol Hill that public opinion was shifting. Many states and cities have begun to take their own steps towards harm reduction by decriminalizing possession of controlled substances, expanding access to clean syringes, and starting safe-injection sites. While some are opposed to these ideas over fears of promoting drug use, active programs have had great success. "In Washington, D.C., for example, a syringe access program reduced new HIV cases by 70 percent over two years, saving the city an estimated $44.3 million in averted health care costs."[229] There was also an "80 percent drop in new diagnoses of hepatitis B and hepatitis C" in Washington state.[230] These facilities also help people get treatment and other resources. A 30 percent increase in people entering treatment was observed in Vancouver after they opened a safe injection facility.[231] Court diversion programs like

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[226] *War on Drugs,* GLOB. COMM'N ON DRUG POL'Y (2011), https://www.globalcommissionondrugs.org/wp-content/themes/gcdp_v1/pdf/Global_Commission_Report_English.pdf.
[227] *Id.*
[228] Drug Policy Reform Act of 2021, H.R. 4020, 117th Cong. (2021).
[229] Betsy Pearl & Maritza Perez, *Ending the War on Drugs*, CTR. FOR AM. PROGRESS (June 27, 2018), https://www.americanprogress.org/article/ending-war-drugs/.
[230] Pearl, *supra* note 12 (citing Monica S. Ruiz et al., *Impact Evaluation of a Policy Intervention for HIV Prevention in Washington, DC*, 20 AIDS & BEHAV. 2933 (2016)).
[231] *Id.*

Law Enforcement Assisted Diversion (LEAD) permit police to refer people to social services or therapy instead of making arrests related to minor drug offenses. The data showed people in the program were "58 percent less likely to be rearrested" and "33 percent more likely to have an income or benefits, 46 percent more likely to be employed or in vocational training, and 89 percent more likely to obtain permanent housing."[232] Data showed a $2,100 per participant yearly decrease in the expenses of the criminal and judicial systems.[233]

Addressing the Issues with the DEA Scheduling

The DEA has actively fought the de- or rescheduling of substances. Their outright refusal to acknowledge decades of legitimate research and maintain that these substances have "no accepted medical use" is not only factually wrong, but also negatively impacting our society. One of the main reasons that rescheduling is such a huge deal is that by keeping these substances in a category that says there is no accepted medical use, the government is restricting the ability of researchers to get samples of the substances to actually research potential medical uses. Rescheduling would open many pathways for those in the biomedical and mental health fields to explore. In 2022, Dr. Sunil Aggarwal filed a petition with the Ninth Circuit requesting a "review of the Drug Enforcement Administration's (DEA) denial of his petition to transfer psilocybin from schedule I to schedule II."[234] Dr. Aggarwal's petition was granted and the court did not mince words calling the DEA's decision, "arbitrary, capricious, an abuse of discretion" and stating, "the DEA failed

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[232] *Id.* (citing SUSAN E. COLLINS ET AL., LEAD PROGRAM EVALUATION: RECIDIVISM REPORT (2015)) (noting that individuals in the LEAD program were 58% less likely to have at least one arrest before evaluation entry); SEEMA CLIFASEFI ET AL., THE IMPACT OF LEAD ON HOUSING, EMPLOYMENT AND INCOME/BENEFITS (2016).

[233] *Id.* (citing SUSAN E. COLLINS ET AL., LEAD PROGRAM EVALUATION: RECRIMINAL JUSTICE AND LEGAL SYSTEM UTILIZATION AND ASSOCIATED COSTS (2015)).

[234] Aggarwal v. United States Drug Enf't Admin., No. 22-1718, 2023 U.S. App. LEXIS 28598, at *1 (9th Cir. Oct. 27, 2023).

to provide analysis sufficient to allow its 'path' to 'reasonably be discerned.'[235] "Even if we inferred that the DEA does require a substance to meet the five-part test for 'currently accepted medical use' in order to be transferred to schedule II, the DEA failed to explain why Aggarwal's submission did not show that psilocybin met the five-part test."[236] The court ordered the DEA to either "clarify its pathway for denying Aggarwal's petition or reevaluate Aggarwal's petition on an open record."[237] There has been similar arbitrary pushback from the DEA with regard to marijuana rescheduling. Insiders claim that "DEA officials are disputing scientific findings from the U.S. Health and Human Services (HHS) that led it to recommend moving marijuana from Schedule I to Schedule III of the Controlled Substances Act (CSA)."[238] According to the report, DEA officials are skeptical of the health agency's assessment that cannabis has some medicinal value and are worried about problems relating to higher THC potency.[239] Despite the DEA's pushback, there is a loophole that will most likely be used. If the FDA approves Lykos' MDMA drug, it will have an "accepted medical use," and would no longer fall under the language of Schedule I. This would trigger "the Secretary of Health and Human Services to recommend that DEA reschedule MDMA; DEA then has 90 days to issue an 'interim final rule' on their decision to reschedule."[240] The same condition would happen for psilocybin and LSD should their drugs receive FDA approval.

Regardless of what the DEA decides to do, members of Congress have stepped up to attempt to address the issue. U.S.

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[235] *Id.*

[236] *Id.* at *2.

[237] *Id.* at *2-3.

[238] Kyle Jaeger, *DEA Officials Reportedly at Odds with Biden Admin Over Marijuana Rescheduling Push*, MARIJUANA MOMENT (Mar. 11, 2024), https://www.marijuanamoment.net/dea-officials-reportedly-at-odds-with-biden-admin-over-marijuana-rescheduling-push/.

[239] *Id.*

[240] Vincent Joralemon, *The FDA Backdoor to MDMA Rescheduling*, PETRIE-FLOM CTR.: BILL OF HEALTH, https://blog.petrieflom.law.harvard.edu/2024/03/19/the-fda-backdoor-to-mdma-rescheduling/ (last visited Feb. 26, 2025).

Senator Cory Booker and U.S. Senator Rand Paul introduced the Breakthrough Therapies Act which will "remove regulatory hurdles that inhibit research and compassionate use access to potentially lifesaving treatments that are heavily restricted by Schedule I of the Controlled Substances Act."[241] According to them the Act would "resolve these problems by expediting the transfer of substances that receive breakthrough therapy designation from Schedule I to Schedule II" and "eliminate unreasonably burdensome rules and regulations that delay or prevent researchers from studying these breakthrough mental health treatments, and will provide access to these promising therapies for eligible patients who urgently need care."[242] If it passes it would have a massive impact on the future of psychedelic medicine and the way the DEA is involved in the approval process.

Another federal success story was the passing of Representative Dan Crenshaw's Douglas Mike Day Psychedelic Therapy to Save Lives Act in 2023.[243] The bill was included in the National Defense Authorization Act ("NDAA") and created a $75 million research grant program to study the therapeutic side of mushrooms."[244] Representative Crenshaw and

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[241] Press Release, Senator Cory Booker, Booker, Paul, Mace, Dean Introduce Bipartisan Legislation to Promote Research and Access to Potential Life Saving Drugs (Mar. 8, 2023), https://www.booker.senate.gov/news/press/booker-paul-mace-dean-introduce-bipartisan-legislation-to-promote-research-and-access-to-potential-life-saving-drugs.

[242] *Id.*

[243] *Crenshaw's Psychedelic Research Provision Signed into Law*, CONGRESSMAN DAN CRENSHAW (Dec. 22, 2023), https://crenshaw.house.gov/2023/12/crenshaw-s-psychedelic-research-provision-signed-into-law; Matthew Choi, *Congress Greenlights Psychedelic Treatment Bill for Active Duty Service Members Suffering from PTSD*, TEX. TRIB. (Dec. 14, 2023, 3:00 PM), https://www.texastribune.org/2023/12/14/ndaa-congress-psychedelics-ptsd-dan-crenshaw/.

[244] Kelly Laco, *'Psychedelics Saved Our Lives': Ex-Navy Seals Including the Lone Survivor Credit Drugs For Helping Them Readjust to Normal Life*, DAILY MAIL (June 19, 2023, 7:33 AM), https://www.dailymail.co.uk/news/article-

Representative Morgan Luttrell are former Navy SEALs. Luttrell, along with his brother Marcus, himself a distinguished former Navy SEAL known as the "Lone Survivor,"[245] as well as Marcus Capone, another former Navy SEAL and founder of TARA Mind, all credit psychedelics with saving their lives after suffering from PTSD.[246] Douglas "Mike" Day, whom the bill is named after was a Navy SEAL who tragically took his own life after being wounded in Iraq. According to Crenshaw psychedelic therapy is "'important' to help treat service members suffering from Post-traumatic Stress Disorder (PTSD) and Traumatic Brain Injuries (TBIs). He said the 'demons that followed' one former SEAL Mike Day home from war led to his eventual suicide."[247]

CONCLUSION

One thing is abundantly clear, the status quo isn't working. This war has gone on for fifty-two years and has cost over $1 trillion and things have only gotten worse.[248] Millions of people have had their lives ruined over mere possession.[249] Drug overdose deaths have jumped from 47,523 in January 2015 to 109,703 in October 2023.[250] It is time to admit that the War on Drugs is a massive failure. Prohibition failed a century ago, and its failure has been repeated over the past five decades. We need to correct many years of misinformation and reexamine these substances with fresh eyes. Like Rep. Crenshaw said "'We

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12204431/Psychedelics-saved-lives-Ex-Navy-SEALs-credit-drugs-helping-readjust-normal-life.html.

[245] LONE SURVIVOR (UNIVERSAL PICTURES 2013). Marcus Luttrell was played by Mark Wahlberg in this film adaptation of his story as the lone survivor of an unsuccessful joint military operation against the Taliban in Afghanistan.

[246] *About Us: Marcus Capone*, TARAMIND, https://taramind.com/team/marcus-capone/ (last visited Feb. 28, 2025); Laco, *supra* note 230.

[247] Laco, *supra* note 230.

[248] Chinni, *supra* note 5.

[249] Pearl, *supra* note 12.

[250] *Provisional Drug Overdose Death Counts*, CTR. FOR DISEASE CONTROL & PREVENTION, https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm (last visited Feb. 28, 2025).

have to think outside the box, we have to do something new."[251] Only then can we hope to expand our minds and address the root causes of our struggles and help our country heal.

[251] Laco, *supra* note 230.