From “Reefer Madness” to “This Is Your Brain on Drugs,” Americans have lived through decades of anti-cannabis propaganda. Legalization is poised to turn this information environment on its head, unleashing a torrent of corporate-funded, pro-cannabis misinformation that regulators cannot prevent or dispel. This appears to be a problem caused by the Supreme Court’s creation and expansion over the past fifty years of First Amendment protections for corporate and commercial speech. Although these doctrines contribute substantially to the problem, this Article shows how it originates in lax antitrust policy rather than expansive First Amendment jurisprudence.

If Congress follows current legalization trends and facilitates the creation of a consolidated commercial cannabis industry, misinformation about marijuana will follow. That industry will have the opportunity, incentive, and ability to draw on successful disinformation campaigns waged by other big businesses, including the tobacco and food-and-beverage industries, to corrupt both the public’s understanding of

* Senior Counsel, New York City Law Department. Former Research Fellow, Harvard Law School, Project on Psychedelics Law and Regulation. J.D., New York University, 2015. B.A., Loyola University Maryland, 2012. The ideas expressed in this Article do not represent those of any organization. Thanks for helpful suggestions and discussions to Rachel Barkow, Genevieve Lakier, Emily Winston, Mike Vitiello, Mason Marks, David A. Simon, Uzezi Abugo, Kiliaen Strong, Alex McDowell, Lidia Angelatos, and Hercules Angelatos. Thank you also to the editors of the American University Law Review.
cannabis science and the science itself. Even with the benefit of foresight, legal institutions are hamstrung in their response to this problem. The First Amendment’s protections of corporate and commercial speech foreclose many of the regulatory options. Several options remain, including fraud prosecutions, government speech identifying cannabis’s health effects, and administrative regulation of labeling and advertising. But these responses are incomplete, inadequate, and vulnerable to industry capture, constitutional invalidation, and corporate evasion.

Ultimately, misinformation about marijuana is an unavoidable cost of a consolidated cannabis industry. Even abolishing the corporate and commercial speech doctrines, although helpful, would not get at the root problem: excessive private power. To effectively address the threat of corporate-funded misinformation about cannabis science, Congress must prevent the creation of a consolidated industry by ratifying and bolstering the existing state bans on interstate and international commerce in cannabis, among other measures.

TABLE OF CONTENTS

Introduction ............................................................................................................. 2159
I. The Looming Cloud of Misinformation About Marijuana .......... 2165
   A. The Tobacco Industry’s Disinformation ................................. 2166
   B. The Food-and-Beverage Industry’s Disinformation .......... 2168
   C. A Consolidated Cannabis Industry’s Disinformation .......... 2170
      1. The Vulnerability of Cannabis Science ...................... 2170
      2. A Consolidated Cannabis Industry ......................... 2172
      3. Misinformation About Marijuana .......................... 2175
II. Addressing Corporate Disinformation Directly ...................... 2179
   A. Legislative Solutions ................................................... 2179
      1. First Amendment “Speech” by Corporations .......... 2180
      2. Banning or Burdening Corporate Disinformation ...... 2184
      3. Prior Restraints on Fraud .................................... 2187
   B. Judicial Solutions ....................................................... 2190
      1. The Constitutionality of Fraud Prosecutions .......... 2190
      2. Liability for Corporate Disinformation ................. 2193
      3. Corporate Disinformation Eludes Liability ............. 2200
   C. Administrative Solutions ............................................ 2205
      1. Government Speech ........................................... 2205
         a. Science Funding .......................................... 2205
         b. Direct Government Speech ........................... 2209
      2. Compelling Industry Speech ................................ 2211
INTRODUCTION

In the era of fake news, conspiracy theories, and state-sponsored disinformation, one pernicious source of misinformation deserves more attention: big business.1 History shows that, when public health...
threatens profits, corporate interests reshape both the popular understanding of science and science itself. The tobacco industry wrote the disinformation playbook when it attacked the science showing that cigarettes are addictive and cause cancer. This model inspired the proliferation of corporate propaganda across many industries, including the oil-and-gas industry’s denial of climate science and the food-and-beverage industry’s capture of nutrition science. A consolidated commercial cannabis industry—that is, one composed of a small number of large, for-profit companies—could be the next example.

For decades, commentators and activists have advanced an increasingly persuasive and well-supported argument against cannabis prohibition and the broader War on Drugs. They have argued that it is expensive to wage, ineffective at its own goal of eliminating or suppressing cannabis consumption, and accompanied by unacceptable consequences at home and abroad, including racial injustice, violence, eroded civil liberties, and ballooning prison populations.

The case against cannabis prohibition has increasingly persuaded voters. Starting with California in 1996, thirty-seven states and four territories have legalized medical marijuana.

Jackson, supra note 1; see Jack, supra note 1, at 4–7. “Big business” refers to large, for-profit companies that have influence over social or political policy. See Big business, MERRIAM-WEBSTER, https://www.merriam-webster.com/dictionary/big%20business [https://perma.cc/G6WL-7S8P].

2. Infra Part I.
3. Infra Section IA.
4. Infra Section IB.; see infra notes 278–282 and accompanying text.
5. Infra Section IC.

states and the District of Columbia have legalized adult-use marijuana—five of them in 2021. Today, sixty-eight percent of Americans support adult-use legalization, and forty-four percent live in a state that has already enacted it. Congress has taken notice, with members of both parties introducing legislation to end federal prohibition. Although there are many alternatives to prohibition, the standard model that has emerged from these legalization initiatives finds its roots in activists’ slogan: “[r]egulate marijuana like alcohol.” As this Article explains, one unrecognized cost of this model is widespread, corporate-funded misinformation about cannabis’s health effects.

Of course, misinformation about marijuana will be nothing new; for almost a century, prohibitionist forces have disseminated anti-marijuana propaganda. These forces include church groups, like

9. Id; see also Support for Legal Marijuana Holds at Record High of 68%, GALLUP (Nov. 4, 2021), https://news.gallup.com/poll/356939/support-legal-marijuana-holds-record-high.aspx [https://perma.cc/JL5R-3J7R].
13. See infra Section I.C.
those that funded the infamous 1936 film, *Reefer Madness*; media tycoon William Randolph Hearst; Federal Bureau of Narcotics chief Henry Anslinger; and politicians, like Richard Nixon. These prohibitionists repeatedly made false and racist claims about the dangers of marijuana, arguing that it led men to murder and women to promiscuity and tying the substance to anti-Mexican prejudice by popularizing the Spanish term “marijuana,” rather than the English term “cannabis.” This led to a federal prohibition that falsely classifies marijuana as a drug with high potential for abuse, no accepted medical use, and greater danger than cocaine or methamphetamine. In light of this history, few are attuned to the threat of overcorrection.

Current science suggests that cannabis has several medicinal benefits and is relatively innocuous compared to tobacco or alcohol. Yet, there are already two widespread myths exaggerating cannabis’s relative safety: that it is harmless and that it is not addictive. In addition, cannabis companies are trying to establish new myths by marketing the substance as a general wellness product and claiming, with little evidence, that it can help fight cancer or mend broken bones. In 2018, drug-policy expert Mark Kleiman opined that the misconceptions regarding harmlessness and addictiveness are “partly an overreaction against ‘reefer madness’ propaganda, partly the product of the zeal of legalization advocates, and partly a result of the skilled marketing and lobbying efforts of the cannabis industry.” The industry is already wielding these myths to promote cannabis use disorder, a condition roughly synonymous with addiction that increases both profits for industry and adverse physical, mental, and

---

17. See infra Section I.C.3.
19. See infra Section I.C.3.
social consequences for consumers. As the industry gains wealth and power, it will increasingly have the incentive and opportunity to perpetuate these misconceptions, which could be the next generation's version of the myths that secondhand smoke is not dangerous and that exercise is the best way to lose weight.

This is the first article to identify that corporate-funded misinformation about marijuana is an unavoidable result of a consolidated commercial cannabis industry. This analysis requires the discussion of several far-flung strategies for using legal institutions to address corporate propaganda—from prior restraints on fraud to packaging and labeling regulations—because, when the Supreme Court holds one regulatory option unconstitutional, it often claims that other options are available and adequate. Section II of this Article disproves those claims by showing how big business has used its financial might to invalidate many regulatory options, twist others to its advantage, and side-step the ones that remain.

Although some scholars have written about the First Amendment and the cannabis industry, none have addressed misinformation. This Article is also the first legal scholarship to identify that corporate-funded misinformation about science finds its roots in lax

21. Infra Section I.C.3. Tobacco companies employed a similar strategy when they promoted misinformation about the addictiveness of nicotine, thereby increasing the likelihood that their customers would become addicted to the product. Infra Section IA.

22. Infra Section I.C.3.

23. See infra Sections IA–B.

24. See, e.g., Sorrell v. IMS Health Inc., 564 U.S. 552, 578–79 (2011) (reasoning that while State may not ban or burden corporate speech that is not false or misleading, it can effectively address corporate assertions through its own persuasive speech).

25. In fact, this is part of a concerted strategy for big business to expand its influence in every branch of government and in the court of public opinion. See Memorandum from Lewis F. Powell, Jr. to Eugene B. Sydnor, Jr., Chairman, Educ. Comm., U.S. Chamber of Comm. (Aug. 23, 1971), https://law2.wlu.edu/deptimages/Powell%20Archives/PowellMemorandumPrinted.pdf [https://perma.cc/B42V-T7RK]. Justice Powell set out this strategy in his famous "Powell Memorandum," which he drafted only months before he took his seat on the Supreme Court and only years before he drafted the Supreme Court opinions creating the corporate- and commercial-speech doctrines. Id.

antitrust policy rather than expansive First Amendment jurisprudence. There is growing literature regarding the use of antitrust law to address information problems. Scholars have discussed how the consolidation of traditional and social media companies can damage the information environment; how corporate disinformation can enhance market power and harm competition; and how monopoly power can generate political propaganda. Scholars have also identified corporate funded misinformation about science as a First Amendment problem. This Article is the first to combine these literatures.

The threat of corporate-funded misinformation about science is not exclusive to the cannabis industry, but it is particularly important and timely with respect to that industry for three reasons. First, the nascent state of cannabis science makes it unusually susceptible to disinformation, making the threat unusually predictable. Second, activists, politicians, and scholars are unaware of this threat and in fact believe that legalizing cannabis and regulating it like alcohol will bring added clarity about its health effects. Third, the cannabis laws in the United States are rapidly changing, giving lawmakers a unique and time-sensitive opportunity to address the problem before a consolidated industry arises and uses its wealth and influence to

---

31. *Infra* Sections I.C.1, I.C.3.
32. *Infra* Section I.C.1.
These three factors distinguish cannabis from alcohol, tobacco, and other legal substances.

This Article proceeds in three sections. Section I uses the tobacco and food-and-beverage industry examples to illustrate a consolidated cannabis industry’s incentive and opportunity to disseminate misinformation about cannabis science. Section II explores the non-systemic measures legal institutions can implement to address this problem, from fraud prosecutions to government speech, such as science funding or ad campaigns identifying cannabis’s health effects. Section II finds that the First Amendment’s protections of corporate and commercial speech—doctrines that are less than 50 years old—foreclose many of the regulatory options, protecting any corporate propaganda that is not itself false or misleading.

Yet, big business has several means of disseminating misinformation without crossing that line. As a result, even the optimal government response is incomplete. It is also an expensive patchwork of measures vulnerable to political and regulatory capture, constitutional invalidation, and corporate evasion. Section III then shows that, even if the Supreme Court were to abandon the corporate and commercial-speech doctrines, an unlikely proposition, it would not address the root of the problem: excessive corporate power. Section III concludes that, to successfully counter the threat of corporate-funded misinformation about marijuana, government should pair the non-systemic measures identified in Section II with ratification and expansion of the existing state bans on interstate and international commerce in cannabis.

I. THE LOOMING CLOUD OF MISINFORMATION ABOUT MARIJUANA

Science can be inconvenient. Lung cancer, addiction, and obesity are bad for business. This incentivizes businesses to fight the science, and history confirms they will do just that. The tobacco industry did it when it denied the adverse health consequences and addictiveness of first and secondhand smoke. The food and beverage industry is doing

34. See sources cited infra note 217 (citing the foundational cases).
35. See infra notes 40–43, 54–62 and accompanying text (discussing the origins of the tobacco, food-and-beverage, and oil-and-gas industries’ disinformation campaigns).
36. See infra Section I.A.
it now by, among other things, shifting the blame for obesity to sedentary lifestyles while promoting products like dark chocolate as health foods.\textsuperscript{37} Sections I.A and I.B discuss those historical examples, respectively, before Section I.C shows how a consolidated cannabis industry can follow them by undermining science about cannabis’s negative health effects and manufacturing science about its positive health effects.\textsuperscript{38} When science pits profits against public health, big business can and will turn that science into a public relations battle, using its financial might to corrupt both the public’s understanding of science and the science itself.

A. The Tobacco Industry’s Disinformation

The tobacco industry began a disinformation campaign in the early 1950s. By then, the evidence that cigarettes cause cancer had been mounting for decades.\textsuperscript{39} But this science did not trigger an industry response until, in 1952, a \textit{Reader’s Digest} article called “Cancer by the Carton” sent tobacco sales spiraling.\textsuperscript{40} The industry responded to what it saw as an existential threat by banding together, hiring a public-relations team, and developing a position that it would maintain for over forty years: that cigarettes were not a proven cause of lung cancer or other diseases and that, before reaching any conclusions, more research was necessary.\textsuperscript{41}

This “open question” position was at the center of the infamous tobacco playbook, and the industry’s other tactics were designed to bolster it.\textsuperscript{42} For example, because the industry recognized that it was not the most credible source, it paid seemingly unbiased agents and front groups (i.e., organizations that purport to represent one agenda

\textsuperscript{37}. See infra Section I.B. \\
\textsuperscript{38}. See infra Section I.C. \\
\textsuperscript{40}. Kelly D. Brownell & Kenneth E. Warner, \textit{The Perils of Ignoring History: Big Tobacco Played Dirty and Millions Died. How Similar Is Big Food?}, 87 \textit{Milbank Q.} 259, 260 (2009). \\
\textsuperscript{41}. \textit{Id.} at 260, 264–66; United States v. Philip Morris USA Inc., 566 F.3d 1095, 1106 (D.C. Cir. 2009) (per curiam). \\
\textsuperscript{42}. Philip Morris, 566 F.3d at 1106; Brandt, supra note 39, at 65.
while actually serving the interests of a hidden sponsor)\textsuperscript{43} to spread its message.\textsuperscript{44}

The tobacco industry also coordinated, funded, and advertised its own science, both directly and through these third parties.\textsuperscript{45} That science was not meant to discover the truth, but to support the industry’s position in the “debate” about cigarettes’ health effects.\textsuperscript{46} Science historian Allan Brandt explains that the tobacco industry “had no interest in answering a scientific question.”\textsuperscript{47} The industry’s “goal was to maintain vigorous control over the research program [and] to use science in the service of public relations.”\textsuperscript{48} Accordingly, it suppressed any research that did not advance that mission.\textsuperscript{49} The industry was looking to generate “marketable science,”\textsuperscript{50} and the industry had no use for science it could not market.\textsuperscript{51}

The tobacco industry used these tactics, among others, to misinform Americans for almost fifty years, first to undermine the science that cigarettes cause lung cancer and eventually to undermine the science that cigarettes are addictive and harm non-smokers who inhale secondhand smoke.\textsuperscript{52} This allowed the industry to delay the drop in sales, anti-smoking regulations, and tort liability attendant to public knowledge of the truth—sickening and killing millions of smokers and non-smokers in the process.\textsuperscript{53}

\textsuperscript{43} Front Groups, TOBACCO TACTICS (July 24, 2019, 2:17 PM), https://tobaccotactics.org/wiki/front-groups [https://perma.cc/JJ2H-GPGW].
\textsuperscript{44} MARION NESTLE, UNSAVORY TRUTH: HOW FOOD COMPANIES SKEW THE SCIENCE OF WHAT WE EAT 13–14 (2018); see also infra Section II.B.3 (discussing the tobacco and food-and-beverage industries’ use of front groups to spread disinformation).
\textsuperscript{45} E.g., Philip Morris, 566 F.3d at 1108.
\textsuperscript{46} Id.
\textsuperscript{47} Brandt, supra note 39, at 66.
\textsuperscript{48} Id.
\textsuperscript{49} Philip Morris, 566 F.3d at 1108.
\textsuperscript{50} Id.
\textsuperscript{51} Cf. NESTLE, supra note 44, at 175 (“When work is funded by industry or an industry-funded group, it needs to promote industry interests unambiguously if the relationship is to continue.”).
\textsuperscript{52} Philip Morris, 566 F.3d at 1108; United States v. Philip Morris USA, Inc., 449 F. Supp. 2d 1, 13, 27 (D.D.C. 2006), aff’d in part, vacated in part, 566 F.3d 1095 (D.C. Cir. 2009).
\textsuperscript{53} See infra Section II.B.2.
B. The Food-and-Beverage Industry’s Disinformation

Faced with calls for soda taxes in the mid-to-late 2000s, Coca-Cola sought to counter the evidence connecting soda to obesity by shifting the blame to a lack of exercise.\textsuperscript{54} Leaked emails show that the Coca-Cola executive in charge of this campaign saw it as part of a “war between the public health community and private industry” and sought to win that war by training journalists and funding scientists to conduct both “defensive and offensive research.”\textsuperscript{55} Coca-Cola spent over $140 million on these efforts from 2008 to 2017, much of which went to the Global Energy Balance Network, an ostensibly independent nonprofit devoted to combating America’s obesity epidemic.\textsuperscript{56} Coca-Cola’s investment in this front group yielded almost 400 articles, published in over 150 different journals.\textsuperscript{57} These articles typically found that exercise is more effective at combating obesity than diet (it is not),\textsuperscript{58} that sugar and soda are not serious health risks (they are),\textsuperscript{59} and that evidence to the contrary is erroneous (it is not).\textsuperscript{60}

Coca-Cola’s disinformation campaign was nothing new. Food and beverage companies began combatting studies linking sugar to obesity, type-2 diabetes, heart disease, tooth decay, stroke, gout, and


\textsuperscript{55} Nestle, supra note 4444, at 91–93.

\textsuperscript{56} Id. at 101; O’Connor, supra note 5454; Candice Choi, APNewsBreak: Emails Reveal Coke’s Role in Anti-Obesity Group, Associated Press (Nov. 24, 2015), https://apnews.com/1fd235360ac94dcf893a87e3074a03a5 [https://perma.cc/7RKK-SGLR].

\textsuperscript{57} Nestle, supra note 4444, at 44, at 92.


\textsuperscript{60} Nestle, supra note 4444, at 92.
Alzheimer’s disease in the 1960s.\textsuperscript{61} In those early days, the sugar industry attempted to distract from such studies by shifting the blame to fat and cholesterol.\textsuperscript{62} Now, the industry supplements those efforts with spurious claims that sugar is healthy, either in relation to its competitors (e.g., refined cane sugar is healthier than high-fructose corn syrup) or in general (e.g., dark chocolate is good for the heart).\textsuperscript{63} This debate distracts from the main point: Sugar is sugar, and it is not healthy.\textsuperscript{64}

In a recent effort to rebut the evidence linking sugar to obesity, a trade association representing the makers of Butterfinger, Hershey’s products, and Skittles funded and publicized a study that concluded: “[c]hildren who eat candy tend to weigh less than those who don’t.”\textsuperscript{65} The authors of that study (one of whom privately described its conclusion as “thin and clearly padded”) have written dozens of articles funded by industry and industry groups.\textsuperscript{66} According to Associated Press reporter Candice Choi, those articles “regularly deliver[] favorable conclusions for funders—or as [the researchers] call them, ‘clients.’”\textsuperscript{67}

Today, the food and beverage industry’s money pervades nutrition science.\textsuperscript{68} It funds the full spectrum, from the defensive sugar research described above to the blueberry and pecan industries’ offensive efforts to show that their products are “superfoods”—a marketing term with no nutritional significance.\textsuperscript{69} For the reasons discussed in Section II.A.2, this biases the body of science in favor of corporate
That is no surprise. If corporate investments in marketable science were not profitable, businesses would stop making them.\footnote{Infra Section I.A.2.}

\begin{center}
\textbf{C. A Consolidated Cannabis Industry’s Disinformation}
\end{center}

This Section illustrates the corporate-funded misinformation about cannabis science will follow the advent of a consolidated cannabis industry by discussing (1) the vulnerability of cannabis science to corporate disinformation, (2) the rise of a consolidated cannabis industry, and (3) the industry’s opportunity and incentive to corrupt both cannabis science and the public’s understanding of it.

\begin{center}
\textbf{1. The Vulnerability of Cannabis Science}
\end{center}


The argument is straightforward: although people have been using marijuana for thousands of years, scientists know relatively little about its health effects, largely because of the regulatory thicket they must navigate to access cannabis for research purposes.\footnote{\textit{NAT’L INST. ON DRUG ABUSE}, (Mar. 27, 2020), https://www.drugabuse.gov/drugs-abuse/marijuana/nidas-role-in-providing-marijuana-research [https://perma.cc/ETT4-WGQQ].}

Chief among these hurdles is the Drug Enforcement Agency’s ("DEA") long-time regulations making the University of Mississippi the exclusive source of cannabis for research.\footnote{\textit{NIDA’s Role in Providing Cannabis for Research}, NAT’L ACAD. OF SCI., \textit{The Health Effects of Cannabis and Cannabinoids: The Current State of Evidence and Recommendations for Research 378–79 (2017).}} While the DEA has announced its intention of expanding access to cannabis for research purposes, this change in policy has gone through years of delay and has yet to result in any

\footnote{Id. at 382; Id. at 382; Id. at 382; Id. at 382; Infra note 4444, at 175.}
additional cannabis for researchers.\textsuperscript{75} The substance still is not widely available for research\textsuperscript{76} and, when available, it fails to reflect the cannabis Americans consume. Research-grade cannabis is often low potency, years' old, and frozen rather than fresh. Additionally, many cannabis products like edibles, concentrates, and oils are unavailable to researchers.\textsuperscript{77} In addition to these supply issues, methodological and funding issues impede cannabis research.\textsuperscript{78}

Some foreign and domestic scientists have nonetheless been able to study cannabis, and there is a large body of science about it.\textsuperscript{79} But that science is immature, providing conflicting and/or tentative results on many questions about marijuana's health effects.\textsuperscript{80} The existing research also fails to capture shifts in how Americans consume their cannabis, from the dramatic increase in potency over the past several decades to the rise of “vaping” and “dabbing.”\textsuperscript{81} Nor could the existing research account for the shifts in production, packaging, and consumption that will follow industry consolidation.\textsuperscript{82}

These gaps leave room for further study, as well as for corruption. Removing the regulatory hurdles, through legalization or otherwise,
would indeed lead to more research. If legalization leads to a consolidated cannabis industry, however, it will do more to obscure the truth about cannabis’s health effects than to clarify.\textsuperscript{83}

2. \textit{A Consolidated Cannabis Industry}

Today, the budding commercial cannabis industry operates in the shadow of federal prohibition. This has several consequences. One is that states have been able to limit out-of-state cannabis companies from dealing in their jurisdiction.\textsuperscript{84} Another is that, although some states have taken a lax approach to cannabis advertising,\textsuperscript{85} others have implemented severe restrictions.\textsuperscript{86} Once cannabis cultivation and distribution are legal at the federal level, the Dormant Commerce Clause, the First Amendment, and other business-friendly federal laws will attach, and state restrictions on interstate commerce and advertising will be subject to constitutional invalidation.\textsuperscript{87}

If, as the legalization bills in Congress suggest, the federal government legalizes cannabis into a commercial model similar to alcohol’s,\textsuperscript{88} the emerging cannabis industry will be able to consolidate into a handful of large firms and advertise extensively in national media.\textsuperscript{89} The sports betting industry experienced this type of

\textsuperscript{83}See sources cited infra note 123 and accompanying text.

\textsuperscript{84}Infra Section III.B.1.


\textsuperscript{87}Infra Sections II, III.B.1.


\textsuperscript{89}Title, supra note 33, at 3, 7; infra Sections II.B.1–2; see also T.L Stanley, \textit{Why This Broccoli Is Fed Up With Cannabis Censorship}, ADWEEK (Feb. 7, 2022), https://www.adweek.com/brand-marketing/why-this-brocoli-is-fed-up-with-cannabis-censorship/ [https://perma.cc/2Y6J-RZH2] (discussing a rejected cannabis Super Bowl ad).
consolidation after the federal prohibition ended in 2018. Some argue that it is difficult to predict “whether a mature marijuana industry looks more like that for tobacco or beer, with a few giant corporations dominating, or whether it looks more like the wine industry.” True enough. In 2012, the five largest Californian wine companies—two of which are broader alcohol conglomerates—accounted for over two-thirds of the American wine industry. Additionally, the fact that some sectors of the cannabis industry could buck the American consolidation trend does not contradict the advent of a consolidated cannabis industry. For instance, although certain segments of the beer industry have seen the proliferation of small craft-beer companies, the three biggest beer companies control almost seventy percent of the overall market. Once some cannabis companies become large enough, they will act like big business, regardless of the number of small companies that also deal in marijuana.

This analysis highlights the distinction between two related but distinct qualities: “bigness,” which refers to firm size, and “industry concentration,” which refers to the number of firms

92. CAULKINS ET AL., supra note 11, at 56.
94. See Wu, supra note 9191, at 114–18 (2018) (discussing the consolidation trend).
96. See Wu, supra note 91, at 20 (explaining the difference between “bigness” and “industry concentration”).
competing in individual cannabis market segments, such as the market for “edibles.”

The cannabis industry has yet to reach the bigness or economic concentration that could follow federal legalization, but it is on its way. Today, legal cannabis companies in the U.S. and Canada are bringing in big investments, including from the giants of other sectors, like the tobacco, beer, and pharmaceutical industries. Many cannabis companies are already expanding across state and national lines and advertising extensively. No wonder the emerging marijuana industry has already begun acting like big business, investing heavily in politics and organizing industry groups reminiscent of those the tobacco and food and beverage industries, among others, have used to disseminate propaganda and shape laws in their favor.

These investments in politics are turning long-time drug warriors into legalization activists. Take former Republican Speaker of the House John Boehner, who abandoned his long-time opposition to

97. Id.
100. Lopez, supra note 12.
101. See Kary, supra note 98 (discussing the U.S. Cannabis Council); Leslie Gielow Jacobs, Memo to Cannabis Regulators: The Expression Hair Design Decision Does Not Limit Your Broad Authority to Restrict All Forms of Discounting, 49 U. PAC. L. REV. 67, 68 (2017) (stating that cannabis companies “are following the same trajectory of tobacco and alcohol” in terms of marketing); ADAM WINKLER, WE THE CORPORATIONS: HOW AMERICAN BUSINESSES WON THEIR CIVIL RIGHTS xxi (2018) (stating that larger firms are more politically active and sophisticated in that activity).
legalization only after he left office and obtained significant shares in and a seat on the board of Acreage Holdings, a Canadian cannabis investment company.\textsuperscript{102} This financial interest has led him to lobby Congress in favor of legalization, to recruit investors to the burgeoning marijuana industry, and to organize that industry—by founding the National Cannabis Roundtable, for example—to help amplify its voice.\textsuperscript{103} Boehner is not alone.\textsuperscript{104} Former Massachusetts Governor William F. Weld also advises Acreage, and former congressmen Tom Daschle, Joseph Crowley, Dana Rohrabacher, and Carlos Curbelo are affiliated with cannabis companies.\textsuperscript{105} The cannabis industry has also contributed generously to the election and re-election campaigns of politicians like former New York Governor Andrew Cuomo, who then reversed his long-time opposition to legalization.\textsuperscript{106} Predictably, after setting its sights on politics, the burgeoning cannabis industry will target science.

3. Misinformation About Marijuana

Current science suggests that, compared to tobacco, or even alcohol, cannabis is an innocuous substance that has several medicinal benefits, including treating pain, suppressing nausea, and stimulating appetite.\textsuperscript{107} Indeed, contrary to the prohibitionist propaganda discussed above,\textsuperscript{108} most cannabis users have positive experiences.\textsuperscript{109}

Despite the myth, however, cannabis is not harmless. Though preliminary in nature, current evidence correlates cannabis with


\textsuperscript{103} Id.

\textsuperscript{104} Id.

\textsuperscript{105} Id.


\textsuperscript{108} See supra notes 14–16 and accompanying text.

several short-term consequences, including paranoia, anxiety, psychosis, altered judgment, and impaired short-term memory and motor coordination.\textsuperscript{110} The current evidence also links cannabis to several long-term consequences, including poor educational outcomes, cognitive impairment, altered brain development, diminished quality of life, increased risk of chronic respiratory tract disorders, increased risk of psychotic disorders, injuries, motor vehicle collisions, and suicide.\textsuperscript{111} Unsurprisingly, the correlation between cannabis and many of these longer-term risks increases with the volume, frequency, and duration of chronic use.\textsuperscript{112}

Despite the myth that cannabis is not addictive, moreover, long-term risks include addiction.\textsuperscript{113} According to Kleiman, substantial numbers of marijuana consumers use the substance “more, or more often, than they want to; they’ve tried, unsuccessfully, to cut back or quit; they find that cannabis interferes with their other interests and responsibilities; and their use has led to conflict with people they care about.”\textsuperscript{114} According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), the main authority for psychiatric diagnoses, any combination of two or more of these or similar symptoms qualify individuals for “cannabis use disorder”—or, roughly, addiction.\textsuperscript{115} Surveys indicate that eighteen to thirty percent of people who identify as current cannabis users report symptoms that qualify them for


\textsuperscript{111} Sources cited supra note 110; Ivan Urits, Karina Charipova, Kyle Gress, Nathan Li, Amnon A. Berger, Elyse M. Cornett et al., Adverse Effects of Recreational and Medical Cannabis, 51 PSYCHOPHARMACOLOGY BULL 94, 100–02 (2021).

\textsuperscript{112} Urits et al., supra note 111, at 100–02.

\textsuperscript{113} Bahji et al., supra note 110, at 2; Volkow et al., supra note 110, at 2200 tbl. 1.


\textsuperscript{115} AM. PSYCHIATRIC ASS’N, DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS (DSM-5) 509 (2013).
cannabis use disorder. In addition, forty-seven percent of regular cannabis users suffer withdrawal symptoms, which include irritability, anxiety, depressed mood, sleep and appetite disturbance, headaches, sweating, and nausea.

There is a clear need for more research about cannabis’s health effects. As stated above, several obstacles stand in the way of this research, including lack of funding, methodological concerns, and, most importantly, regulatory barriers. There are many ways to remove the regulatory barriers—including not only various forms of legalization but also administrative or legislative actions short of legalization. If Congress removes the regulatory barriers by legalizing cannabis and allowing for the creation of a consolidated commercial industry, the remaining funding and methodological concerns, along with the nascent state of cannabis science, will allow the industry to corrupt the science regarding cannabis’s positive and negative health effects, as well as the public’s understanding of that science.

The industry can do so offensively, by twisting the substance’s legitimate therapeutic and medicinal uses into sales pitches for recreational use, or simply by claiming benefits that do not exist. True or not, these benefits will range widely, from pain relief and depression treatment to improving lung capacity, losing weight, and even fighting cancer and mending broken bones. A consolidated


118. See supra notes 73–78 and accompanying text.

119. See supra notes 73–78 and accompanying text; Caulkins et al., supra note 11, at 49–50.

120. See, e.g., supra notes 63–71 and accompanying text.

121. See 20 Health Benefits of Cannabis that Everyone Should Know, Health Europa (July 22, 2019), https://www.healtheuropa.eu/health-benefits-of-cannabis/92499 [https://perma.cc/9C2V-3BBC] (claiming these benefits); Julie H. Ishida, Alyssandra J. Zhang, Stacey Steigerwald, Beth E. Cohen, Marzieh Vali, & Salomeh Keyhani, Sources of
cannabis industry can also spread defensive disinformation about cannabis science by denying or distorting any science linking marijuana to negative health consequences.\textsuperscript{122}

Most likely, the cannabis industry will follow the tobacco industry's lead by attempting to perpetuate the myths that marijuana is harmless and non-addictive while nevertheless promoting cannabis use disorder with advertisements encouraging overuse and with efforts to make the substance more physically addictive.\textsuperscript{123} After all, the moderate majority of cannabis users are of little commercial value compared to the minority of heavy users, who account for the bulk of sales.\textsuperscript{124} In Colorado, for example, the heaviest thirty percent of cannabis consumers account for almost ninety percent of the demand.\textsuperscript{125} This is a well-established phenomenon in the alcohol industry, where the top ten percent of consumers account for over half of the demand.\textsuperscript{126} By promoting cannabis use disorder, the cannabis industry will increase users’ risks of long-term health consequences, which are still poorly


124. Testimony of Mark A.R. Kleiman, Professor of Public Policy, New York University, to the Committee on Foreign Affairs and International Trade, Senate of Canada [Mar. 22, 2018], https://marroninstitute.nyu.edu/blog/mark-kleiman-canadian-senate-address [hereinafter Kleiman Testimony].


understood. The industry will also increase users’ risks of harms that stem from addiction itself, such as neglected responsibilities and damaged interpersonal relationships.

History suggests that a consolidated cannabis industry will promote cannabis use disorder with aggressive marketing tactics, including by generating marketable science and creating front groups to tout specious health benefits and deny adverse health consequences. To illustrate the limited means by which legal institutions can combat this disinformation, the next Section will elaborate on the methods a consolidated cannabis industry can use to spread it.

II. Addressing Corporate Disinformation Directly

This Section explores the means by which legal institutions can address a consolidated cannabis industry’s disinformation directly. The First Amendment’s protection of corporate and commercial speech forecloses many of these options. Several remain, and this Part advocates their adoption. Those solutions are incomplete because although big business has proven adept at spreading misinformation without itself uttering false and misleading speech, the First Amendment protects corporate propaganda short of that line. What’s more, a consolidated cannabis industry can use its wealth and sophistication not only to spread disinformation, but also to influence government countermeasures, to challenge them in court, and to evade them when all else fails.

A. Legislative Solutions

If not for the Supreme Court’s creation of First Amendment protections for corporate and commercial speech over the last fifty years, there would be a simple solution to some forms of corporate propaganda: ban it. Among other commentators, nutrition scientist Marion Nestle has proposed this solution in the context of corporate

127. See supra notes 110–112 and accompanying text.
128. See supra notes 113–117 and accompanying text.
129. See supra Sections I.A–B.
130. Infra Section II.A.
131. Infra Section II.B.3.
132. Infra Section II.A.2.
133. Infra Sections II.B–C.
funding for science.\textsuperscript{134} Other commentators, including epidemiologist David Michaels, have sought to retain corporate funding while excising the corporate skew through a concept sometimes referred to as "sequestration."\textsuperscript{135} The idea is that, rather than banning corporate funding altogether, the government should require it—exclusively via contributions to a fund over which there is no corporate control.\textsuperscript{136}

This Section will show that the Supreme Court’s First Amendment case law prohibits these and most other prior restraints on corporate propaganda. Although government may take the bolder step of prohibiting cannabis altogether, once prohibition ends, it generally may not then take the smaller step of banning or even burdening the legal cannabis industry’s speech.\textsuperscript{137} The result is that legislation is too blunt an instrument to deal with corporate propaganda, except insofar as the legislation requires case-by-case application by prosecutors or regulators.

1. First Amendment “Speech” by Corporations

A consolidated cannabis industry can disseminate disinformation in many ways, including advertisements, packaging, public statements, messaging to the media, and funding of scientists, front groups, agents, and allies.\textsuperscript{138} All of these methods fall within the First Amendment’s ambit. Whether the methods involve traditional speech or spending money, which is also speech for First Amendment purposes,\textsuperscript{139} they fall into two overlapping categories: “corporate speech” and “commercial speech.”\textsuperscript{140}

The speaker’s identity is the sole determinant of whether the speech qualifies as “corporate.” If uttered by a corporation, all of the forms of speech listed above constitute corporate speech. This simple

\begin{itemize}
\item \textsuperscript{134} Nestle, supra note 44, at 182 (discussing banning as a good but unlikely option).
\item \textsuperscript{136} See Michaels, supra note 135, at 211–12.
\item \textsuperscript{137} See 44 Liquormart, Inc. v. Rhode Island, 517 U.S. 484, 513–14 (1996) (holding that, absent prohibition, there is no "vice" exception to the First Amendment).
\item \textsuperscript{138} See supra Part I.
\item \textsuperscript{139} See, e.g., First Nat’l Bank of Bos. v. Bellotti, 435 U.S. 765, 784–85 (1978) (holding that certain corporate political expenditures are fully protected speech under the First Amendment).
\item \textsuperscript{140} See infra notes 148–162 and accompanying text.
\end{itemize}
determination has little doctrinal value, because courts treat corporate speech like any other; it gets “the full panoply of [First Amendment] protections.” For instance, corporate funding of science or politics is fully protected corporate speech. The Court created the corporate right to make political contributions in the 1970s and famously extended that right to corporate “independent expenditures” in the 2010 case Citizens United v. Federal Election Commission. This was an important expansion of businesses’ ability to influence government actions, because it allows them to sidestep the limits on direct contributions to candidates, which are constitutional when applied to both individuals and corporations. Because courts treat corporate speech no differently than the speech of individuals, laws restricting it on the basis of its content are subject to strict scrutiny. Thus, these restrictive laws are almost always unconstitutional, unless they fall into a category of unprotected or less protected speech.

Fraud and defamation are categories of speech that do not get First Amendment protection, whether uttered by a corporation or an individual. Accordingly, laws restricting those forms of speech are subject to rational basis review and thus are almost always constitutional.

143. See Bellotti, 435 U.S. at 784–85.
146. See Bolger, 463 U.S. at 67–68 (noting that public comments made by corporations are entitled to the full protection of the First Amendment).
147. See id.
149. See id. (explaining that the government may formulate “content-based restrictions,” so long as the restrictions are confined to defamation, fraud, or another type of speech not protected by the First Amendment). But see infra Section II.A.3 (explaining that prior restraints on false statements are unconstitutional).
Other categories of speech, including commercial speech, get an intermediate amount of First Amendment protection, whether uttered by a corporation, a lawyer, or a pharmacist. Once a court determines that the speech at issue is commercial, it will assess laws restricting it under Central Hudson's\textsuperscript{150} intermediate scrutiny and laws compelling it under Zauderer's\textsuperscript{151} even less exacting scrutiny.\textsuperscript{152} Central Hudson has repeatedly come under fire, both in the Supreme Court, where justices have tried and failed to replace it,\textsuperscript{153} and in the academy, where scholars have argued that the test's "fit" requirement is "a blank check for activist judges to de- or re-regulate on behalf of businesses."\textsuperscript{154} In Section II.C.3, this criticism will come into focus.\textsuperscript{155}

To determine whether speech is commercial, courts look to the character of the speech itself; again, the speaker's identity is not relevant to the analysis. In Bolger v. Youngs Drug Products Corp., the Supreme Court explained that commercial speech either (1) does "no more than propose a commercial transaction" or (2) is an advertisement, refers to a specific product, and is economically motivated.\textsuperscript{156} The Court strongly suggested that speech satisfying all three of the latter factors is commercial, but it "express[ed] no opinion" on whether speech is commercial if it satisfies only one or two of those factors.\textsuperscript{157} Other cases provide some clarification. First, the Court has clarified that an economic motivation, alone, does not make speech

\begin{footnotesize}
\begin{enumerate}
\item[150.] 447 U.S. 557 (1980).
\item[151.] 471 U.S. 626 (1985).
\item[153.] See, e.g., 44 Liquormart, Inc. v. Rhode Island, 517 U.S. 484, 488-517 (1996) (plurality opinion) (attempting to replace the Central Hudson test but failing to garner a majority, with this case being decided based on a 5-4 divided court).
\item[155.] See infra notes 472-475 and accompanying text.
\item[157.] See Bolger, 463 U.S. at 66 n.13, 67 n.14.
\end{enumerate}
\end{footnotesize}
Second, the Court has indicated that “direct comments on public issues,” like politics or science, receive full First Amendment protection. Finally, where commercial speech is “inextricably intertwined with otherwise fully protected speech,” it loses its commercial character. Whether uttered by corporations or individuals, that speech receives full First Amendment protection, meaning that laws restricting or compelling it on the basis of its content are subject to strict scrutiny.

This guidance is not always easy to apply, especially because courts have been increasingly willing to ratchet up protections for commercial speech by collapsing its distinction from non-commercial speech. For now, however, the Supreme Court’s First Amendment jurisprudence indicates that advertising, packaging, and sales activity are commercial speech and that corporate funding of science is not.

158. See Bd. of Trs. of the State Univ. of N.Y. v. Fox, 492 U.S. 469, 482 (1989) (“While these examples consist of speech for a profit, they do not consist of speech that proposes a commercial transaction, which is what defines commercial speech.”).

159. Bolger, 463 U.S. at 68.


162. Riley v. Nat’l Fed’n of the Blind of N.C., Inc., 487 U.S. 781, 796 (1988). See generally United States v. Philip Morris USA Inc., 566 F.3d 1095, 1144 (D.C. Cir. 2009) (per curiam). In that case, the D.C. Circuit appears to hold that the tobacco industry’s “various claims—denying the adverse effects of cigarettes and nicotine in relation to health and addiction—constitute commercial speech,” because each of those statements was disseminated to persuade the public to purchase cigarettes. Id. at 1144. But the court goes on to acknowledge that some of the tobacco industry’s “marketing efforts” may have been inextricably intertwined with the industry’s “past participation in the public controversy surrounding smoking and health.” Id. The D.C. Circuit does not state with specificity which of the tobacco industry’s statements fall into the former category and which fall into the latter. Id. Instead, it holds that the “intentionally fraudulent character of the noncommercial public statements” removes them from the First Amendment’s ambit, and thus prevents them from turning the commercial speech into “intertwined” corporate speech. Id.

163. See, e.g., Nigel Barrella, First Amendment Limits on Compulsory Labeling, 71 Food & Drug L.J. 519, 525–26 (2016) (discussing the limits of what counts as “commercial speech”); Tamara R. Piety, Brandishing the First Amendment: Commercial Expression in America 22 (2012) (arguing that commercial speech is much broader than the Court has suggested to date).


165. See supra notes 162–63 and accompanying text.
Press releases about new studies and statements on company websites about cannabis science are closer to the nebulous line.166

2. Banning or Burdening Corporate Disinformation

In Sorrell v. IMS Health Inc.,167 the Supreme Court held that the government cannot ban or burden corporate propaganda—whether commercial or non-commercial—unless the government shows that it is “false or misleading within the meaning of th[e] [Supreme] Court’s First Amendment precedents.”168

This is significant because a consolidated cannabis industry can distort the truth without crossing that line.169 One example is science funding. Certainly, a consolidated cannabis industry can fund shoddy science, some of which may be false or misleading; the tobacco and food-and-beverage industries are both guilty of this.170 But most industry-funded science is not false or misleading; it is merely biased and incomplete.171

This skew occurs whether the scientists realize it or not.172 Michaels argues that, after decades of corporate disinformation campaigns, there is an entire industry of “mercenary scientists” employed by “product defense firms.”173 With the help of lawyers, these firms have developed a series of techniques to re-shape science to their sponsors’ desire without running afoul of fraud laws.174 In addition to these mercenary scientists are those who do not know—and indeed vehemently deny—that corporate funding biases them in any way.175

166. See, e.g., Barrella, supra note 163, at 525 (“[A] company publishing a press release about a new study on an off-label use or even simply posting a favorable journal article on the company’s website, might be closer to the line between purely commercial and non-commercial speech.”); infra Section II.B.1 (discussing Nike Inc. v. Kasky, 539 U.S. 654, 655 (2003) (per curiam)).
168. Id. at 564–66, 579.
169. See supra Section II.B.3.
170. See, e.g., Choi, supra note 65; White & Bero, supra note 135, at 113–14.
172. Id. at 175.
173. See Michaels, supra note 135, at 228–31, 237–49 (discussing the prevalence of biased corporate-sponsored science and its effects on political outcomes).
175. See Nestle, supra note 44, at 175 ("[E]ven small [financial] contributions can exert influence [on researchers].").
In most cases, they are mistaken, because extensive research supports the existence of a “funding effect”: no matter who the researchers are, studies funded by private sponsors tend to provide results the sponsors seek.176 The funding effect literature explains this phenomenon by reference to “motivated reasoning,” explaining that the funding source can be a powerful motivator for the reasoning of scientists, who must make many decisions throughout a laboratory experiment that can shape the outcome.177

In other words, not only can a consolidated cannabis industry selectively fund research supporting the industry position and thereby give an outsize voice to a minority view,178 its money can introduce bias at every stage of the research process—from the research question to the design and methods to the evidence gathering and finally the reporting.179

The Supreme Court addressed an analogous form of corporate propaganda in Sorrell.180 The issue there was the pharmaceutical industry’s “detailing”: its private visits to doctors’ offices meant to promote brand name drugs over generics, which are far cheaper for patients and far less profitable for industry.181 Vermont’s legislature found that this practice hurt residents by unnecessarily increasing the cost of health care.182 As a solution, Vermont burdened the industry’s detailing by banning the use for marketing purposes, absent the doctor’s consent, of prescriber-identifying information—information that allows detailers to target their visits to particular doctors and tailor their message to that particular doctor’s preference, attitude, and prescriber style.183

176. E.g., MICHAELS, supra note 135, at 208, 233–37; NESTLE, supra note 44, at 35.
177. See, e.g., MICHAELS, supra note 135, at 234 (collecting studies finding that corporate sponsorship biases research results in favor of the sponsor); NESTLE, supra note 44, at 35 (same).
179. NESTLE, supra note 44, at 36, 42 fig. 1; accord White & Bero, supra note 135, at 106.
181. Id. at 557–58.
182. Id. at 560–61.
183. Id. at 558–60.
The Supreme Court emphasized that Vermont neither “contend[ed] that detailing is false or misleading within the meaning of this Court’s First Amendment precedents,” nor “argue[d] that the provision challenged here will prevent false or misleading speech.”\textsuperscript{184} This was important doctrinally because the threshold question in \textit{Central Hudson}’s analysis is whether the speech is false or misleading.\textsuperscript{185} If so, it ostensibly receives no First Amendment protection.\textsuperscript{186} If not, the court can move on to \textit{Central Hudson}’s other factors which, as stated above, set out an intermediate scrutiny test that give courts wide latitude to uphold or invalidate the relevant speech restriction.\textsuperscript{187} But, in \textit{Sorrell}, the Court did not merely rely on \textit{Central Hudson} to invalidate Vermont’s law.\textsuperscript{188} Indeed, although the statute plainly addressed commercial speech—it targeted speech meant to “persuade the doctor to prescribe a particular pharmaceutical”\textsuperscript{189}—the Court declined to say whether Vermont’s law addressed purely commercial speech.\textsuperscript{190} Instead, the Court emphasized that, rather than contending that the restricted detailing was false or misleading, Vermont’s legislature merely found that detailing caused doctors to issue prescriptions based on “incomplete and biased information,” causing the “marketplace for ideas on medicine safety and effectiveness [to be] frequently one-sided.”\textsuperscript{191} In light of these findings, Vermont’s statute sought to restore balance to the debate about which drugs doctors should prescribe by making detailing less effective.\textsuperscript{192}

The Supreme Court held that this legislative purpose is unconstitutional, because it “disfavors marketing, that is, speech with a particular content,” and “disfavors specific speakers, namely pharmaceutical manufacturers.”\textsuperscript{193} Vermont could “not burden the

\begin{footnotesize}
\begin{enumerate}
\setcounter{enumi}{184}
\item Id. at 579.
\item Id. at 566.
\item See \textit{id.} (after the (1) falsity analysis, the Court determines (2) "whether the asserted governmental interest is substantial;" (3) "whether the regulation directly advances the governmental interest asserted;" and (4) "whether it is not more extensive than necessary to serve the interest").
\item \textit{Sorrell}, 564 U.S. at 579–80.
\item Id. at 558.
\item Id. at 571.
\item Id. at 561.
\item Id. at 560–61.
\item Id. at 564.
\end{enumerate}
\end{footnotesize}
speech of others in order to tilt public debate in a preferred direction.”

In so holding, the Court used principles that apply to fully protected speech—i.e., the question of whether the speech restriction is "content-based"—to invalidate a commercial-speech restriction, thereby ratcheting up the constitutional protections for commercial speech. The result is that the First Amendment now prohibits any law meant to ban or burden corporate propaganda that does not meet the Supreme Court’s definition of false or misleading speech, because such a law would disfavor speech with a particular content (propaganda) and would disfavor particular speakers (corporations).

3. Prior Restraints on Fraud

In the 1980s, decades before the Court decided *Sorrell* in 2011, it heard a series of cases addressing state and local efforts to combat fraud by those soliciting charitable contributions. After determining that the commercial speech at issue in these cases was "inextricably intertwined" with fully protected, non-commercial speech, and thus subject to strict scrutiny rather than intermediate scrutiny, the Supreme Court struck down each piece of legislation. In so doing the Court established the rule that government cannot ban or burden even false and misleading non-commercial speech ex ante; it can combat such fraud only with liability ex post.

To understand this principle, it helps to look at the increasingly narrowly tailored legislative attempts to ban false and misleading speech that the Court invalidated in these cases. In *Schaumburg v. Citizens for a Better Environment*, the Court addressed a local ordinance requiring that, to get a license allowing door-to-door charitable solicitation, at least seventy-five percent of the collections would...
be used for the organization’s charitable purpose.\textsuperscript{202} The Village of Schaumburg enacted this ordinance because it believed that an organization that used too much of its revenues on fundraising, salaries, and overhead was not a charitable organization but a for-profit enterprise; accordingly, the village believed that it would be fraudulent for such organizations to represent themselves as charities when soliciting contributions.\textsuperscript{203} In \textit{Secretary of State of Maryland v. Joseph H. Munson Co.},\textsuperscript{204} the Court addressed a Maryland statute that included a similar seventy-five percent requirement, as well as a provision allowing an administrative waiver of that requirement based on financial necessity.\textsuperscript{205} The North Carolina statute the Court addressed in \textit{Riley v. National Federation of the Blind of North Carolina}\textsuperscript{206} was more complicated.\textsuperscript{207} It prohibited professional fundraisers from retaining an “unreasonable” or “excessive” fee for their charitable solicitation efforts.\textsuperscript{208} Under the statute, a fee of up to twenty percent was reasonable; a fee between twenty and thirty-five percent was unreasonable upon a showing that the solicitation did not involve advocacy or the dissemination of information; and a fee of more than thirty-five percent was unreasonable unless the fundraiser could show that the fee was necessary either because the solicitation involved advocacy or the dissemination of information or because, without the fee, the charity’s ability to raise money or communicate would be significantly diminished.\textsuperscript{209}

Although the Court framed the issue as an overbreadth problem in \textit{Schaumburg}, neither Maryland’s waiver provision nor North Carolina’s three-tiered reasonableness analysis saved their statutes from the First Amendment.\textsuperscript{210} What started as an overbreadth problem became

\begin{itemize}
  \item \textsuperscript{202} Id. at 622.
  \item \textsuperscript{203} Id. at 636.
  \item \textsuperscript{204} 467 U.S. 947 (1984).
  \item \textsuperscript{205} Id. at 950–52.
  \item \textsuperscript{206} 487 U.S. 781 (1988).
  \item \textsuperscript{207} See id. at 784–87 (addressing a statute governing fee retention for charitable organizations soliciting fundraising).
  \item \textsuperscript{208} Id. at 784.
  \item \textsuperscript{209} Id. at 784–85.
  \item \textsuperscript{210} See id. at 795 (holding North Carolina’s reasonableness provision unconstitutional because it was not “the most efficient means of preventing fraud”); Sec’y of State of Md. v. Joseph H. Munson Co., 467 U.S. 947, 968 (1984) (holding that Maryland’s waiver provision did not cure \textit{Schaumburg’s} overbreadth problem);
\end{itemize}
an outright ban on legislative attempts to place a prior restraint on fraud—at least where non-commercial speech is concerned.\textsuperscript{211}

In these cases, the Court repeatedly emphasized that “[b]road prophylactic rules in the area of free expression are suspect.”\textsuperscript{212} As a result, legislation is usually too blunt an instrument to combat corporate propaganda. It is true there is an atmospheric difference between charitable organizations and commercial cannabis companies, especially to the conservative judges and justices who currently dominate the federal bench.\textsuperscript{213} But the Supreme Court has made clear that, doctrinally, it does not treat speech differently on the basis of its speaker's corporate identity.\textsuperscript{214}

In \textit{Schaumburg}, \textit{Munson}, and \textit{Riley}, the Court explained that, although combating fraud was a legitimate governmental interest, the relevant regulators should have addressed it with more targeted measures, like prohibiting fraudulent misrepresentations and using the penal laws to punish such conduct directly.\textsuperscript{215} Such \textit{ex-post} enforcement of statutes banning false or misleading speech is the only means by which the government may combat non-commercial corporate disinformation, which is the subject of Section II.B.\textsuperscript{216} Later, Section II.C.3 addresses government efforts to restrict corporate disinformation in advertising and packaging.

\begin{flushleft}
Schaumburg v. Citizens for a Better Env't, 444 U.S. 620, 639 (1980) (holding that the local ordinance was overbroad).
\textsuperscript{211} See sources cited \textit{supra} note 197.
\textsuperscript{212} \textit{Riley}, 487 U.S. at 801 (quoting NAACP v. Button, 371 U.S. 415, 438 (1963)); accord \textit{Schaumburg}, 444 U.S. at 637 (“The Village may serve its legitimate interests, but it must do so by narrowly drawn regulations designed to serve those interests without unnecessarily interfering with First Amendment freedoms.”).
\textsuperscript{213} See, \textit{e.g.}, Gonzales v. Raich, 545 U.S. 1, 42 (2005) (O'Connor, J., dissenting) (indicating conservative Justices' hostility to cannabis).
\textsuperscript{214} See \textit{supra} Section II.A.1.
\textsuperscript{215} See \textit{Riley}, 487 U.S. at 800 (stating that the government may address its concerns about fraudulent solicitations through enforcement of its antifraud laws); \textit{Munson}, 467 U.S. at 966–68 (same); \textit{Schaumburg}, 444 U.S. at 637 (same).
\textsuperscript{216} See \textit{supra} notes 201–209 and accompanying text (discussing \textit{Schaumburg}, \textit{Munson}, and \textit{Riley}).
\end{flushleft}
B. Judicial Solutions

Over the past fifty years, corporations have gained and expanded their First Amendment rights. Section II.B.1 shows how they may expand those rights further still by continuing to challenge fraud prosecutions. For now, fraud prosecutions are useful weapons in the government’s shrinking anti-disinformation arsenal. Accordingly, Section II.B.2 identifies the strengths and weaknesses of this governmental response. Section II.B.3 then identifies the many ways in which a consolidated cannabis industry can disseminate misinformation about cannabis science without exposing itself to liability.

1. The Constitutionality of Fraud Prosecutions

Fifteen years after Schaumburg, Munson, and Riley, the Supreme Court reaffirmed the constitutionality of fraud prosecutions in Illinois ex rel. Madigan v. Telemarketing Associates, Inc. There, the Illinois Attorney General alleged that certain professional fundraisers committed fraud by representing “a significant amount of each dollar donated” would go to the charity, even though the fundraisers retained at least 85% of the revenues they generated. The Illinois court previously held that Schaumburg, Munson, and Riley barred the state from prosecuting the fraud, but the Supreme Court disagreed. It explained that, although “prophylactic statutes designed to combat fraud by imposing prior restraints on solicitation” are unconstitutional, individual fraud prosecutions are not.

However, that same year, the Supreme Court indicated some hostility to fraud prosecutions. First, it suggested in Madigan that fraud prosecutions require safeguards, like proof of knowledge of falsity,
intent to mislead, and detrimental reliance. Second, it granted certiorari in *Nike, Inc. v. Kasky*.

*Nike* called on the Court to determine whether a private attorney general could civilly prosecute Nike and five of its corporate officers for violating California laws banning unfair competition and false advertising. The allegations in that case, which Nike moved to dismiss on First Amendment grounds, were that the company and its officers negligently made several misrepresentations during a public-relations campaign meant to rebut bad press about the working conditions in its foreign facilities. The plaintiff alleged that Nike made these misrepresentations on its website; in press releases; in letters to newspaper editors, university presidents, and athletic directors; and in a report about working conditions that Nike commissioned and published.

Although the Supreme Court ultimately dismissed the writ of certiorari in *Nike* as improvidently granted, Justice Stevens indicated the Court’s thinking in a concurring opinion. He explained that the issue in the case was “whether a corporation participating in a public debate”—there, globalization—“may be subjected to liability for factual inaccuracies.” According to Justice Stevens, the constitutional question turned on two issues: (1) whether Nike’s statements were corporate or commercial speech, and (2) if the statements were commercial speech, whether they could subject Nike to liability. The case turned on these issues, Justice Stevens also indicated the speech was not purely commercial but rather was “a blending of commercial speech, noncommercial speech and debate on an issue of public importance.”

---


224. *Id.* at 656, 661.

225. *Id.* at 656.

226. *Id.* at 672 (Breyer, J., dissenting) (listing nine instances of Nike’s communications alleged to contain misrepresentations).

227. *Id.* at 655 (per curiam).

228. *Id.* at 656 (Stevens, J., concurring).

229. *Id.* at 657.

230. *Id.* Justice Stevens also indicated the speech was not purely commercial but rather was “a blending of commercial speech, noncommercial speech and debate on an issue of public importance.” *Id.* at 663; *see also id.* at 676 (Breyer, J., dissenting) (reaching the same conclusion).
suggested, because false, misleading, but non-commercial corporate speech on public issues could not expose the speaker to liability unless the false statements were made knowingly or recklessly.\textsuperscript{231} The open question was whether Nike’s speech qualified for this constitutional protection, either because it was not purely commercial speech or because commercial speech warrants that protection too.\textsuperscript{232}

Citing Exxon’s and Pfizer’s amicus briefs as support, Justice Stevens further explained that there was a substantial interest in protecting Nike, a participant in the debate about labor practices used by multinational corporations, “from the chilling effect of the prospect of expensive litigation.”\textsuperscript{233} One irony is that big businesses like Nike, Exxon, and Pfizer frequently wear down plaintiffs and deter others from bringing suit by ratcheting up the cost of litigation, not only buying the best lawyers but also fighting every discovery motion, appealing every adverse decision, and otherwise using their financial might to tilt the outcome in their favor.\textsuperscript{234} Indeed, big business often initiates the litigation, especially now that the Supreme Court has given it so much ammunition to weaponize the Constitution.\textsuperscript{235} For example,

\begin{itemize}
\item \textsuperscript{231} \textit{Id.} at 659–60 (Stevens, J., concurring) (citing \textit{N.Y. Times Co. v. Sullivan}, 376 U.S. 254 (1964)); \textit{see also} \textit{United States v. Alvarez}, 567 U.S. 709, 719 (2012) (plurality opinion) (“[F]alsity alone may not suffice to bring the speech outside the First Amendment. The statement must be a knowing or reckless falsehood.” (citing \textit{Sullivan}, 376 U.S. at 280)).
\item \textsuperscript{232} \textit{See Nike}, 539 U.S. at 657 (Stevens, J., concurring).
\item \textsuperscript{233} \textit{Id.} at 664; \textit{see also id.} at 668–83 (Breyer, J., dissenting) (emphasizing the chilling effect the threat of prosecution can have on corporate speech).
\item \textsuperscript{234} \textit{See, e.g.}, Nora Freeman Engstrom & Robert L. Rabin, \textit{Pursuing Public Health Through Litigation: Lessons from Tobacco and Opioids}, 73 Stan. L. Rev. 285, 296–98 (2021) (describing how the tobacco industry used these tactics to avoid losing or settling any of the hundreds of lawsuits it faced between the early 1950s and early 1990s).
\item \textsuperscript{235} \textit{See Winkler, supra note 101} (describing large corporations as “constitutional first movers” and “constitutional leveragers,” who spend on expensive and protracted litigation to create new rights for themselves); Robert L. Rabin, \textit{Reexamining the Pathways to Reduction in Tobacco-Related Disease}, 15 Theoretical Inquiries in L. 507, 508–09 (2014) (stating that a recent development in government/tobacco-industry interaction has been “the resort by the industry to litigation in a new guise—particularly reliant on the First Amendment—as an offensive weapon targeting regulatory controls, in contrast to traditional common law defensive efforts in the tort litigation”); Allan M. Brandt, \textit{The Cigarette Century: The Rise, Fall, and Deadly Persistence of the Product That Defined America} 371, 381–82 (2007) (describing how Philip Morris’s libel suit against ABC for its \textit{Day One} broadcast chilled media coverage of the tobacco industry’s disinformation campaign).
\end{itemize}
Exxon sued the New York, Massachusetts, and U.S. Virgin Islands Attorneys General on First Amendment grounds, among others, based on their investigations into whether Exxon had committed consumer or securities fraud in its communications about climate science.\footnote{John Schwartz, Exxon Mobil Fights Back at State Inquiries into Climate Change Research, N.Y. TIMES (June 16, 2016), https://www.nytimes.com/2016/06/17/science/exxon-mobil-fights-back-at-state-inquiries-into-climate-change-research.html [https://perma.cc/8AMS-7HCK]. Disclosure: The author represented Exxon in these actions and investigations as a junior associate in 2016 and 2017.}

Although that action was not legally fruitful for Exxon,\footnote{See Exxon Mobil Corp. v. Schneiderman, No. 17-CV-02301 (VEC) (S.D.N.Y. 2018) (court order dismissing the action).} it led the Virgin Islands Attorney General to withdraw its subpoena,\footnote{Phil McKenna, Virgin Islands and Exxon Agree to Uneasy Truce Over Climate Probe, INSIDE CLIMATE NEWS (July 7, 2016), https://insideclimatenews.org/news/07072016/virgin-islands-exxon-agree-climate-probe-subpoena-claude-walker-schneiderman-healey [https://perma.cc/B3E9-VAHN].} and it diverted the other Attorneys Generals’ time, money, and resources away from their investigations. Today, the First Amendment is not just a shield for corporate propaganda; it is a sword too.

If big business keeps challenging the constitutionality of fraud prosecutions for corporate disinformation it may get the judgment it sought in Nike—especially now that the Supreme Court has further collapsed the distinction between corporate and commercial speech in Sorrell\footnote{See supra notes 180–183 and accompanying text (discussing Sorrell v. IMS Health Inc., 564 U.S. 552 (2011)).} and held in United States v. Alvarez\footnote{567 U.S. 709 (2012).} that bans on false but non-fraudulent speech are unconstitutional.\footnote{Id. at 723, 729–30.} At the very least, the government will be on shaky constitutional footing if it seeks to combat corporate disinformation by loosening the requirements necessary to make out a fraud prosecution.\footnote{See supra note 222 (discussing the Martin Act).} Yet, as the next two sections will show, corporate disinformation often evades such prosecutions.

2. Liability for Corporate Disinformation

From the start, a primary motivation for the tobacco industry’s disinformation campaign was litigation.\footnote{Supra Section I.A.} The industry did not want to compensate tort claimants for their premature deaths, serious
diseases, or medical bills.\textsuperscript{244} The industry was effective on that front. Although the industry did ultimately suffer legal defeats, the monetary liability went almost entirely to state coffers or research funds, leaving nearly every victim of the tobacco industry’s fraud uncompensated.\textsuperscript{245} In addition, the industry delayed its liability by decades, suffering no damages or reported settlements in any of the 800 plus lawsuits smokers brought between the early 1950s and early 1990s.\textsuperscript{246}

What ultimately reversed this trend in the mid-1990s was not a mounting scientific consensus about cigarettes’ health effects.\textsuperscript{247} After all, scientists had reached a consensus that cigarettes cause cancer by the 1960s, at the latest.\textsuperscript{248} Rather, what reversed this trend was the disclosure by whistleblowers of millions of pages of internal emails and research revealing the tobacco industry’s reprehensible conduct.\textsuperscript{249}

From a liability perspective, these disclosures were critical. First, they provided prosecutors and plaintiffs with evidence that the industry did not sincerely believe its statements about tobacco’s health effects.\textsuperscript{250} When prosecuting corporate disinformation campaigns, this is arguably the only way to establish an industry’s knowledge and intent, given courts’ unwillingness—and lack of institutional capacity—to wade into debates about what constitutes truth and

\textsuperscript{244} Supra Section I.A.

\textsuperscript{245} See Engstrom & Rabin, supra note 234, at 350 (explaining that, because the industry’s liability went mostly into state coffers, it could not serve tort’s compensatory function); id. at 306 (“As of January 2007, experts reported that ‘[d]efendants have paid judgments in just six individual smoking and health lawsuits ever.’ Over the past decade, this trend has endured.”) (quoting Brief of Amici Curiae Tobacco Control Health Resource Center Division of the Public Health Advocacy Institute, Inc. & the Tobacco Control Legal Consortium in Support of Respondents at 2, McLaughlin v. Am. Tobacco Co., 522 F.3d 215 (2d Cir. 2008)).


\textsuperscript{247} Brandt, supra note 235, at 357.

\textsuperscript{248} Id. at 153, 159.

\textsuperscript{249} E.g., id. at 357; Rabin, supra note 246, at 1732; see also, e.g., Rabin, supra note 235, at 521–22.

\textsuperscript{250} Brandt, supra note 235, at 357; Rabin, supra note 246, at 1732.
falsity in speech about science.\textsuperscript{251} Second, and perhaps more importantly, the disclosure of internal documents brought severe reputational damage to the industry. Judges, juries, and the general public discovered that the tobacco industry had (1) long known the truth about cigarettes’ negative health effects and deliberately sought to deceive the public about them, (2) targeted advertising and promotional campaigns at minors, and (3) manipulated nicotine delivery in a manner designed to promote and sustain addiction.\textsuperscript{252} These reputational costs brought a drop in sales, a wave of restrictive legislation and regulation, and hundreds of billions of dollars of liability.\textsuperscript{253}

The primary liability the tobacco industry suffered was its Master Settlement Agreement (“MSA”) with state Attorneys General.\textsuperscript{254} In total, the industry agreed to pay the states almost $250 billion, over twenty-five years, as well as payments of $9 billion per year in perpetuity, to reimburse the states for their Medicaid costs.\textsuperscript{255} The MSA also included a raft of equitable relief, including several restrictions on advertising.\textsuperscript{256}

\begin{footnotesize}
\begin{enumerate}
\item See United States v. Alvarez, 567 U.S. 709, 751–52 (2012) (Alito, J., dissenting) (stating “hypothetical laws prohibiting false statements about history, science, and similar matters” are constitutionally problematic because it is “perilous to permit the state to be the arbiter of truth” in these areas, “[e]ven where there is a wide scholarly consensus”); Jason Pielemeier, Disentangling Disinformation: What Makes Regulating Disinformation So Difficult?, 2020 Utah L. Rev. 917, 922 (2020) (“It can be extremely difficult to objectively determine the truth in a given context, much less establish whether an individual knew or should have known that certain information was untrue or misleading.”); Shannon M. Roesler, Evaluating Corporate Speech About Science, 106 Geo. L.J. 447, 473–79 (2018) (explaining why it is especially difficult for prosecutors to establish truth in the context of speech about science).
\item Brandt, supra note 235, at 357; Rabin, supra note 246, at 1732.
\item See Engstrom & Rabin, supra note 234, at 350; Brownell & Warner, supra note 40, at 286; Rabin, supra note 246, at 1732, 1747.
\item See MSA, supra note 254, at 54–57 (providing for the industry to pay the settling states about $206 billion over twenty-five years and about $9 billion per year thereafter); Traylor, supra note 254, at 1098–99 (explaining the industry agreed to pay the four other states a total of $36.8 billion over twenty-five years).
\item MSA, supra note 254, at L-1–L-3.
\end{enumerate}
\end{footnotesize}
In exchange, the MSA gave the industry “peace”—at a cost that was unlikely to substantially impact the industry’s future revenue stream.\textsuperscript{257} To this day, the MSA is the bulk of the litigation cost imposed on the tobacco industry, along with the estimated $900 million the industry spent on lawyers to contest liability each year during its disinformation campaign.\textsuperscript{258} Yet, according to Brandt, the MSA was a victory for the tobacco industry and a disappointment for public health advocates because the monetary relief was “inadequate to cover the costs of smoking-related disease,” and the equitable relief was riddled with loopholes.\textsuperscript{259}

Although the industry also reached some large private settlements of tort suits and lost some private suits at trial, it was mostly successful at evading major civil liability, all but extinguishing any hope that these claims could be litigated as class actions and often reducing jury awards on appeal.\textsuperscript{260} The major exception to this rule is \textit{Broin v. Philip Morris Co.}, a class action brought by about 60,000 flight attendants who were exposed to secondhand smoke while working.\textsuperscript{261} The industry settled for $349 million in 1998.\textsuperscript{262} But even that case shows the limits of the tobacco industry’s liability, as it was neither adequate compensation for the injured plaintiffs,\textsuperscript{263} nor a legitimate example of the tobacco industry’s private civil liability, because the industry appears to have foregone its usual defenses as part of a public relations strategy meant to help it reach a more favorable MSA.\textsuperscript{265}

Finally, the tobacco industry suffered additional equitable relief in 2006 for civil violations of the Racketeer Influenced and Corrupt Organizations Act (RICO).\textsuperscript{266} During that litigation, the tobacco industry

\textsuperscript{257} Rabin, \textit{supra} note 246, at 1737–39, 1745; \textit{see also} Brandt, \textit{supra} note 235, at 434.

\textsuperscript{258} Rabin, \textit{supra} note 246, at 1745.

\textsuperscript{259} Brandt, \textit{supra} note 235, at 432–38.


\textsuperscript{261} 641 So. 2d 888 (Fla. Dist. Ct. App. 1994).

\textsuperscript{262} \textit{Id.} at 889.

\textsuperscript{263} Luff, \textit{supra} note 260, at 153; Rabin, \textit{supra} note 246, at 1739–41.

\textsuperscript{264} \textit{Broin} set up a research fund; it did not compensate the plaintiffs for their illnesses or healthcare costs. Rabin \textit{supra} note 246, at 1741.

\textsuperscript{265} Luff, \textit{supra} note 260, at 153–54; Rabin, \textit{supra} note 246, at 1739–41.

\textsuperscript{266} \textit{See United States v. Philip Morris USA, Inc.}, 449 F. Supp. 2d 1, 932–33 (D.D.C. 2006) \textit{aff’d in part, vacated in part}, 566 F.3d 1095 (D.C. Cir. 2009); \textit{see also} United
continued using its financial might to tilt the outcome in its favor. One major victory was the industry’s interlocutory appeal of the prosecution’s central claim for disgorgement of $280 billion, which the D.C. Circuit dismissed, holding that the relevant section of RICO authorized only “forward-looking” relief.267 Another industry victory was its efforts to lobby the Bush administration, whose political appointees at the Justice Department ordered the trial team to reduce the government’s remedial requests and ask expert witnesses to soften their testimony during the remedies phase.268 Ultimately, after lamenting that the D.C. Circuit left it with too few remedies,269 the district court issued equitable relief, ordering that the industry publish corrective statements and maintain a public database of internal industry documents.270 This equitable relief contributed to the biggest industry cost of litigation: further reputational damage.271 In this regard, however, whistleblowers greatly aided litigation.272

This history provides lessons for the government, which can combat a consolidated cannabis industry’s expected disinformation not only by aggressively prosecuting the industry’s false and misleading statements, but also by facilitating access to its internal documents.273 The government could do so by making it easier for litigants to get to discovery and more difficult for industry to claim privilege or confidentiality.274 Legislatures could also incentivize whistleblowers to come forward with evidence against cannabis companies, both by

---

268. BRANDT, supra note 235, at 502–03; cf. Engstrom & Rabin, supra note 234, at 338 (explaining that, in 2007, federal prosecutors sought to indict Purdue executives on felony charges for their role in spreading disinformation about OxyContin’s addictiveness, but political appointees overruled them and, as a result, “the executives merely got a slap on the wrist”).
270. Id. at 938–39, 941.
271. See Engstrom & Rabin, supra note 234, at 292; Brownell & Warner, supra note 40, at 286.
272. See Luff, supra note 260, at 170; Rabin, supra note 246, at 1749.
273. See Rabin, supra note 235, at 536.
implementing a bounty system and by impeding use of the tobacco industry’s strategy of intimidating its former employees.

This history also provides lessons for business. By illustrating the cost of corporate reputational damage, this history shows the value of disinformation as a means of delay. After all, the MSA was finalized in 1998, some forty-five years after the tobacco industry began its disinformation campaign—with a significant, uncompensated cost to those who died of lung cancer or heart disease in the interim. This illustrates the limits to liability’s deterrent effect. Indeed, the tobacco industry has been much more of an inspiration than a deterrent.

Still, the tobacco industry’s liability shapes how industry disseminates misinformation. For one, the tobacco story shows the importance of caution in internal communications because knowledge of the truth is the ultimate sign of wrongdoing. Publicly available documents suggest that the oil-and-gas industry understood this in the late 1970s and early 1980s: when its internal research produced tentative confirmation of the warming effect fossil-fuel emissions had on the Earth’s climate, Exxon shuttered its science program and went silent on the issue.

Ten years later, climate scientists began reaching a consensus that fossil-fuel emissions caused climate change, which would have disastrous consequences. The oil-and-gas industry...

275. Congress could model this bounty system on the qui tam regime, which encourages private individuals to come forward with knowledge of a fraud against the federal government in order to obtain part of the government’s recovery, see, e.g., 31 U.S.C. § 3729.


277. See, e.g., MICHAELS, supra note 135, at 213; NAOMI ORESKES & ERIK M. CONWAY, MERCHANTS OF DOUBT 6, 7 (2010); MICHAELS, supra note 174, at 46, 50–51.

278. See supra notes 247–253 and accompanying text.


280. See supra note 277.
responded to this existential threat by denying the growing scientific consensus through its science funding, public statements, and otherwise. In theory, commentators differ on whether this public-relations campaign is or should be actionable. In practice, without internal knowledge of the truth to point at, American prosecutors and plaintiffs have been unable to secure liability against Exxon or other participants in the oil-and-gas industry's denial of climate science.

It helps that big business has many means of re-shaping the truth without actually uttering false and misleading speech. These methods are the subject of Section II.B.3. If employed correctly, they will create a fog of misinformation without exposing the speaker to liability or, ideally, even to reputational costs. This is something the food-and-beverage industry has done more effectively than the tobacco industry and it may make Coca-Cola a bigger role model for legal cannabis companies than Philip Morris. Then again, it may not be


284. See infra Section II.B.3.

285. See infra Section II.B.3. (discussing these tactics).

286. See, e.g., Rabin, supra note 235, at 536 (“The McDonald’s litigation, if anything, heaped scorn upon the plaintiffs rather than the fast-food enterprise.”). Compare, e.g., NESTLE, supra note 44, at 14 (providing a history of the food-and-beverage industry’s disinformation campaigns, which does not include any major liability), with BRANDT, supra note 235, at 371, 381–82 (providing a history of the tobacco industry’s disinformation campaign, which does include major liability).
a question of role models. In 2018, Philip Morris, now named Altria, bought a forty-five percent stake in Cronos, a Canadian cannabis company.287

3. Corporate Disinformation Eludes Liability

Big business has developed and refined a series of well-lawyered tactics to encourage misinformation to flourish while avoiding false and misleading speech. One such tactic is the science funding discussed above.288 Another is the use of opinion statements, like when, in 1994, the CEOs from the seven major tobacco companies told Congress that they did not believe that nicotine was addictive.289 At the time, nicotine was provably addictive, but the opinion phrasing of these statements dissuaded prosecutors from pursuing perjury charges.290

Industry also uses a series of logical fallacies and semantic sleights that are not quite false or misleading but nevertheless deceive by distorting or distracting from the truth. They include straw-man arguments,291 ad hominem attacks,292 emphasizing personal

287. Krane, supra note 99. Note also that corporate propaganda is not always a result of deliberate decisions to mislead. Legal scholar Shannon Roesler explains cognitive biases, organizational culture, and institutional factors “create multiple opportunities for distortion.” Roesler, supra note 251, at 499.
288. See supra Section II.A.2.
289. RANDT, supra note 235, at 369.
291. For example, the tobacco industry distracted from the links between cigarettes and lung cancer by repeatedly pointing out that most smokers never develop lung cancer and that some people who get lung cancer have never smoked. The tobacco industry also shifted the blame to other causes of lung cancer, like asbestos and radon. But scientists have never claimed that all or only smokers get lung cancer. Instead, they have established that cigarettes are a statistical cause of lung cancer: by smoking, a person becomes much more likely to get lung cancer. MICHAELS, supra note 135, at 19–20; Kearns et al. supra note 62, at E1; ORESKES & CONWAY, supra note 277, at 34.
292. A key part of the tobacco playbook is to attack not only the work of scientists with whom they disagree, but to attack their reputations as well. ORESKES & CONWAY, supra note 277, at 6; MICHAELS, supra note 174, at 57–58 (discussing the “junk science’ movement”). The flip side of this strategy of ad hominem attack is industry’s purchase of allies with sterling reputations on unrelated subjects. ORESKES & CONWAY, supra note 277, at 8 (identifying a handful of highly distinguished and respected scientists—mostly physicists with “no particular expertise in environmental or health questions”—who used their credentials to discredit science connecting industry to secondhand smoke, climate change, acid rain, and the ozone layer).
responsibility,293 and weaponizing the perfect as the enemy of the good by demanding unrealistic scientific standards to induce regulatory “paralysis by analysis.”294 This last tactic exploits a key industry insight—few in the general public know how to talk about science, let alone distinguish good science from bad.295 Accordingly, industry capitalizes on the difference between the popular and scientific understandings of concepts like causation296 and uncertainty. This allows even trivial uncertainties to underpin persuasive arguments that, while technically or arguably true, leave the listener with a mistaken impression.297 Big business also uses its money and power to exploit the vulnerabilities of various institutions, like academia, politics, and journalism, deputizing them in the spread of corporate disinformation. In addition to industry groups and trade associations, which have obvious connections to industry, big business makes repeated use of “astroturf organizations” (or, fake grassroots organizations) and of “front groups,”298 like Coca-Cola's Global Energy

293. The tobacco and food-and-beverage industries have used this tactic to avoid regulations (paternalistic) and liability (assumption of the risk). It is disingenuous because it ignores the facts that industry propaganda prevents consumers from making informed decisions, that the tobacco and food-and-beverage industries engineer their products to make them more addictive, and, in the tobacco industry’s case, that secondhand smoke increased the risk of lung cancer in non-smokers. See, e.g., MICHAELS, supra note 135, at 17; Brownell & Warner, supra note 40, at 265–67; KESSLER, supra note 276, at 155–56. 
295. MICHAELS, supra note 174, at 9.
296. See supra note 291.
297. Oreskes and Conway explain “[t]here are always uncertainties in any live science.” ORESKES & CONWAY, supra note 277, at 34. Although scientists have established that smoking causes cancer, for example, they do not fully understand the mechanism by which that happens. That uncertainty does not undermine the science establishing that smoking causes cancer. Id. at 34, 75–76; see also CERTAINTY VS. UNCERTAINTY: UNDERSTANDING SCIENTIFIC TERMS ABOUT CLIMATE CHANGE, UNION OF CONCERNED SCIENTISTS (June 21, 2010), https://www.ucsusa.org/global-warming/science-and-impacts/science/certainty-vs-uncertainty.html#.W-C8FRNKjMI [https://perma.cc/BET9-WEZ] (distinguishing the popular (“we don’t know”) and scientific (“how well we know”) understandings of “uncertainty”); Roesler, supra note 251, at 451, 464, 471–72 (stating big business can exploit the term’s ambiguity to mislead).
298. See PIETY, supra note 163, at 46–47 (discussing astroturfing and front groups).
Balance Network. Although they are bought and paid for by their corporate sponsors, it is often difficult or even impossible to find out who their funders are—let alone to prosecute the funders for any of the front group’s false or misleading statements. Indeed, by splitting the profit motive from the false and misleading speech, this tactic may insulate both the corporate funder and the front-group speaker from fraud liability. Likewise, the food-and-beverage industry evades liability when it pays legitimate-sounding dieticians and health or fitness experts to spread the preposterous notion that mini-sodas, chips, or other junk foods are healthy snack options.

The same is true when big business purchases allies in politics through campaign funding or otherwise. For instance, although fear of liability pushed oil-and-gas industry giants to begin conceding, in 2006 and 2007, that fossil-fuel emissions are causing climate change, their allies in Congress continue to spread industry disinformation to this day. The media in particular has provided frequent, gratuitous complicity to the corporate disinformation endeavor. For decades, the tobacco industry succeeded in slowing the public acceptance of cigarettes’ harms by getting the media to maintain that the science was controversial or uncertain, even after the scientific community had reached a consensus. The tobacco industry did this by, among other

---

299. See supra Section I.B.
300. See supra note 291.
301. See United States v. Alvarez, 567 U.S. 709, 723 (2012) (plurality opinion) (holding the First Amendment protects false speech, absent a profit motive); In re Asbestos Sch. Litig., 46 F.3d 1284, 1295–96 (3d Cir. 1994) (holding where a trade association disseminated misleading information about the danger of asbestos, Pfizer could not be held liable based on its membership, funding, and attendance of the trade group’s meetings).
305. See Kennedy & Bero, supra note 281 at 254–57; cf. Maxwell T. Boykoff & Jules M. Boykoff, Balance as Bias: Global Warming and the US Prestige Press, 14 GLOBAL ENV’T
things, (1) seizing on the media’s thirst for conflict and commitment to “balanced reporting” and (2) feeding journalists media briefing books and “experts” for quotes, as if their methodological quibbles carried the same weight as published studies. Another example of media complicity is the counterintuitive, too-good-to-be-true articles about easy paths to weight loss or about the health benefits of junk food. Headlines include Good News for Chocolate Lovers: The More You Eat, the Lower Your Risk of Heart Disease, Study Suggests. How did chocolate become a health food, even though cocoa still has never been proven to have long-term health benefits and fat and sugar in dark chocolate outweigh any of the potential health benefits of raw cocoa? Chocolate manufacturers have invested heavily in research meant to cast their products in a positive light as well as in promoting that marketable science to journalists ill-equipped at assessing its rigor.

Crucially, these tactics build on one another. There is a game of telephone at play, and big business uses its wealth and sophistication to ensure that each abstraction twists the truth in industry’s favor.

Change 125, 125, 129–30, 133 (2004) (finding (1) press coverage of climate change between 1988 and 2002 emphasized controversy even as the scientific consensus solidified and (2) this coverage most accurately mirrored the scientific discourse in 1988 and 1989, before the oil-and-gas industry’s disinformation campaign began).

306. Kennedy & Bero, supra note 281, at 259; see also Oreskes & Conway, supra note 277, at 16; Kessler, supra note 276, at 202; cf. Boykoff & Boykoff, supra note 305, at 125–26, 128–30, 134 (determining balanced reporting led to a divergence between the scientific literature and press reporting about climate change).


310. Michaels, supra note 135, at 207.

311. Id. at 4.
First, business skews science with corporate funding. Second, it issues a press release omitting unfavorable nuances and promotes it to journalists. Third, science reporters summarize the press release, omitting more nuance. For many, there is a fourth step: they read only the too-good-to-be true headline. Big business understands that many more people consume mass media than read scientific journals, where the science supporting the links between cigarettes and cancer or sugar and obesity mounts and ultimately solidifies. The result is an unwarranted shift in perception, like the aura of health that now surrounds dark chocolate.

For all the success big business has had in turning academia, politics, and especially the media into incubators of misinformation, these tactics are immune from prosecution. The next Section shows that they are also largely immune from regulatory intervention of any form. Although governments have more room to address the game of telephone big business plays with itself by funding marketable science
and then mischaracterizing it on advertising and packaging, the government’s role is shrinking there too.\textsuperscript{319}

\textbf{C. Administrative Solutions}

This Section addresses three administrative solutions to a consolidated cannabis industry’s disinformation: government speech, compelling industry speech, and restricting industry speech.

\textbf{1. Government Speech}

Two forms of government speech can help counter a consolidated cannabis industry’s disinformation: science funding and direct statements about cannabis’s health effects.

\textbf{a. Science Funding}

Part of the reason why the food-and-beverage industry has succeeded in capturing nutrition science is that universities and governments slashed funding, both for the scientists’ research and for their salaries, leaving corporate funding as the primary source of income.\textsuperscript{320} Similarly, the lack of funding for cannabis research, along with regulatory hurdles and methodological concerns, are reasons why cannabis science is underdeveloped.\textsuperscript{321} Thus, legislatures should create programs that provide generous funding for cannabis science. To finance such a program, government could impose a science tax on cannabis companies. For now, this aspect of the sequestration idea identified above\textsuperscript{322}—requiring corporations contribute to a fund from which money is disbursed to scientists with no corporate input—is constitutional, as long as (1) government uses that fund to finance its own research rather than the research of private entities, (2) listeners are not left with the impression that cannabis companies endorse the government’s speech, and (3) the compelled subsidies fund a comprehensive regulatory scheme.\textsuperscript{323} Government cannot prevent a

\textsuperscript{319} See infra Section II.C.3.
\textsuperscript{320} Nestle, supra note 44, at 173–87, 203–16; accord Choi, supra note 65.
\textsuperscript{321} Nat’l Acad. of Sci., supra note 73, at 384–85.
\textsuperscript{322} See supra notes 135–136 and accompanying text.
consolidated cannabis industry from funding cannabis science as well.324 But, by providing an alternative source of funding, the government would diminish the field’s reliance on industry funding.325

The federal government has already implemented something similar to sequestration in the agriculture industry. Congress created twenty-one research-and-promotion boards that collect mandatory contributions from the companies in a given agricultural industry and spend that money on promoting sales of the agricultural product by advertising it in a generic way and, among other things, funding scientific research.326 The trouble with these so-called checkoff programs, from a corporate disinformation perspective, is that their purpose is to promote sales, not to promote the truth.327 That pro-sales purpose is one of the reasons scholars often identify the U.S. Department of Agriculture (USDA)—which governs the checkoff programs—as captured by industry.328 That and the “rotating door” between industry and the USDA.329

The result is that the checkoff programs have often been a tool of corporate propaganda rather than a counterweight to it. For example, in 2015, the federal beef checkoff program cast doubt on the World Health Organization’s classifications of red meat as “probably carcinogenic to humans” and processed meat as unambiguously

(holding the government may compel subsidies to support private speech as part of a comprehensive regulatory scheme). But see United Foods, 533 U.S. at 411 (“First Amendment values are at serious risk if the government can compel a particular citizen, or a discrete group of citizens, to pay special subsidies for speech on the side that it favors . . . .”). To form a comprehensive regulatory regime, one agency could be charged with coordinating all of the regulations discussed in Section II.C. See infra notes 354, 365, 382, Error! Bookmark not defined. and accompanying text.

324. See supra Section II.A.2.

325. See Nestle, supra note 44, at 173–87, 203–16 (explaining that government-funded studies are subject to government oversight, and that “when work is funded by industry or an industry-funded group, it needs to promote industry interests unambiguously if the relationship is to continue.”).


327. See Brownell & Warner, supra note 40, at 276.

328. See, e.g., id.; Michaels, supra note 135, at 216.

329. See Brownell & Warner, supra note 40, at 276.

In a public statement, the beef checkoff program stated, “[t]he available scientific evidence simply does not support a causal relationship between red or processed meat and any type of cancer.” \footnote{Id. at 64 (quoting National Cattlemen’s Beef Association, \textit{Science Does Not Support International Agency Opinion on Red Meat and Cancer, PRNewswire} (Oct. 26, 2015)).}

As evidence, the beef checkoff cited studies it funded, which found no association between red meat, processed meat, and prostate cancer. \footnote{Id.} But, prostate cancer is not usually linked to meat; colon cancer, rectal cancer, esophageal cancer, liver cancer, lung cancer, and pancreatic cancer are. \footnote{Id. at 63.} The beef-checkoff-funded organization’s argument was misleading because it attacked a strawman. \footnote{See supra note 291 and accompanying text.}

Another example of the corrupting influence of corporate money on government speech is the truism that moderate drinking is healthy. No rigorous science has established that this is true, and emerging research suggests that it is not. \footnote{E.g., Roni Caryn Rabin, \textit{Is Alcohol Good for You? An Industry-Backed Study Seeks Answers}, N.Y. Times (July 3, 2017), [https://perma.cc/3YQJ-CHZ7].}

This did not prevent the National Institute of Health (NIH) from courting $68 million from the alcohol industry, starting in 2014, to help fund a $100 million study meant to show conclusively that moderate alcohol consumption has positive health effects. \footnote{Id.; Roni Caryn Rabin, \textit{Federal Agency Courted Alcohol Industry to Fund Study on Benefits of Moderate Drinking}, N.Y. Times (Mar. 17, 2018), https://www.nytimes.com/2018/03/17/health/nih-alcohol-study-liquor-industry.html?partner=rss&emc=rss [https://perma.cc/S3TH-ZFNT].}

To obtain the necessary corporate funding, \textit{New York Times} staff writer Roni Caryn Rabin reported, NIH scientists “strongly suggest[ed] that the study’s results would endorse moderate drinking as healthy.” \footnote{Roni Caryn Rabin, \textit{Federal Agency Courted Alcohol Industry to Fund Study on Benefits of Moderate Drinking}, N.Y. Times (Mar. 17, 2018), https://www.nytimes.com/2018/03/17/health/nih-alcohol-study-liquor-industry.html?partner=rss&emc=rss [https://perma.cc/S3TH-ZFNT].} NIH scientists also let industry representatives preview the trial design and vet the investigators, and they kept this industry involvement secret from both the media and their own bosses at
NIH. In 2018, after the study was underway and under fire in the media, which had discovered the industry’s involvement, NIH shuttered the study because of “concerns about the study design that cast doubt on its ultimate credibility.” Scientists appointed to investigate the controversy found that interactions between NIH and industry “appear[ed] to intentionally bias the framing of the scientific premise in the direction of demonstrating a beneficial health effect of moderate alcohol consumption.”

There are many other examples of industry's influence over government science. In the early 1980s, for instance, the tobacco industry successfully lobbied Congress to shut down studies into whether tobacco smoke had addictive properties.

To be sure, government science funding is not free of other biases, especially when it comes to drugs. Neuroscientist Carl Hart has argued that government-funded scientists who study drugs are not sufficiently objective, because they frequently “emphasize the possible neurological and psychiatric dangers of drug use—cannabis included—while virtually ignoring these drugs’ potential medicinal or other beneficial effects.” If true, this is a serious problem. But, as with the anti-cannabis propaganda cited above, the solution is not to overcorrect by unleashing a torrent of corporate money seeking to promote cannabis’s positive effects and obscure its negative effects, regardless of the truth. The country needs a balanced approach to cannabis science.


341. KESSLER, supra note 276, at 61. Similarly, the mining industry used its influence to delay by ten years a major government study about diesel’s link to lung cancer. MICHAELS, supra note 135, at 78–87.

342. HART, supra note 109109, at 7.

343. See supra Section I.C.
b. Direct Government Speech

Government can also combat a consolidated cannabis industry's disinformation with direct statements about cannabis's health effects. One tobacco example is the Surgeon General's yearly reports. The two most notable reports are the 1964 report, which declared that cigarettes cause lung cancer, and the 1988 report, which declared that nicotine is addictive. A later report also identified smoking as "the single most important preventable cause of death" in the United States, and "responsible for more than one in every six deaths." According to Robert Rabin, this "created a singular level of public concern." Among other things, direct government speech about cannabis science can include similar reports, as well as a government website detailing their findings and a public education campaign using ad space on television, the internet, and billboards. This government speech program should also involve public relations activities, like press events and cessation hotlines. Finally, this campaign should include efforts to affect social norms.

The California Department of Health Services pioneered "social norm change" efforts, also known as "tobacco industry denormalization" efforts as part of a comprehensive tobacco-control program in 1989 when it began a media campaign portraying smoking as undesirable and dangerous and tobacco companies as deceptive and exploitative. Many of the television ads featured actors playing

---

344. See, e.g., Michaels, supra note 174, at 4.
347. Rabin, supra note 246, at 1724. But see Brandt, supra note 235, at 237 (explaining that, after a one-year dip, cigarette sales and profits rebounded to record highs in 1965).
tobacco executives being deceitful about smoking's health effects or discussing how to lure in new smokers. The ads were so effective that the industry unsuccessfully sued California in 2003, arguing that the ads violated tobacco companies' rights to due process and trial by jury by stigmatizing the companies and biasing jurors.

Regulators and scholars have explained that, to be most effective, government health communications should be sophisticated and ubiquitous, based on audience-focused research and implemented on all available media. In other words, government should use industry's tactics against it.

Such measures are extremely expensive; thus, adequate funding is vital. To accomplish this goal, the government should earmark a portion of the cannabis tax mentioned above to direct government speech about cannabis's health effects. Indeed, the guaranteed and ongoing funding from an earmarked tobacco tax was one of the keys to California's success.

Still, there are limits to the usefulness of government speech, even when adequately funded. For decades, prohibitionists, like the DEA, have dominated government speech about marijuana. Hopefully, once legalization strips law enforcement of its jurisdiction over cannabis, the government will lose its incentive to spread anti-marijuana propaganda. The risk then, will be corruption in the other

---

350. See Bonta, 272 F. Supp. 2d at 1089.
351. See id. at 1090. When implemented nationally and in California and Florida, denormalization campaigns have decreased smoking rates. See Ling et al., supra note 349, at 1449; Roeseler & Burns, supra note 348, at 11–12.
353. Silver & Fenson-Hood, supra note 318, at 26 (citing Hicks, infra note 352).
354. See id. at 32–36; supra note 323 and accompanying text.
355. See Roeseler & Burns, supra note 348, at 3; cf Rabin, supra note 235, at 521 (explaining that, as funding from the MSA has been diverted to other programs, nationwide resort to government speech warning about cigarettes’ health risks has waned).
356. See supra notes 14–16 and accompanying text.
direction because corporate capture has turned government speech into corporate propaganda on several occasions.\footnote{357}{See, e.g., Michaels, supra note 135, at 214, 217–32; Michaels, supra note 174, at 192–211 (discussing the Bush Administration’s silencing of EPA’s Clean Air Scientific Advisory Committee).}

Another limit to the usefulness of government speech is that it usually does not prevent or deter corporate disinformation. Industry denormalization strategies may be the exception to this rule if, by raising reputational costs, they deter industry from spreading disinformation.\footnote{358}{See supra notes 349–351 and accompanying text.} Generally, government speech competes with corporate efforts to misinform, and history suggests that government will not have the louder voice.\footnote{359}{See R.J. Reynolds Tobacco Co. v. Bonta, 272 F. Supp. 2d 1085, 1107 n.26 (E.D. Cal. 2003), aff’d sub nom. R.J. Reynolds Tobacco Co. v. Shewry, 384 F.3d 1126 (9th Cir. 2004), opinion amended and superseded on denial of reh’g, 423 F.3d 906 (9th Cir. 2005); Jacobs, supra note 26, at 1128; Randolph Kline, Samantha Graff, Leslie Zellers, & Marice Ashe, Beyond Advertising Controls: Influencing junk-Food Marketing and Consumption with Policy Innovations Developed in Tobacco Control, 39 Loy. L.A. L. Rev. 603, 643 (2006).} Finally, although government speech appears like it is on firm constitutional footing, it is not immune from the threat of constitutional invalidation—or at least litigation.\footnote{360}{See NAACP v. Hunt, 891 F.2d 1555, 1566 (11th Cir. 1990) ("[T]he government may not monopolize the ‘marketplace of ideas,’ thus drowning out private sources of speech."); Warner Cable Commc’ns., Inc. v. City of Niceville, 911 F.2d 634, 638 (11th Cir. 1990) ("[T]he government may not speak so loudly as to make it impossible for other speakers to be heard by their audience”; in other words, “government speech [cannot] becom[e] so dominant as to ‘drown out’ the voice of private speakers."); Bonta, 272 F. Supp. 2d at 1109–10 (stating that, although the government may discourage protected activity, coercion is constitutionally impermissible (citing Rust v. Sullivan, 500 U.S. 173, 192–93 (1991)); supra note 323 (citing the Supreme Court’s compelled-subsidy case law).}

2. Compelling Industry Speech

Two forms of compelled speech could help to mitigate the deceptive effects of a consolidated cannabis industry’s disinformation: disclosure requirements and warning labels.

a. Disclosure Requirements

In response to the corporate capture of nutrition science, several commentators have called for disclosure requirements.\footnote{361}{E.g., Nestle, supra note 44, at 182; White & Bero, supra note 135, at 132.} Scientific
journals have obliged, but many authors fail to disclose or to disclose completely. Disclosure requirements are now widespread, but compliance and enforcement are inconsistent at best.

This leaves room for the government to intervene. As part of the legislation legalizing marijuana for example, legislatures could not only mandate robust requirements for disclosure of the funding of science and other speech about cannabis’s health effects, but it could also create an administrative body tasked with punishing non-compliance. There are at least two problems with this regime.

First, there are questions about its effectiveness. Because conflicts of interest shape the direction and performance of research, they are more important than disclosure. In addition, studies have found that while disclosure does cause the reader to discount a study's credibility, it does so to a small extent. Authors then compensate for this hit to their credibility by presenting their case more forcefully. This perverse effect of disclosure is well established, especially in the pharmaceutical/doctor-prescribing-decision context. There, studies have shown that disclosure reinforces physicians’ feelings of immunity from industry influence and encourages them to provide even more biased advice, feeling justified in their decision to do so because their patients have been warned.

362. Nestle, supra note 44, at 175.
363. Id. at 179; see also, e.g., White & Bero, supra note 135, at 130 (describing how all five industries in the study failed to disclose the involvement of lawyers and industry executives in the scientific design process, thereby manipulating research on risk); see also Daniele Mandrioli, Cristin E. Kearns, & Lisa A. Bero, Relationship Between Research Outcomes and Risk of Bias, Study Sponsorship, and Author Financial Conflicts of Interest in Reviews of the Effects of Artificially Sweetened Beverages on Weight Outcomes: A Systematic Review of Reviews, 11 PLoS ONE, Sept. 8, 2016, at 9.
364. Nestle, supra note 44, at 182; White & Bero, supra note 135, at 130.
365. See supra note 323.
368. Id. at 22.
369. See id. at 4; Daylian M. Cain, George Loewenstein & Don A. Moore, Coming Clean but Playing Dirtier: The Shortcomings of Disclosure as a Solution to Conflicts of Interest, in CONFLICTS OF INTEREST: CHALLENGES AND SOLUTIONS IN BUSINESS, LAW, MEDICINE, AND PUBLIC POLICY 104, 115–16 (Don A. Moore, Daylian M. Cain, George Loewenstein, & Max H. Bazerman eds., 2005) (explaining that strategic exaggeration occurs when advisors further skew their advice to counteract the discounted effect disclosure has on their
Nevertheless, it may help to identify corporate propaganda as such. The tobacco and food-and-beverage industries’ efforts to hide their links to disinformation reinforce the commonsense notion that the public will be more persuaded by propaganda appearing to come from unbiased sources. Additionally, even if disclosure requirements do not help reduce the persuasiveness of corporate disinformation, they may deter some of it in the first place. For example, Coca-Cola shut down the Global Energy Balance Network once it was exposed as a front group, in part because of the blowback that followed disclosure.

The second problem with this disclosure regime is that it may be unconstitutional. Indeed, courts may see disclosure requirements’ deterrent effect as impermissibly “chilling” speech. The Supreme Court has said that from a First Amendment perspective, compelling speech is worse than prohibiting it. Accordingly, the Court has invalidated several disclosure requirements. For example, in Riley one of the charitable solicitation cases discussed above, the Court struck down a statute requiring professional fundraisers to disclose the average percentage of contributions that went to the charity rather than to fundraisers. Other examples are the Supreme Court’s invalidation of laws requiring that petitioners wear ID badges and that

370. See supra Sections I.A–B.
371. Michaels, supra note 135, at 205; cf. Winkler, supra note 101, at 372 (explaining that, in the context of political donations, “nondisclosure is always preferred” because businesses do not want to risk offending customers or clients).
372. See, e.g., supra note 233 and accompanying text; infra note 377 and accompanying text.
campaign literature disclose its author. These “ban[s] on anonymous speech” were unconstitutional because, by forcing speakers to reveal their identities while delivering their messages, the disclosure requirements chilled speech. Courts could likewise invalidate any requirement that scientific researchers disclose their funders’ identities as an unconstitutional “ban on anonymous speech.”

b. Health Warnings

About ten years after the tobacco industry’s disinformation campaign came crashing down, Congress passed The Family Smoking Prevention and Tobacco Control Act of 2009 (the “Act”), which empowers the Food and Drug Administration (FDA) to regulate the tobacco industry and bans certain advertisements, like marketing to minors. The Act also requires (1) disclosure of ingredients on packaging and (2) health warnings, accompanied by graphic images


377. Buckley, 525 U.S. at 199; see also Ams. for Prosperity Found. v. Bonta, 141 S. Ct. 2373, 2388–89 (2021) (holding facially unconstitutional a California law requiring that charitable organizations disclose the identities of their major donors to the State, not the public, because that risked chilling donations and thus violated members’ right of association); McIntyre, 514 U.S. at 341–42 (“The decision in favor of anonymity may be motivated by fear of economic or official retaliation, by concern about social ostracism, or merely by a desire to preserve as much of one’s privacy as possible.”); Brown v. Socialist Workers ’74 Campaign Comm., 459 U.S. 87, 97–98 (1982) (invalidating statute requiring disclosure of campaign contributors where the “public enmity attending publicity” might deter contributions); NAACP v. Alabama ex rel. Patterson, 357 U.S. 449, 466 (1958) (holding that mandatory disclosure of organization’s membership violated members’ right of association).

378. Buckley, 525 U.S. at 199; see McIntyre, 514 U.S. at 342 (applying this rule to traditional speech “in the field of literary endeavor”); Citizens Union, 408 F. Supp. 3d at 506–08 (applying this rule to spending supporting political speech).


380. Id. §§2–3.
depicting cigarettes’ negative health effects, on packaging and advertising.\textsuperscript{381}

When legalizing marijuana, legislatures should enact a similar version of the Act.\textsuperscript{382} Unfortunately, although disclosure of the ingredients and dosing in cannabis products will be helpful and uncontroversial,\textsuperscript{383} the health-warnings component will not effectively dispel negative corporate disinformation in the short or medium term.\textsuperscript{384}

As discussed above, scientists know relatively little about marijuana’s health effects.\textsuperscript{385} That is what creates the opportunity for a consolidated cannabis industry to wage a disinformation campaign.\textsuperscript{386} This disinformation will delay the development of cannabis science and the popular understanding of it.\textsuperscript{387} In turn, these delays will slow both regulators’ willingness to implement warning labels and courts’ willingness to uphold them.\textsuperscript{388}

The Supreme Court has explained that warning labels and other compelled commercial speech are permissible if they are reasonably related to a state interest and require the inclusion of “purely factual and uncontroversial information.”\textsuperscript{389} This is the Zauderer standard.\textsuperscript{390} Under it, mandatory health warnings would be vulnerable to a consolidated cannabis industry’s argument that they do not compel the inclusion of “purely factual and uncontroversial information.”\textsuperscript{391} After all, the very point of the industry’s disinformation will be to create

\textsuperscript{381} Id. §§ 101, 123, 201, 904.
\textsuperscript{382} See supra note 323.
\textsuperscript{384} Id. notes 385–396 and accompanying text.
\textsuperscript{385} Supra Introduction, Section I.C.
\textsuperscript{386} Supra Introduction, Section I.C.
\textsuperscript{387} Supra Introduction, Section I.C.
\textsuperscript{388} Id. notes 390–396 and accompanying text.
\textsuperscript{389} Zauderer v. Off. of Disciplinary Couns. of Sup. Ct. of Ohio, 471 U.S. 626, 651 (1985) (explaining that courts and scholars are split on whether the only permissible state interest is preventing consumer deception); see also Sarah C. Haan, The Post-Truth First Amendment, 94 Ind. L.J. 1351, 1375–88 (2019) (describing how lower courts have applied the Zauderer standard to an increasing scope of regulations mandating information disclosures).
\textsuperscript{391} Zauderer, 471 U.S. at 651.
uncertainty and sow controversy about any health concerns, like addiction.  

The tobacco industry did not have this argument in its arsenal when Congress passed the Act because the disclosure of internal industry documents estopped it from contesting the science about cigarettes' negative health effects. Still, the tobacco industry successfully challenged FDA regulations requiring cigarette packages and advertising bear graphic images depicting smoking's negative health consequences. In that case, the D.C. Circuit held that these regulations did not survive constitutional scrutiny under Zauderer framework, in part because the graphic images were not "purely factual and uncontroversial" disclosures. Several other industries have successfully employed this argument.

3. Restricting Industry Speech

Three types of commercial speech restrictions could help fight a consolidated cannabis industry's efforts to place disinformation on its packaging or advertising: agency preapproval, prophylactic rules, and ex post enforcement.

---

392. Supra Introduction, Section I.C.
393. See supra notes 247–253 and accompanying text.
394. R.J. Reynolds Tobacco Co. v. FDA, 696 F.3d 1205, 1216–17, 1222 (D.C. Cir. 2012), overruled by Am. Meat Inst. v. U.S. Dep't of Agric., 760 F.3d 18 (D.C. Cir. 2014); see also Rabin, supra note 235, at 519 (stating that, by invalidating the graphic warnings, this case "dealt a serious blow to the FDA's cornerstone informational initiative").
395. R.J. Reynolds, 696 F.3d at 1216 (quoting Zauderer, 471 U.S. at 651). The court also found that the Zauderer standard did not apply because Congress had not shown that the graphic warnings were necessary to rebut a danger that cigarette packaging or advertisements would mislead consumers. See id. But see Disc. Tobacco City & Lottery, Inc. v. United States, 674 F.3d 509, 568–69 (6th Cir. 2012) (distinguishing the D.C. Circuit's invalidation of the FDA's graphic-warning regulations when affirming the constitutionality of the Act's graphic-images requirement).
396. See, e.g., Nat'l Inst. of Fam. & Life Advocs. v. Becerra, 138 S. Ct. 2361, 2372 (invalidating requirement that crisis pregnancy centers disclose information about the availability of abortions, in part because abortions were "anything but an 'uncontroversial' topic"); Nat'l Ass'n of Mfrs. v. SEC, 800 F.3d 518, 520, 530 (D.C. Cir. 2015) (invalidating requirement that securities issuers disclose use of "conflict minerals," because it was not "factual and non-ideological . . . to tell consumers that its products are ethically tainted"); Int'l Dairy Foods Ass'n v. Amestoy, 92 F.3d 67, 74 (2d Cir. 1996) (invalidating mandatory disclosure of use of synthetic growth hormones).
a. **Agency Preapproval**

The FDA, which regulates labeling on eighty percent of all food products, has a preapproval requirement for all “health claims” on food labels.\(^{397}\) These claims represent that the product reduces the risk of a disease or health condition.\(^{398}\) The FDA authorizes health claims only when supported by “significant scientific agreement, among experts qualified by scientific training and experience to evaluate such claims.”\(^{399}\) This standard is difficult to meet, requiring “near-consensus in the scientific community,” and therefore, resulting in few authorized health claims.\(^{400}\)

The FDA also permits “qualified health claims” on food packages.\(^{401}\) These claims must be supported by “credible scientific evidence,” a standard requiring something less than significant scientific agreement.\(^{402}\) The food label must also include a disclaimer identifying “limits to the level of scientific evidence to support the relationship.”\(^{403}\)

One problem with the preapproval process, according to food law scholar Diana Winters, is that it is heavily influenced by the food industry.\(^{404}\)

A problem specific to qualified health claims, which are by far the most widely used health claims, is that consumers have difficulty

---

\(^{397}\). Hilary G. Buttrick & Courtney Droms Hatch, *Pomegranate Juice Can Do THAT? Navigating the Jurisdictional Landscape of Food Health Claim Regulation in a Post-POM Wonderful World*, 49 Ind. L. Rev. 267, 272–73 (2016). The USDA’s regulation of claims made on meat, poultry, and egg labels accounts for the remaining twenty percent of food labels. *Id.* at 273 n.66.


\(^{400}\). Buttrick & Hatch, *supra* note 397, at 272.

\(^{401}\). FDA LABELING GUIDE, *supra* note 383, at 82.


\(^{403}\). *Id.* at 11.

\(^{404}\). Diana R.H. Winters, *The Magical Thinking of Food Labeling: The NLEA as a Failed Statute*, 89 Tul. L. Rev. 815, 841 (2015); cf. Michaels, *supra* note 174, at 160, 239–40 (explaining that safety labels on prescription drugs are the subject of intense negotiations between the FDA and industry, resulting in safety labels that "are often incomplete and occasionally misleading").
understanding them.\textsuperscript{405} Several studies have demonstrated this.\textsuperscript{406} That is why the European Union has rejected them\textsuperscript{407} and why the FDA rejected them until the D.C. Circuit’s 1999 case \textit{Pearson v. Shalala}.\textsuperscript{408} Unlike compelled commercial speech, which courts assess under \textit{Zauderer},\textsuperscript{409} courts assess commercial speech restrictions using \textit{Central Hudson}’s four-part analysis.\textsuperscript{410}

The Supreme Court’s “misleading” speech case law governs the first part of \textit{Central Hudson}’s analysis and ostensibly authorizes restrictions limiting only false or misleading commercial speech.\textsuperscript{411} This case law burdens the government with showing that the speech is either “inherently misleading” or “potentially misleading”\textsuperscript{412} to the intended audience.\textsuperscript{413} The government may ban inherently misleading

\begin{itemize}
\item \textsuperscript{405} Winters, \textit{supra} note 404, at 841.
\item \textsuperscript{407} Winters, \textit{supra} note 404, at 841.
\item \textsuperscript{408} 164 F.3d 650, 655–60 (D.C. Cir 1999); \textit{see also}, \textit{e.g.}, FDA LABELING GUIDE, \textit{supra} note 383, at 82 (stating that FDA began considering qualified health claims because of “[p]ast court decisions”); Although \textit{Pearson} addressed health claims on dietary supplements, the FDA applies its ruling to products. Guidance for Industry: Qualified Health Claims in the Labeling of Conventional Foods and Dietary Supplements; Availability, 67 Fed. Reg. 78,002, 78,002 (Dec. 20, 2002).
\item \textsuperscript{409} \textit{See supra} note 390 and accompanying text.
\item \textsuperscript{411} Carver, \textit{supra} note 156, at 171–73.
\item \textsuperscript{412} \textit{See} Ibanez \textit{v. Fla. Dep’t of Bus. & Pro. Regul.}, 512 U.S. 136, 142–46 (1994) (explaining and applying the two different constitutional standards that constrain governmental regulation of “inherently misleading” versus “potentially misleading” speech).
\item \textsuperscript{413} Edenfield \textit{v. Fane}, 507 U.S. 761, 775 (1993) (invalidating ban where the audience was “sophisticated and experienced business executives”); \textit{Ohralik v. Ohio State Bar Ass’n}, 436 U.S. 447, 465–66 (1978) (upholding ban where the audience was vulnerable accident victims).
\end{itemize}
commercial speech altogether, but it may not ban potentially misleading commercial speech unless it shows that the use of disclaimers or other less restrictive measures could not prevent deception.\footnote{414}{Bates v. State Bar of Ariz., 433 U.S. 350, 384, 387 n.1, 397, 402 (1977).} The government must make a substantial showing to support such a ban.\footnote{415}{See Friedman v. Rogers, 440 U.S. 1, 12–18 (1979) (upholding ban on trade names in optometry because government put forth extensive evidence that optometrists had used them in misleading ways); Nicopure Labs, LLC v. FDA, 944 F.3d 267, 284–87 (D.C. Cir. 2019) (affirming constitutionality—based on extensive findings about how addictive and harmful cigarettes are, how past consumers have been misled by even truthful statements in cigarette marketing, and how Congress considered and rejected less restrictive alternatives as inadequate—a FDA ban on marketing e-cigarettes as safer than existing tobacco products until manufacturers show (1) scientific evidence for claim and (2) claim will not mislead consumers).}

In \textit{Pearson}, the D.C. Circuit found that the FDA did not meet that burden and thus could not ban the health claims at issue simply because they failed to meet the significant-scientific-agreement standard.\footnote{416}{Pearson v. Shalala, 164 F.3d 650, 653–56, 659–60 (D.C. Cir. 1999).} The FDA had to consider whether a disclaimer could cure the health claims’ deceptiveness.\footnote{417}{Id. at 659.} Although the court allowed for the possibility of a different holding if the FDA could provide empirical evidence of case-specific consumer confusion,\footnote{418}{See id. at 659–60; Fleminger, Inc. v. U.S. Dep’t of Health & Hum. Servs., 854 F. Supp. 2d 192, 217–18 (D. Conn. 2012); Whitaker v. Thompson, 248 F. Supp. 2d 1, 13 (D.D.C. 2002).} the FDA has not indicated an interest in doing so.\footnote{419}{Jennifer L. Pomeranz, \textit{A Comprehensive Strategy to Overhaul FDA Authority for Misleading Food Labels}, 39 Am. J.L. & Med. 617, 624–25 (2013).} Indeed, \textit{Pearson} appears to have ushered in a more lax environment for all labeling claims.\footnote{420}{Coates, supra note 154, at 270; John C. Coates IV, \textit{Cost-Benefit Analysis of Financial Regulation: Case Studies and Implications}, 124 Yale L.J. 882, 914–17 (2015); Robert A. Kagan, \textit{Adversarial Legalism and American Government, in The New Politics of Public Policy} 88, 89 (Marc K. Landy & Martin A. Levin eds., 1995); see also Taylor, supra note 154.}

This may be a result of the string of legal defeats the FDA suffered in the years after \textit{Pearson}.\footnote{421}{Id. at 625.} Political scientist Robert Kagan and legal scholar John Coates have shown that litigation drains agency resources, morale, and reputation, causing regulators to reduce or delay their activity in an effort to avoid it.\footnote{422}{See infra notes 424–426 and accompanying text.} In other words, the threat
of constitutional invalidation has a chilling effect on regulations, pushing them further and further away from the ever-approaching constitutional line. For the FDA, the legal defeats include one district court interpreting Pearson to stand for the proposition that the agency can reject a health claim outright only where there is “little-to-no scientific evidence in support of the claim and where the government could prove that the public would still be deceived by the claim even with the use of accompanying disclaimers.” District courts have also invalidated: (1) FDA efforts to satisfy Pearson by modifying industry health claims and (2) FDA disclaimer language that “negates” the industry claim—for example, by stating that the FDA does not agree with it. FDA disclaimer language now merely attempts to convey the strength of scientific evidence supporting the health claim.

b. Prophylactic Rules

Food companies’ “nutrient content claims”—like “healthy,” “natural,” “low fat,” or “high in fiber”—must comply with the FDA’s prophylactic definitions. For example, the term “healthy” may be used only on the labels of foods that have less than a threshold amount of fat and cholesterol and more than a threshold amount of nutrients.

These prophylactic rules have advantages. They can provide uniformity and clarity for both consumers and food companies, and, when compared to preapproval, they promote efficiency by avoiding review of thousands of labels.

---

423. See Roesler, supra note 251, at 503–05 (discussing evaluating commercial speech and potential First Amendment violations of regulations by applying the Central Hudson test).
427. FDA LABELING GUIDE, supra note 383, at 79, 93–94.
429. FDA LABELING GUIDE, supra note 383, at 79, 93–94.
431. Id. at 13–15.
Prophylactic rules also have disadvantages. First, in the food context where at least ten federal agencies have regulatory responsibilities for ensuring the integrity of representations about food, "regulatory fragmentation" creates inconsistencies in the definitions of these terms, leading to consumer confusion. Second, some scholars argue that the FDA's nutrient-content-claim regulations are too lax. One example is the definition of "healthy," which has no disqualifying levels of trans-fat or added sugar, allowing cereal companies to create a "health-halo" around their sugary products. Another is the FDA's refusal to define the term "natural," which appears on a wide variety of processed-food labels, from potato chips to artificial sweeteners. This may be a consequence of industry capture, which plagues the FDA, according to several commentators.

Another disadvantage of prophylactic rules is the threat of constitutional invalidation. In *In re R.M.J.*, the Supreme Court applied its misleading-speech doctrine to a Missouri state law that allowed lawyers to advertise their expertise in one or more of twenty-three listed practice areas, but did not allow them to deviate from the rule's precise wording. Because Missouri could not argue that the defendant's use of the term "real estate instead of property" was misleading, the Court held Missouri's law unconstitutional as applied. Although there is no major case law applying this ruling to the FDA's prophylactic definitions and standards, *R.M.J.*'s logic applies

432. *Id.* at 14, 20.
434. See 21 C.F.R. § 101.65(d)(2); FDA LABELING GUIDE, *supra* note 383, at 79.
435. NICOLE E. NEGOWETTI, FOOD LABELING LITIGATION: EXPOSING GAPS IN THE FDA’S RESOURCES AND REGULATORY AUTHORITY 6 (2014), https://www.brookings.edu/wp-content/uploads/2016/06/Negowetti_Food-Labeling-Litigation.pdf [https://perma.cc/5KJJ-UMN4] (defining the "health halo" as the theory that people tend to overestimate the healthiness of food based on attributes of the food such as "organic," "natural," or contains "whole grains").
437. E.g., Heinzerling, *supra* note 430, at 14, 20; see also, e.g., Letter from Audrae Erickson, Pres., Corn Refiners Ass’n, to Dockets Mgmt. Branch, Food & Drug Admin. (Nov. 14, 2006) (opposing, on behalf of producers of high fructose corn syrup, an FDA clarification of the term "natural").
439. *Id.* at 195, 199–207.
440. *Id.* at 205–07.
to nutrient content claims, and some scholars have argued that they are constitutionally problematic.\footnote{441}

c. \textit{Ex post Enforcement}

i. FDA Enforcement

When a food label fails to comport with FDA regulations—including health-claim preapproval, prophylactic nutrient-content-claim rules, and the overarching requirement that food packaging be “truthful and not misleading”—the agency may initiate enforcement proceedings for “misbranded” food.\footnote{442}

Although commentators are critical of all three categories of the FDA’s food-label regulations, they are by far the most critical of FDA enforcement, which seldom amounts to more than a “Warning Letter” urging the food company to voluntarily correct its action, and often amounts to less.\footnote{443} This is the case even though the FDA’s enforcement authority includes recall, seizure, injunction, administrative detention, civil money penalties, and criminal prosecution.\footnote{444} The result is that, “while the law is mighty in theory, it is tame in fact.”\footnote{445}

Scholars list several reasons for the FDA’s failure to enforce its food-labeling regulations. Some argue that the FDA lacks sufficient enforcement authority to deter misleading claims, because the more severe penalties are limited to claims that, like missing allergen information, put consumers at immediate risk of severe injury or death.\footnote{446} Relatedly, some scholars argue that FDA enforcement actions are unnecessarily costly and time consuming because, unlike the Federal Trade Commission (FTC), which may compel food companies to substantiate advertising claims with scientific support, the FDA

\footnotesize

442. 21 U.S.C § 343(a); see Pomeranz, \textit{supra} note 419, at 619.
444. 21 U.S.C §§ 333–36.
must conduct its own research. Some commentators also emphasize that food companies exploit regulatory loopholes.

Most commentators agree that the number one factor hindering the FDA's ability to effectively combat false and misleading food labels is its resource constraints. In addition to its task of regulating food labels, the FDA must regulate drugs, cosmetics, tobacco, and dietary supplements. This involves tens of thousands of companies and hundreds of thousands of products. The result is that the FDA is overworked and underfunded, and that misbranding claims are underenforced.

ii. **FTC Enforcement**

The FTC, which regulates the advertising of food products, relies entirely on ex post enforcement. When the agency determines that material claims in advertisements or promotional materials are false, misleading, or unsubstantiated, it may bring an administrative enforcement action or file suit before a U.S. District Court.

The available remedies differ depending on the forum. In administrative actions, liability is limited to injunctive relief, usually in the form of an order to cease and desist from making false, misleading, or unsubstantiated claims. In addition, although the FTC generally does not have the authority to impose financial remedies, it may enter into administrative consent orders that require disgorgement.
district court, the FTC may seek preliminary and permanent injunctions, as well as financial remedies.\textsuperscript{458} Although attorneys Anne Maher and Leslie Fair state that “much of the FTC’s consumer protection litigation is now conducted in federal court, rather than before ALJs,”\textsuperscript{459} that is not where the agency prosecuted \textit{POM Wonderful, LLC v. FTC}.\textsuperscript{460} Indeed, some commentators argue that the famous \textit{POM Wonderful} case is an outlier in the other direction: because the FTC does not have the resources to litigate every case so vigorously, the FTC, like the FDA, relies increasingly on voluntary compliance achieved through warning letters and consent orders.\textsuperscript{461} In the \textit{POM} case, which helps to illustrate the limited deterrent of FTC enforcement actions, the agency contented itself with a cease-and-desist order.\textsuperscript{462}

From 2003 to 2010, POM’s advertisements and promotional materials made claims—based on shoddy science POM both funded and mischaracterized—that its pomegranate juices and extracts treat, prevent, or reduce the risk of heart disease, prostate cancer, and erectile dysfunction.\textsuperscript{463} For example, POM funded an erectile dysfunction study that evaluated results using two measures, one that is a “validated” measure, meaning that it has been shown to have statistical reliability, and one that is not.\textsuperscript{464} The validated measure did not show evidence of improved erectile function after patients drank pomegranate juice.\textsuperscript{465} The non-validated measure did, but even those results fell short of statistical significance.\textsuperscript{466} Nevertheless, POM publicized the study repeatedly from 2007 to 2010, touting the non-validated findings online and in print ads without any mention of their shortcomings or of the unfavorable validated findings.\textsuperscript{467} POM even drafted the study’s press release in a way that suggested positive findings on the validated measure.\textsuperscript{468}

\begin{itemize}
\item \hspace{1em} 458. \textit{Id.} at 593 \& n.34, 614–16.
\item \hspace{1em} 459. \textit{Id.} at 594.
\item \hspace{1em} 460. 777 F.3d 478 (D.C. Cir. 2015).
\item \hspace{1em} 461. Buttrick \& Hatch, \textit{supra} note 397, at 273.
\item \hspace{1em} 462. \textit{POM}, 777 F.3d at 484.
\item \hspace{1em} 463. \textit{Id.} at 484–88.
\item \hspace{1em} 464. \textit{Id.} at 487–88.
\item \hspace{1em} 465. \textit{Id.}
\item \hspace{1em} 466. \textit{Id.}
\item \hspace{1em} 467. \textit{Id.}
\item \hspace{1em} 468. \textit{See id.} at 488.
\end{itemize}
In 2010, the FTC filed an administrative complaint charging that POM and some of its managers made “false, misleading, and unsubstantiated representations.” After extensive administrative proceedings, the FTC ordered that defendants cease and desist from making claims about the health benefits of any food, drug, or dietary supplement unless the claims are non-misleading and supported by “competent and reliable scientific evidence that, when considered in light of the entire body of relevant and reliable scientific evidence, is sufficient to substantiate that the representation is true.” The FTC also imposed a heightened requirement for unqualified claims about the treatment or prevention of any disease, requiring that such claims be supported by at least two randomized, controlled, human clinical trials (RCTs).

According to Coates, this shows that “regulatory agencies under Central Hudson face a strong risk that a court will be able to exploit any mismatch between the court’s (often uneducated or even ignorant) view of what is ‘necessary’ to accomplish the agency’s goals to strike down a regulation.” Even worse, Coates continues, such cases often rely on a “politically naïve (or disingenuous)” view that “agencies or legislatures can simply rewrite their regulations or statutes with minimal effort and delay, to bring them into line with the court’s view.” Coates finds this naïveté “hard to understand in an era of political logjams, ‘do nothing’ Congresses, and increasingly bitter and polarized politics, which make it more likely that the result of a court striking down a law is that it will stay struck.”

iii. Private Enforcement

The government’s failure to adequately police health and nutrition claims on food and beverage labels and ads has pushed consumer advocacy groups to turn to the courts. There, they have had some successes, like the $4 million settlement with Kellogg based on its false

469. Id.
470. Id. at 488-89.
471. Id. at 489.
472. Id. at 502-05.
473. Coates, supra note 154, at 247.
474. Id.
475. Id.
476. NEGOVETTI, supra note 435, at 1, 7, 9.
advertising that Frosted Mini-Wheats improve children’s attentiveness, memory, and other cognitive functions.477

Like agency enforcement actions, private enforcement actions have their limits. First, much of the private litigation has been unsuccessful because there is no private right of action to enforce federal deceptive labeling and advertising laws.478 Thus, consumers must bring actions against false advertising, unfair trade practices, consumer protection, fraud, and breach of warranty under state statutes.479 These cases frequently get bogged down in threshold litigation over preclusion, preemption, and primary jurisdiction.480 Second, even when successful, some cases settle for no monetary relief and limited injunctive relief, while paying off plaintiffs’ attorneys with ample fees.481 Relatedly, Negowetti argues that “regulation by litigation is a costly and slow process that is unlikely to affect widespread change.”482

As a solution, several scholars have argued that Congress should create such a private right of action.483 Such a private right of action could be a useful supplement to federal enforcement.484 This situation currently exists for those with commercial interests, who may sue under the federal Lanham Act to recover the losses they suffered as a result of their competitors’ false or misleading labeling or advertising.485 Legislatures could give consumers a similar power to enforce federal truth-in-labeling and advertising laws.

d. Administrative Restrictions on Cannabis Industry Speech

Taking lessons from the FDA and FTC, legislators and regulators trying to prevent disinformation on cannabis labels and

478. Pomeranz, supra note 419, at 635.
479. Buttrick & Hatch, supra note 397, at 279; NEGOWETTI, supra note 435, at 10–11.
480. Buttrick & Hatch, supra note 397, at 268.
481. Heinzerling, supra note 430, at 23.
482. NEGOWETTI, supra note 435, at 23.
484. Heinzerling, supra note 430, at 23.
advertisements can erect an administrative regime that has (1) prophylactic definitions and standards, (2) preapproval procedures for all other claims, (3) robust ex post enforcement, and (4) a private right of action as a backstop. Terms like “organic” and “low tar” could have prophylactic definitions while newer and more specific health-related claims could go through the preapproval process—until the agency gains expertise and adds definitions. A growing list of definitions can help avoid repetitive preapproval proceedings, which will be a relatively slow and resource-intensive process for both the agency and the cannabis companies. But the preapproval process could remain available to cannabis companies seeking to use undefined terms or to reword pre-defined terms, thereby acting as a constitutional safety valve for the prophylactic rules.

If implemented correctly, legislators and regulators could avoid or mitigate some of the issues that plague the FDA and the FTC. First, they could solve the “regulatory fragmentation” problem by centralizing authority in a single agency. Second, they could authorize the agency to compel cannabis companies to substantiate labeling or advertising claims with scientific support and use severe penalties to deter corporate disinformation. Third, they could attempt to avoid resource constraints by earmarking a cannabis tax to agency funding.

Still, there are limits to these solutions. In theory, legislators and regulators can insulate the agency from industry capture and avoid any gaps in regulatory policy; in practice, big business has proven adept at influencing agency actions and exploiting regulatory loopholes.
Additionally, monitoring and enforcing advertising and labeling laws will remain expensive, even if the new enforcement agency remains adequately funded and is never overburdened.\footnote{495} Judicial second-guessing of agency decisions on First Amendment grounds will add to these costs, force the agency to accept qualified representations, and limit the agency’s ability to implement severe penalties ex post.\footnote{496}

Finally, some forms of corporate propaganda precede these administrative solutions. Indeed, one purpose of marketable science, like POM’s, is to obtain scientific findings that the industry can tout on its labels and advertising.\footnote{497} At best, prophylactic rules, preapproval requirements, and ex post enforcement can help to ensure that promotional claims accurately describe these studies and the surrounding body of science, but they cannot cure the preexisting skew.\footnote{498}

III. Addressing Corporate Disinformation Indirectly

The non-systemic measures Section II advocates amount to an expensive, incomplete, and inadequate patchwork. When applied to wealthy and sophisticated big businesses, like a consolidated cannabis industry, they are vulnerable to political and regulatory capture, constitutional invalidation, and corporate evasion. This shows that

\begin{itemize}
\item and exemptions of certain claims from FDA approval; \textit{supra} notes 326–341, 357, 404, 437 and accompanying text; \textit{cf.} Michaels, \textit{supra} note 135, at 110–11 (explaining that pharmaceutical companies frequently exploit loopholes in the FDA’s regulation of prescription drug advertising). A related issue is the threat of preemption. Although the tobacco industry had an iron grip on Congress throughout its disinformation campaign, it had less influence over state and especially local governments. Brandt, \textit{supra} note 235, at 251–58, 273–74; Kline et al., \textit{supra} note 359, at 645. So, the tobacco industry sought to invalidate local and state regulations in court, arguing that state or federal laws preempted them. Kline et al., \textit{supra} note 359, at 644–45. This severely inhibited tobacco control efforts. \textit{Id.} at 645–46 & nn.231–32. If federal or state regulators want to allow for stricter state or local regulations, they must remember to include anti-preemptive language. \textit{Id.}
\item See, \textit{e.g.}, Winters, \textit{supra} note 404, at 836 (arguing that the Nutrition Labeling and Education Act of 1990 was ineffective because it required substantial judicial resources to manage claims as well as significant FDA resources to monitor and enforce it).
\item See, \textit{e.g.}, Coates, \textit{supra} note 154, at 273 (arguing that judicial ability to strike down agency requirements wastes agency resources).
\item See, \textit{e.g.}, Michael Moss, \textit{Salt, Sugar, Fat: How the Food Giants Hooked Us} (2013) (surveying the junk food industry, including manipulative marketing strategies).
\item See \textit{supra} notes 170–179 and accompanying text.
\end{itemize}
corporate disinformation is an unavoidable cost of a system defined by a de-regulatory First Amendment and consolidated corporate power. But it is not unavoidable. Abandoning the corporate and commercial speech doctrines would help substantially, but it would not get at the root of the problem. A more complete solution, and a more realistic one, would be to pair the measures listed in Section II with measures designed to prevent the creation of a consolidated cannabis industry before it takes root.

A. Abandoning the Corporate and Commercial Speech Doctrines

Abandoning the corporate and commercial speech doctrines would greatly help government efforts to address corporate propaganda. But it would not address the core issue: excessive private power. Such a solution would also carry the risk of government overreach and, in any case, it is unlikely in the short and medium term.

The corporate and commercial speech doctrines make it more difficult for regulators to combat corporate disinformation. They force gaping holes into any regulatory response to corporate disinformation, foreclosing prophylactic measures, like a sequestration system for corporate science funding;\textsuperscript{499} immunizing biased, incomplete, but technically true propaganda from regulatory intervention;\textsuperscript{500} and opening every hard-fought regulatory victory to the possibility of constitutional invalidation.\textsuperscript{501} This constitutional litigation not only increases the cost of regulation and favors big business, which has the resources to litigate these issues effectively;\textsuperscript{502} it also deters regulators from pursuing solutions, like those discussed in Part II, that approach the constitutional line.\textsuperscript{503} In addition, the corporate speech cases protecting political spending, including \textit{Citizens United}, make it easier for big business to shape legislative and regulatory outcomes.\textsuperscript{504}

Abandoning the corporate and commercial speech doctrines would re-empower government to address corporate disinformation, but it would not get at the root of the problem. As Section III.B will show,

\begin{itemize}
\item 499. \textit{Supra} notes 135–137 and accompanying text.
\item 500. \textit{Supra} Section II.A.2 (discussing banning or burdening corporate propaganda as a legislative solution to corporate disinformation).
\item 501. \textit{See supra} Sections II.B.1, II.C (discussing judicial and administrative solutions).
\item 502. \textit{See supra} notes 234–238, 258, 266–267, and accompanying text.
\item 503. \textit{Supra} notes 422–423 and accompanying text.
\item 504. \textit{Supra} notes 143–145 and accompanying text.
\end{itemize}
misinformation is just one cost of bigness and consolidation. The corporate and commercial speech doctrines are others. The power imbalance between big businesses and their adversaries creates skewed outcomes in many domains, including litigation, politics, science, journalism, and public opinion. There is then a feedback loop because the incremental capture of one institution makes it easier to further capture another. Without the First Amendment, regulators could better impede industry efforts to change the truth, making it harder and more expensive for industry to tilt outcomes in its favor. However, industry would still be able to use its financial might to misinform, just less easily.

In addition, abandoning the corporate and commercial-speech doctrines carries the risk of government overreach. One of the First Amendment’s core purposes is to protect against that very risk, because the Founders and the Court rightly understood that government is not always virtuous. Indeed, this Article discusses many examples in which the government has been a source of misinformation, from anti-cannabis disinformation to pro-alcohol propaganda. Yet, just as the First Amendment does not protect against corporate propaganda, it does not protect against government propaganda.

The First Amendment protects against government censorship, and its solution to speech problems, in almost all cases, is more speech. This Article shows how there can sometimes be too much speech, insofar as preexisting power imbalances allow one side of a debate to

505. _Infra_ notes 544–555 and accompanying text.
506. _Infra_ notes 544–555 and accompanying text.
507. _Supra_ notes 295–302 and accompanying text.
508. _See supra_ Part II (discussing inadequacy of legislative, judicial, and administrative solutions to corporate disinformation).
509. _See Taylor, supra_ note 318.
511. _See supra_ Introduction, Section II.C.1.
512. _See supra_ Section II.C.1.
513. _See, e.g., Genevieve Lakier, The First Amendment’s Real Lochner Problem, 87 U. CHI. L. REV. 1241, 1334 (2020) (comparing the Court’s contemporary, inclusive First Amendment approach to the Court’s Lochner-era commitment to laissez-faire economics).
crowd out the other.\textsuperscript{514} One possible solution is to pare back the First Amendment and allow the government to restore balance by burdening one side of the debate. But there is no guarantee that government will intervene on the right side. Accordingly, although many scholars have advocated abandoning the corporate and commercial-speech doctrines,\textsuperscript{515} others take the opposite view.\textsuperscript{516}

In any case, the Supreme Court has given every indication that it intends to make the corporate and commercial speech doctrines stronger, not weaker.\textsuperscript{517} Thus, the more effective, safer, and more realistic solution is to address the power imbalance that allows one side of a debate to crowd out the other.

\textbf{B. Preventing Consolidation}

After a decade-long battle with the tobacco industry in the 1990s, former FDA Commissioner David Kessler reached the conclusion that the only way to effectively combat the industry’s disinformation was to break it up.\textsuperscript{518} Kessler saw that the industry could press its financial advantage at every turn, twisting not only the truth in its favor but also every attempt to regulate the industry or hold it accountable for its fraud.\textsuperscript{519} Although Kessler’s calls to dismantle the tobacco industry

\footnotesize
\begin{itemize}
\item \textsuperscript{514} \textit{See, e.g., supra} Section II.A.2 (discussing corporate propaganda); \textit{cf.} NAACP v. Hunt, 891 F.2d 1555, 1566 (11th Cir. 1990) ["The government may not monopolize the ‘marketplace of ideas’ thus drowning out private sources of speech." (citing Red Lion Broad. Co. v. FCC, 395 U.S. 367, 390 (1969)); Warner Cable Commc’ns., Inc. v. City of Niceville, 911 F.2d 634, 638 (11th Cir. 1990) ["The government may not speak so loudly as to make it impossible for other speakers to be heard by their audience;" in other words, “government speech [cannot] becom[e] so dominant as to ‘drown out’ the voice of private speakers.”].
\item \textsuperscript{515} \textit{E.g., Piety, supra} note 163, at 22 (arguing that commercial speech is broader than the Court has acknowledged to date); Robert Weisman, Commentary, Let the People Speak: The Case for a Constitutional Amendment to Remove Corporate Speech from the Ambit of the First Amendment, 83 TEMPLE L. REV. 979, 1000–01 (2011) [arguing that a constitutional amendment to remove corporations from First Amendment protection is necessary because of deep and damaging consequences, as well as a weak jurisprudential basis, for such protection].
\item \textsuperscript{516} \textit{See, e.g., Lakier, supra} note 513, at 1248 (proposing that limiting commercial speech perpetuates a misunderstanding of First Amendment).
\item \textsuperscript{517} \textit{Supra} Section II.A.1 (discussing First Amendment “speech” by corporations).
\item \textsuperscript{518} \textit{Kessler, supra} note 276, at 388–93; \textit{see also} Kleiman Testimony, \textit{supra} note 124 (advocating marijuana legalization but warning against the creation of a commercial cannabis industry).
\item \textsuperscript{519} \textit{Kessler, supra} note 276, at 388–93.
\end{itemize}
have gone unanswered, this failure stems in part from the industry's use of its wealth and influence to protect its entitlement.\textsuperscript{520} A consolidated cannabis industry, by contrast, does not yet exist, giving policymakers a unique and time-sensitive opportunity to prevent its creation.

This Part proceeds in three Sections. Section III.B.1 explains the current state of the cannabis industry and how the Dormant Commerce Clause is poised to promote bigness and consolidation. Section III.B.2 explains why America's current antitrust regime would allow for bigness and consolidation and why those factors would contribute to the threat of corporate disinformation. Section III.B.3 then proposes measures to prevent bigness and consolidation in the legal cannabis industry.

1. State Protectionism and the Dormant Commerce Clause

States have already taken several measures to prevent bigness and consolidation in the legal cannabis industry. For example, some states have capped the size of cannabis companies through licensing regulations.\textsuperscript{521} Many more have done so by burdening interstate commerce in cannabis.\textsuperscript{522} If and when Congress lifts the federal prohibition of cannabis, these laws will be deemed unconstitutional. Indeed, they may be unconstitutional already.

The states that have legalized cannabis have taken two categories of measures that impede the creation of a national cannabis industry.\textsuperscript{523} First, all states that have legalized cannabis have prohibited interstate sales of cannabis, thereby banning import and export.\textsuperscript{524} Second, most such states have limited the ability of nonresidents to own or operate cannabis businesses by making state residency a requirement for acquiring or holding a state-issued cannabis business license.\textsuperscript{525}


\textsuperscript{522}. Id. at 862.

\textsuperscript{523}. Id.

\textsuperscript{524}. Id.

\textsuperscript{525}. Id.
Some multistate operators have nevertheless arisen by creating several single-state subsidiary corporations, and they are growing bigger. For example, in July 2020, Curaleaf Holdings expanded its presence from eighteen to twenty-three states when it acquired Grassroots, another multistate operator. In addition, many big businesses, including those in the tobacco, beer, and pharmaceutical industries, have bought into the cannabis industry. Nevertheless, although consolidation, collusion, and barriers to entry are on the rise, today’s American cannabis industry is one defined more by its smallness and fragmentation than by its bigness and concentration.

If and when Congress lifts the federal prohibition of cannabis, the Dormant Commerce Clause will invalidate the state laws described above. The Dormant Commerce Clause “is a free trade principle implied by the Constitution’s express grant of authority to Congress to regulate commerce among the several states.” It prevents states from burdening interstate commerce. Accordingly, once it applies, state import/export bans and residency requirements will be unconstitutional. This will allow cannabis companies to consolidate freely across state lines. This will also likely cause a “race to the bottom,” in which states compete for a newly mobile cannabis industry by enacting increasingly business-friendly regulations.

526. Id. at 863.
528. See supra notes 98–101 and accompanying text.
529. See Mikos, supra note 521, at 889; Title, supra note 33, at 4–5 (highlighting that a few companies have emerged as monopolistic despite strong limitations of state laws and a small number of companies participating in the market).
531. Id.
532. Id. at 859.
533. Mikos, supra note 521, at 889.
534. Bloomberg & Mikos, supra note 530, at 844.
bottom that eviscerated the usefulness of corporate law in regulating corporations.\textsuperscript{535}

The conventional wisdom is that the Dormant Commerce Clause does not apply so long as the federal prohibition of cannabis prevails, but some scholars and cannabis companies are challenging that view.\textsuperscript{536} For example, out-of-state cannabis companies are currently pursuing legal challenges to the residency requirements imposed by Maine, Missouri, Oklahoma, and Washington.\textsuperscript{537} By the time Congress lifts the federal prohibition on cannabis, at the latest, congressional action will be necessary to prevent the American cannabis industry from consolidating into a small number of large, national firms.

2. Antitrust and Incentives

Bigness and consolidation in the cannabis industry would contribute substantially to the threat of corporate disinformation about cannabis science and U.S. antitrust laws are inadequate to prevent it.

Today, the “consumer welfare principle,” as defined by low prices and high output, is the touchstone of American antitrust jurisprudence.\textsuperscript{538} This principle came out of the Chicago School in the 1960s and ’70s, developed by conservative legal luminaries including Robert Bork and Richard Posner.\textsuperscript{539} At the time, “economic structuralism” was the dominant antitrust philosophy in both the courts and the academy.\textsuperscript{540} That philosophy held that a market populated with many small- and medium-sized companies is more likely to be competitive than a market dominated by a very small number of large companies.\textsuperscript{541} Accordingly, courts approved antitrust enforcement actions, like blocking mergers, that they determined would lead to anticompetitive market structures.\textsuperscript{542} By the 1980s, the

\textsuperscript{535} Winkler, supra note 101, at 168–70, 207 (citing William L. Cary, Federalism and Corporate Law: Reflections Upon Delaware, 83 YALE L.J. 663, 666 (1974)).

\textsuperscript{536} E.g., Mikos, supra note 521, at 863–65, 875–76, 884, 888.

\textsuperscript{537} Id. at 888.


\textsuperscript{540} Lina M. Khan, Note, Amazon’s Antitrust Paradox, 126 YALE L.J. 710, 718 (2017).

\textsuperscript{541} Id.

\textsuperscript{542} Id.
Chicago School persuaded the Harvard School, the rest of the academy, and most importantly, the courts to abandon economic structuralism in favor of a view of antitrust law that prized efficiency above all.\textsuperscript{543} This philosophy, centered around the consumer welfare principle, tolerates large firms and consolidated industries when there is an economic justification for them that could redound to the benefit of consumers in terms of price.\textsuperscript{544}

Economies of scale—\textit{i.e.}, the reduction in cost per unit as output increases—are an example of particular relevance to agricultural businesses like the cannabis industry.\textsuperscript{545} Several commentators have recognized that these economies will likely lead cannabis companies to consolidate and average firm size to grow because large, industrial farming and refining operations will manufacture cannabis and cannabis products more cheaply than will smaller operations.\textsuperscript{546} The firms can then pass savings on to consumers and thus avoid antitrust scrutiny.

One cost of the cannabis industry consolidating into a handful of very large firms is that it will be better equipped to invest in disinformation. This is a result of both the firms’ bigness and the industry’s consolidation.\textsuperscript{547}

Political scientists have established that bigger firms tend to be more active and sophisticated in their political activity than smaller ones.\textsuperscript{548}


\textsuperscript{544} E.g., Hovenkamp, supra note 538, at 92.

\textsuperscript{545} See, e.g., Caulkins et al., supra note 11, at 54.

\textsuperscript{546} E.g., id. at 55; Mikos, supra note 521, at 889.

\textsuperscript{547} See supra note 98 and accompanying text (distinguishing "bigness" from "economic concentration").

Spending on non-essential items like politics and science requires a certain amount of amassed capital.\textsuperscript{549} That is why the corporate propaganda story so rarely involves small firms and so frequently highlights very large firms, like Philip Morris and Coca-Cola.\textsuperscript{550} Even little POM Wonderful is backed by billionaires.\textsuperscript{551} In economic terms, this conduct is called “rent seeking.”\textsuperscript{552} It involves transfers of wealth that are socially wasteful, because “one person’s gain is another’s loss, and the exercise of transferring wealth requires resources.”\textsuperscript{553} The analysis of rent seeking by big businesses tends to focus on corporate lobbying and campaign financing, but constitutional law scholar Adam Winkler explains in his 2018 book \textit{We the Corporations} that “the pursuit of corporate constitutional rights [like the First Amendment right to corporate speech] may be understood as another illustration of the phenomenon.”\textsuperscript{554} Corporate disinformation is yet another.

Political science, through a well-accepted concept known as interest group theory, also explains why a consolidated cannabis industry would invest more in disinformation, constitutional litigation, and regulatory and political capture than a fragmented industry.\textsuperscript{555} Large, diffusely interested groups are beset by coordination and collective-action problems that prevent the investment of time and money necessary to accomplish things that would benefit them all. Their coordination problem is straightforward: it is difficult and expensive to

\begin{footnotes}
\footnoteref{549} See \textit{Winkler}, supra note 101, at 200.
\footnoteref{550} See \textit{supra} Parts I, II.
\footnoteref{552} See, e.g., Coates, \textit{supra} note 154, at 271.
\footnoteref{553} See, e.g., \textit{id}.
\footnoteref{554} \textit{Winkler}, supra note 101, at xxi (citing Vogel, \textit{supra} note 548); Hansen & Mitchell, \textit{supra} note 548, at 893; Hillman, \textit{supra} note 548, at 465; Meznar & Nigh, \textit{supra} note 548, at 979.
\end{footnotes}
identify, communicate with, and organize the action of large groups, like thousands of small, single-state cannabis companies.

The collective-action problem is subtler. It arises because each company gets the benefit of investments in disinformation dismissing the evidence of marijuana's addictive potential, regardless of its individual contribution. Accordingly, most companies would rather “free ride” on the investments of others than make any contributions themselves. The smaller and more intensely interested the group, the smaller the coordination and collective-action problems. That is why the consolidation of power in the food-and-beverage industry and, especially, the tobacco industry allowed these companies to band together so successfully. It is also why the private speech of cigarette smokers or the public in general—two very large, diffusely interested groups—could not counter the tobacco or food-and-beverage industries’ disinformation campaigns.

A small group of antitrust scholars are attuned to this problem, especially in the context of lobbying and campaign financing. These scholars find their inspiration in Supreme Court Justice Louis Brandeis, who recognized over a hundred years ago the importance of strong antitrust laws and enforcement, as well as the inseparable relationship between private economic and political power. Today, the “Neo-Brandeisian” school of thought is challenging the Chicago School’s hegemony in antitrust scholarship. These scholars have argued that the historically high concentration of power in today’s economy is leading to, among other things, the increased capture of politicians and

557 Although the food-and-beverage industry involves many products and thousands of companies worldwide, it includes a much smaller number of mega companies, like Kraft, McDonalds, and Coca-Cola, that are able to organize based on the types of food or constituent ingredients they sell. Brownell & Warner, supra note 40, at 259–60, 263–65, 283. The tobacco industry’s coordination is even easier because it has only one major product and just a handful of companies selling it. Luff, supra note 260, at 142–45, 148; Brownell & Warner, supra note 40, at 259–60, 263–65, 283; see also Wu, supra note 94, at 56 (stating that the industry associations are the best example of “small, closely-knit groups with discrete interests around which they organize”).
558 See, e.g., Wu, supra note 94, at 56.
559 Id. at 33. See generally Louis D. Brandeis, Other People’s Money and How Bankers Use It (1914); Louis D. Brandeis, Brandeis on Democracy (Philippa Strum ed., 1995).
regulators, resulting in low taxes and high subsidies for big businesses. As a solution, Neo-Brandesian scholars like Tim Wu and Lina Khan argue for a return to economic structuralism. In his 2018 book The Curse of Bigness, Wu sketches out a Neo-Brandesian agenda, including several specific measures that would make American antitrust laws more robust. For example, Wu proposes the resurrection of structural presumptions during merger review, such as a per se ban on mergers that reduce the number of firms competing in an industry to four. Khan adds that federal antitrust law is "just one tool in the antimonopoly toolbox." Federal, state, and local governments have many competition policy levers, such as the Federal Reserve's ability to promote competition in banking, and Neo-Brandesians seek to restore these tools to their full competition-promoting potential.

The disagreement between the Chicago School and the Neo-Brandesians rests on a difference in values. Neo-Brandesians criticize mainstream antitrust scholars and current antitrust law for failing to weigh the political consequences of antitrust decisions, as well as the harms that accrue to non-consumer constituencies, such as workers and small businesses. In turn, mainstream antitrust scholars, like influential University of Pennsylvania law professor Herbert Hovenkamp, dismiss the Neo-Brandesian approach as unsophisticated because it does not proceed on the economic terms that have come to govern American antitrust law. Hovenkamp also mocks Neo-Brandesian scholars for ignoring the benefits of low prices, stating that, sometimes the movement's "protagonists write as if low prices are the evil to be avoided."

562. See, e.g., supra Sections IA–C.
563. See, e.g., Khan, supra note 561, at 1061; Wu, supra note 94, at 129, 137–39; Khan, supra note 540, at 716–17.
565. Id. at 127–29.
566. Khan, supra note 520, at 131–32.
567. Id.
568. See, e.g., id.; Wu, supra note 94, at 55.
570. Id. at 85.
Interestingly, there is a compelling argument that low prices for cannabis are a bad thing. After all, for almost 100 years, cannabis policy has been singularly focused on reducing output and increasing prices.\textsuperscript{571} It is well established that increasing prices on cigarettes or alcohol, even modestly, causes a significant reduction in smoking or drinking.\textsuperscript{572} Indeed, one of the reasons why states levy specific taxes, called “sin” or “vice” taxes, on tobacco, alcohol, and cannabis is to promote public health by deterring consumption.\textsuperscript{573} Thus, by interfering with the economies of scale and other efficiencies that come with bigness and consolidation, policymakers may be able to offset the increases in both cannabis use disorder and overall cannabis consumption that generally follow legalization.\textsuperscript{574}

Decentralization may have another salutary benefit in the cannabis context: increasing access to cannabis markets by the disadvantaged racial minorities hurt most by prohibition.\textsuperscript{575} This is a result many states have explicitly tried to achieve when legalizing cannabis, though many have been unsuccessful.\textsuperscript{576} Decentralization would promote this outcome by reducing the barriers to entry, because less capital is necessary to open a successful cannabis business in a local or state market than a nationwide market.\textsuperscript{577}

3. Preventing Bigness and Consolidation

Federal and state governments can take several measures to prevent bigness and consolidation in the legal cannabis industry. If paired with

\begin{footnotesize}
\begin{enumerate}
\item \textsuperscript{571} See Jeffrey A. Miron & Jeffrey Zwiebel, \textit{The Economic Case Against Drug Prohibition}, 9 J. Econ. Persps. 175, 177 (1995) (explaining how prohibition has this effect).
\item \textsuperscript{574} See Smith & Appelbaum, \textit{supra} note 122, at 697–98; Silvia S. Martins, Luis E. Segura, Natalie S. Levy, Pia M. Mauro, Christine M. Mauro, Morgan M. Philbin et al., \textit{Racial and Ethnic Differences in Cannabis Use Following Legalization in US States Medical Cannabis Laws}, JAMA Network Open, Sept. 7, 2021, at 1, 1.
\item \textsuperscript{575} Mikos, \textit{supra} note 521, at 890–91; Title, \textit{supra} note 33, at 4–6.
\item Sources cited \textit{supra} note 575.
\item Sources cited \textit{supra} note 575.
\end{enumerate}
\end{footnotesize}
the non-systemic measures identified in Section II, they would effectively address the threat of corporate disinformation about cannabis science, even if the corporate- and commercial-speech doctrines remain intact.

At the very least, if Congress lifts the federal prohibition of cannabis, that legislation should suspend the Dormant Commerce Clause with respect to commerce in cannabis.\textsuperscript{578} This would allow states to maintain intrastate-only cannabis industries, thus limiting firms’ abilities to grow and the industry’s ability to consolidate.\textsuperscript{579}

Congress should go further. Although Congress’s legalization legislation could implement a cannabis-specific antitrust regime that takes a Neo-Brandesian approach,\textsuperscript{580} that approach may not be strong enough.

Rather, Congress should itself ban interstate and international commerce in cannabis. To do so, Congress could learn from the current state laws to that effect.\textsuperscript{581} In other words, if and when Congress legalizes cannabis, that legislation should (1) ban cannabis sales across state or national lines, thereby prohibiting import and export and (2) implement residency requirements for ownership and operation of cannabis businesses.\textsuperscript{582} To prevent cannabis companies from evading these bans on interstate and international commerce by establishing corporate subsidiaries in multiple states or countries, Congress should ban corporate ownership of equity in cannabis companies.\textsuperscript{583} This would also prevent cannabis companies from becoming big business by virtue of their place in a broader conglomerate, including ones that include tobacco, beer, or pharmaceutical businesses.\textsuperscript{584}

Such federal legislation would allow states to implement similar laws to prevent the creation of large, intrastate cannabis corporations. This is especially important in large states like California, where the population and economic activity rivals that of many countries.\textsuperscript{585} In

\textsuperscript{578} See Bloomberg & Mikos, supra note 530, 843–45, 860.
\textsuperscript{579} See supra Section III.B.1.
\textsuperscript{580} See supra Section III.B.2.
\textsuperscript{581} See supra notes 523–525 and accompanying text.
\textsuperscript{582} See supra notes 523–525 and accompanying text.
\textsuperscript{583} See supra notes 526–528 and accompanying text.
\textsuperscript{584} See supra notes 526–528 and accompanying text.
\textsuperscript{585} Kieran Corcoran, California’s Economy Is Now the 5th-Biggest in the World, and Has Overtaken the United Kingdom, BUS. INSIDER (May 5, 2018, 7:09 AM),
addition to state versions of the measures described above, states can, for example, use licensing requirements to cap the market share of any one cannabis company. In a recent report, drug-policy expert Shaleen Title advances several other proposals states can take to promote decentralization, including uncapping the total number of cannabis business licenses, lowering barriers to entry for new businesses, prohibiting vertical integration, and allowing individuals to grow their own cannabis for personal use. Any federal legalization legislation should ensure that federal law does not preempt or otherwise prohibit these measures.

If federal and state governments prevent the creation of a consolidated cannabis industry and implement the non-systemic measures listed in Part II, they will dispel the looming cloud of corporate-funded misinformation about marijuana. Although it is true that a highly decentralized cannabis industry might raise a whack-a-mole problem, in which many small companies make false, misleading, or unfounded statements about cannabis and its health effects, regulators are better equipped to address this problem than a sophisticated and coordinated disinformation campaign. To the extent that small cannabis companies would make these statements, they would make them on advertising and packaging, rather than by funding scientists, creating front groups, or buying allies. The former strategies are not only cheaper, but also more directly tied to an individual company's sales; thus, they are more worthwhile investments for smaller firms. They are also commercial speech, which is still subject to greater regulatory oversight and less First Amendment protection than is fully protected corporate speech. Moreover, without investing in marketable science, capturing regulators, challenging regulations in court, or evading regulations in


586. See supra note 521 and accompanying text.

587. Title, supra note 33, at 3, 7–10.

588. Id.

589. See Taylor, supra note 318.

590. See supra Section III.B.2.

591. See supra Section III.B.2.

592. See supra Part II.
the first place, false, misleading, or unsupported labeling and advertising is a more manageable problem.  

If policymakers and regulators seek to prevent a consolidated cannabis industry from spreading disinformation about their product and its health effects, they must act quickly. The current pattern of cannabis legalization portends a consolidated commercial cannabis industry and, once the industry takes hold, it will use its wealth and sophistication to protect its entitlement. Indeed, although American cannabis markets still have relatively low market concentration, some big firms already deal in cannabis, and they are translating their economic might into political power through lobbying and campaign-finance expenditures meant to encourage and shape legalization. If policymakers do not act quickly, the United States will continue down its path toward a consolidated cannabis industry and it will find itself in a cloud of misinformation about marijuana.

CONCLUSION

After more than fifty years of concerted corporate efforts to advance their interests in the public discourse and in every branch of government, a consolidated cannabis industry will have many powerful tools to draw upon: a propaganda infrastructure of lawyers, PR reps, and product-defense firms; allies for hire in politics and the agencies; and business-friendly courts wielding a novel First Amendment protection for corporate speech. In this environment, even the optimal responses to corporate disinformation are piecemeal and vulnerable to attack. Of course, optimal regulations are neither likely nor cost free. Ultimately, the widespread history and success of corporate disinformation about science indicates that it is an unavoidable cost of a consolidated cannabis industry. If policymakers want to successfully address the threat of corporate-funded misinformation about marijuana, they must prevent the creation of such an industry before it is too late.

593. See supra Section II.C.3.
594. Supra notes 98–106 and accompanying text.
595. See sources cited supra note 520.
596. See supra notes 98–106 and accompanying text.