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BACK IN THE DRIVER’S SEAT: THE UNITED STATES SHOULD ENACT A UNIFIED AUTOMATED VEHICLE LAW AND REGULATION

James Ng[†]

ABSTRACT

Automated Vehicles are becoming more and more prevalent in the modern world. Although these vehicles are not without drawbacks, they are predicted to have numerous benefits to society and are here to stay. However, as society progresses towards a more computer-controlled and less human-operated vehicle world, U.S. laws have been unable to keep up with these scientific developments.

The federal and state governments have yet to achieve uniformity in their automated vehicle laws and regulations. The former has only provided voluntary guidance. For the latter, some states have taken progressive approaches, while others have taken more conservative ones. Taking into consideration that the current and upcoming automated vehicle technologies will create difficulties for claimants to successfully bring claims under the existing state product liability laws, this Note will explore potential solutions and propose a solution to address the current flaws.

This Note will examine what the European Union has achieved in this area of law and what solutions other legal scholars have proposed to address the issue. Finally, this Note will propose that the United States enact a unified federal automated vehicle regulation with a private cause of action for automated vehicle product liability.

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† B.S., New York University Tandon School of Engineering (2014); J.D., Brooklyn Law School (Expected 2025). I want to thank all the *Berkeley Technology Law Journal* staff for choosing my Note to be first prize for the writing competition and supporting the publication of this Note. I also want to thank all the *Brooklyn Journal of International Law* staff for assisting in developing this Note. Lastly, I would like to thank my family and friends for all the support throughout my life and the development of this Note.

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I. INTRODUCTION

Traveling in a self-driving car was dreamt of long before today.¹ In David H. Keller's short-story *The Living Machine* (1935), he envisioned a world with self-driving vehicles that would bring tremendous societal benefits.² He imagined:

Old people began to cross the continent in their own cars. Young people found the driverless car admirable for petting. The blind for the first time were safe. Parents found they could more safely send their children to school in the new car than in the old cars with a chauffeur.³

However, this distant dream would not emerge as a reality until nearly a century later.⁴

Indeed, this dream is now reality. Although most modern vehicles continue to lack the capability to be fully autonomous, many already have semi-autonomous features.⁵ An industry forecast projected that the global autonomous vehicle market would increase from \$76 billion in 2020 to \$2.16 trillion by 2030.⁶ The United States Department of Transportation declared that self-driving technology will bring about “a new era of transportation.”⁷ As early as 2016, the United States officially recognized autonomous vehicles as the future of motor vehicles.⁸ More recently, on November 15, 2021, President

1. See Marc Weber, *Where To? A History of Autonomous Vehicles*, COMPUT. HIST. MUSEUM (May 8, 2014), <https://computerhistory.org/blog/where-to-a-history-of-autonomous-vehicles/?key=where-to-a-history-of-autonomous-vehicles>; Bonnie Gringer, *History of the Autonomous Car*, TITLE MAX, <https://www.titlemax.com/resources/history-of-the-autonomous-car> (last visited Oct. 27, 2022).

2. David H. Keller, *The Living Machine*, 6 WONDER STORIES 12, 1461, 1470 (1935).

3. *Id.*

4. *A Brief History of Autonomous Vehicle Technology*, WIRED, <https://www.wired.com/brandlab/2016/03/a-brief-history-of-autonomous-vehicle-technology/> (last visited Dec. 26, 2023).

5. Gringer, *supra* note 1.

6. Abhay S & Sonia M, *Autonomous Vehicle Market by Level of Automation (Level 1, Level 2, Level 3, Level 4, and Level 5), Application (Civil, Defense, Transportation & Logistics, and Construction), Drive Type (Semi-autonomous and Full Autonomous), and Vehicle Type (Passenger Car and Commercial Vehicle): Global Opportunity Analysis and Industry Forecast, 2021-2030*, ALLIED MKT. RSCH. (Feb. 2022), <https://www.alliedmarketresearch.com/autonomous-vehicle-market>.

7. USDOT *Automated Vehicles Activities*, U.S. DEP'T OF TRANSP. <https://www.transportation.gov/AV> (last updated Mar. 28, 2022) (recognizing the self-driving vehicles will be the dawn of “a new era of transportation”).

8. U.S. DEP'T OF TRANSP. & NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., FEDERAL AUTOMATED VEHICLES POLICY: ACCELERATING THE NEXT REVOLUTION IN ROADWAY SAFETY, at 3, 5, 6 (2016), <https://www.transportation.gov/sites/dot.gov/files/docs/AV%20policy%20guidance%20PDF.pdf>.

Biden signed the Infrastructure Investment and Jobs Act into law that discussed researching and updating existing regulations related to automated vehicles.⁹ These recent federal government activities indicate the government's interest in regulating this new technology.¹⁰

An automated vehicle (AV) is a vehicle capable of operating without the driver's control by relying on software and programs that include sensors to control vehicular movement.¹¹ An AV has internet connectivity that allows for software and program updates as well as communication with other vehicles, traffic devices, and infrastructure to improve the vehicle's safety.¹²

The inevitable introduction of AVs has created a two-fold interrelated issue for the current United States AV regulatory framework and existing product liability law. First, there are no standardized laws and regulations for AVs between the federal and state governments. The federal government has mainly issued voluntary guidance, whereas some states have taken diverse approaches to address emerging AVs.¹³ Secondly, most of the current state product liability laws are exceptionally burdensome for a party harmed by an AV compared to a traditional vehicle.¹⁴ While some states have taken a more progressive approach in addressing the above-mentioned issues, others have not been as liberal in this area.¹⁵ However, with the rapid advancement of AVs, federal and state regulations are failing to provide an innovation-friendly

9. Infrastructure Investment and Jobs Act, HR 3684, 117th Cong. (discussing that this act “authorize[s] funds for Federal-aid highways, highway safety programs, and transit programs”). See also Infrastructure Investment and Jobs Act, §§ 11135, 13005, 13006, 24102, 24108, 25005.

10. The legislative purpose and congressional intent are key factors courts consider when determining Congressional authority under commerce clause and federal preemption. *Infra* note 280, 286.

11. *What is an Autonomous Car?*, SYNOPSIS, <https://www.synopsys.com/automotive/what-is-autonomous-car.html> (last visited Oct. 27, 2022). (explaining an autonomous car is “self-aware and capable of making its own choices, whereas, an automated car “follow[s] orders and then drive itself.”)

12. See TE Connectivity, *6 Key Connectivity Requirements of Autonomous Driving*, IEEE SPECTRUM (Oct. 4, 2018), <https://spectrum.ieee.org/6-key-connectivity-requirements-of-autonomous-driving>; see also Jayna Locke, *What is Connected Vehicle Technology and What Are the Use Cases?*, DIGI (June 17, 2020), <https://www.digi.com/blog/post/what-is-connected-vehicle-technology-and-use-cases>.

13. Mark J. Fanelli & F. Jackson Stoddard, *States Lead the Way on Autonomous Vehicle Regulation as Federal Law Looms on the Horizon*, MORGAN LEWIS (May 25, 2022), <https://www.morganlewis.com/pubs/2022/05/states-lead-the-way-on-autonomous-vehicle-regulation-as-federal-law-looms-on-the-horizon>; see Gurney, *infra* note 120, at 257–66.

14. See Gurney, *infra* note 120, at 257–66.

15. See generally *Autonomous Vehicles*, GOVERNORS HIGHWAY SAFETY ASS'N, <https://www.ghsa.org/state-laws/issues/autonomous%20vehicles> (last visited Nov. 10, 2022); see Gurney, *infra* note 120, at 257–66.

environment, which is hindering the progression of this beneficial technology.¹⁶

Many legal scholars have recognized that the United States' current AV framework and liability system is insufficient, and they have proposed solutions.¹⁷ As early as 2013, legal scholar Jeffrey Gurney explored this topic profoundly and correctly predicted the implication of AVs in the existing framework and system.¹⁸ Since then, potential solutions have been proposed by different scholars.¹⁹ This Note will explore four types of these solutions—(1) insurance, (2) Federal Motor Vehicle Safety Standards (FMVSS), (3) uniform law, and (4) a “hands off” approach—and discuss the flaws of these solutions.²⁰

This Note then proposes that Congress creates a comprehensive federal AV regulation that preempts all state regulations on the design, construction, or performance of AVs and creates a cause of action for victims to bring a claim against manufacturers in a product liability suit. Victims will be afforded two new legal rights to ease the burden of bringing a claim: the “right of access to evidence”²¹ and the “presumption of causality.”²² Part II will outline the current automation levels for AVs, their benefits and drawbacks, and the current landscape of AV regulations at the federal and state levels. Understanding the most recent developments in AVs, and their benefits and drawbacks, is key to understanding why Congress must regulate this area. Part III will explore issues with the current U.S. AV regulations and product liability laws. Specifically, it will examine how U.S. product liability laws are incompatible with AV. Part IV will search for potential solutions based on the European Union's current state of AV regulations and related product liability laws, as well as other scholarly solution proposals including insurance, federal regulation, uniform law, and the hands-off approach. Lastly, Part V will propose a solution to address the issues by enacting a unified federal AV regulation with a private cause of action for AV product liability.

16. See Robert E. Latta, *Federal Autonomous Vehicle Framework is Needed for the US to be a Leader in AV Technology*, HILL (June 07, 2022), <https://thehill.com/driving-into-the-future/3513655-federal-autonomous-vehicle-framework-is-needed-for-the-us-to-be-a-leader-in-av-technology/>.

17. See, e.g., Dr. Michael Chatzipanagiotis & Dr. George Leloudas, *infra* note 250.

18. Gurney, *infra* note 120, at 257–66.

19. See Dr. Chatzipanagiotis & Dr. Leloudas, *infra* note 250; Davola, *infra* note 260; Geistfeld, *infra* note 264; Hockstad & Fisher, *infra* note 272; Bollman, *infra* note 279.

20. *Id.*

21. *EU Press PLD and AI Liability*, *infra* note 242.

22. *Id.*

II. AV TECHNOLOGY AND REGULATIONS AT THE FEDERAL AND STATE LEVELS

Part II will provide an overview of AV technology and the attempts to regulate AVs at the federal and state levels. Section II.A will first discuss the different levels of driving automation for AVs and then consider the benefits and drawbacks of AVs. Section II.B will discuss the federal government's involvement in regulating AVs. Section II.C will discuss the state government's involvement in regulating AVs.

A. AN OVERVIEW OF AV TECHNOLOGY

1. *SAE J3016 Levels of Driving Automation*

Although the term AV primarily refers to self-driving cars, AV is a broad term encompassing different automated capabilities.²³ To classify the sophistication of an AV, the United States used the Society of Automotive Engineers (SAE) definitions for levels of automation.²⁴ The SAE defined six levels of driving automation—from “Level 0” through “Level 5”—in the *SAE J3016 Recommended Practice*.²⁵ Many countries, including the United States²⁶ and the European Union, use this discursive framework for regulating AVs.²⁷

SAE Level 0, Level 1, and Level 2 vehicles require the drivers to be driving—that is, steering, braking, and accelerating—and must supervise the automation support features to maintain safety.²⁸ Examples of SAE Level 0 features include automatic emergency braking, blind spot warning, and lane departure warning.²⁹ The Level 0 features are “limited to providing warnings and momentary assistance.”³⁰ Examples of SAE Level 1 features include lane

23. See U.S. Dep't of Transp. & Nat'l Highway Traffic Safety Admin., *supra* note 8, at 9.

24. *Id.* at 9–10.

25. *SAE Levels of Driving Automation Refined for Clarity and International Audience*, SAE INT'L (May 3, 2021), <https://www.sae.org/blog/sae-j3016-update>.

26. Nat'l Sci. & Tech. Council & U.S. Dep't of Transp., ENSURING AMERICAN LEADERSHIP IN AUTOMATED VEHICLE TECHNOLOGIES - AUTOMATED VEHICLES 4.0, 29 (2020), <https://www.transportation.gov/sites/dot.gov/files/2020-02/EnsuringAmericanLeadershipAVTech4.pdf>.

27. Susanne Pillath, *Automated Vehicles in the EU*, EUROPEAN PARLIAMENTARY RSCH SERV. 3–5 (Jan. 2016), [https://www.europarl.europa.eu/RegData/etudes/BRIE/2016/573902/EPRS_BRI\(2016\)573902_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2016/573902/EPRS_BRI(2016)573902_EN.pdf) [hereinafter *AV in EU*].

28. Jennifer Shuttleworth, *SAE Standards News: J3016 Automated-Driving Graphic Update*, SAE INT'L (Jan. 7, 2019), <https://www.sae.org/news/2019/01/sae-updates-j3016-automated-driving-graphic> (explaining Level 0 features are “limited to providing warnings and momentary assistance”; Level 1 features “provide steering OR braking/acceleration support”; and Level 2 features provide steering, acceleration, and braking support).

29. *Id.*

30. *Id.*

centering OR adaptive cruise control.³¹ Features in SAE Level 1 morph into SAE Level 2 when both the lane centering and adaptive cruise control are used at the same time, which allows the “features [to] provide steering [and] braking/acceleration support to the driver.”³² Some current systems, such as the “Tesla Autopilot and Cadillac Super Cruise systems,” already qualify as Level 2.³³ Under SAE Levels 0, 1, and 2, automation support features are considered to be “driver support features,” instead of “automated driving features” that can be seen in higher SAE Levels, so the driver is considered to be “driving.”³⁴

Starting from SAE Level 3, the role of “driving” begins to shift from the driver to the self-driving technology.³⁵ Level 3 is of important contemporary consideration as Level 3 vehicles are on the verge of being commercially deployed.³⁶ In comparison to lower levels, vehicles that have SAE Level 3, 4, or 5 systems do not require the driver to be driving when “automated driving features are engaged—even if [the drivers] are seated in ‘the driver’s seat.’”³⁷ In a Level 3 vehicle, the driver may need to engage in driving at the automated feature request because the vehicle can only be driven under limited³⁸ conditions and will not operate when certain conditions are not met.³⁹

For SAE Levels 4 and 5, the “automated driving features will not require [the driver] to take over driving.”⁴⁰ A Level 4 system can only be operated

31. *Id.*

32. *Id.*

33. *The 6 Levels of Vehicle Autonomy Explained*, SYNPOSYS, <https://www.synposys.com/automotive/autonomous-driving-levels.html#:~:text=The%20vehicle%20can%20control%20both,both%20qualify%20as%20Level%202> (last visited Dec. 26, 2022).

34. Shuttleworth, *supra* note 28.

35. *See generally id.*

36. In December of 2021, automaker Mercedes-Benz received approval in Germany for a new level 3 Drive Pilot system, and planned on applying for certification to test their system in the U.S. Automaking companies, such as Polestar and BMW, are also scheduled to offer level 3 systems in their vehicle in 2022. Shuttleworth, *supra* note 28; Murray Slovick, *Level 3 Autonomous Vehicles: Regulators Can't Keep Up with the Tech*, ELECTRONIC DESIGN (Jan. 24, 2022), <https://www.electronicdesign.com/markets/automotive/article/21214818/electronic-design-level-3-autonomous-vehicles-regulators-cant-keep-up-with-the-tech>; Angel Sergeev, *Mercedes Drive Pilot Level 3 Autonomous Tech Officially on Sale in Germany*, MOTOR 1 (May 6, 2022), <https://www.motor1.com/news/584121/mercedes-level-3-autonomous-tech-on-sale/>.

37. Shuttleworth, *supra* note 28.

38. Cabe Atwell, *What are SAE's Five Self-driving Levels?*, FIERCE ELECTRONICS (June 6, 2022), <https://www.fierceelectronics.com/sensors/what-are-saes-five-self-driving-levels> (explaining a level 3 AV can be self-driving under ideal conditions and within limitation, such as “limited-access divided highways at certain speeds”).

39. Shuttleworth, *supra* note 28.

40. *Id.*

under limited conditions.⁴¹ Although the deployment of Level 4 systems is not yet widespread, companies are developing the technology for its arrival.⁴² Level 5 vehicles, which can be driven entirely by automated driving features under all conditions, are the only vehicles that are not yet accessible to the public, even though the technologies are being tested.⁴³

2. *Benefits and Drawbacks of AVs*

In January 2020, the United States Department of Transportation (DOT) published a report explaining that the National Highway Traffic Safety Administration (NHTSA) has established “four main areas of potential benefit with regard to AVs: safety, economic and societal benefits, efficiency and convenience, and mobility.”⁴⁴ A NHTSA Research conducted from 2005 to 2007 showed that 95% of the “critical reasons for crashes” are attributed to drivers.⁴⁵ Automated Driving Systems (ADS) can reduce, or even eliminate, human error and poor human choices, leading to drastic improvements in public safety on roadways.⁴⁶ NHTSA also identified additional potential economic and societal benefits “including increased economic productivity and efficiency, reduced commuting time, and even the potential reduction of the environmental impact of conventional surface vehicles while increasing

41. The difference between a level 3 and level 4 AV is that a level 4 AV does not expect any driver’s input and is fully capable of handling all driving function that is set within its operational perimeter. Shuttleworth, *supra* note 28; Atwell, *supra* note 38.

42. Synopsys, *supra* note 33 (discussing companies that are developing and building level 4 vehicles. In the United States, taxi service company Waymo has been testing a level 4 self-driving taxi service in Arizona. A French company, NAVYA, has built and sold level 4 shuttles and cabs. Canadian company Magna is working on level 4 kit to turn vehicles into AVs. Volvo and Baidu are developing level 4 vehicles to be used in China).

43. Shuttleworth, *supra* note 28; Synopsys, *supra* note 12.

44. Nat’l Sci. & Tech. Council & U.S. Dep’t of Transp., *supra* note 26, at 2. NHTSA is a federal agency that is given the authority to reduce traffic accidents and related death and injuries. *See* 49 U.S.C. § 30101.

45. U.S. DEP’T OF TRANSP. NAT’L HIGHWAY TRAFFIC SAFETY ADMIN., CRITICAL REASONS FOR CRASHES INVESTIGATED IN THE NATIONAL MOTOR VEHICLE CRASH CAUSATION SURVEY (Feb. 2015), <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812115>. (explaining that

The critical reason is the immediate reason for the critical pre-crash event and is often the last failure in the causal chain of events leading up to the crash. Although the critical reason is an important part of the description of events leading up to the crash, it is not intended to be interpreted as the cause of the crash nor as the assignment of the fault to the driver, vehicle, or environment.

Specifically, the critical reasons are attributed to four categories: drivers, vehicles, environment, and unknown critical reasons.)

46. Nat’l Sci. & Tech. Council & U.S. Dep’t of Transp., *supra* note 26, at 2.

overall system energy efficiency.”⁴⁷ Lastly, automated technology can enhance the “independence, economic opportunities, and social well-being” for the elderly and people with disabilities.⁴⁸

Despite the numerous benefits, ADS also presents potential drawbacks.⁴⁹ The three most considerable drawbacks are (1) job loss in transportation,⁵⁰ (2) weakened cybersecurity,⁵¹ and (3) an unresolved moral dilemma.⁵² First, the jobs of many trucking, transit, and delivery workers can be replaced by AVs.⁵³ Second, since AVs rely heavily on electronic systems and connectivity to provide safety, AVs are susceptible to cyber threats that may hack the vehicle’s system and put the vehicle’s passengers and the public in danger.⁵⁴ Lastly, developers may have to design the AV to choose between unfavorable outcomes leading to a moral dilemma known as the “Trolley Problem.”⁵⁵ The

47. *Id.*; see generally SECURING AMERICA’S FUTURE ENERGY, AMERICA’S WORKFORCE AND THE SELF-DRIVING FUTURE: REALIZING PRODUCTIVITY GAINS AND SPURRING ECONOMIC GROWTH (June 2018), https://avworkforce.secureenergy.org/wp-content/uploads/2018/06/Americas-Workforce-and-the-Self-Driving-Future_Realizing-Productivity-Gains-and-Spurring-Economic-Growth.pdf (discussing improving safety in AV can lead to improve productivity and efficiency).

48. Nat’l Sci. & Tech. Council & U.S. Dep’t of Transp., *supra* note 26, at 3.

49. Jonathan Negretti, *Self-Driving Cars: Pros and Cons*, NEGRETTI LAW (June 2, 2021), <https://negrettilaw.com/news/self-driving-cars-pros-and-cons/>.

50. *See id.*

51. U.S. Dep’t of Transp., *infra* note 54.

52. Negretti, *supra* note 49; see also Scott B. Smith, *Framework for Automated Driving System Impact Assessment*, VOLPE CTR. (May 19, 2022), https://www.pcb.its.dot.gov/t3/s220519/s220519_Impacts_on_Roads_from_Automated_Driving_Systems_presentation_Smith.pdf (identifying other potential drawbacks).

53. Negretti, *supra* note 49. One 2017 report suggests that “[m]ore than four million jobs will likely be lost with a rapid transition to autonomous vehicles.” CTR. FOR GLOBAL POLICY SOLUTIONS, STICK SHIFT: AUTONOMOUS VEHICLES, DRIVING JOBS, AND THE FUTURE OF WORK 3 (2017), <https://web.archive.org/web/20220203070610/https://www.law.gwu.edu/sites/g/files/zaxdzs2351/f/downloads/Stick-Shift-Autonomous-Vehicles-Driving-Jobs-and-the-Future-of-Work.pdf>.

54. Negretti, *supra* note 49. As NHTSA points out, vehicles, which includes AV, depend on connectivity to utilize their information systems. These systems are susceptible to cyber-attacks such as hacking, “unauthorized access, damage, or anything else that might interfere with safety function[.]” *Vehicle Cybersecurity*, NAT’L HIGHWAY TRAFFIC SAFETY ADMIN., <https://www.nhtsa.gov/technology-innovation/vehicle-cybersecurity> (last visited Nov. 10, 2022).

55. Some studies have considered whether an ADS is forced to choose between two unethical choices that will result in harm, this is also known as the trolley problem. Human drivers react to emergencies “instinctively,” but AV makes decisions that are “predetermined by programmers.” Negretti, *supra* note 49; Matteo Luccio, *The Trolley Problem: What Would a Self-driving Car Do?*, GPS WORLD (Dec. 12, 2021), <https://www.gpsworld.com/what-would-a-self-driving-car-do/#:~:text=In%20the%20trolley%20problem%2C%20a,would%20>

U.S. government is nonetheless committed to leadership in AV “development and integration” while prioritizing “safety, security, and privacy.”⁵⁶

B. AN OVERVIEW OF THE REGULATIONS AT THE FEDERAL LEVEL

Traditionally, both federal and state governments enforce vehicle safety regulations in the United States.⁵⁷ Federal agencies regulate the safety, testing, and fuel economy and emission of vehicles.⁵⁸ They also investigate vehicular accidents and make safety improvement recommendations.⁵⁹ On the other hand, states regulate roadway safety through vehicle licensing, vehicle regulation, vehicle inspections, traffic laws, safety infrastructure, vehicle insurance, and motor vehicle liability.⁶⁰ Despite the growing amount of AVs on public roads, there is no comprehensive AV regulation framework at the federal or state level in the United States.⁶¹

1. Federal Government Involvements in AV Regulation

Before 1966, Congress was not active in traffic safety regulation, except for addressing limited road safety issues, and it did not have comprehensive traffic and motor vehicle legislation.⁶² However, Congress began to pay greater attention in the face of alarming statistics: the National Safety Council reported a staggering quantity of automobile accident deaths, injuries, and damages.⁶³ To address these concerns, Congress established the United States Department of Transportation (“USDOT”) on October 15, 1966, and asked USDOT to develop national policies:

not%20have%20been%20involved; *see generally* Next Stop: ‘Trolley Problem’, MERRIAM-WEBSTER, <https://www.merriam-webster.com/words-at-play/trolley-problem-moral-philosophy-ethics> (last visited Nov. 10, 2022).

56. Nat’l Sci. & Tech. Council & U.S. Dep’t of Transp., *supra* note 26, at 1.

57. AUTONOMOUS VEHICLE: LEGAL AND REGULATORY DEVELOPMENTS IN THE UNITED STATES, JONES DAY 5 (July 2021), <https://www.jonesday.com/-/media/files/publications/2021/05/autonomous-vehicles-legal-and-regulatory-developments-in-the-us/files/autonomous-vehicles-legal-and-regulatory-developme/fileattachment/autonomous-vehicles-legal-and-regulatory-developpm.pdf>.

58. *Id.* (pointing out that the NHTSA, the Environmental Protection Agency, the Federal Motor Carrier Safety Administration, and the National Transportation Safety Board are federal agencies that regulate vehicle safety).

59. *Id.*

60. *Id.*

61. *See generally id.*

62. *National Traffic and Motor Vehicle Safety Act*, ASS’N OF CTRS. FOR THE STUD. OF CONG., <http://acsc.lib.udel.edu/exhibits/show/legislation/traffic-and-motor-vehicle-safe> (last visited Nov. 10, 2022).

63. *Id.* (discussing how in 1966, the National Safety Council reported that “automobile accidents resulted in 49,000 death, 1.8 million minor injuries, and \$8.5 billion in damages, lost wages, and medical expenses in 1965 alone”).

to facilitate the development and improvement of coordinated transportation service . . . ; to encourage *cooperation of Federal, State, and local government* . . . and other interested parties toward the achievement of national transportation objectives; to stimulate technological advances in transportation; to provide general leadership in the identification and solution of transportation problems; and to *develop* and recommend . . . *national transportation policies and programs* to accomplish [] objectives . . . [for] the needs of the public, users, carriers, industry, labor⁶⁴

The roadway safety concerns also led to the signing of the National Traffic and Motor Vehicle Safety Act of 1966.⁶⁵ The act gave rise to NHTSA and granted the USDOT the authority to reduce traffic accidents and related injuries.⁶⁶ The act also granted the authority “to prescribe motor vehicle safety standards for motor vehicles and motor vehicle equipment in interstate commerce; and to carry out needed safety research and development.”⁶⁷ These standards are now the Federal Motor Vehicle Safety Standards (FMVSS).⁶⁸ These regulations supersede state law because the authorizing statute expressly preempts states from creating their motor vehicle safety standards unless they are identical to FMVSS.⁶⁹

To date, the USDOT mainly provides guidance for states, manufacturers, and other stakeholders to follow.⁷⁰ For example, the 2021 Infrastructure

64. Department of Transportation Act, Pub. L. No. 89-670, 80 Stat. 931, 931 (1966) (emphasis added).

65. Ass’n of Ctrs. For the Stud. Of Cong., *supra* note 62. This act has been codified in 49 U.S.C Chapter 301. 49 U.S.C. § 30101.

66. 49 U.S.C. § 30101.

67. *Id.*

68. *Regulations*, NAT’L HIGHWAY TRAFFIC SAFETY ADMIN., <https://www.nhtsa.gov/laws-regulations/fmvss> (last visited Nov. 10, 2022).

69. 49 U.S.C. § 30103(b).

70. The USDOT issued a guidance in January 2020 with core interests to “Protect Users and Communities,” “Promote Efficient Markets,” and “Facilitate Coordinated Efforts.” NAT’L SCI. & TECH. COUNCIL & U.S. DEP’T OF TRANSP., *supra* note 26, at 1. In January 2021, USDOT issued another guidance that set goals to “promote collaboration and transparency,” “modernize the regulatory environment,” and “prepare the transportation system.” U.S. DEP’T OF TRANSP., AUTOMATED VEHICLES: COMPREHENSIVE PLAN, at I (2021) https://www.transportation.gov/sites/dot.gov/files/2021-01/USDOT_AVCP.pdf [hereinafter *AV Comprehensive Plan*]. On June 29, 2021, NHTSA issued an order to require manufacturers and operators to report crashes for vehicles with *Standing General Order on Crash Reporting*, ADS. U.S. DEP’T OF TRANSP., <https://www.nhtsa.gov/laws-regulations/standing-general-order-crash-reporting> (last visited Nov. 15, 2022). On November 15, 2021, Congress passed the Infrastructure Investment and Jobs Act that discussed researching AV use, establishing special rules and traffic enforcement system that applies to AVs on highways, and updating the Manual on Uniform Traffic Control Devices to support the safe integration of AV. Infrastructure Investment and Jobs Act, *supra* note 9.

Investment and Jobs Act provided that the USDOT “shall cooperate . . . with foreign governments” and other stakeholders to bring “global harmonization” to vehicle regulations.⁷¹ The most recent concrete update is a final rule,⁷² issued on March 10, 2022, that amended the FMVSS for occupant protection in a vehicle with ADS by updating existing terminology, such as “driver’s seat” and “steering wheel,” to “[resolve] ambiguities in applying the standards to ADS-equipped vehicles without traditional manual controls.”⁷³

AVs are already subject to the same regulations as non-autonomous vehicles. An AV, like any vehicle, must comply with federal laws to operate on public roads.⁷⁴ Motor vehicles, including AVs, must comply with the FMVSS to be manufactured and sold in the United States or imported into the United States.⁷⁵ U.S. manufacturers must self-certify their vehicles to comply with the FMVSS.⁷⁶ However, with numerous revolutionary AV designs do not comply with the current FMVSS, so most AV manufacturers and testers have to apply for exemptions to test their vehicles on the road.⁷⁷

2. *The SELF DRIVE Act and the AV START Act*

Despite a lack of a comprehensive federal AV regulation, Congress did attempt to pass the SELF DRIVE Act a few years ago.⁷⁸ U.S. House Representative Robert Latta introduced the SELF DRIVE Act on July 25, 2017; the House Committee on Energy and Commerce unanimously passed the act on September 6, 2017.⁷⁹ Although the bill passed in the House, it did

71. H.R. 3684, 117th Cong. § 24211 (2021-2022).

72. Final rule is a terminology used by the federal government to designate rules that would be published in the Federal Register after a public review process. *Rulemaking, RULEMAKING INITIATIVE*, <https://www.regulations.gov/learn> (last visited Nov. 13, 2022).

73. U.S. DEP’T OF TRANSP. NAT’L HIGHWAY TRAFFIC SAFETY ADMIN., FINAL RULE ON OCCUPANT PROTECTION FOR VEHICLES WITH AUTOMATED DRIVING SYSTEMS, at 2–3 (2022), <https://www.nhtsa.gov/sites/nhtsa.gov/files/2022-03/Final-Rule-Occupant-Protection-Amendment-Automated-Vehicles.pdf>.

74. U.S. DEP’T OF TRANSP. NAT’L HIGHWAY TRAFFIC SAFETY ADMIN., FIRST AMENDED STANDING GENERAL ORDER 2021-01 (Aug. 5, 2021), https://www.nhtsa.gov/sites/nhtsa.gov/files/2021-08/First_Amended_SGO_2021_01_Final.pdf.

75. 49 U.S.C. § 30101, 30112. Motor vehicles can be exempted under § 30113 and § 30114. § 30113, § 30114.

76. 49 C.F.R. § 567.4

77. LAURA FRAADE-BLANAR & NIDHI KALRA, AUTONOMOUS VEHICLES AND FEDERAL SAFETY STANDARDS: AN EXEMPTION TO THE RULE?, at 1–2 (2017), https://www.rand.org/content/dam/rand/pubs/perspectives/PE200/PE258/RAND_PE258.pdf.

78. The “SELF DRIVE Act” was referred in Senate on September 7, 2017. Safely Ensuring Lives Future Deployment and Research in Vehicle Evolution Act, H.R. 3388, 115th Cong. § 1 (2017), <https://www.congress.gov/bill/115th-congress/house-bill/3388/text/rfs>.

79. Alexandra Green, *The Self Drive Act: An Opportunity to Re-Legislate A Minimum Cybersecurity Federal Framework for Autonomous Vehicles*, 60 SANTA CLARA L. REV. 217, 221 (2020).

not pass in the Senate because the Committee did not present the act before the expiration of the session.⁸⁰ The act's purpose was “to memorialize the Federal role” in “encouraging the testing and deployment of [highly-automated] vehicles.”⁸¹ In service of unifying the regulatory scheme, the act would have preempted states from prescribing “any law or regulation regarding the design, construction, or performance” of AVs unless they are identical to the federal laws and regulations.⁸²

Similarly, Senator John Thune introduced the AV START Act in the Senate on September 28, 2017.⁸³ In the same manner as the SELF DRIVE Act, the AV START Act, among other things, would have preempted certain state and local laws and required NHTSA to update its FMVSS.⁸⁴ However, this Act also suffered the same fate as the SELF DRIVE Act and was never made into law.⁸⁵

Both these Acts aimed to unify the AV regulatory scheme into a single national compliance framework. As one commentator explained, these Acts would have prevented state regulation from forming “a patchwork of differing standards” and thereby given manufacturers “more certainty” without “compromis[ing] public safety.”⁸⁶

Nevertheless, the acts were criticized on at least two grounds: (1) updating FMVSS takes so long that the resulting standard would not match the technological advancement; and (2) the acts failed to provide manufactures guidance on how AVs can achieve the required “equivalent level of safety” of a non-autonomous vehicle.⁸⁷ As a result, critics argued that the acts’ changes could slow down innovation.⁸⁸

80. Green, *supra* note 79.

81. *Id.*

82. Safely Ensuring Lives Future Deployment and Research In Vehicle Evolution Act, H.R. 3388, 115th Cong. § 3 (2017), <https://www.congress.gov/bill/115th-congress/house-bill/3388/text/rfs>.

83. Spencer A. Mathews, *When Rubber Meets the Road: Balancing Innovation and Public Safety in the Regulation of Self-Driving Cars*, 61 B.C. L. REV. 295, 307 (2020).

84. As this author pointed out, the SELF DRIVE ACT preempts laws pertaining to the “design, construction, or performance” of AV. This was distinguishable from the AV START ACT, where it only preempts nine subject areas: “system safety, data recording, cybersecurity, human-machine interface, crashworthiness, capabilities, post-crash behavior, account for applicable laws, and automation function.” Mathews, *supra* note 83, at 308.

85. See S. 1885, 115th Cong. (2017-2018) (showing that the senate report was introduced, but did not make any further progress).

86. Mathews, *supra* note 83, at 326.

87. *Id.* at 327.

88. *Id.* at 326.

3. *A Brief Overview of the Relationship Between FMVSS and State Product Liability Law*

On top of understanding the AV regulations at the federal level in the United States, we must explore progress at the state level. A brief overview of the relationship between FMVSS and the states' product liability law is necessary before an in-depth discussion in Part III on how the current product liability law is flawed when applied to AVs. While NHTSA regulates the safety of vehicles via FMVSS, which are relevant to a product liability lawsuit, a violation of FMVSS does not provide a private cause of action for such a lawsuit.⁸⁹ The NHTSA regulation specified that “[c]ompliance with a [FMVSS] . . . does not exempt a person from liability at common law.”⁹⁰ Presently, every state has codified common law product liability doctrines in its statutes.⁹¹ A claimant can file a vehicle product liability suit in a court under the relevant state's product liability laws.⁹²

C. STATE GOVERNMENTS' INVOLVEMENT IN AV REGULATION

In contrast to the federal government's lack of comprehensive AV regulation, states have diverse AV testing, deployment, and liability regulations.⁹³ However, diverse regulations are creating inconsistencies between state lines. An AV traveling through different states may face different laws, making it difficult for stakeholders to comply with them or prepare to deal with liability risks associated with different state laws.⁹⁴

States have taken multiple approaches to AV regulation.⁹⁵ These approaches include: (1) authorizing only a research study on AV; (2) authorizing AV testing with a human operator; (3) authorizing AV testing without a human operator; and (4) authorizing full deployment on public

89. Kenneth Ross & Ted Dorenkamp, *Product Liability and Safety in the United States: Overview*, THOMSON REUTERS (Sept. 1, 2020), [https://uk.practicallaw.thomsonreuters.com/w-012-8129?transitionType=Default&contextData=\(sc.Default\)&firstPage=true](https://uk.practicallaw.thomsonreuters.com/w-012-8129?transitionType=Default&contextData=(sc.Default)&firstPage=true).

90. 49 U.S.C. § 30103(e).

91. MATTHIESEN, WICKERT & LEHRER, S.C., *PRODUCT LIABILITY IN ALL 50 STATES* (Jan. 13, 2022), <https://www.mwl-law.com/wp-content/uploads/2018/02/PRODUCT-LIABILITY-LAW-CHART.pdf>.

92. See Ross & Dorenkamp, *supra* note 89.

93. See Governors Highway Safety Ass'n, *supra* note 15.

94. Trayce Hockstad & Justin Fisher, *Automated Unity: Evaluating the Uniform Law Commission's Autonomous Vehicle Act*, 61 WASHBURN L.J. 275, 286 (2022) (explaining that terms in state motor vehicle codes are inconsistent across or within states); Mark A. Geistfeld, *A Roadmap for Autonomous Vehicles: State Tort Liability, Automobile Insurance, and Federal Safety Regulation*, 105 CAL. L. REV. 1611, 1611 (2017).

95. Governors Highway Safety Ass'n, *supra* note 15.

roads.⁹⁶ Thirty-eight states and the District of Columbia have enacted legislation or issued orders regarding AVs.⁹⁷

Some states are more hands-on in regulating the responsibility and liability of AV operations.⁹⁸ Several states impose a duty on the vehicle operator, the AV, or the testing company to remain at the crash scene or to report the accident to law enforcement authorities.⁹⁹ Some states require AV developers to have vehicle insurance, and the mandatory insurance type and amount differ depending on the state's law.¹⁰⁰ Others require the AVs to achieve minimal risk conditions in case of a failure or malfunction of the ADS to be operated.¹⁰¹

Some states take a more progressive approach to address liability in a motor vehicle accident.¹⁰² At least two states—Tennessee and Utah—specify the liability division between the operator and the ADS in specific circumstances. The Tennessee AV code specifies that “[w]hen the ADS is fully engaged . . . the ADS shall be considered the driver or operator of the motor vehicle for the purpose[] of determining: (1) Liability of the vehicle owner or lessee for alleged personal injury, death or property damage in an incident”¹⁰³ Similarly, the Utah AV code specifies that:

(1)(a) When an ADS is operating a motor vehicle, the ADS is the operator . . .

(b) The ADS is responsible for the compliant operation of the vehicle and is not required to be licensed . . .

(2)(a) If a vehicle with an engaged [SAE] level three ADS issues a request to intervene, the ADS is responsible for the compliant operation of the vehicle until disengagement of the ADS.

(b) If a vehicle with an engaged [SAE] level four or five ADS issues a request to intervene, the ADS is responsible for the

96. *Id.*; Ernst Karner, Bernhard A. Koch, & Mark A. Geistfeld, *Comparative Law Study on Civil Liability for Artificial Intelligence*, at 124–26 (2020) <https://op.europa.eu/en/publication-detail/-/publication/8a32ccc3-0f83-11ec-9151-01aa75ed71a1/language-en> (identifying eleven states allow AV to operate without a human operator, two states only allow AV with a human operator, seven states allow AV on public roads) [hereinafter *EU AI Liability Study*].

97. Governors Highway Safety Ass'n, *supra* note 15.

98. *EU AI Liability Study*, *supra* note 96, at 124–42.

99. *Id.* at 133–35 (identifying nine states that regulate duty in the event of a crash).

100. Each state that requires minimal risk condition define the term in their statute. *Id.* at 135–38 (identifying eleven states that require insurance for AVs).

101. *Id.* at 137–38 (identifying five states that require minimal risk condition).

102. *Id.* at 132–33.

103. TENN. CODE ANN. § 55-30-106 (West 2021); *AI Liability Study*, *supra* note 107, at 132.

compliant operation of the vehicle until or unless a human user begins to operate the vehicle.

(3) The ADS is responsible for compliant operation of an ADS-dedicated vehicle.¹⁰⁴

Both states indicate that the ADS would be considered the operator when determining liability.

In contrast, Louisiana takes a more conservative approach.¹⁰⁵ The Louisiana statute states that “[t]he person or entity operating the [AV] may be issued a . . . penalty if the vehicle fails to comply with any traffic or motor vehicle laws . . .”¹⁰⁶ but does not specify who the operator is and only indicated that the person or entity that registered the ADS “[would] be considered to be licensed to operate the vehicle.”¹⁰⁷ There is no clear division of responsibility between a traditional human driver and the ADS “driver.” Notably, the statute specifies that “[t]he provisions of this Part shall not be construed to repeal, modify, or preempt any liability . . . pursuant to existing law . . .”¹⁰⁸ Without relevant precedents, the division of liability will be a question for a factfinder.

III. THE ISSUE WITH THE CURRENT U.S. AV REGULATIONS AND PRODUCT LIABILITY LAW

Part III will explain that currently, there is a lack of comprehensive federal AV regulations and that the existing state product liability laws are insufficient when applied to AVs. Section II.A will explain that states are not uniform in their approaches to AVs. Section II.B will discuss how the failure to warn, manufacturing defects, and design defects cannot adequately address the risks of AVs.

A. A LACK OF COMPREHENSIVE FEDERAL AV REGULATIONS

The issue with AV regulations and product liability is two-fold. First, no uniform federal AV laws or regulations exist to create consistency between state lines. In contrast, the USDOT primarily provides voluntary guidance on AVs and has only just begun modifying existing FMVSS on AV manufacturing.¹⁰⁹ States have taken diverse approaches to address emerging AVs. While some states have progressive laws addressing AVs, others take a

104. UTAH CODE ANN. § 41-26-104 (West 2019); *AI Liability Study*, *supra* note 107, at 132.

105. *See* LA. STAT. ANN. § 32:400.4 (2022); *see AI Liability Study*, *supra* note 107, at 133.

106. LA. STAT. ANN. § 32:400.4 (2022).

107. *Id.*

108. LA. STAT. ANN. § 32:400.8 (2022).

109. *See AV Comprehensive Plan*, *supra* note 70, at 7; U.S. Dep’t of Transp. Nat’l Highway Traffic Safety Admin., *supra* note 73.

conservative route in lawmaking.¹¹⁰ A lack of uniform AV regulations has led to fragmentary experimentation by individual states and manufacturers.¹¹¹

More specifically, the lack of a comprehensive AV regulation can also affect a claimant's ability to recovery in a product liability suit. This concern can be witnessed in two Arizona cases: *Dashi v. Nissan North America, Inc.* and *Varela v. FCA US LLC*.¹¹²

In *Dashi v. Nissan North America, Inc.*, a 2019 products liability case in the Court of Appeals of Arizona, the plaintiff alleged that a collision would not have happened if the manufacturer had equipped the crashing vehicle with an automatic emergency braking system.¹¹³ The *Dashi* court held that the claim was impliedly preempted by NHTSA's refusal to set automatic emergency braking system standards.¹¹⁴

The *Dashi* decision was not overruled by the Supreme Court of Arizona until a 2022 case, *Varela v. FCA US LLC*.¹¹⁵ In *Varela*, the plaintiff alleged that she would not have been injured and that her daughter would not have been killed if the vehicle that crashed into her car was equipped with an automatic emergency braking system.¹¹⁶ The *Varela* court overruled *Dashi* and held that NHTSA did not establish "a policy objective that actually conflicts" with the issue of failure to install the automatic emergency braking system.¹¹⁷ The court also held that the federal government's published guidance, *Automated Vehicles 3.0*, did not establish that the "regulation of automated vehicles and automated driving systems is exclusively federal."¹¹⁸

Even though *Dashi* and *Varela* were both ruled in the same state, the claimants received completely opposite outcomes, and it took three years for the Arizona Supreme Court to reverse the original ruling.¹¹⁹

110. See Governors Highway Safety Association, *Autonomous Vehicles*, <https://www.ghsa.org/state-laws/issues/autonomous%20vehicles> (last visited Nov. 10, 2022); Gurney, *infra* note 120, at 248–51.

111. *Id.*

112. *Dashi v. Nissan N. Am., Inc.*, 445 P.3d 13 (Ariz. Ct. App. 2019); *Varela v. FCA US LLC*, 505 P.3d 244 (Ariz. 2022).

113. *Dashi*, 445 P.3d at 14–15.

114. *Id.* at 21–24.

115. *Varela*, 505 P.3d at 262.

116. *Id.* at 250–51.

117. *Id.* at 250, 262.

118. *Id.* at 255.

119. See *Dashi*, 445 P.3d at 13; *Varela*, 505 P.3d at 244.

B. EXISTING STATE PRODUCTS LIABILITY LAWS ARE INSUFFICIENT
WHEN APPLIED TO AVS

The second issue is that at present, states' product liability laws are inadequate to address the risk of AVs.¹²⁰ To understand the issue, it is essential to understand the U.S. product liability law generally.

1. *An Overview of Product Liability Law in the United States*

In the United States, to bring a product liability claim, a claimant must show a product's defect, the defendant's liability concerning that defect, and that the defect was a proximate cause of the claimant's injury.¹²¹ A product liability case focuses on a claim that a product was defective or that conduct related to the product was deficient.¹²²

Product liability can be held under three defects: failure to warn, manufacturing defects, and design defects.¹²³ A failure-to-warn defect is found when a product "is defective because of inadequate instructions or warnings when the foreseeable risks of harm posed by the product could have been reduced or avoided by . . . reasonable instructions or warning . . ."¹²⁴

Under manufacturing defect law, a product is defective "when the product *departs from its intended design* even though all possible care was exercised in the preparation and marketing of the product[.]"¹²⁵

When considering a design defect claim, courts mainly apply one of two tests: (1) the consumer expectations test and (2) the risk-utility test.¹²⁶ A majority of the states have adopted the latter test.¹²⁷

First, under the consumer expectations test,

120. See Jeffrey K. Gurney, *Sue My Car Not Me: Products Liability and Accidents Involving Autonomous Vehicles*, 2013 U. ILL. J.L. TECH. & POL'Y 247, 257–66 (2013).

121. 49 Am. Jur. Proof of Facts 2d 293 (Originally published in 1987) (explaining a proximate cause is a cause "in natural and continuous sequence, and unbroken by any efficient, intervening cause, produced the injury, and without which the injurious result would not have occurred.")

122. Sean P. Wajert, *Product Liability Claims, Defenses, and Remedies*, <https://us.practicallaw.thomsonreuters.com/2-504-1711> (last visited Nov 10, 2022).

123. 96 A.L.R.3d 22 (Originally published in 1979); RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 2 (1998); Even if the defendant was liable, the claimant may recover partially or not recover at all, depending on the fault allocation.

124. RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 2 (1998).

125. *Id.* (emphasis added).

126. Ross & Dorenkamp, *supra* note 89; see 96 A.L.R.3d 22 (Originally published in 1979); § 5:1. Strict liability in tort, 1 Owen & Davis on Prod. Liab. § 5:1 (4th ed.).

127. Margaret Z. Smith, *50 State Survey of Design Defect Requirements*, PRO TE: SOLUTIO (Mar. 13, 2019), <https://protesolutio.com/2019/03/13/50-state-survey-of-design-defect-requirements/> (pointing out in 2010, one court counted "35 of the 46 states that recognize strict products liability utilize some form of risk-utility analysis").

[o]ne who sells any product in a defective condition *unreasonably dangerous* to the user . . . is subject to liability . . . if (a) . . . in the business of selling such a product, and (b) it is expected to and does reach the user . . . *without substantial change* in the condition in which it is sold.¹²⁸

A product is unreasonably dangerous when it is “dangerous to an extent beyond that which would be contemplated by an *ordinary consumer* who purchases it, with the *ordinary knowledge* common to the community as to its characteristics.”¹²⁹

Second, under the risk-utility test,

[a] product . . . is defective in design when the foreseeable risk of harm posed by the product could have been reduced or avoided by the adoption of a *reasonable alternative design* by the seller . . . and the omission of the alternative design renders the product not reasonably safe.¹³⁰

This test focuses on if the product was unreasonably unsafe because “a *reasonable alternative design* would, at *reasonable cost*, have reduced the foreseeable risks of harm posed by the product.”¹³¹ It should also be noted that scholars have found there is no difference between negligence and the risk-utility test because a plaintiff has to essentially prove the same things under both theories—“that the product contained a danger that is unreasonable.”¹³² However, interestingly, the resulting decisions from these theories are inconsistent, leading some scholars to suggest that one solution is to restrict a plaintiff to “elect a single theory, strict liability or negligence.”¹³³

In any case, the emphasized terms under both the manufacturing and design defect doctrines are particularly troublesome when applied to AVs. In the existing product liability framework, the claimant may experience increased difficulties.¹³⁴ The difficulties with the failure to warn, manufacturing defect, and design defect doctrines will be explored sequentially.

128. RESTATEMENT (SECOND) OF TORTS § 402A (1965) (emphasis added); *see generally* RESTATEMENT (SECOND) OF TORTS INTRO. (1965) (discussing the objective and influence of the Restatement).

129. RESTATEMENT (SECOND) OF TORTS § 402A (1965) (emphasis added).

130. RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 2 (1998) (emphasis added).

131. *Id.*

132. § 5:29. Comparison with other liability theories—Strict liability vs. negligence, 1 Owen & Davis on Prod. Liab. § 5:29 (4th ed.).

133. *Id.*

134. *See generally* Gurney, *supra* note 120.

Finally, under failure to warn law, manufacturers have a duty to warn the vehicle users of foreseeable harm that the users may encounter in their AV use.¹³⁵

2. *The Issue with Failure to Warn*

First, we address the defect of failure to warn when applied to the AV field: manufacturers have a duty to warn the vehicle users of foreseeable harm that the users may encounter in their AV use.¹³⁶ The most predictable failure to warn in the AV context is failing to instruct operators on how to use an AV safely.¹³⁷ One can foresee that users would experience some difficulties in bringing a failure to warn claim on a defective AV. However, given that manufacturers expectedly will issue warnings to vehicle users, as they already had done in existing vehicles, the level of difficulty would not be vastly different from a traditional vehicle claim.¹³⁸

An Eleventh Circuit case, *Watkins v. Ford Motor Company*, can demonstrate the difficulty.¹³⁹ In *Watkins*, a driver brought a failure to warn claim after he lost control of his vehicle, which resulted in his vehicle rolling over and causing him fatal injuries.¹⁴⁰ The defendant argued that since “no warning could guard against the dangers of rollover, there can be no causation [of the driver’s death].”¹⁴¹ In a vacating a grant of summary judgment for the manufacturer, the *Watkins* court explained that the warning only needs to inform a consumer of the nature and existence of a hazard so the consumer can make an informed decision regarding the risk.¹⁴² The court added that to determine whether a warning is adequate, a factfinder must consider if the warning “provide[d] a complete disclosure of the existence and extent of the risk involved.”¹⁴³ Nowadays, manufacturers like Tesla provide this level of warning.¹⁴⁴

Given that Tesla is renowned for its autopilot feature, we will use them as an example. In a hypothetical scenario where a driver was injured due to the autopilot function of a Tesla Model 3, Tesla can easily point to its Tesla Model

135. *See id.* at 264–65.

136. *Id.*

137. *See id.* at 264.

138. *See* Alexander B. Lemann, *The Duty to Warn in the Age of Automation*, 110 KY. L.J. 469, 472–73 (2022).

139. *Watkins v. Ford Motor Co.*, 190 F.3d 1213 (11th Cir. 1999).

140. *Id.* at 1215.

141. *Id.* at 1218–19.

142. *Id.*

143. *Id.* at 1220.

144. *See, e.g., Model 3 Owner’s Manual*, TESLA, https://www.tesla.com/ownersmanual/model3/en_jo/GUID-E5FF5E84-6AAC-43E6-B7ED-EC1E9AEB17B7.html (last visited Sept. 24, 2023).

3 Owner's Manual on the company's website to show it provided warnings.¹⁴⁵ Currently, under the autopilot page, the manual provides warnings such as: "[i]t is the driver's responsibility to be in control of Model 3 at all times;" and "Traffic-Aware Cruise Control is designed for your driving comfort and convenience and is not a collision warning or avoidance system Failure to do so can result in serious injury or death."¹⁴⁶ Knowing the inherent risk of AVs, vehicle manufacturers will have equivalent warnings for their vehicles, which will make a claim for failure to warn challenging to remedy.

3. *The Issue with Manufacturing Defects*

In contrast, under the manufacturing defect doctrine in the AV area, a claimant will likely experience more difficulty proving the AV did not work per the manufacturer's specifications as compared to a non-AV claimant.¹⁴⁷ Regarding the physical components of the vehicle, AV designs are more sophisticated than traditional vehicles, and AVs operate with more electrical and computational components.¹⁴⁸ The highly technical vehicle components pose an obstacle for a claimant to prove product deviation.¹⁴⁹ To make matters worse, AVs rely heavily on software, and courts decline to extend manufacturing defective x law to intangible products.¹⁵⁰ Even if a court accepted that software is a manufactured product, proving that a defect originated from software and programming error would be a tremendous hurdle for a claimant.¹⁵¹ The claimant has to prove that the software and program deviated from the manufacturer's specifications, regardless of whether the software and program were installed when it was first purchased or later updated via the vehicle's internet.¹⁵²

To illustrate, we will study the following two cases: *Dack v. Volkswagen Group of America* and *Chiulli v. American Honda Motor Co., Inc.*¹⁵³

In *Dack*, a 2021 Missouri District court case, plaintiffs alleged their vehicles were equipped with a "Forward Collision Warning and Autonomous Emergency Braking" system that can help monitor traffic, warn the driver of any possible collision, and prevent or reduce the effect of a collision.¹⁵⁴ The

145. *See id.*

146. *Id.*

147. Gurney, *supra* note 120, at 258–60.

148. *See id.*

149. *See id.*

150. *Id.*

151. *See id.*

152. *See id.*

153. *See Dack v. Volkswagen*, 565 F. Supp. 3d 1135 (W.D. Mo. 2021); *Chiulli v. Am. Honda Motor Co.*, 2023 WL 5763053 (N.D. Cal. Sept. 6, 2023).

154. *Dack*, 565 F. Supp. 3d at 1139.

plaintiffs alleged that the system would unexpectedly apply the brakes as a result of “defective software coding.”¹⁵⁵ Plaintiffs did not allege defective design, but nonetheless they argued that they should be allowed to perform discovery to determine whether the defect is a design or manufacturing defect.¹⁵⁶ The *Dack* court explained manufacturing defects occur when there are “defects in material and/or workmanship,” whereas “design defects refer to the inadequacy of the design itself.”¹⁵⁷ However, because the plaintiffs only alleged a software coding defect that caused the brakes to engage unexpectedly and did not allege any facts to show “defects in material and workmanship,” the court granted the defendant’s motion to dismiss.¹⁵⁸

In *Chiulli*, a case in the Northern District of California, plaintiffs alleged their vehicle’s “Infotainment System” was defective because its safety features malfunctioned, causing drivers to become distracted.¹⁵⁹ Plaintiffs alleged the “improperly designed and/or programmed/calibrated software” was “*per se* a manufacturing defect.”¹⁶⁰ In 2023, the *Chiulli* court explained that:

A design defect exists when the product is built in accordance with its intended specifications, but the design itself is inherently defective. By contrast, a manufacturing defect exists when an item is produced in a substandard condition, where a manufacturer fails to comply with its own design specifications, and is often demonstrated by showing the product performed differently from other ostensibly identical units of the same product line.¹⁶¹

The court further explained that differentiating between a design defect and a manufacturing defect involves determining “whether a programming or calibration defect is part of the specifications [(a design defect)] or constitutes a deviation from the specifications [(a manufacturing defect)].”¹⁶² The court ultimately found the plaintiffs failed to state a claim given they only speculated that the defect “may be a software calibration issue that was introduced during manufacture[.]”¹⁶³

155. *Id.* at 1139, 1146.

156. *Id.* at 1146.

157. *Id.* at 1147.

158. *Id.*

159. Infotainment System’s safety features includes Bluetooth pairing for phone call and navigation and rear-view camera system for back-up and blind-spot cameras. *Chiulli*, 2023 WL 5763053, at *1.

160. *Id.* at *8.

161. *Id.* at *7 (internal quotations marks and citations omitted).

162. *Id.* at *8.

163. *Id.*

Both the *Dack* and *Chiulli* cases show the difficulty AV product liability plaintiffs have experienced getting past a motion to dismiss.¹⁶⁴ The plaintiffs in *Dack* wanted additional information to determine the defect but were ultimately denied.¹⁶⁵ Presumably, the plaintiffs in *Chiulli* also suffered from a lack of information, so they had to speculate the defect “may be a software calibration issue.”¹⁶⁶ As stated earlier, these problems can compound for vehicles that receive software updates over the internet.¹⁶⁷

4. *The Issue with Design Defects*

Lastly, depending on the jurisdiction, the claimant may experience difficulty proving an AV product liability claim under a design defect.¹⁶⁸ As discussed in Section III.B.1, courts have adopted either the consumer expectations test or the risk-utility test, with the latter being the dominant choice.¹⁶⁹ The consumer expectations test focuses on a defective condition being so “unreasonably dangerous” that an “ordinary consumer” with “ordinary knowledge” would not expect it.¹⁷⁰ Applying the consumer expectation test to an AV, consumers expect the AV will be driven safely. So, if the vehicle’s automated feature caused a crash, a consumer can argue the automated feature was dangerous “beyond that which would be contemplated by an ordinary consumer[.]”¹⁷¹ The test does not require the consumer to have a sophisticated knowledge of AV technology.¹⁷² The expectations are “based on the reasonable person, and not the reasonable Distracted Driver or the reasonable Diminished Capabilities Driver.”¹⁷³

However, the test is not without uncertainties. It is unclear how a court would treat software and program updates under the test. Under the test, for a product to be defective, it must reach the user without substantial change in the condition.¹⁷⁴ A software and program update may be considered a change

164. *See Dack*, 565 F. Supp. 3d; *Chiulli*, 2023 WL 5763053.

165. *See Dack*, 565 F. Supp. 3d.

166. *See Chiulli*, 2023 WL 5763053 at *8.

167. *See Gurney*, *supra* note 120, at 258–60.

168. *Id.* at 260–64.

169. *Id.*

170. RESTATEMENT (SECOND) OF TORTS § 402A (1965).

171. *Gurney*, *supra* note 120, at 260–64; RESTATEMENT (SECOND) OF TORTS § 402A (1965).

172. *See Gurney*, *supra* note 120, at 260–64.

173. *Id.*

174. *See id.*; EUROPEAN PARLIAMENT, A COMMON EU APPROACH TO LIABILITY RULES AND INSURANCE FOR CONNECTED AND AUTONOMOUS VEHICLES, at 20–21 (Feb. 2018) [hereinafter *EU Liability Study*], [https://www.europarl.europa.eu/RegData/etudes/STUD/2018/615635/EPRS_STU\(2018\)615635_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2018/615635/EPRS_STU(2018)615635_EN.pdf) (identifying liability issues related to software, programs, and network issues related to AVs).

in condition after the vehicle delivery. Further, these updates may rely on third-party companies to install, which bypass the vehicle manufacturer and keep them from being involved in the update process.¹⁷⁵ Additionally, network failures may lead the software and programs to malfunction, adding another layer of complication for the claimant. No clear-cut liability is assigned to the multitude of actors involved to ensure that an AV operates properly.

To illustrate, in *Scirocco v. Ford Motor Company*, a plaintiff was injured when her vehicle came to an unexpected abrupt stop while she was driving downhill, even though she did not apply the brakes.¹⁷⁶ The plaintiffs took the vehicle to the manufacturer's dealership for repairs, and during the repair, the vehicle's "powertrain control module [] was updated to a newer software version."¹⁷⁷ The repair technician entered the vehicle identification number into a program to "identif[y] any outstanding service actions or technical service bulletins related to the vehicle," and, of relevance, the program identified a "harsh 3-1 or 2-1 rolling stop downshift" issue in some of the manufacturer's vehicles.¹⁷⁸ The *Scirocco* court found the plaintiffs did not have expert testimony and evidence to prove the vehicle was defective.¹⁷⁹ The court started by stating that the plaintiffs must prove, among other things, that "the defective condition rendered the product unreasonably dangerous to the user or consumer."¹⁸⁰ The court explained its finding by pointing out the plaintiffs failed to show the vehicle had the defect "at the time it was manufactured or at the time of the accident" because the plaintiffs did not show their vehicles "had the condition described in the [program] or even had the software model that could render the [program] applicable."¹⁸¹ The court added in its footnotes that the plaintiffs did not meet their burden of proof by failing to provide expert testimony because the issue was "highly technical."¹⁸²

Scirocco demonstrates that even when the plaintiffs can identify some evidence that indicates the manufacturer knew about software defects, their claim may not survive summary judgment without proof that the software in their vehicle was, in fact, defective.¹⁸³ The court acknowledged that the software issue is "highly technical," so the plaintiff had to produce expert

175. See *EU Liability Study*, *supra* note 174, 84–86.

176. *Scirocco v. Ford Motor Co.*, 641 F. App'x 414, 415 (5th Cir. 2016)

177. *Id.*

178. *Id.*

179. *Id.*

180. *Id.* at 416; see generally RESTATEMENT (SECOND) OF TORTS § 402A (1965).

181. *Scirocco*, 641 F. App'x at 416–17.

182. *Id.* at 417 n.3.

183. See generally *id.* at 416–417.

testimony.¹⁸⁴ It follows that one can anticipate proving defective software, especially in an even more complex AV lawsuit, is difficult and costly.

Yet, another consideration, as the Supreme Court of Ohio wisely pointed out in *Knitz v. Minster Mach. Co.*, is that “there are situations in which ‘the consumer would not know what to expect because he would have no idea how safe the product could be made.’”¹⁸⁵ The *Knitz* court elucidated that

[d]ifficulty could arise, for example, where the injured party is an innocent bystander who is ignorant of the product and has no expectation of its safety, or where a new product is involved and no expectation of safety has developed. Conversely, liability could be barred hypothetically where industrial workmen “gradually learn of the dangers involved in the machinery they must use to make a living and come to ‘expect’ the dangers.”¹⁸⁶

Since AV technology is relatively new and will continue to change for the foreseeable future, the problem identified by the *Knitz* court will likely manifest.

On the other hand, proving design defects under the risk-utility test is also problematic. For a claimant to succeed under the risk-utility test, the claimant must prove that a “reasonable alternative design” is available at a “reasonable cost” and would have “reduced or avoided” the harm.¹⁸⁷ Tangible components of an AV are more accessible for a claimant to compare with other vehicle manufacturers’ designs to determine whether the harm reduction and cost of such a component would be reasonable.¹⁸⁸ However, the reasonable alternative design requirement for intangible components will be problematic.¹⁸⁹ A plaintiff must show the manufacturer’s ability to program the AV safer through expert testimonies.¹⁹⁰ Experts must demonstrate how software can be designed to be safer than the ones used in the defective

184. *Id.* at 417 n.3.

185. *Knitz v. Minster Mach. Co.*, 432 N.E.2d 814, 818 (Ohio 1982) (quoting Wade, *On the Nature of Strict Tort Liability for Products*, 44 Miss. K.J. 825, 829).

186. *Id.* (quoting Beasley, *Products Liability and the Unreasonably Dangerous Requirement*, 88-89).

187. RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 2 (1998).

188. *See* Gurney, *supra* note 120, at 260–64; RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 2 (1998); *see also* Brendan Fleming, *What’s the Difference Between Autonomous and Electric Vehicles?*, ELECTRONICDESIGN (June 8, 2021), <https://www.electronicdesign.com/markets/automotive/article/21165478/klas-whats-the-difference-between-autonomous-and-electric-vehicles> (explaining Avs rely on “in-vehicle data loggers” that use data captured from sensors that guide the vehicles. These tangible components can be analyzed individually and compared to other’s manufacturer’s alternatives.)

189. *See* Gurney, *supra* note 120, at 260–64.

190. *Id.*

product.¹⁹¹ Also, it is unclear whether network failures and cybersecurity issues can be addressed under the current product liability.¹⁹²

Trent v. Ford Motor Co. provides further insights into a claimant's difficulties.¹⁹³ In *Trent*, a plaintiff's vehicle struck a guardrail, causing the side airbag to deploy, which struck the plaintiff's right eye.¹⁹⁴ The plaintiff claimed the manufacturer defectively designed its airbag crash sensing system, causing it to deployed unnecessarily.¹⁹⁵ The court explained that the plaintiff needed to show the availability of an "alternative safer design."¹⁹⁶ The court clarified that a plaintiff must present more than a "theoretically probable" alternative design that is feasible and could have prevented the injury.¹⁹⁷ Instead, a plaintiff "must provide expert testimony" to show a "practicable, feasible, safer, alternative design," where one way to establish such design is to demonstrate the alternative design "has been widely used in another product."¹⁹⁸ The court found that, in this case, the plaintiff was able to establish an alternative design by another manufacturer.¹⁹⁹ Still, it ultimately ruled against the plaintiff because the plaintiff failed to prove the defective design was the cause of her injury.²⁰⁰

Trent illustrates to us that even when a plaintiff can show an alternative design, a plaintiff has a significant burden to prove a defective design caused their harm, which will likely heighten in a world of highly complex AVs.²⁰¹ Because of the complexity of an AV product liability suit, both physical component and software programming experts will be needed to ascertain the root cause of an accident, leading to costly litigation.²⁰² The plaintiff's burden of proof in an AV product liability suit will be harder to satisfy compared to a traditional vehicle suit.²⁰³

IV. A SEARCH FOR POTENTIAL SOLUTIONS

To consider alternative proposed solutions in AV regulations and related product liability law, Part IV of this Note will search for potential solutions

191. *Id.*

192. *See EU Liability Study, supra* note 174, 24–27.

193. *Trent v. Ford Motor Co.*, 2 F. Supp. 3d 1022 (W.D. Ky. 2014).

194. *Id.* at 1023.

195. *Id.*

196. *Id.* at 1026.

197. *Id.*

198. *Id.* (internal quotation marks and citation omitted).

199. *Id.* at 1027.

200. *Id.*

201. *Trent*, 2 F. Supp. 3d at 1022.

202. *See Gurney, supra* note 120, at 265–66.

203. *Id.*

based on the European Union's current state of AV regulations and related product liability law, as well as other scholarly solution proposals including insurance, federal regulation, uniform law, and the hands-off approach.

A. THE EUROPEAN UNION'S AV REGULATIONS AND PRODUCT LIABILITY LAW

Part IV.A.1 will provide some background on what the European Union has done regarding AV regulations. Section IV.A.2 will discuss the European Union's 1985 Product Liability Directive, and Section IV.A.3 will briefly explore the issue with this directive. Subsequently, Section IV.A.4 will discuss the relevant 2022 amendments to this directive.

1. *Background*

In the European Union, the European Commission (EC) has the executive power to propose and implement laws based on the objectives of E.U. treaties.²⁰⁴ There are three types of binding legislation—regulations, directives, and decisions—and two types of non-binding legislation—recommendations and opinions.²⁰⁵

Regarding AV technology, the EC promised to make transportation “safer, more accessible and sustainable.”²⁰⁶ Similar to the United States's finding, EC identified AV to improve road safety because human error is estimated to be 94% of accidents.²⁰⁷ They also identified other benefits, such as mobility for the elderly, disabled, or under-served, accelerating vehicle electrifications, and improving urban planning.²⁰⁸ Additionally, they recognized that the AV market was expected to bring economic benefits “exceeding EUR 620 billion by 2025 for the EU automotive industry.”²⁰⁹

204. European Commission Directorate-General for Communication, *What The European Commission Does in Law*, https://ec.europa.eu/info/about-european-commission/what-european-commission-does/law_en (last visited Nov. 10, 2022).

205. Each type of binding legislation has a different function. A regulation must be followed across the EU. A directive set out a goal for individual countries to creates or revises their own laws to reach the goal. A decision is directed toward a specific entity such as one of the member states or a company. A recommendation suggests “a line of action” with no legal obligation. An opinion is a statement with no legal obligation. *Id.*; European Commission Directorate-General for Communication, *Types of EU Law*, https://ec.europa.eu/info/law/law-making-process/types-eu-law_en (last visited Nov. 14, 2022).

206. *See On the Road to Automated Mobility: An EU Strategy for Mobility of the Future*, COM (2018) 283 final (May 17, 2018), <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52018DC0283>.

207. *See id.*

208. *See id.*

209. *Id.*

Unlike the U.S. manufacturers' self-certification system for vehicle compliance, under the E.U. vehicle type approval system, a manufacturer can obtain approval for a new vehicle type if it meets the E.U. approval regulations.²¹⁰ Once the regulations have been met and approved by a national authority, a manufacturer can market its approved vehicle to other member states without further authorization.²¹¹

The EC has been active in creating rules in the AV area and considers itself “a pioneer in the field.”²¹² More recently, on July 6, 2022, the EC released a vehicle safety regulation introducing a range of mandatory advanced driver assistance systems to improve road safety.²¹³ It also established a legal framework and has paved the way for approving and introducing high-level AVs for mass production.²¹⁴ In a recently updated E.U. regulation on type approval requirements for motor vehicles, the European Union set goals to “harmonize[] rules and test procedures for the type approval of vehicles” and to simplify the rules by replacing them with UN regulations.²¹⁵ These proposals align with the European Union's goal of achieving international harmonization.²¹⁶ The type approval regulation also requires a motor vehicle to be equipped with an event data recorder, which records and stores “critical crash-related parameters and information shortly before, during and immediately after a collision[.]”²¹⁷ However, the event data recorder remarkably does not allow the vehicle or holder to be identified, which would be helpful in a liability lawsuit.²¹⁸

210. *Id.*

211. *See id.*

212. European Commission Press Release, The Commission, New Rules To Improve Road Safety And Enable Fully Driverless Vehicles in the EU (July 6, 2022) https://ec.europa.eu/commission/presscorner/detail/en/IP_22_4312 [hereinafter *New Vehicle General Safety Regulation*].

213. *Id.*; see Council Regulation 2019/2144, 2019, O.J. (L 325) 1 (EU).

214. *See New Vehicle General Safety Regulation, supra* note 212; Council Regulation 2019/2144, 2019, O.J. (L 325) 1 (EU); Commission Delegated Regulation 2022/2236, 2022 O.J. (L 296) 1, 2 (EU).

215. Council Regulation 2019/2144, 2019, O.J. (L 325) 2–6; *see generally* Council Regulation 2022/1426, O.J. (L221) 1, 2 (laying down rules for type approval of ADS for fully AVs).

216. *AV in EU, supra* note 27, at 6–7, 10–11.

217. Council Regulation 2019/2144, 2019, O.J. (L 325) 3.

218. *Id.* at 3, 9, 11–12, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019R2144&from=EN>; *but see* EUROPEAN COMMISSION, GUIDELINES ON THE EXEMPTION PROCEDURE FOR THE EU APPROVAL OF AUTOMATED VEHICLES, at 5 (Feb. 12, 2019), <https://ec.europa.eu/docsroom/documents/34802/attachments/1/translations/en/renditions/native> (recommending the installation of event data recorders to “assign liability in case of accident.” This is of particular interest because the regulation appears to have shifted away from this guideline).

2. 1985 Product Liability Directive

After the formation of the European Union, legal scholars discussed harmonizing the various national tort laws and creating a common European tort law.²¹⁹ Despite pushes for a unified European tort law, none has been successful.²²⁰ However, one well-known area in which the European Union succeeded in harmonizing European law is product liability.²²¹ In 1985, the European Union issued a directive known as the Product Liability Directive (“PLD”).²²² The PLD specified that “[t]he producer shall be liable for damage caused by a defect in his product.”²²³ The PLD required the injured person “to prove the damage, the defect and the causal relationship between defect and damage.”²²⁴ The PLD explains that

[a] product is defective when it does not provide the safety which a person is entitled to expect, taking all circumstances into account, including: (a) the presentation of the product; (b) the use to which it could reasonably be expected that the product would be put; (c) the time when the product was put into circulation.²²⁵

A product is not defective if “a better product is subsequently put into circulation.”²²⁶ Similarly, the European Union’s Motor Insurance Directive (MID) requires “all motor vehicles in the European Union to be covered by compulsory third party insurance.”²²⁷ The PLD and MID are the two main E.U. regulations to govern liability in motor vehicles and to appropriate risk.²²⁸

3. Issues with the 1985 PLD for AVs

The European Union has identified traditional motor vehicle risks are related to hardware failure or a driver’s action.²²⁹ However, with the introduction of AV, additional risks such as software and network failure (programming update failure) and cybersecurity (hacking) can no longer be

219. CEES VAN DAM, *EUROPEAN TORT LAW* 3–6 (2d ed. 2013).

220. *Id.* at 13–14 (stating a unified system is halted by differences between nation’s legal system, language, and culture).

221. *See id.* at 301.

222. CEES VAN DAM, *EUROPEAN TORT LAW* 21, 29 (2d ed. 2013) (discussing PLD took years to be implement by every single nation in the European Union since the directive requires each state to implement the PLD into a member state’s law).

223. Council Directive 85/374/EEC, 1985 O.J. (L 210) 29–30.

224. *Id.* at 31.

225. *Id.*

226. *Id.*

227. *Motor Insurance*, EUROPEAN COMMISSION, https://finance.ec.europa.eu/insurance-and-pension-funds/insurance/motor-insurance_en (last visited Nov. 11, 2022).

228. *EU Liability Study*, *supra* note 174, at 5.

229. *Id.* at 20–22.

covered by existing regulations.²³⁰ The European Union has also identified that claimants would have difficulty proving defects without “associated detection technology.”²³¹

Under the PLD, a producer is not liable if the defect that caused the damage did not exist when the product was put into circulation.²³² A producer is also not liable if the “scientific and technical knowledge” at that time did not allow the defect to be discovered.²³³

Under the existing PLD, software updates to AVs can make them defective after they have left the factory, so a producer will not be liable. Similarly, because of the ever-changing programming and cybersecurity risks from malicious actors, a producer may be held not to have had the scientific and technical knowledge to discover a defect, so they will not be liable.²³⁴ Since high-level AVs can be driven either by the AV system or a human operator, it is difficult to determine whether the manufacturer or driver is at fault.²³⁵

4. *The European Union Amends the 1985 PLD*

On September 28, 2022, the European Union modernized the 1985 PLD.²³⁶ The European Union intended the PLD update to “reflect the nature and risks of product in the digital age and circular economy,” making it easier for plaintiffs to prove their claims and ensuring “legal certainty” for AV developers to know their risk and cost of civil liability and related transactional costs.²³⁷

Specifically, the amended PLD changed the definition of a product to include “electricity, digital manufacturing files and software,”²³⁸ like the

230. *Id.* at 20–27.

231. *Id.* at 22.

232. *See* Council Directive 85/374/EEC, 1985 O.J. (L 210) 29–30.

233. *Id.* at 29, 31.

234. *EU Liability Study*, *supra* note 174, at 63–64.

235. *See generally* *EU Liability Study*, *supra* note 174, at 23–24.

236. *Proposal for a Directive of the European Parliament and of the Council on Liability for Defective Products*, COM (2022) 495 final, at 1–4 (Sept. 28, 2022) [hereinafter *EU Amended PLD*]. In a 2018 E.U. assessment on liability rules and insurance for AV, the European Union generated four options to address gaps and uncertainties in AV liability: “the status quo,” PLD reformation, MID reformation, and a new E.U. legislation. The last option was considered “preferable as it has the greatest potential” to address all the issues and gaps. *EU Liability Study*, *supra* note 174, at 6, 29–31. Ultimately, the European Union executed the second option.

237. It should be noted that the modified PLD specified that “Member States shall not maintain or introduce, in their national law, provisions diverging from those laid down in [the amended PLD], including more, or less, stringent provisions to achieve a different level of consumer protection, unless otherwise provided for in [the amended PLD].” *EU Amended PLD*, *supra* note 236, at 2, 24.

238. *Id.* at 24.

programs. The amended PLD also defined a product as defective when it does not provide expected safety that is based on:

- “the presentation of the product,”
- “the reasonably foreseeable use and misuse of the product,”
- “the effect on the product of any ability to continue to learn after deployment,”
- “the moment in time . . . where the manufacturer retains control over the product after . . . [it] left the control of the manufacturer,” and
- “cyber security requirements.”²³⁹

The expanded coverage authorizes claims that software and programs are defective. Furthermore, the amended PLD created liability for “economic operators,” defined as manufacturers, service providers, authorized representatives, importers, and distributors.²⁴⁰ This new term allows claimants to sue other third-party manufacturers for product liability. The amended PLD explained that an economic operator is not exempted from defectiveness within their control for “software, including software updates or upgrades” and “the lack of software updates or upgrades necessary to maintain safety.”²⁴¹

Additionally, the amended PLD created a right—the “right of access to evidence.”²⁴² This right entitles a claimant injured by a defective product to compel the defendant “to disclose relevant evidence that is at its disposal” when the claimant “presented facts and evidence sufficient to support the plausibility of [their] claim.”²⁴³ The right of access to evidence eases a claimant’s difficulty in uncovering necessary information to determine defects in an AV.

Furthermore, the amended PLD rebalanced the burden of proof to the claimant’s advantage by creating “presumption of causality.”²⁴⁴ It states that

[t]he defectiveness of the product shall be presumed, where any of the following conditions are met: (a) the defendant has failed to comply with an obligation to disclose relevant evidence . . . ; (b) the

239. *Id.* at 26–27.

240. *Id.* at 27.

241. *Id.* at 29–30.

242. European Commission Press Release, The Commission, New Liability Rules on Products and AI to Protect Consumers and Foster Innovation (Sept. 28, 2022), https://ec.europa.eu/commission/presscorner/detail/en/ip_22_5807 [hereinafter *EU Press PLD and AI Liability*].

243. *EU Amended PLD*, *supra* note 236, at 28.

244. *EU Press PLD and AI Liability*, *supra* note 242.

claimant establishes the product does not comply with mandatory safety requirements laid down in Union law or national law . . . ; (c) the claimant establishes that the damage was caused by an obvious malfunction of the product during normal use or under ordinary circumstances.²⁴⁵

Moreover, it declares

[w]here [a court judges] . . . the claimant faces excessive difficulties, due to technical or scientific complexity, to prove the defectiveness of the product or the causal link between its defectiveness and the damage, or both, the defectiveness of the product or causal link between its defectiveness and the damage, or both, shall be presumed where the claimant has demonstrated, on the basis of sufficiently relevant evidence, that: (a) the product contributed to the damage; and (b) it is likely that the product was defective or that its defectiveness is likely cause of the damage, or both.²⁴⁶

After the plaintiff makes a threshold showing, the presumption of causality puts the burden of proof on the manufacturer to show that the alleged defective product was, in fact, not defective.²⁴⁷

The amended PLD helps ensure that victims get the same level of protection when a “smart” product like an AV harms them that they would with any other automobile.²⁴⁸ These PLD modifications align with the goal of the European Union to promote AV introduction not only by ensuring all producers know their risk and cost of civil liability but also by increasing public trust in this emerging technology.²⁴⁹

B. OTHER POTENTIAL SOLUTIONS

Section IV.B will discuss four potential solutions that other legal scholars have proposed. Sections IV.B.1–4 will respectively examine the solutions based on (1) insurance, (2) FMVSS, (3) uniform law, and (4) hands-off approach.

1. “Insurance”

Aside from exploring what the European Union has done, it is worth investigating solutions that other scholars have proposed to address the insufficiency of the current U.S. AV regulatory framework and liability

245. *EU Amended PLD*, *supra* note 236, at 28.

246. *Id.* at 28–29.

247. *Id.* at 2, 12, 19–20.

248. *EU Press PLD and AI Liability*, *supra* note 242.

249. *EU Liability Study*, *supra* note 174, at 28–29.

system.²⁵⁰ The first type of solution is to address the issue via insurance or an insurance-like system.²⁵¹ One author proposed laws mandatorily raising the current driver insurance minimum to increase recovery success.²⁵² The author explained that most current state driver insurance minimums do not adequately cover serious injury crashes.²⁵³ Typically, naming vehicle manufacturers as defendants in a car crash is more advantageous as compared to naming the drivers and their insurance because manufacturers can pay more than the personal insurance minimum.²⁵⁴ In an AV crash, a claimant is likely to sue manufacturers because there is a high chance that vehicle design can be related to the crash.²⁵⁵ However, the current low insurance minimum coverage and increased difficulty in bringing a suit against an AV manufacturer can limit any recovery.²⁵⁶ By increasing the insurance minimum coverage, an injured party is more likely to be put in the same position as if the crash had not occurred.²⁵⁷ Nevertheless, the insurance solution may not be ideal. The proposal author admitted there are adverse effects from the increased insurance minimum coverage leading to a rise in “the cost of owning and operating a vehicle.”²⁵⁸ Such an increase could be detrimental to the underserved and might encourage drivers to refuse to obtain insurance.²⁵⁹

Another author proposed a federal “two-step” liability system: the first step consists of administrative courts that determine negligence, and the second step is a “participated fund” that is subsidized equally between manufacturers and public resources, i.e., a federal tax.²⁶⁰ This fund can be viewed as public insurance. As illustrated in Section III.B.3-4, this system’s

250. Michael Chatzipanagiotis & George Leloudas, *Automated Vehicles and Third-Party Liability: A European Perspective*, 2020 U. ILL. J.L. TECH. & POL’Y 109, 186–89 (2020).

251. *Id.*

252. Insurance solution has been seen in Nevada and California, where they require AV developers to have a five million dollars in crash liability to test their AVs. Bryant Walker Smith, *How Governments Can Promote Automated Driving*, 47 N.M.L. REV. 99, *128–*130 (2017).

253. *Id.* at *129–*130,

254. *Id.*

255. *Id.*

256. *Id.* at *130.

257. *Id.*

258. *Id.* at *129.

259. *See id.*

260. Under the proposed system, the court can find negligence if there is an easily identifiable and resolvable error in the software or if the technology is inadequate compared to other technologies being used at the time. The participated fund would pay using the manufacturer’s subsidy if negligence was found. In contrast, if negligence is not found, the participated fund will pay using the public resource’s subsidy. Antonio Davola, *A Model for Tort Liability in A World of Driverless Cars: Establishing A Framework for the Upcoming Technology*, 54 IDAHO L. REV. 591, 609–12 (2018).

issue is that software errors may not be easily identifiable or resolvable under the current legal systems.²⁶¹ Further, identifying comparable functional technologies falls short in the same manner as a reasonable alternative design claim. The system may even experience additional pushback because taxpayers will be mandated to pay to the fund even if they do not benefit.²⁶² Lastly, since states traditionally regulate insurance, they may resent federal intrusion on the state's traditional police power.²⁶³

2. FMVSS

The issues with AV regulation may also be addressed through FMVSS, first discussed earlier in Section II.B.²⁶⁴ One author proposed that NHTSA update the current FMVSS to ensure AV safety, allowing manufacturers to avoid liability under a regulatory compliance defense.²⁶⁵ Another author proposed a comparable solution of adopting a negligence per se liability standard. Under this solution, a claimant could use a negligence per se liability standard against the manufacturer for violating NHTSA's regulations.²⁶⁶ One can foresee that the downfall of these solutions is that claimants will rely heavily on NHTSA to set appropriate standards and update them concerning the most current technology. If the standards are weak, the claimants are not likely to recover from injuries. In contrast, if NHTSA's regulation is overly restrictive, even though claimants will benefit, developers and manufacturers can be impeded from innovation. Since AV technology still has some years until it is fully developed, NHTSA would be given the difficult task of maintaining balance in setting the FMVSS to ensure adequate injury recovery.

3. Uniform Law

The third genus of solutions involve uniform law.²⁶⁷ The Uniform Law Commission has drafted the Uniform Automated Operation of Vehicles Act to unify state legislation on AVs.²⁶⁸ The act regulates AV technology on deployment, insurance, driver licensure and location requirements, as well as

261. See Gurney, *supra* note 120, at 258–64.

262. *Id.*

263. Chatzipanagiotis & Leloudas, *supra* note 250, at 188.

264. Mark A. Geistfeld, *The Regulatory Sweet Spot for Autonomous Vehicles*, 53 WAKE FOREST L. REV. 101, 114 (2018).

265. *Id.* at 105.

266. Jacob B. Jensen, Note, *Self-Driving but Not Self-Regulating: The Development of A Legal Framework to Promote the Safety of Autonomous Vehicles*, 57 WASHBURN L.J. 579, 606–7 (2018) (explaining the negligence per se liability).

267. See Trayce Hockstad & Justin Fisher, *Automated Unity: Evaluating the Uniform Law Commission's Autonomous Vehicle Act*, 61 WASHBURN L.J. 275, 276–77 (2022).

268. *Id.* at 276.

unattended vehicles.²⁶⁹ However, as one author identified, the act does not address critical issues such as local government preemption, liability, and duties after accidents.²⁷⁰ Also, the author criticized how terms in the act are used inconsistently across or within the current state's motor vehicle codes.²⁷¹ The distinctive definition of the terminology in different states can lead to dissimilar enforcement of the uniform law.²⁷² Additionally, there is uncertainty about whether states would adopt the uniform law.²⁷³ Without the adoption, such a law is not enforceable, and the disarray of AV regulations continues.

4. *Hands-Off Approach*

The fourth type of solution does not address the issue and instead takes a hands-off approach. Some argue that government intrusion will raise the cost of AVs and hinder their development; instead, the government should permit innovation.²⁷⁴ When addressing legal intervention in E.U. AV regulation, one author questions whether the introduction of AV requires a legal solution since the risk of new technology is “inherent in all new technologies[] until they mature.”²⁷⁵ As the famous example of “the Law of the Horse” illustrates, tailoring the law to a developing subject may be unnecessary if it can be instead tied to the principles underlying existing law.²⁷⁶

Legislators will not need to regulate as long as the risk is insurable.²⁷⁷ Nonetheless, they did acknowledge that strict liability is their “framework of choice” because, under such a framework, the claimant has a lower burden for proof.²⁷⁸ A simpler recovery can promote public trust in AV, leading to a promotion of its deployment.²⁷⁹ The problem with a hands-off approach is that the manufacturers and the public would have to adjust their expectations

269. *Id.*

270. *Id.*

271. *Id.* at 278.

272. *Id.* at 286–87.

273. *See id.* at 285.

274. Sean Bollman, Article, *Autonomous Vehicles: A Future Fast Approaching with No One Behind the Wheel*, 20 PGH. J. TECH. L. & POL'Y 1, 15–16 (2019).

275. Chatzipanagiotis & Leloudas, *supra* note 250, at 193.

276. Frank H. Easterbrook, *Cyberspace and the Law of the Horse*, 1996 U. CHI. LEGAL F. 207 (1996) (explaining that policy based on new technology is “shallow” and “miss[es] unifying principles.”). Judge Easterbrook illustrated this principle by stating “[l]ots of cases deal with sales of horses; others deal with people kicked by horses; still more deal with the licensing and racing of horses, or with the care veterinarians give to horses, or with prizes at horse shows.” *Id.* But this does not mean that we need The Law of the Horse, instead we have contract law and tort law, but applied to horses. *Id.*

277. Chatzipanagiotis & Leloudas, *supra* note 250, at 193.

278. *Id.* at 194.

279. *Id.*

based on how each state regulates AV and addresses liability. As more AVs get deployed onto the road, states may be forced to legislate their version of AV and liability laws. Differences between state laws can ultimately confuse all stakeholders regarding interstate travel.

V. A SOLUTION TO PREPARE THE UNITED STATES FOR THE INEVITABLE AV FUTURE BY ENACTING A UNIFIED FEDERAL AV LAW AND REGULATION WITH A CAUSE OF ACTION FOR AV PRODUCT LIABILITY

After studying the recent E.U. action and other scholars' proposed solutions, this Note proposes a solution at the federal level to create uniformity in the United States. The solution suggests that Congress create a comprehensive federal AV law and regulation that preempts all state regulations on AV design, construction, and performance. This law will also create a cause of action for victims to bring a claim against manufacturers in a product liability suit.

A. CONGRESSIONAL AUTHORITY

Section V.A will explore the congressional authority to demonstrate that Congress can create a unified federal AV regulation. Section V.A.1 will focus on congressional authority under the commerce clause. Section V.A.2 will focus on the federal preemption power on state laws.

1. *Commerce Clause*

Congress must have authority under the U.S. Constitution to create such a law.²⁸⁰ Congress can rely on the commerce clause to regulate AVs²⁸¹ and the supremacy clause to preempt state AV laws.²⁸² Congress will likely not experience constitutional difficulties creating a comprehensive federal AV law.

Under the Commerce Clause, there are three categories that Congress can regulate: (1) "the use of the channels of interstate commerce," (2) "the instrumentalities of interstate commerce," and (3) "activities having a substantial relation to interstate commerce."²⁸³

As this Note has indicated, the federal government's recent activities strongly suggest that it has an interest in promoting AVs due to their significant

280. U.S. Const. art. I, § 1.

281. U.S. Const. art. I, § 8, cl. 3.

282. U.S. Const. art. VI, cl. 2.

283. 15A AM. JUR. 2D *Commerce* § 19 (2022); *see also* Taylor v. United States, 579 U.S. 301, 306 (2016) (enumerating three categories that Congress can regulate under the Commerce Clause).

societal and economic benefits. As discussed in Part V, similar benefits were also recognized by the European Union. Given that large-scale AV deployments throughout the United States are inevitable, AVs will become “things in interstate commerce” that use “channels of interstate commerce.”²⁸⁴ In a 2003 U.S. Supreme Court case, *Pierce County, Washington v. Guillen*, the Court recognized Congress’ Commerce Clause power to grant the USDOT the authority to collect information on highway safety to “reduc[e] hazardous conditions” on the road.²⁸⁵ Since the advent of AVs poses the threat of hazardous road conditions, a federal AV law should be viewed as proper use of Congress’s Commerce Clause power.

2. Federal Preemption of State Law

The federal government can rely on the U.S. Constitution’s Supremacy Clause to ensure the state’s laws do not contradict the federal government’s objective.²⁸⁶ Because the federal government’s authority is “supreme,” state law is preempted when it conflicts with federal laws and regulations.²⁸⁷ Congress can preempt areas traditionally under state control if state laws clearly and substantially conflict with federal laws.²⁸⁸

Currently, NHTSA has the authority to preempt state laws that conflict with FMVSS.²⁸⁹ Additionally, FMVSS has a “saving clause” which states that compliance with FMVSS “does not exempt a person from liability at common law.”²⁹⁰

284. 15A AM. JUR. 2D *Commerce* § 19 (2022).

285. *Pierce Cnty., Wash. v. Guillen*, 537 U.S. 129, 147 (2003) (explaining Congress’ legislation “would result in more diligent effort to collect the relevant information, more candid discussions of hazardous locations, better informed decisionmaking, and ultimately, greater safety on our Nation’s roads.” The Court continues that the legislation “can be viewed as legislation aimed at improving safety in the channels of commerce and increasing protection for the instrumentalities of interstate commerce.”)

286. 148 AM. JUR. *Trials* 211 § 2 (2017); see U.S. Const. art. VI, cl. 2.

287. 148 AM. JUR. *Trials* 211 §§ 5–7 (2017) (explaining there are three categories of federal preemption of state law: (1) express preemption by Congress, (2) implied preemption based on the impossibility of following due to conflict, and (3) federal law occupies the field); see also *Perry v. Mercedes Benz of N. Am., Inc.*, 957 F.2d 1257, 1261 (5th Cir. 1992).

288. Although some areas of law, such as health, is typically considered outside the preemption, the exact coverage of the preemption is not defined. See 148 AM. JUR. *Trials* 211 (2017).

289. 49 U.S.C. § 30103(b) (“When a motor vehicle safety standard is in effect under this chapter, a State or a political subdivision of a State may prescribe or continue in effect a standard applicable to the same aspect of performance . . . only if the standard is identical”); FMVSS also prescribed a preemption related to rental vehicle. 49 U.S.C. § 30106.

290. 49 U.S.C. § 30103(e) (“Compliance with a motor vehicle safety standard prescribed under this chapter does not exempt a person from liability at common law.”).

In 2000, the Supreme Court addressed the preemption authority of the USDOT involving FMVSS in *Geier v. American Honda Motor Company, Inc.*²⁹¹ In *Geier*, plaintiffs-petitioners sued a car manufacturer for negligently and defectively designing its car because it lacked a driver's side airbag, in violation of state law.²⁹² The Supreme Court affirmed the lower court's dismissal of the lawsuit, reasoning that the state law that established a different airbag safety standard was an "obstacle to the accomplishment of [the FMVSS.]" However, the Court explained that the lawsuit was not expressly preempted due to the FMVSS's "saving" clause which illustrated Congress's intention not to preempt the tort suit.²⁹³ Specifically, the Supreme Court explained

[t]he saving clause assumes that there are some significant number of common-law liability cases to save *Without the saving clause, a broad reading of the express pre-emption provision arguably might pre-empt [common-law tort actions], for . . . , it is possible to read the pre-emption provision, standing alone, as applying to standards imposed in common-law action, as well as standards contained in state legislation or regulations [S]o, it would pre-empt all nonidentical state standards established in tort actions covering the same aspect of performance as an applicable federal standard, even if [it] established a minimum standard*²⁹⁴

The emphasized line suggests that the USDOT can have a broad authority to preempt a common law tort lawsuit if there is no saving clause in the FMVSS.

Therefore, with Congress' express preemption, Congress can likely preempt all state regulations and product liability suits on AV's design, construction, or performance.

B. A UNIFIED FEDERAL AV REGULATION WITH A CAUSE OF ACTION FOR PRODUCT LIABILITY SUITS

With the congressional authority hurdle addressed, this Note's solution is now on constitutional footing. Congress can create comprehensive federal AV law that preempts all state regulations on AV design, construction, and

291. *Geier v. Am. Honda Motor Co.*, 529 U.S. 861, 861 (2000); There were several cases involving FMVSS that were reviewed by the Supreme Courts, but they are not discussed here for the purpose of this note. *See generally* *Williamson v. Mazda Motor of Am., Inc.*, 562 U.S. 323 (2011) (holding FMVSS 208 does not preempt state tort suits about installing lap and shoulder belt); *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29 (1983) (relating to the history of FMVSS 208).

292. *Geier*, 529 U.S. at 865.

293. The saving clause "says that '[c]ompliance with' a federal safety standard 'does not exempt any person from any liability under common law.'" *Id.* at 865–66.

294. *Id.* at 868–69 (emphasis added).

performance and any related product liability suit and provide a cause of action for victims to bring a claim against manufacturers in a product liability suit.

Given the existence of FMVSS, Congress can give authority to NHTSA to update the current FMVSS to be compatible with AVs. Alternatively, Congress can create new FMVSS specifically for AVs that will not disrupt the current regulations for traditional motor vehicles.

The new regulations should include two general types of regulation. The first type of regulation should include specific and restrictive rules that ensure manufacturers have the necessary equipment and systems to create a safe and functional AV. The second type of regulation should include broader standards that set safety goals but which do not specify how a manufacturer must meet the goals. This regulation will allow manufacturers more flexibility to develop and remain “technology-neutral.”²⁹⁵ The recent E.U. regulations contain the latter type of approval.²⁹⁶ The E.U. act allows manufacturers to demonstrate that their AVs are “free of unreasonable safety risk” by setting parameters and criteria to assess whether the manufacturer’s design is safe.²⁹⁷ While Congress may consider employing a certification system similar to the E.U.-type approval,²⁹⁸ it would not be necessary under this solution. The cause of action for bringing a product liability claim and any monetary damages will adequately incentivize the manufacturer to ensure their products are safe.

The unified AV regulation must require all AVs to install event data recorder systems.²⁹⁹ This requirement is equivalent to the European Union’s requirement for an event data recorder. However, unlike the current E.U. regulation, the data from the event data recorder should be allowed to be used in a liability suit under the NHTSA’s regulation. This data will assist claimants, defendants, and courts in determining circumstances, faults, and liability between the driver and ADS. NHTSA needs to determine the types of data

295. *AV Comprehensive Plan*, *supra* note 70, at 4 (discussing remaining technology neutral in order to “promote efficient markets”).

296. *See* Commission Regulation 2022/1426, 2022, O.J. (L 221) 1–2.

297. Although the E.U. regulation focus on assessing the manufacturer’s design for type approval, the United States can apply similar regulation in its own way. Commission Regulation 2022/1426, 2022, O.J. (L 221) 1–2. (stating that “[g]iven the complexity of automated driving systems, it is necessary to supplement the performance requirements and tests of this Regulation by manufacturer documentation demonstrating that the automated driving system is free of unreasonable safety risks to vehicle occupants and other road users”)

298. *On The Road to Automated Mobility: An EU Strategy for Mobility of The Future*, *supra* note 206.

299. *Cf.* Council Regulation, *supra* note 217.

useful in a liability suit without exposing unnecessary user personal data that can be susceptible to hacking.³⁰⁰

NHTSA also must address the concerns related to software updates, network failure, and cybersecurity. NHTSA must set broad requirements to ensure manufacturers' AVs have adequate, or even the most up-to-date, software and programs.³⁰¹ They should also address how an AV should react in network failure.³⁰² Moreover, cybersecurity procedures and protocols should be established to prevent the failure of a safety system. Lastly, NHTSA should require specific manufacturer warnings with a predetermined minimum amount of information.

This proposed federal law must also allow claimants to bring a product liability suit related to an AV's design, construction, and performance. Further, a claimant must be able to bring all relevant parties into the courtroom. When a claimant wants to implead a manufacturer in a personal injury suit, the trial court should be required to permit the impleaders if the claimant can show proper merit and if the impleading does not delay or unduly complicate the trial or prejudice the impleader.³⁰³

As discussed in Part IV, the failure-to-warn doctrine does not warrant any changes. However, changes must be made to both manufacturing defect and design defect doctrines. Learning from the recent E.U. amendment to the PLD in Section V.B, this Note's proposed law will create identical rights to the European Union's "right of access to evidence"³⁰⁴ and the "presumption of causality."³⁰⁵

The former gives claimants easier access to information that may not be readily available to prove the plausibility of their claim.³⁰⁶ This right can expedite the legal process, which would ultimately reduce the economic burden for the claimant and the legal system.

The latter allows courts to shift the burden of proof from the claimant to the defendant if a defect is presumed.³⁰⁷ The defect is presumed when: (1) the defendant fails to disclose relevant evidence; (2) the claimant proves the AV

300. See generally U.S. Dep't of Transp. NHTSA, *supra* note 54.

301. Updates can be classified as essential and optional to the functionality and safety of the AVs. An AV should be rendered non-operational until it receives essential updates.

302. Depending on the road, environment, and the AV itself, a network failure may render the AV not operational or operational under limited conditions.

303. See § 16:276. Impleader in consumer product liability suits, 7 Fed. Proc., L. Ed. § 16:276.

304. *EU Press PLD and AI Liability*, *supra* note 242.

305. *Id.*

306. *Id.*

307. *Id.*

does not meet the FMVSS; or (3) the claimant proves an obvious malfunction caused the damage during normal use and circumstances.³⁰⁸

The proposed law should largely remain the same in terms of defenses to a product liability suit. Manufacturers can produce evidence to prove that they are not liable for the damages once the claimant can prove the presumption of causality. One customary type of defense is misuse, which can be classified into two categories, per Professor David Fisher: (1) abnormal use, which is “use for an unintended and unforeseeable purpose”; and (2) mishandling, which is “use for a product’s intended purpose but in an unforeseeable manner.”³⁰⁹ When a product is misused, courts assume that the product was not defective.³¹⁰ It follows that since the product was not defective, there should be no liability.³¹¹ Despite being an unlikely scenario, the misuse defense will continue to apply where a product is, in fact, defective and misused.

Another common defense to a product liability suit is contributory negligence. In the AV context, the assumption of risk defense can arise when “a plaintiff’s conduct creates an unreasonable risk to himself (1) either in the manner in which he uses a product which has a manufacturing type of defect, or (2) by causal conduct which is unreasonable but which is not related to his use of the product.”³¹² In the use of AV, this type of defense will occur in SAE Level 3 or below because the driver will be required to drive when the automated features are not active. Since SAE Level 4 and Level 5 do not require driver intervention, this type of defense is not probable.

One last consideration is whether comparative negligence should be used instead of contributory negligence.³¹³ The main issue is whether a comparative model would have an undesired negative impact on a product liability policy founded on providing better consumer protection.³¹⁴ Although comparative negligence proponents argue that it is unduly unfair to make others bear the burden of a careless user, opponents respond that contributory negligence is better at “providing an incentive for safer products, compensation of those injured by defective products[,] and spreading of the risks of product injuries.”³¹⁵ The Pennsylvania Supreme Court affirmed this stance,

308. *EU Amended PLD*, *supra* note 236, at 28.

309. William J. McNichols, *The Relevance of the Plaintiff’s Misconduct in Strict Tort Products Liability, the Advent of Comparative Responsibility, and the Proposed Restatement (Third) of Torts*, 47 OKLA. L. REV. 201, 213 (1994).

310. *See id.* at 211–12.

311. *See id.*

312. *Id.* at 213.

313. *Id.* at 237.

314. *Id.* at 240.

315. *Id.* at 243.

acknowledging that “[manufacturers] are in a position to absorb the loss by distributing [the risk of loss for injury] as a cost of doing business.”³¹⁶ Since AV manufacturers have much more control over the consumers, a contributory negligence scheme is preferable over a comparative negligence scheme.

Adhering to the updated PLD, the proposed law must also include software, subsequent updates, and other intangible items as a product addressable under product liability.³¹⁷ Under the manufacturing defect context, these intangible items should be treated as manufactured. Once causality is presumed, manufacturers must prove they made their products according to their specifications, and claimants can challenge the manufacturers’ proof.

For a design defect claim, the courts should use a risk-utility test instead of the consumer expectations test because consumer expectations, especially for AVs, are difficult to determine and impractical. On the one hand, a consumer may expect an AV always to be safe, which means a manufacturer would be liable whenever there is a crash. On the other hand, an “ordinary” consumer may not perceive a defective condition as “unreasonably dangerous.”³¹⁸ Reflecting on the discussion in Section III.B.4, claimants in the current AV environment will encounter circumstances, as pointed out by the *Knitz* court, where “the consumer would not know what to expect because he would have no idea how safe the product could be made.”³¹⁹

Under the risk-utility test, manufacturers must prove there are no reasonable alternative designs by comparing them to other manufacturers’ designs once causality is presumed.³²⁰ After the manufacturer has produced their evidence, the claimants can challenge their claim. Here, as suggested by the *Knitz* court, we should allow a product to be found defective “if through hindsight the jury determines that the product’s design embodies ‘excessive preventable danger[.]’”³²¹ This method will be different when assessing a design defect claim than assessing a negligence claim.³²² In a negligence claim, the manufacturer will evaluate the relationship between burden and the

316. *Id.* at 244.

317. *Cf. EU Amended PLD*, *supra* note 236, at 29–30.

318. RESTATEMENT (SECOND) OF TORTS § 402A (1965).

319. *Knitz*, 432 N.E.2d at 818.

320. RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 2 (1998).

321. *Knitz*, 432 N.E.2d at 818.

322. As discussed in part III, where scholars have criticized the similarity between negligence and risk utility test. 1 Owen & Davis on Prod. Liab. § 5:29, *supra* note 132.

probability of loss at the time of the design.³²³ Instead, based upon the *Knitz* framework, factfinders should be allowed to re-evaluate in hindsight based on new technologies that were developed after the product's design to determine if the defective design was preventable at the time of design.³²⁴

To illustrate the proposed solution, let's suppose NHTSA creates a new FMVSS under the first type of regulation, which requires "all SAE Level 3 vehicles must have sensing devices to identify the emergency situation." Also, suppose NHTSA creates another new FMVSS under the second type of regulation, requiring manufacturers to meet a goal: "All SAE Level 3 vehicles must be able to take mitigating or evasive maneuver to protect passengers."

In a hypothetical scenario where a driver in an SAE Level 3 vehicle was injured in an accident, the driver can point to the fact that, according to NHTSA, their vehicle was supposed to have sensing devices and be able to take maneuver to protect them. The driver will then have a cause of action to sue their vehicle manufacturer since the accident was related to an AV's design, construction, and performance.

Because of the "right of access to evidence," once the driver "presented facts and evidence sufficient to support the plausibility of [their] claim," they will be able to obtain additional information to investigate and support their claim.³²⁵ Due to the proposal's requirement of an event data recorder in every AV, the vehicle will have recorded the data from the required sensors and mitigation or evasive maneuvers that the vehicle had taken when the accident occurred. The data recorder can also record the version of the software at the time of the accident, allowing the driver to investigate any software-related defects.

Once the driver properly pleads his case, under the new law the manufacturer will be presumed to have caused the accident unless they can prove otherwise. This presumption will force the manufacturer to present the emergency sensors they had installed and maneuvering programs that they used to show that they had complied with the NHTSA requirements. In response, the driver can argue the software program is a manufacturing defect. Under design defect theory, the driver can argue the vehicle was unreasonably dangerous and present safer alternatives compared to what the manufacturer had produced. Specifically, under the less stringent standard, the driver can

323. See generally Patrick J. Kelley, *The Carroll Towing Company Case and the Teaching of Tort Law*, 45 ST. LOUIS U. L.J. 731 (2001) (discussing about Judge's Hand's famous formula for determining negligence "in algebraic terms: if the probability be called P; the injury, L; and the burden, B; liability depends upon whether B is less than L multiplied by P: i.e., whether $B < PL$.)

324. See generally *Knitz*, 432 N.E.2d at 818.

325. See *EU Press PLD and AI Liability*, *supra* note 242.

present new technologies that were developed later to determine if the defective design would have been preventable at the time of design, based on what was being developed by other manufacturers. However, if the defenses discussed above are unsuccessful, the manufacturer will have to “absorb the loss by distributing it as a cost of doing business.”³²⁶

As illustrated, under the proposed law, claimants have an improved prospect of succeeding in both manufacturing defect and design defect claims. With a new and updated FMVSS, accompanied by a new cause of action and legal rights, this solution will address the lack of a comprehensive federal AV regulation, the current fragmentation of states’ AV laws, and the heightened difficulties for claimants to bring AV product liability suits.

VI. CONCLUSION

Under the current pace of AV development, the federal and state laws and regulations on AV are falling behind the industry’s progress. To promote the three goals set forth by the USDOT—“promote collaboration and transparency,” “modernize the regulatory environment,” and “prepare the transportation system”—Congress should legislate a unified federal AV regulation.³²⁷

Although the proposed regulation is not fully comprehensive, it is a necessary start. The regulation would accelerate the introduction of future, unified, comprehensive federal laws and regulations in areas such as road construction, traffic, and network systems to create a truly unified traffic system. The regulations also present a possibility for the United States to meet its global harmonization goal.³²⁸ Perhaps the United States can learn from the European Union to harmonize its regulations with those of the UN.³²⁹

More importantly, unified regulation will provide clear standards and liability expectations for both manufacturers and consumers and improve public trust in AVs. The regulation aligns with the task of the USDOT to develop and coordinate transportation, encourage federal and state cooperation, stimulate technological advances, be a leader in solving transportation problems, and develop national transportation policies and programs.³³⁰ To maintain U.S. leadership in AV technology, the government can no longer take detours and sit in the backseat by setting guidance. They

326. See McNichols, *supra* note 309, at 243–44.

327. *AV Comprehensive Plan*, *supra* note 70, at i.

328. Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, § 24211, 135 Stat. 429, 825 (2021).

329. See Council Regulation 2019/2144, 2019, O.J. (L 325) 5.

330. See Department of Transportation Act, Pub. L. No. 89-670, 80 Stat. 931, 931 (1966).

must take back the driver's seat. A unified, comprehensive federal AV regulation is the express lane to travel to a new era where the public can reap the benefit of AVs and the manufacturers can be the world leader in emerging AV technologies. Now is the time to make a dream, once believed to be impossible, a reality.

TL;DR: THE LAW AND LINGUISTICS OF SOCIAL PLATFORM TERMS-OF-USE

Tim R Samples,[†] Katherine Ireland^{††} & Caroline Kraczon^{†††}

ABSTRACT

Online terms-of-use (TOUs) are the most widely used form contracts in human history. But TOUs are as poorly understood as they are ubiquitous. Their proliferation has fueled a yawning gap between contract law and consumer reality. The notion that users read and understand online TOUs, disproven in academic research, is the subject of pop culture mockery. Yet contract law assumes something very different. Because classic legal doctrines apply to online contracts, consumers routinely find themselves legally bound to contracts they have not—and often could not—read.

In this Article, we evaluate the law and linguistics of a critical area of consumer contracting: smartphone-based social platforms. Our interdisciplinary study examines an original dataset of 195 contracts (TOUs, privacy policies, and community guidelines) for seventy-five apps. Our analysis highlights a decoupling of contract doctrine and consumer reality in the smartphone age of online contracting. Our results show that this divergence is fueled by extraordinary volume, complexity, and asymmetries in platform-to-consumer contracts. In addition, our results offer evidence that the decoupling has grown in recent years.

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I. INTRODUCTION

Too long; didn't read—often abbreviated as TL;DR or TLDR—is a popular expression indicating that a passage of text appears excessive in length, presumptively not worth reading.¹ For most consumers, routine transactional agreements, like a privacy policy for a smartphone application (or “app”), are the epitome of TL;DR. The terms-of-use (TOUs) of popular social platforms bind billions of users in contracts that govern sensitive personal rights and intimate data.² With almost three billion users, Facebook's TOU is among the most widely used contracts ever.³ In the absence of intervening regulation, TOUs govern much of society's relationship with technology.⁴ Yet only a small fraction of users will ever read or understand them.⁵ Indeed, the most widespread contracts in the history of the world are among the least understood.⁶

Prominent legal minds—including the Chief Justice of the Supreme Court—have confessed to glossing over the terms of their own consumer contracts.⁷ A survey of consumer law scholars indicates a similar pattern.⁸

1. The abbreviation is used widely enough to have an entry in Merriam-Webster. *See* TL;DR, MERRIAM-WEBSTER, <https://www.merriam-webster.com/dictionary/TL;DR> (last visited June 7, 2022).

2. In this Article, we use “terms of use” (abbreviated as TOU) to refer to the variety of standard form agreements that platforms employ in contracting with users. Sometimes these agreements are also called terms of service (e.g., Snapchat, X (formerly Twitter), YouTube), user agreements (e.g., LinkedIn, Hello), license agreements (e.g., OK), and so on.

3. *See Terms of Service*, FACEBOOK, <https://www.facebook.com/terms.php> (last updated July 26, 2022).

4. *See* Nancy S. Kim & D. A. Jeremy Telman, *Internet Giants as Quasi-Governmental Actors and the Limits of Contractual Consent*, 80 MO. L. REV. 724, 754 (2015); Michael L. Rustad & Thomas H. Koenig, *Wolves of the World Wide Web: Reforming Social Networks' Contracting Practices*, 49 WAKE FOREST L. REV. 1431, 1432–33 (2014).

5. *See* Yannis Bakos, Florencia Marotta-Wurgler & David R. Trossen, *Does Anyone Read the Fine Print? Consumer Attention to Standard Form Contracts*, 43 J. LEGAL STUD. 1, 3 (2014) (demonstrating that consumers almost never read end-user license agreements); *see also* Uri Benliel & Shmuel I. Becher, *The Duty to Read the Unreadable*, 60 B.C. L. REV. 2255, 2277–81 (2019) (showing that TOUs on popular websites are mostly unreadable for the general public).

6. *See* Michael L. Rustad & Maria Vittoria Onufrio, *Reconceptualizing Consumer Terms of Use for a Globalized Knowledge Economy*, 14 U. PA. J. BUS. L. 1085, 1086 (2012) (labeling social media TOUs as “the most widely used standard form contract in world history, with potentially billions of users”).

7. *See* Debra Cassens Weiss, *Chief Justice Roberts Admits He Doesn't Read the Computer Fine Print*, A.B.A. J. (Oct. 20, 2010), https://www.abajournal.com/news/article/chief_justice_roberts_admits_he_doesnt_read_the_computer_fine_print.

8. *See* Jeff Sovern, *The Content of Consumer Law Classes III*, 22 J. CONSUMER & COM. L. 2, 4 (“Not one professor reported always reading contracts or disclosures. In contrast, 57% said they rarely or never read contracts and 48% said they rarely or never read required disclosures.”).

Anecdotal evidence is consistent with academic research: consumers almost never read TOUs and, when they do, are unlikely to fully understand their terms.⁹ TOUs are, fundamentally, TL;DR. Popular culture ridicules the idea of reading them.¹⁰ A satirical headline in *The Onion* reads, “New Facebook Terms of Service Includes Compulsory Conscription Into Zuckerberg’s Upcoming War Against Government.”¹¹ A parody podcast titled *Ts&Zzz* aims to lull listeners to sleep by reading TOUs aloud in their entirety.¹² Some companies have included amusing clauses or even cash prizes in TOUs as surprises for the rare consumer who actually reads them.¹³

This Article offers an interdisciplinary analysis of the consumer contracting ecosystem, with a focus on social platforms. To start, we construct an original dataset that includes the core consumer contracts of seventy-five digital platforms: their TOUs, privacy policies, and community guidelines. Our dataset contains 195 separate agreements that amount to roughly 944,459 words—almost 4.5 times the length of *Crime and Punishment* by Fyodor Dostoyevsky.¹⁴ Whereas most interdisciplinary work on form contracting has come from law and economics, we use a law and linguistics framework to examine the platform-consumer contracts in our dataset.¹⁵ Our methods combine legal analysis with natural language processing, data science, and corpus linguistics.¹⁶ We supplement traditional readability metrics with more advanced linguistics methods to assess the linguistic difficulty of our dataset.

9. See Bakos et al., *supra* note 5 and accompanying text.

10. See, e.g., *South Park: Human CentiPad*, COMEDY CENTRAL (Apr. 27, 2011), <https://www.southparkstudios.com/episodes/j6a6zs/south-park-humancentipad-season-15-ep-1>.

11. *New Facebook Terms of Service Includes Compulsory Conscription into Zuckerberg’s Upcoming War Against Government*, ONION (Oct. 1, 2019), <https://www.theonion.com/new-facebook-terms-of-service-includes-compulsory-inscr-1838675822>.

12. *Ts&Zzz*, <https://tsandzzz.com> (last visited Jan. 19, 2024) (“*Ts&Zzz* is a podcast to help you fall asleep by listening to a conversation about the most boring text on the internet; [sic] terms of service agreements.”).

13. See, e.g., Matthew S. Schwartz, *When Not Reading the Fine Print Can Cost Your Soul*, NPR (Mar. 8, 2019), <https://www.npr.org/2019/03/08/701417140/when-not-reading-the-fine-print-can-cost-your-soul> (reporting on various novelty clauses).

14. See *infra* Section III.A (explaining characteristics of the dataset).

15. See Shmuel I. Becher, *Asymmetric Information in Consumer Contracts: The Challenge That Is Yet to Be Met*, 45 AM. BUS. L.J. 723, 724 (2008) (“The interdisciplinary contribution to the field of [standard form contracts] is dominated by economics.”).

16. See Anya Bernstein, *Legal Corpus Linguistics and the Half-Empirical Attitude*, 106 CORNELL L. REV. 1397, 1401–17 (2021) (describing the emergence and development of corpus linguistics research in fields of linguistics and law). Our methods rely on R programming packages including *quanteda*, *tidytext*, and *polmineR*. See Section III.B (explaining our methods).

We also analyze metadata variables to inform our observations about the consumer contracting practices of social platforms.¹⁷

This Article also offers a novel contribution to the field of legal corpus linguistics—a promising¹⁸ yet controversial¹⁹ area of empirical legal scholarship. Corpus linguistics is the scientific study of naturally occurring language in the aggregate, often in large datasets, so-called corpora.²⁰ It applies a variety of computational and quantitative methodologies to understand fine-grained and large-scale trends across different linguistic levels of analysis. Previous work in legal corpus linguistics has focused primarily on matters of judicial interpretation, such as the ordinary meaning of specific words.²¹ We take a different tack, combining legal analysis with methods from corpus linguistics, data science, and natural language processing. Our interdisciplinary methodology contributes to a vibrant and growing literature that evaluates online consumer contracts with empirical methods.²²

Our methods bridge a gap between law and linguistics. Legal scholarship has produced a wealth of literature on the law and problems of consumer contracting. Linguistics scholarship, meanwhile, offers a wealth of advanced

17. See *infra* Section IV.D (discussing the results of our metadata analysis).

18. See, e.g., Friedemann Vogel, Hanjo Hamann & Isabelle Gauer, *Computer-Assisted Legal Linguistics: Corpus Analysis as a New Tool for Legal Studies*, 43 LAW & SOC. INQUIRY 1340, 1340 (2018) (cataloging research on corpus linguistics and introducing “computer-assisted legal linguistics”); Thomas R. Lee & Stephen C. Mouritsen, *Judging Ordinary Meaning*, 127 YALE L.J. 788, 795 (2018) (proposing the use of corpus linguistic methods to ascertain the ordinary meaning of texts for judicial interpretation); James C. Phillips, Daniel M. Ortner & Thomas R. Lee, *Corpus Linguistics & Original Public Meaning: A New Tool to Make Originalism More Empirical*, 126 YALE L.J. F. 21, 21 (2016) (same).

19. See, e.g., Bernstein, *supra* note 16, at 1399 (highlighting weaknesses in legal corpus linguistics research that “hindered its own ability to yield empirically reliable results”); John S. Ehrett, *Against Corpus Linguistics*, 108 GEO. L.J. ONLINE 50 (2019) (arguing against the use of corpus linguistics in judicial interpretation); Evan C. Zoldan, *Corpus Linguistics and the Dream of Objectivity*, 50 SETON HALL L. REV. 401, 401 (2019) (concluding that “corpus linguistics does not live up to its promise to make legal interpretation more objective”).

20. See Bernstein, *supra* note 16, at 1402–12; Lee & Mouritsen, *supra* note 18, at 795.

21. See, e.g., *Carpenter v. United States*, 138 U.S. 2206, 2238 (2018) (Thomas, J., dissenting) (citing legal corpus linguistics research on the meaning of “search”); *Am. Bankers Ass’n v. Nat’l Credit Union Admin.*, 306 F.3d 44, 68 n.5 (D.C. Cir. 2018), *rev’d and remanded*, 934 F.3d 649 (D.C. Cir. 2019) (citing to the Corpus of Historical American English on the meaning of “rural district”); see also Zoldan, *supra* note 19, at 404–05 (reviewing instances of judges using and citing corpus linguistics methods in judicial opinions).

22. See, e.g., Shmuel I. Becher & Uri Benoliel, *Dark Contracts*, 64 B.C. L. REV. 55, 69 n.78 (2023) (reviewing empirical research on form contracts); Rustad & Koenig, *supra* note 4 (evaluating the contracting practices of social platforms); see Florencia Marotta-Wurgler & Robert Taylor, *Set in Stone? Change and Innovation in Consumer Standard-Form Contracts*, 88 N.Y.U. L. REV. 240 (2013) (examining change in consumer form contracts).

metrics for understanding the linguistic difficulty of texts.²³ To date, advanced methods in linguistics have only begun to reckon with issues in consumer contracting.²⁴ In this Article we take a step in that direction. Our analysis examines three categories of linguistic characteristics that may contribute to reading difficulty: *readability* (sentence and word length), *syntactic complexity* (range and complexity of language forms), and *lexical diversity* (richness of vocabulary).²⁵

Contracting has changed profoundly during the digital era, but contract law has not. For courts, online TOUs have proven particularly awkward to evaluate through lenses of traditional contract law.²⁶ As an extension of internet contracting, the smartphone generation of platform-consumer TOUs has introduced new distortions to traditional contract doctrines. Our results illustrate that trend. In this Article, we demonstrate the extraordinary volume, linguistic difficulties, and asymmetries facing consumers online. By situating our results in longitudinal comparisons with similar datasets, we also show that these tendencies have deepened in recent years.²⁷ All said, the sum of our findings supports a broader conclusion: the gap between contract doctrine and consumer reality—already wide in the online environment—has grown wider

23. Readability metrics emerged in the 1940s to measure the ease of reading a text in quantitative terms. Since then, however, linguistics scholarship has yielded a more diverse set of metrics for understanding the linguistic difficulty of a text. *See generally* Matej Martinc, Senja Pollak & Marko Robnik-Šikonja, *Supervised and Unsupervised Neural Approaches to Text Readability*, 47 COMPUTATIONAL LINGUISTICS J. 141 (2021); Tove Larsson & Henrik Kaatari, *Syntactic Complexity Across Registers: Investigating (in)formality in Second-Language Writing*, 45 J. ENGLISH FOR ACADEMIC PURPOSES 1 (2020); Mostafa Zamanian & Pooneh Heydari, *Readability of Texts: State of the Art*, THEORY AND PRAC. IN LANGUAGE STUD. (2012); Michael A. Covington & Joe D. McFall, *Cutting the Gordian Knot: The Moving-Average Type-Token Ratio (MATTR)*, 17 J. QUANTITATIVE LINGUISTICS 94 (2010); Eric Martínez, Francis Mollica & Edward Gibson, *Poor Writing, Not Specialized Concepts, Drives Processing Difficulty in Legal Language*, 224 COGNITION 1 (2022).

24. *See generally* Martínez et al., *supra* note 23 (examining features of contract language that inhibit processing and comprehension); Isabel Wagner, *Privacy Policies Across the Ages: Content and Readability of Privacy Policies 1996–2021*, <https://doi.org/10.48550/arXiv.2201.08739> (2022) (using longitudinal data to assess linguistic tendencies and other features of privacy policies).

25. *See infra* Section III.B (defining and illustrating our metrics).

26. *See, e.g.*, Berkson v. Gogo LLC, 97 F. Supp. 3d 359, 380 (E.D.N.Y. 2015) (“Courts have ‘decided,’ based largely on speculation, what constitutes inquiry notice of a website’s ‘terms of use.’”).

27. *See infra* Sections IV.A–D (comparing our results with previous studies of online TOUs).

in the smartphone era.²⁸ That divergence is especially problematic for social platforms that transact with society at extraordinary scale, deploy manipulative interfaces, and manage vast troves of intimate user data.²⁹

This Article proceeds as follows. Part II describes platform TOUs and their place within the modern consumer contracting landscape. Following that overview, we outline features of social platforms and smartphones that compound the implications of these TOUs for individual rights and public interests. In this way, we differentiate mobile-based social platform TOUs from other areas of consumer contracting. In Part III, we explain our data and methodology. We begin by explaining the characteristics of our dataset and our approach to gathering the data. We then discuss the metrics and computations in our methodology. Part IV presents the findings. There, we illustrate and discuss the results of our linguistics analysis. We also use our metadata to demonstrate key tendencies among social platform TOUs. As we discuss the results, we consider implications for law and policy. A brief conclusion follows.

II. TOUS AND SOCIAL PLATFORMS

Standard form contracting is now the primary means for conducting business in consumer-facing industries.³⁰ With the Industrial Revolution, mass production and distribution prompted the need for standardized contracts.³¹ By reducing transaction costs, form contracting at scale offers important efficiency gains. But many of the benefits of form contracting are deeply asymmetric, producing tensions with fundamental tenets of contract law.³² The nature of online contracting combined with the unprecedented scale of

28. See Jeff Sovern & Nahal Heydari, *Not-So-Smartphone Disclosures*, St. John's Legal Studies Research Paper No. 22-0010 (Aug. 12, 2022), <http://dx.doi.org/10.2139/ssrn.4188892>.

29. See *infra* Section II.B (distinguishing social platform contracting from other areas of consumer contracting).

30. Daniel T. Ostas, *Postmodern Economic Analysis of Law: Extending the Pragmatic Visions of Richard A. Posner*, 36 AM. BUS. L.J. 193, 226–27 (1998) (“Form contracting has become the predominant way of doing business in the twentieth century.”).

31. Becher, *supra* note 15, at 726; Ellen Wauters, Eva Lievens & Peggy Valcke, *Towards a Better Protection of Social Media Users: A Legal Perspective on the Terms of Use of Social Networking Sites*, 22 INT'L J. L. INFO. TECH. 254, 255 (2014).

32. Legal scholars have critiqued standard form consumer contracts for decades. See generally Friedrich Kessler, *Contracts of Adhesion—Some Thoughts about Freedom of Contract*, 43 COLUM. L. REV. 629 (1943); W. David Slawson, *Standard Form Contracts and Democratic Control of Lawmaking Power*, 84 HARV. L. REV. 529 (1971); Melvin A. Eisenberg, *The Limits of Cognition and the Limits of Contracts*, 47 STAN. L. REV. 211 (1995); Robert A. Hillman, *Rolling Contracts*, 71 FORDHAM L. REV. 743 (2002).

digital platforms further exacerbate those tensions. This Part provides a brief overview of the legal environment for consumer contracting online. Following that overview, this Part outlines characteristics that differentiate the TOUs of social platforms from other areas of consumer contracting.

A. TOUS IN THE LEGAL ENVIRONMENT

This Section II.A discusses both the development of modern TOUs and TOU typology within legal environments.

1. *Modern TOUs*

Form contracting has long been controversial.³³ Yet, for today's consumer, form contracts are more pervasive than ever before. Browsing websites, making routine purchases, downloading an app—virtually any online activity involves a TOU, a privacy policy, or both.³⁴ Online commerce and mobile computing created vast new frontiers for consumer contracting.³⁵ The debut of the iPhone in 2007 gave rise to a new era of digital commerce on mobile devices. When the App Store launched in 2008, it carried about 500 apps. Today, the App Store offers almost 2.2 million apps while Google Play has over 3.5 million.³⁶ For people across the world, information access underwent a profound shift towards mobile, app-based web experiences.³⁷

As the app economy grew into a multi-trillion-dollar marketplace, a vast and ever-expanding universe of consumer contracts followed.³⁸ Digital

33. For a colorful critique from the 1940s, see Kessler, *supra* note 32, at 640 (“Standard contracts in particular could thus become effective instruments in the hands of powerful industrial and commercial overlords enabling them to impose a new feudal order of their own making upon a vast host of vassals.”).

34. Ann Morales Olazábal, Howard Marmorstein & Dan Sarel, *Frequent Flyer Programs: Empirically Assessing Consumers’ Reasonable Expectations*, 51 AM. BUS. L.J. 175, 221 (2014) (“As early as the 1970s, standardized contract forms had already edged out the practice of contract negotiation, with the vast majority of consumer and commercial contracts being form-driven.”).

35. Woodrow Hartzog, *Website Design as Contract*, 60 AM. U. L. REV. 1635, 1641 (2011) (“As websites became ubiquitous, so did terms of use. As a result, an overwhelming amount of online activity is not governed by default law but rather through agreement between the parties.”).

36. The Amazon Appstore has another 480,000 or so. See L. Ceci, *Number of Apps Available in Leading App Stores as of 2nd Quarter 2022*, STATISTA (Aug. 11, 2022), <https://www.statista.com/statistics/276623/number-of-apps-available-in-leading-app-stores>.

37. See ORG. FOR ECON. COOP. & DEV. [OECD], *The App Economy*, at 8–11, OECD Digital Econ. Papers No. 230 (Dec. 16, 2013), <http://dx.doi.org/10.1787/5k3ttftlv95k-en> (summarizing the rapid growth of the app economy).

38. In 2021, the app economy was worth some \$6.3 trillion. See L. Ceci, *Size of the App Economy Worldwide from 2016-2021*, STATISTA (July 6, 2021), <https://www.statista.com/statistics/267209/global-app-economy>.

platforms now cater to millions, or even billions, of consumers at once. The number of active users on the Meta family of platforms—including Facebook, WhatsApp, and Instagram—is almost 3.6 billion per month.³⁹ According to Pew surveys, a quarter of Americans report that they are asked to agree to a privacy policy daily.⁴⁰ Few read them; even fewer read them all the way through.⁴¹

From a consumer perspective, the online contracting environment is especially daunting. The length of TOUs introduces a fundamental asymmetry between platforms and users. While reading TOUs is costly for consumers, adding terms to an online contract costs a platform almost nothing.⁴² There are no physical constraints on the length of an online contract. Over time, TOUs have swelled in length and complexity. Smartphone-based apps pose serious difficulties for reading and comprehension.⁴³ Practically speaking, to review the user terms of any given platform would mean reading long, highly technical documents on a smartphone screen upon downloading an app.

With the rise of digital commerce, consumer contracting practices have evolved dramatically. Contract law, however, has not.⁴⁴ As a result, core concepts in contract law exist in tension with the practical realities of modern form contracting.⁴⁵ With a mobile device and an internet connection, contracts may be formed any time, from almost anywhere. However, because the law of contract formation remains relatively static, courts are equipped with outdated

39. *Meta Reaches 3.6 Billion People Each Month*, STATISTA (Oct. 29, 2021), <https://www.statista.com/chart/2183/facebook-mobile-users/>.

40. *Americans' Attitudes and Experiences with Privacy Policies and Laws*, PEW RSCH. CTR. (Nov. 15, 2019), <https://www.pewresearch.org/internet/2019/11/15/americans-attitudes-and-experiences-with-privacy-policies-and-laws>.

41. *Id.*

42. See Adam Levitin, *ALI Consumer Contracts Restatement—What's at Stake*, CREDIT SLIPS (Mar. 16, 2019), <https://www.creditslips.org/creditslips/2019/05/ali-consumer-contracts-restatement-whats-at-stake.html> (“[T]he cost of larding on an extra term on the Internet is so low, that there’s no reason for a business not to bury its whole Christmas wishlist in linked on-line terms and conditions.”).

43. See *infra* Section IV.A–D.

44. See, e.g., *Plazza v. Airbnb, Inc.*, 289 F. Supp. 3d 537, 547 (S.D.N.Y. 2018) (“Although the Internet age has certainly introduced new twists with regard to entering into contracts, the fundamental elements of contract law, including mutual assent of the parties, have not changed.”); *Register.com, Inc. v. Verio Inc.*, 356 F.3d 393, 403 (2d Cir. 2004) (“While new commerce on the Internet has exposed courts to many new situations, it has not fundamentally changed the principles of contract.”).

45. See Becher, *supra* note 15, at 724 (“Because typical consumers do not read and cannot negotiate [standard form contracts], such contracts challenge the basic assumption of informed consent as a prerequisite for contract formation.”).

doctrines to the online contracting environment.⁴⁶ For instance, case law shaping the doctrine of inquiry notice developed in vending machine disputes in the 1950s and 1960s.⁴⁷ Yet inquiry notice remains a pivotal issue in the enforceability of online TOUs.⁴⁸

Most users, of course, do not read TOUs.⁴⁹ And few would understand them even if they did.⁵⁰ Nonetheless, courts often treat TOUs as valid, enforceable contracts.⁵¹ Whether the consumer has read a TOU is irrelevant.⁵² Whether or not the consumer *reasonably could* read a TOU is also irrelevant. Because courts approach modern TOUs with traditional contract doctrines, concepts like reasonable notice are adapted to the online contracting environment.⁵³ Determinations of notice often turn on small details like font and color scheme, the conspicuousness of hyperlinks, and interface design.⁵⁴ Courts tend not to question the practicality or the reasonable feasibility of reading a TOU. The existence of an *opportunity* to read will suffice if notice of the terms is deemed conspicuous.⁵⁵ Although the law imposes a duty to read

46. See NANCY S. KIM, WRAP CONTRACTS: FOUNDATIONS AND RAMIFICATIONS 109–11 (2013) (comparing internet contract rules to traditional contract doctrine); *Berkson*, 97 F. Supp. 3d 359 at 381–82 (observing “outdated fundamentals” available to courts).

47. See *Berkson*, 97 F. Supp. 3d at 382 (explaining the foundations of inquiry notice case law); see also *Specht v. Netscape*, 306 F.3d 17, 30–32, 35 (2d Cir. 2002) (applying a traditional reasonable communicativeness test to an internet contract dispute).

48. See, e.g., *Selden v. Airbnb, Inc.*, 4 F.4th 148, 157 (D.C. Cir. 2021).

49. See generally Jonathan A. Obar & Anne Oeldorf-Hirsch, *The Biggest Lie On the Internet: Ignoring the Privacy Policies and Terms of Service Policies of Social Networking Services*, 23 INFO., COMM’N & SOC’Y 128 (2020); Shmuel I. Becher & Tal Z. Zarsky, *Online Consumer Contracts: No One Reads, but Does Anyone Care?*, 12 JERUSALEM REV. LEGAL STUDIES 105 (2010); Susan E. Gindin, *Nobody Reads Your Privacy Policy or Online Contract? Lessons Learned and Questions Raised by the FTC’s Action Against Sears*, 8 NW. J. TECH. & INTELL. PROP. 1 (2009); Ian Ayres & Alan Schwartz, *The No-Reading Problem in Consumer Contract Law*, 66 STAN. L. REV. 545 (2014); Bakos et al., *supra* note 5.

50. See Bakos et al., *supra* note 5 and accompanying text.

51. When notice and assent are considered adequate, TOUs have widely been ruled enforceable. See *Selden v. Airbnb, Inc.*, 4 F.4th 148, 157 (D.C. Cir. 2021).

52. The duty to read doctrine is well established in common law. Even if a party does not read a contract, courts presume that all parties have read it and are bound to its terms, as long as users have adequate notice of the terms and express their assent. See Becher, *supra* note 15, at 729–33.

53. See, e.g., *Selden v. Airbnb, Inc.*, 4 F.4th 148, 157–58 (D.C. Cir. 2021).

54. See, e.g., *id.* (“The only red text in the warning indicated the legal policies, which were set off from the surrounding black text.”); *Meyer v. Uber*, 868 F.3d 66, 78 (2d Cir. 2017) (“Turning to the interface at issue in this case, we conclude that the design of the screen and language used render the notice provided reasonable as a matter of California law.”); *Nicosia v. Amazon.com, Inc.*, 834 F.3d 220, 233 (2d Cir. 2015).

55. See, e.g., *Swift v. Zynga Game Network, Inc.*, 805 F. Supp. 2d 904, 911–12 (N.D. Cal. 2011).

contracts on consumers, there is no symmetrical duty to make contracts readable or understandable.⁵⁶ Gaps like these create tensions for courts, especially in consumer contracting disputes.

Social platform TOUs highlight those tensions. They are deeply asymmetric, procedurally and substantively.⁵⁷ Most are contracts of adhesion, offered on a unilaterally drafted, take-it-or-leave-it basis.⁵⁸ Many are extraordinary in length and linguistic difficulty.⁵⁹ The fact that virtually none of the millions (or billions) of people who agree to a given TOU will ever read or understand the terms raises fundamental legal questions: What constitutes meaningful consent, or even notice, in these conditions? Is this freedom of contract? If so, for who? The idea that TOUs represent a “meeting of the minds” borders on the absurd.⁶⁰ Because classic pillars of contract law are so distorted in the online contracting environment, courts are forced into the realm of speculation around central issues.⁶¹

In theory, the notice and choice framework should empower consumers to make choices about how their personal data will be handled online. But that utopia is far from the reality for consumer TOUs. An uneasy assumption undergirds the enforceability of online TOUs: that consumers receive adequate notice of terms and make free choices about whether to agree with the terms. That assumption is especially precarious in the modern contracting environment where consumers face cognitive hurdles, time constraints, and informational asymmetries that prevent them from making rational choices about whether to agree to TOUs.⁶² The volume *and* content of TOUs is overwhelming.⁶³ And, even if consumers could both read and understand

56. See Becher, *supra* note 5, at 2258 (“Yet under U.S. law, the duty to read is unilateral: although consumers are presumed to read contracts, there is no general duty on suppliers to provide consumers with readable contracts.”).

57. There is a wide gap across a variety of factors: opportunities to draft and negotiate, bargaining power, legal expertise, business sophistication, and commercial experience. See Schmucl I. Becher & Esther Unger-Aviram, *The Law of Standard Form Contracts: Misguided Intuitions and Suggestions for Reconstruction*, 8 DEPAUL BUS. & COMM. L.J. 199, 201 (2010); see also Becher, *supra* note 15, at 727.

58. See *Berkson v. Gogo LLC*, 97 F. Supp. 3d 359, 365 (“In many instances, these consumers are accepting important contracts of adhesion when they order a product or service through a computer.”).

59. See *infra* Sections IV.A–D (illustrating the difficulty of TOUs relative to other bodies of English usage and their expanding length).

60. Rustad & Koenig, *supra* note 4, at 1434 (“The concept of the ‘meeting of the minds’ is a legal fiction when it comes to TOU boilerplate.”).

61. See, e.g., *Berkson v. Gogo LLC*, 97 F. Supp. 3d 359, 380.

62. See Daniel J. Solove, *Introduction: Privacy Self-Management and the Consent Dilemma*, 126 HARV. L. REV. 1880, 1883 (2013).

63. See *infra* Part IV.

TOUs, they still cannot negotiate their terms.⁶⁴ Notice and assent are assumed via legal constructs but are largely a fantasy in today's commercial and technological environment.

2. *TOU Typology*

Social platform TOUs belong to the family of “wrap” contracts.⁶⁵ Nancy Kim defines the family as a “unilaterally imposed set of terms which the drafter purports to be legally binding.”⁶⁶ Wrap contracts are presented in non-traditional formats—a signature is not required, nor is a pen. There are three classic wrap forms: shrink-wraps, click-wraps, and browse-wraps.⁶⁷ There are also scroll-wraps, sign-in-wraps, and various other creatures in the wrap family.⁶⁸ As a matter of terminology, the use of the word “wrap” is a relic from an earlier era of consumer contracting practices. The origin lies with shrink-wrap contracts, which derive their name from the cellophane packaging on software product boxes.⁶⁹ Manufacturers often included a license agreement on the box, visible through the cellophane wrapper.⁷⁰ In that form, the consumer accepts the contract by breaking the seal to open the box.⁷¹ For whatever reason, the word “wrap” has persisted even as non-traditional contracting practices have evolved into digital forms.

Social platform TOUs are often considered sign-in-wrap agreements, which combine features of click-wraps with browse-wraps.⁷² Sign-in-wraps present a digital prompt that indicates agreement with an online contract, which is often hyperlinked on an account registration panel.⁷³ Usually, a sign-in-wrap provides that, by signing up for an account, the user agrees to the contract (and other supplementary terms, such as privacy policies). Click-

64. Solove, *supra* note 62, at 1888.

65. See KIM, *supra* note 46, at 2.

66. *Id.*

67. *Id.* at 36–43 (providing a typology of the classic wrap forms).

68. Click-wraps, for instance, may also be called “click-through,” “click and accept,” or “web-wrap” agreements.

69. *The Origin of Click-Wrap: Software Shrink-Wrap Agreements*, WILMER HALE (Mar. 22, 2000), <https://www.wilmerhale.com/insights/publications/the-origin-of-click-wrap-software-shrink-wrap-agreements-march-22-2000>.

70. *Id.*

71. After a number of cases finding shrink-wrap agreements unenforceable, a seminal case in the Seventh Circuit established their enforceability—and a circuit split on the question. See *ProCD, Inc. v. Zeidenberg*, 86 F.3d 1447 (7th Cir. 1996); see also Brian Covotta & Pamela Sergeeff, *ProCD, Inc. v. Zeidenberg*, 13 BERKELEY TECH. L.J. 35, 36–37 (1998) (reviewing early case law on the enforceability of shrink-wrap contracts).

72. *Selden v. Airbnb, Inc.*, 4 F.4th 148, 156–57 (D.C. Cir. 2021) (“[A] sign-in wrap bundles signing up for a service with agreement to the website’s contractual terms.”).

73. *Berkson v. Gogo LLC*, 97 F. Supp. 3d 359, 399–401 (E.D.N.Y. 2015).

wraps, meanwhile, prompt a user to perform a digitally-mediated action, such as tapping or clicking an “I agree” button, that indicates assent.⁷⁴ Browse-wraps, on the other hand, are more passive. A typical browse-wrap is a statement (hyperlinking to the actual TOU) at the bottom of a screen that says using the website amounts to acceptance. Importantly, browse-wraps do not require a proactive confirmation of assent.⁷⁵ In theory, at least, consumers have an opportunity to review click-wrap and sign-in-wrap agreements before using the platform or service. In court, form matters: whereas judges have shown reluctance to enforce browse-wrap agreements, click-wraps and sign-in-wraps tend to be more enforceable.⁷⁶

B. SOCIAL PLATFORM TOUS

Social platform TOUs are a distinct and particularly sensitive area of consumer contracting. As take-it-or-leave-it agreements, platform TOUs resemble, in many ways, routine form contracts in the digital era. But social platform TOUs carry distinct implications—above and beyond longstanding dilemmas posed by form consumer contracting more broadly. We develop four points within that proposition, highlighting characteristics particular to this category of TOUs: (1) social networks operate and contract at an unprecedented, systemic scale;⁷⁷ (2) social platform business models often rely

74. Jonathan A. Obar & Anne Oeldorf-Hirsch, *The Clickwrap: A Political Economic Mechanism for Manufacturing Consent on Social Media*, SOCIAL MEDIA & SOC'Y 1, 3 (2018) (“The clickwrap is a digital prompt that enables the user to provide or withhold their consent to a policy or set of policies by clicking a button, checking a box, or completing some other digitally mediated action suggesting ‘I agree’ or ‘I don’t agree’”); Eric Goldman, *How Zappos’ User Agreement Failed In Court and Left Zappos Legally Naked*, FORBES (Oct. 10, 2012), <https://www.forbes.com/sites/ericgoldman/2012/10/10/how-zappos-user-agreement-failed-in-court-and-left-zappos-legally-naked> (“A clickthrough agreement is presented to users in such a way that they must take some action—usually, clicking on a button—that unambiguously signifies that they are assenting to the contract.”).

75. KIM, *supra* note 46, at 41 (“Browsewraps do not require users to affirmatively manifest consent.”).

76. *See, e.g.*, *Berman v. Freedom Financial Network, LLC*, 30 F.4th 849, 856 (9th Cir. 2022) (“Courts are more reluctant to enforce browsewrap agreements because consumers are frequently left unaware that contractual terms were even offered, much less that continued use of the website will be deemed to manifest acceptance of those terms.”); *Sellers v. JustAnswer LLC*, 73 Cal. App. 5th 444, 466 (2021) (“[Courts] have reached consistent conclusions when evaluating the enforceability of agreements at either end of the spectrum, generally finding scrollwrap and clickwrap agreements to be enforceable and browsewrap agreements to be unenforceable.”).

77. *See, e.g.*, Nizan Geslevich Packin, *Too-Big-to-Fail 2.0? Digital Service Providers as Cyber-Social Systems*, 93 INDIANA L.J. 1211, 1216 (2018) (exploring failure risks among “Critical Service Providers” in digital markets); Carl Öhman & Nikita Aggarwal, *What if Facebook Goes Down? Ethical and Legal Considerations for the Demise of Big Tech*, 9 INTERNET POL’Y REV. 1, 6 (2020) (coining the term “Systemically Important Technology Institution” and calling for

on harvesting consumer attention with manipulative designs;⁷⁸ (3) heavy market concentrations limit and bind consumer choices in the social network marketplace; and (4) in legal systems with weak consumer and data protections—the United States, for instance—social platform TOUs have an outsized role in defining society’s relationship with technology.⁷⁹

1. *Unprecedented Scale*

The scale of social platform contracting is both extraordinary and unprecedented. Previous eras of form contracting appear quaint by comparison. The largest platforms contract with consumers by the billions, compounding the implications of their TOUs. Facebook’s TOU alone applies to almost three billion users—equivalent to well over a third of the world’s population.⁸⁰ YouTube’s terms apply to well over two billion users and X’s (formerly Twitter) TOU covers some 290 million accounts. Even the TOUs of relatively niche platforms can have vast reach: Badoo (318 million), Tinder (seventy-five million), and Venmo (seventy million). Contracting at this volume has systemic implications.⁸¹ Platform TOUs create private law at societal scale, binding billions of people in contracts that govern sensitive user data and human rights.

2. *Attention-Surveillance Business Models*

The data collection capabilities of digital platforms raise a wide variety of dilemmas, from privacy rights to national security. A common denominator

deeper consideration of the concept in digital markets); Lindsay Sain Jones & Tim R Samples, *On the Systemic Importance of Digital Platforms*, 25 U. PA. J. OF BUS. L. 141, 148–49 (2023) (reviewing literature on the concept of systemic importance in the digital realm).

78. See, e.g., Caleb N. Griffin, *Systemically Important Platforms*, 107 CORNELL L. REV. 445, 449–50 (2022).

79. See Kim & Telman, *supra* note 4, at 754 (“The business practices of Internet giants set online standards, restrict or delete consumers’ rights, establish business norms, and dictate behavior that shapes and affects the lives of citizens.”); Jones & Samples, *supra* note 77, at 170 (“Though seemingly mundane, TOUs play a large role in defining legal dynamics—including rights to data, dispute resolution, and privacy—between society and technology.”).

80. S. Dixon, *Number of Monthly Active Facebook Users Worldwide as of 2nd Quarter 2022*, STATISTA (July 28, 2022), <https://www.statista.com/statistics/264810/number-of-monthly-active-facebook-users-worldwide> (“With roughly 2.93 billion monthly active users as of the second quarter of 2022, Facebook is the most used online social network worldwide.”). As another point of reference Meta’s active *monthly* user base is roughly equivalent to the combined inhabitants of the five largest countries by population: China, India, United States, Indonesia, and Pakistan. Meta reports 3.65 billion monthly active users among its “family” of social applications. Meta’s “family” of apps is defined as Facebook, Instagram, Facebook Messenger, and WhatsApp; see Felix Richter, *Meta Reaches 3.6 Billion People Each Month*, STATISTA (Oct. 29, 2021), <https://www.statista.com/chart/2183/facebooks-mobile-users>.

81. See *supra* note 77 and accompanying text.

across those dilemmas is the attention-surveillance business model.⁸² A primary aim of that business model is to extract data from users while capturing their attention.⁸³ Advertising revenues fuel the business: specifically, targeted ads are sold to third parties. Meta, for instance, is almost exclusively reliant on ad sales.⁸⁴

The attention industry predates the digital era by a large margin, with roots in nineteenth-century marketing, propaganda, and ad-based media.⁸⁵ Accelerated by the release of the iPhone in 2007, the mobile computing revolution brought powerful technology much closer to the human experience.⁸⁶ By 2015, two-thirds of Americans owned a smartphone; by 2021, about 85% did.⁸⁷ As humans began living in close proximity to computers around the clock, opportunities for data collection flourished.⁸⁸ Put one way, carrying around “the most sophisticated tracking and monitoring device ever forged by the hand of man” has serious implications for privacy.⁸⁹ The

82. Julie Cohen, *Law for the Platform Economy*, 51 U.C. DAVIS. L. REV. 133 (2017); Shoshanna Zuboff, *THE AGE OF SURVEILLANCE CAPITALISM: THE RIGHT FOR A HUMAN FUTURE AT THE NEW FRONTIER OF POWER* (2018).

83. Tristan Harris, *Big Tech’s Attention Economy Can Be Reformed. Here’s how.*, MIT TECH. REV. (Jan. 10, 2021), <https://www.technologyreview.com/2021/01/10/1015934/facebook-twitter-youtube-big-tech-attention-economy-reform> (“News feeds on Facebook or Twitter operate on a business model of commodifying the attention of billions of people per day”). Platforms that rely on subscription revenues have a different incentive structure. Sara Brown, *The Case for New Social Media Business Models*, IDEAS MADE TO MATTER (June 16, 2021), <https://mitsloan.mit.edu/ideas-made-to-matter/case-new-social-media-business-models>.

84. In 2020, approximately 97.9% of Facebook’s global revenue came from advertising. Stacy Jo Dixon, *Meta’s (formerly Facebook Inc.) advertising revenue worldwide from 2009 to 2021*, STATISTA (July 27, 2022), <https://www.statista.com/statistics/271258/facebooks-advertising-revenue-worldwide>.

85. See TIM WU, *THE ATTENTION MERCHANTS: THE EPIC SCRAMBLE TO GET INSIDE OUR HEADS* 11–23 (2016) (outlining the early eras of attention industries).

86. Gabriella M. Harari, Nicholas D. Lane, Rui Wang, Benjamin S. Crosier, Andrew T. Campbell & Samuel D. Gosling, *Using Smartphones to Collect Behavioral Data in Psychological Science: Opportunities, Practical Considerations, and Challenges*, 11 PERSPECTIVES PSYCH. SCI. 838, 838–39 (2016) (“[Smartphones] are sensor-rich, computationally powerful, and nearly constant companions to their owners, providing unparalleled access to people as they go about their daily lives.”).

87. Aaron Smith, *U.S. Smartphone Use in 2015*, PEW RSCH. CTR. (Apr. 1, 2015) <https://www.pewresearch.org/internet/2015/04/01/us-smartphone-use-in-2015>; *Percentage of U.S. Adults Who Own a Smartphone 2011-2022*, STATISTA, <https://www.statista.com/statistics/219865/percentage-of-us-adults-who-own-a-smartphone> (last visited Nov. 13, 2023).

88. See, e.g., Harari et al., *supra* note 86 and accompanying text.

89. Alex Kingsbury, *We’re About to Find Out What Happens When Privacy Is All but Gone*, N.Y. TIMES (Aug. 23, 2022), <https://www.nytimes.com/2022/08/23/opinion/apple-internet-privacy-tracking.html>.

“internet of bodies” and the “internet of things” enable the harvesting of even more intimate information, including sensitive health and biometric data.⁹⁰

Mobile-based apps are particularly powerful, combining the intimate user data available on social platforms with the surveillance capabilities of smartphones. Smartphone apps frequently request intimate information such as location tracking, camera access, purchase history, financial information, SMS messages, contacts, various forms of user content, phone call logs, and so on.⁹¹ Geolocation alone offers tremendous opportunities for data collection. In *Carpenter v. United States*, the Supreme Court discussed privacy risks of location tracking, explaining that it can reveal “not only [one’s] particular movements, but through them [one’s] ‘familial, political, professional, religious, and sexual associations.’”⁹²

A recent action by the Federal Trade Commission (FTC) against Kochava Inc., an ad tech company based in Idaho, provides further illustration.⁹³ The FTC complaint outlined sensitivities associated with geolocation data, such as the ability to connect users with locations related to “medical care, reproductive health, religious worship, mental health, temporary shelters, such as shelters for the homeless, domestic violence survivors, or other at-risk populations, and addiction recovery.”⁹⁴ Kochava’s ad tech business model, of course, is far from unique in its use of geolocation data.⁹⁵

Social platforms are positioned to harvest particularly intimate and sensitive data about their users. Facebook might have the “broadest, deepest, and most comprehensive” dataset of human information ever assembled.⁹⁶ At times, our apps know us better than we know ourselves and each other. Platforms that engage in behavioral targeting develop extensive profiles on

90. Stacy-Ann Elvy, *Commodifying Consumer Data in the Era of the Internet of Things*, 59 B.C. L. REV. 423, 426–27 (2018) (explaining that such devices can collect data “such as fingerprint scans, facial scans, heart rates, fitness levels, temperature, and blood sugar levels, among other things”).

91. See Gillian Cleary, *Mobile Privacy: What Do Your Apps Know About You?*, SYMANTEC ENTER. BLOGS: THREAT INTEL. (Aug. 16, 2018), <https://symantec-enterprise-blogs.security.com/blogs/threat-intelligence/mobile-privacy-apps>.

92. *Carpenter v. United States*, 138 U.S. 2206, 2217 (2018) (quoting *United States v. Jones*, 565 U.S. 400 (2011) (Sotomayor, J. concurring)).

93. Complaint for Permanent Injunction and Other Relief, *F.T.C. v. Kochava Inc.*, No. 2:22-cv-377, https://www.ftc.gov/system/files/ftc_gov/pdf/1.%20Complaint.pdf.

94. *Id.* at 1–2.

95. David Shepardson, *U.S. Agency to Probe How Mobile Carriers Use Consumer Location Data*, REUTERS (Aug. 25, 2022), <https://www.reuters.com/business/media-telecom/us-fcc-investigate-mobile-carrier-use-consumer-geolocation-data-2022-08-25>.

96. Jon Evans, *When Facebook Knows You Better Than You Know Yourself*, TECHCRUNCH (Oct. 25, 2015), <https://techcrunch.com/2015/10/24/when-facebook-knows-you-better-than-you-know-yourself>.

users based on tastes, preferences, and personalities.⁹⁷ Data-generated “character” scores can assess credit risks and personality tendencies.⁹⁸ The amount of consumer data transferred in a routine transaction—take, for instance, pizza and a movie at home—is staggering.⁹⁹ TikTok, as explained by the head of the Federal Communications Commission (FCC), gathers an extremely rich set of user data:¹⁰⁰

Indeed, TikTok collects everything from search and browsing histories to keystroke patterns and biometric identifiers, including faceprints—which researchers have said might be used in unrelated facial recognition technology—and voiceprints. It collects location data as well as draft messages and metadata, plus it has collected the text, images, and videos that are stored on a device’s clipboard.

Dating platforms also gather troves of sensitive information about their users: full name, age, email address, credit card, geolocation, user photos and videos, political views, religious beliefs, employment and education, social media, chat history, swiping records, behavioral data, marital status, ethnicity, hobbies and interests, gender, sex, sexual orientation, and mobile number/device.¹⁰¹ Some apps even collect height, weight, and HIV status.¹⁰² And the sheer volume of data harvesting is staggering. One journalist who

97. See Jared S. Livingston, *Invasion Contracts: The Privacy Implications of Terms of Use Agreements in the Online Social Media Setting*, 21 ALB. L.J. SCI. & TECH. 591, 596 (2011) (explaining the practice of behavioral targeting).

98. See, e.g., Janine S. Hiller & Lindsay Sain Jones, *Who’s Keeping Score: Oversight of Changing Consumer Credit Infrastructure*, 59 AM. BUS. L.J. 61, 62–65 (2022); Quentin Hardy, *Using Algorithms to Determine Character*, N.Y. TIMES (July 26, 2015), <https://archive.nytimes.com/bits.blogs.nytimes.com/2015/07/26/using-algorithms-to-determine-character>.

99. An investigation of privacy policies and related documents found that, hypothetically, two friends who order a pizza and a movie with their devices at home might give up over 53 pieces of information about themselves. See Stephanie Stamm, Tripp Mickle & Jessica Kuronen, *How Pizza Night Can Cost More in Data Than Dollars*, WALL ST. J. (Apr. 10, 2018) <https://www.wsj.com/graphics/how-pizza-night-can-cost-more-in-data-than-dollars>.

100. *Letter to Apple and Alphabet from Commissioner Brendan Carr*, FED. COMM’NS COMM’N (June 24, 2022), <https://www.fcc.gov/sites/default/files/carr-letter-apple-and-google.pdf> [hereinafter FCC Letter].

101. See Or Baram, *Do You Know What Personal Data Dating Apps Collect About You? (Hint: It’s a Lot!)*, MINE BLOG (Feb. 13, 2022), <https://blog.saymine.com/blog-1/know-what-personal-data-dating-apps-collect-about-you-february-2022>; see also Rebecca Heilweil, *Tinder May Not Get You a Date. It Will Get Your Data.*, VOX (Feb. 14, 2020), <https://www.vox.com/recode/2020/2/14/21137096/how-tinder-matches-work-algorithm-grindr-bumble-hinge-algorithms>.

102. *Id.*

requested her data from Tinder received 800 pages of information—some of it quite intimate.¹⁰³

So extensive and intimate are their data collection capabilities, some platforms have become protagonists in geopolitics and international security. Though best known for its addictive interface and amusing videos, the question of TikTok's data collection is now a matter of great power geopolitics.¹⁰⁴ FCC leadership recently described TikTok as an “unacceptable” risk to national security.¹⁰⁵ X's (formerly Twitter) combination of extensive data collection and lax cybersecurity prompted alarm.¹⁰⁶ Grindr, the largest LGBTQ+ social networking and dating app, was also the subject of agitation. In 2019, the Committee on Foreign Investment in the United States (CFIUS) ordered the divestment of Grindr shares owned by Beijing Kunlun Tech Co. Ltd., a Chinese gaming company.¹⁰⁷ Although CFIUS did not disclose any specific concerns—the inter-agency committee rarely does—speculation pointed towards blackmail risks, particularly for government contractors and personnel.¹⁰⁸ As large-scale mediators of information, social platforms have played roles in intelligence leaks, disinformation campaigns, and other affairs with sensitive national security implications.¹⁰⁹

103. Judith Duportail, *I Asked Tinder for My Data. It Sent Me 800 Pages of My Deepest, Darkest Secrets*, GUARDIAN (Sept. 26, 2017), <https://www.theguardian.com/technology/2017/sep/26/tinder-personal-data-dating-app-messages-hacked-sold>.

104. See, e.g., FCC Letter, *supra* note 100. A parallel concern is TikTok's potential to manipulate users via propaganda; *The All-Conquering Quaver*, ECONOMIST (July 9, 2022), <https://www.economist.com/interactive/briefing/2022/07/09/the-all-conquering-quaver> (“But there is a second, bigger fear about security, which concerns not what TikTok learns about its users, but what they learn from it.”).

105. FCC Letter, *supra* note 100 (“It is clear that TikTok poses an unacceptable national security risk due to its extensive data harvesting being combined with Beijing's apparently unchecked access to that sensitive data.”).

106. As noted by Charles E. Grassley, a top member of the Senate Judiciary Committee, “Take a tech platform that collects massive amounts of user data, combine it with what appears to be an incredibly weak infrastructure and infuse it with foreign state actors with an agenda, and you've got a recipe for disaster.” See Joseph Menn, Elizabeth Dvoskin & Cat Zakrzewski, *Former Security Chief Claims Twitter Buried “Egregious Deficiencies,”* WASH. POST (Aug. 23, 2022), <https://www.washingtonpost.com/technology/interactive/2022/twitter-whistleblower-sec-spam>.

107. Ama Adams, Brendan Hanifin & Emerson Siegle, *Grindr, CFIUS and the National Security Risks of Dating*, LAW360 (Apr. 1, 2019), <https://www.law360.com/articles/1144915/grindr-cfius-and-the-national-security-risks-of-dating>.

108. *Id.* (quoting sources that concerns stemmed from blackmail risks of American officials or contractors).

109. See, e.g., Tim R Samples, *My Short Life As (The Face Of) a Russian Disinformation Troll*, COLUM. JOURNALISM REV. (July 30, 2018), https://www.cjr.org/first_person/russian-troll-twitter.php (“Once pressed by the U.S. government to investigate, Twitter identified 3,814

At the heart of many digital platform business models is a vital commodity: human attention. Users who spend more time engaging with an app generate more opportunities for targeted advertising and data collection.¹¹⁰ That relationship is the basis of the notion that on a “free” platform, the user is actually the product.¹¹¹ In fact, harvesting data and attention is not just a norm but the *raison d’être* of certain social apps.¹¹² When attention is the crux of a business model, platforms are incentivized to maximize user engagement. As an important point of reference: equity markets value social platforms, in part, as a function of their active user base and engagement.¹¹³ Thus, a highly engaged—or, put differently, a highly addicted—user is a valuable user.

The attention-surveillance business model generates problematic incentives: more addictive platforms are more profitable platforms. Those incentives tempt platforms to deploy addictive interfaces (also called “dark patterns”) to maximize user engagement.¹¹⁴ Techniques—such as variable reward schedules, infinite scroll, gamification, and feedback loops—harness

accounts actively managed by Russian operatives and some 50,258 bots that tweeted over a million times around the election.”); Jennifer Jacobs & Josh Wingrove, *US Urges Social Media to Not Share Leaked Docs in Damage Control*, BLOOMBERG (Apr. 13, 2023), <https://www.bloomberg.com/news/articles/2023-04-13/us-urges-social-media-to-not-share-leaked-docs-in-damage-control> (highlighting the role of social platforms in intelligence document leaks).

110. FORBRUKERRÅDET [CONSUMER COUNCIL OF NORWAY], OUT OF CONTROL, <https://web.archive.org/web/20230121151349/https://fil.forbrukerradet.no/wp-content/uploads/2020/01/2020-01-14-out-of-control-final-version.pdf> (Jan. 14, 2020) (arguing that “comprehensive tracking and profiling of consumers that is at the heart of the adtech industry are by their very nature exploitative practices”); Vikram R. Bhargava & Manuel Velasquez, *Ethics of the Attention Economy: The Problem of Social Media Addiction*, 31 BUS. ETHICS Q. 321, 322 (2021).

111. Will Oremus, *Are You Really The Product?*, SLATE (Apr. 27, 2018) <https://slate.com/technology/2018/04/are-you-really-facebooks-product-the-history-of-a-dangerous-idea.html> (tracing the origins of the notion that social media users are the products in their business models).

112. See, e.g., Kevin Roose, *Eight: “We Go All,”* RABBIT HOLE (June 4, 2020) <https://www.nytimes.com/2020/06/04/podcasts/rabbit-hole-qanon-youtube-tiktok-virus.html> (explaining [at 31:03] that ByteDance views apps such as TikTok not as a “primary product” but instead as a vehicle for collecting data to improve artificial intelligence capabilities).

113. See, e.g., Tyler Clifford, *Jim Cramer Reveals His Top Social Media Stocks*, CNBC (May 20, 2019), <https://www.cnbc.com/2019/05/20/jim-cramer-reveals-his-top-social-media-stocks.html> (“As long as Facebook can maintain its user and engagement numbers, this stock will remain the undisputed king of social media.”) (quoting Jim Cramer, a famous equities analyst).

114. Gregory Day & Abbey Stemler, *Are Dark Patterns Anticompetitive?*, 72 ALA. L. REV. 1, 3 (2020).

the power of dopamine and neurological stimulation.¹¹⁵ So-called “brain hacking” techniques are not exclusive to social platforms, nor are they universal among them, but they are prevalent enough to be considered. Combined with extraordinary scale and data sensitivities, addictive designs add another layer of differentiation between general consumer contracting and social platform TOUs.¹¹⁶

3. *Bounded Choice*

Digital platforms mediate almost every aspect of modern human life. Across economic, political, and social spheres, platforms organize tremendous amounts of information and human interaction.¹¹⁷ The systemic importance attained by certain platforms has drawn comparisons to public utilities, “too-big-to-fail” financial institutions, essential infrastructure, and so on.¹¹⁸ Network effects and the inherent scalability of software have enabled remarkable concentrations in digital markets. Data advantages can also create feedback loops (for instance, data accumulation contributes to superior user experiences) for incumbent platforms that achieve scale early.¹¹⁹ As a result, the largest platforms are exceptionally large. Google, for instance, controls around 93% of the online search market.¹²⁰ As of 2021, Meta controlled three out of the five top social platforms.¹²¹

Individuals and organizations may find that establishing an account on a social platform is almost inevitable. Temporary outages shed light on the

115. See Griffin, *supra* note 78, at 6–14 (outlining manipulative features employed by prominent social platforms); Bjorn Lindstrom, Martin Bellander, David T. Schultner, Allen Chang, Philippe N. Tobler & David M. Amodio, *A Computational Reward Learning Account of Social Media Engagement*, 12 NATURE COMM. 1, 7 (2021) (finding that reward learning mechanisms drive human behavior on social platforms).

116. See Griffin, *supra* note 78, at 449 (“Understanding—and regulating—the addictive design at the core of so many Big Tech platforms is a necessary complement to work on Big Tech’s antitrust, privacy, and speech issues.”).

117. See, e.g., Anupam Chander, *Facebookistan*, 90 N.C. L. REV. 1807, 1809 (2012) (“Facebook increasingly records our lives, mediates our interactions, and serves as a platform for businesses, media, organizations, and even governments to engage the world.”).

118. See Packin, *supra* note 77 and accompanying text.

119. Though dramatic in scale, platform dominance is not necessarily stable, however. See, e.g., Catherine Tucker, *Network Effects and Market Power: What Have We Learned in the Last Decade?*, ANTI-TRUST (2018), <https://sites.bu.edu/tpri/files/2018/07/tucker-network-effects-antitrust2018.pdf> (discussing cases of unstable incumbency among digital platforms).

120. *Worldwide Desktop Market Share of Leading Search Engines from January 2010 to December 2021*, STATISTA (Jan. 26, 2022), <https://www.statista.com/statistics/216573/worldwide-market-share-of-search-engines> (citing Google’s 92.47% market share as of June 2021).

121. *Most Popular Social Networks Worldwide as of October 2021, Ranked by Number of Active Users*, STATISTA (Jan. 7, 2022), <https://www.statista.com/statistics/272014/global-social-networks-ranked-by-number-of-users>.

extent of dependency on dominant platforms.¹²² When the Meta platforms went down for just six hours in 2021, the consequences were serious, especially for vulnerable populations.¹²³ So elemental to social systems is this data, that a failure scenario at Facebook would have broad social and even cultural consequences.¹²⁴ Theories of rational behavior falter in these conditions. Because the top social platforms play such an essential role in everyday life, users are hardly facing a real choice when they click the “I agree” button.¹²⁵ Even with an activist and informed minority, opportunities to negotiate and select viable alternatives are lacking.

4. *Digital Governance*

Data is the most valuable resource in the world—dubbed the “new oil” of the digital era.¹²⁶ In the modern economy, the ownership and management of data is elemental to governance.¹²⁷ Given the scale and nature of digital platforms, TOUs play a significant role in digital governance, especially in jurisdictions that have weaker data and consumer protection laws. Platforms now play outsized roles in shaping privacy and speech rights at the global scale.¹²⁸ TOUs, in turn, are central in defining the relationship between technology and society.¹²⁹ In creating governance frameworks for the users of

122. Raymond Zhong & Adam Satariano, *Facebook’s Apps Went Down. The World Saw How Much It Runs on Them.*, N.Y. TIMES (Oct. 8, 2021) <https://www.nytimes.com/2021/10/05/technology/facebook-down-ig-down-whatsapp-down.html>.

123. See, e.g., Avi Asher-Schapiro & Fabio Teixeira, *Facebook Down: What the Outage Meant for The Developing World*, THOMSON REUTERS FOUND. (Oct. 5, 2021), <https://news.trust.org/item/20211005204816-qzjft>.

124. See Öhman & Aggarwal, *supra* note 77, at 5–10 (exploring consequences of failure for a variety of stakeholders).

125. AN INTRODUCTION TO ONLINE PLATFORMS AND THEIR ROLE IN THE DIGITAL TRANSFORMATION, ORG. FOR ECON. COOP. AND DEV. 13 (2019).

126. Setting aside the precision of that metaphor, it does—at the very least—reflect the vast importance of data. *The World’s Most Valuable Resource Is No Longer Oil, but Data*, ECONOMIST (May 6, 2017), <https://www.economist.com/leaders/2017/05/06/the-worlds-most-valuable-resource-is-no-longer-oil-but-data>.

127. See, e.g., Jennifer Daskal, *Borders and Bits*, 71 VAND. L. REV. 179, 182 (2018) (“The multinational companies that manage our data have taken on a form of international governance in ways that traditional governments can’t and won’t.”).

128. See Jones & Samples, *supra* note 77, at 163–80 (outlining quasi-governmental roles of digital platforms); see also Kate Klonick, *The New Governors: The People, Rules, and Processes Governing Online Speech*, 131 HARV. L. REV. 1598, 1601 (noting the “essential nature” of platforms to “modern free speech and democratic culture”).

129. See Kim & Telman, *supra* note 4, at 754.

digital platforms, TOUs shape basic human rights such as privacy, personal security, and political participation.¹³⁰

TOUs play a critical role in defining the relationship between technology and society. TOUs shape public discourse online by limiting some types of speech and promoting others.¹³¹ They justify the removal of elected officials from the largest digital ecosystems on the planet.¹³² Later, when a suspended or banned user—say, the former President of the United States—files a lawsuit over his removal from X (formerly Twitter), a judge looks to the platform’s TOU to decide on a motion to transfer.¹³³ After that transfer, a California court then consults the TOU when assessing the former President’s claims.¹³⁴

Likewise, systemically important platforms wield the power to discipline other platforms, taking on quasi-regulatory functions.¹³⁵ Following the January 6 riots at the U.S. Capitol, Amazon, Apple, and Google removed Parler from their platforms for violating their terms of service.¹³⁶ Those actions are also executed under the banner of TOUs. Social issues and access to justice are shaped by TOUs as well. Whether policing impersonation claims or antisemitic content, the TOUs and policies of social platforms are determinative.¹³⁷ When a Virginia man sued Airbnb on the grounds of racial discrimination, for

130. See Dafna Dror-Shpoliansky & Yuval Shany, *It’s the End of the (Offline) World as We Know it: From Human Rights to Digital Human Rights – A Proposed Typology*, 32 EUR. J. INT’L L. 1249, 1250 (2021) (highlighting concerns about online infringement of the “basic human rights of online users, such as privacy, personal security and participation on equal terms in political life”).

131. See, e.g., Lata Nott & Brian Peters, *Free Expression on Social Media*, FREEDOM FORUM, <https://www.freedomforum.org/free-speech-on-social-media/> (last visited Mar. 10, 2024) (detailing how social media platforms moderate user content).

132. See, e.g., *YouTube Says it Pulled Bolsonaro Videos for COVID-19 Misinformation*, REUTERS (July 21, 2021) (reporting on platform decisions to remove content of President Bolsonaro “for breaching their terms of use”).

133. *Trump v. Twitter, Inc.*, No. 21-22441-CIV, 2021 WL 8202673 (S.D. Fla. Oct. 26, 2021) (granting Twitter’s motion to transfer an action by enforcing the TOU’s forum selection clause).

134. *Trump v. Twitter Inc.*, 602 F. Supp. 3d 1213, 1227 (N.D. Cal. 2022) (noting that the TOU “gave Twitter contractual permission to act as it saw fit with respect to any account or content for any or no reason.”).

135. See Ian Bremmer, *The Technopolar Moment*, 100 FOREIGN AFFS. 112, 113 (2021) (observing that the most important platforms “have taken control of aspects of society, the economy, and national security that were long the exclusive preserve of the state”).

136. Alex Fitzpatrick, *Why Amazon’s Move to Drop Parler Is a Big Deal for the Future of the Internet*, TIME (Jan. 21, 2021), <https://time.com/5929888/amazon-parler-aws>.

137. See, e.g., Christy Piña, *Kanye West Tweet Taken Down for Violating Twitter Rules*, BILLBOARD (Oct. 9, 2022), <https://www.billboard.com/music/music-news/twitter-takes-down-kanye-west-tweet-1235153071>.

instance, his claims were dismissed in court due to an arbitration agreement buried in a TOU longer than *Macbeth*.¹³⁸

III. DATA AND METHODOLOGY

Corpus linguistics offers a powerful set of methodologies for analyzing text and language.¹³⁹ But the emergence of corpus linguistics in legal scholarship and judicial interpretation is as controversial as it is promising.¹⁴⁰ The primary focus, at least recently, of legal corpus linguistics is trained on divining the ordinary meaning of certain words, often with the aim of guiding judicial interpretation.¹⁴¹ We apply an entirely different set of corpus linguistics methods to an entirely different set of research questions and data. Specifically, we assess linguistic complexity, and key tendencies of social platform TOUs. This Part begins by outlining the characteristics of our dataset and our data collection process. Next, we explain our methodology. Finally, we discuss and illustrate the findings of our analysis.

A. DATA: CHARACTERISTICS AND COLLECTION

Almost all digital platforms feature a TOU that functions as the primary user agreement. In addition, any number of supplementary terms may be incorporated into the TOU, usually via hyperlinked references.¹⁴² Our dataset includes the primary user terms of seventy-five platforms: TOUs, privacy

138. The trial court recognized the fundamental asymmetry of the situation. *See Selden v. Airbnb, Inc.*, No. 16-CV-00933, 2016 WL 6476934 (D.D.C. 2016), *aff'd*, 4 F.4th 148 (D.C. Cir. 2021) (“While that result might seem inequitable to some, this Court is not the proper forum for policy objections to mandatory arbitration clauses in online adhesion contracts. Such objections should be taken up with the appropriate regulators or with Congress.”); *see also infra* Section IV.D. (addressing the role of length in the reading difficulties of TOUs).

139. Bernstein, *supra* note 16, at 1454 (“Corpus linguistics is a powerful methodology for analyzing the realities of language practice.”).

140. Corpus linguistics has surfaced in Supreme Court opinions, amicus briefs, and numerous scholarly works. *See supra* note 21 and accompanying text. Text analysis has also been used to detect bias in language, for instance, in letters of recommendation. *See* Charlotte S. Alexander, *Text Mining for Bias: A Recommendation Letter Experiment*, 59 AM. BUS. L.J. 1, 12–13 n.17 (2022) (describing language analysis and the corpus of recommendation letters).

141. *See* Bernstein, *supra* note 16, at 1401 (describing the aims of legal corpus linguistics); *see also* Jennifer L. Mascott, *Who Are “Officers of the United States”?*, 70 STAN. L. REV. 443 (2018) (using corpus linguistics to determine original public meaning of the word “officer”); Lawrence M. Solan & Tammy Gales, *Corpus Linguistics as a Tool in Legal Interpretation*, 2017 B.Y.U. L. REV. 1311, 1312 (2017) (exploring “conditions in which [corpus linguistics] can be optimally employed by judges and others tasked with construing authoritative legal documents”).

142. *See, e.g., Terms of Service, DISCORD*, <https://discord.com/terms> (last updated Feb. 24, 2023) (“We also have a Privacy Policy, Community Guidelines, and other policies that apply to your use of our services and are incorporated into these terms.”) [hyperlinks omitted].

policies, and community guidelines.¹⁴³ We focused our data collection on those three categories of user terms because they are (1) widely used across social platforms and (2) critical in defining the user's relationship to the platform.¹⁴⁴ Our dataset contains 195 separate texts with roughly 944,459 total words: seventy-five TOUs (504,025 total words), seventy-three privacy policies (325,793 total words), and forty-seven community guidelines (114,641 total words). In addition to those agreements and policies, we collect metadata on the platforms themselves (e.g., category, domicile) and key aspects of their TOUs (e.g., word count, governing law, dispute resolution, modification).¹⁴⁵

Our data collection proceeded as follows. First, we refined the scope. We selected platforms with three key characteristics: *significant social components*, *mobile apps*, and *TOUs available in English*. For many apps, the question of significant social components is straightforward, as they are primarily (or almost exclusively) social networking platforms. However, there is no official registry of social platforms.¹⁴⁶ Indeed, a precise definition of “social platform” is rather difficult to pin down.¹⁴⁷ With the aim of building a diverse and deep dataset, we took an inclusive approach to selecting platforms.¹⁴⁸ As for the second criterion, we selected platforms that offer mobile apps because of their

143. There is more variation in the titles of policies that govern behavior on the platform. We included various forms of content, community, and acceptable behavior policies under the “community guidelines” umbrella.

144. For some apps there are even more agreements that govern the consumer-app relationship such as policies about virtual items (TikTok), cookies (Tinder), music guidelines (Snapchat), profiling (OkCupid), safety (Hoop), and so on. While these, arguably, are also relevant to defining the user-platform relationship, they are less consistently used and thus more difficult to systematically organize and assess. We count supplementary terms only when they are distinct and separate from the main TOU text. Occasionally, a privacy policy may be embedded within a TOU.

145. For a detailed description of the metadata, see *infra* Section IV.D.

146. See Chand Rajendra-Nicolucci & Ethan Zuckerman, *Top 100: The Most Popular Social Media Platforms and What They Can Teach Us*, KNIGHT FIRST AMEND. INST. (Jan. 22, 2021), <https://knightcolumbia.org/blog/top-100-the-most-popular-social-media-platforms-and-what-they-can-teach-us> (“There’s no official ‘registry’ of website traffic that serves as a ‘league table’ for social media.”).

147. A variety of definitions have been proposed. See, e.g., danah m. boyd & Nicole B. Ellison, *Social Network Sites: Definition, History, and Scholarship*, 13 J. COMPUT.-MEDIATED COMM. 210, 211 (2008) (articulating an early definition of “social network”). Making matters more convoluted, many websites and applications have social features that are secondary or supplementary to the primary service, such as Venmo.

148. We included dating applications and some prominent fintech applications with social features, for instance. See *infra* notes 153–155 (describing the selection inputs). Whether or not dating platforms “count” as social platforms is the subject of debate. Compare Rajendra-Nicolucci & Zuckerman, *supra* note 146 (discussing the question of whether or not dating apps are social platforms) with *supra* Section II.B (comparing and contrasting business models of dating apps with other social platforms).

enhanced data collection capacities.¹⁴⁹ Finally, we limited our selection to platforms with TOUs available in English because some of our methods are designed specifically for the English language.¹⁵⁰

Second, we built the dataset. We began by adding market-leading platforms—those with the most downloads, largest reported user bases, and highest in popularity.¹⁵¹ Selecting platforms with the most downloads or largest active user bases is usually straightforward, but data is limited outside of the top apps. Data on active users is contested even on the most visible of publicly traded platforms.¹⁵² In addition to rankings by downloads and active users, we considered the social media mapping project by the Knight First Amendment Institute at Columbia University, which indexes “popularity” among social platforms.¹⁵³ We included the top thirty platforms from the Knight popularity list. Using multiple inputs to build a list of prominent social apps generated a more comprehensive, diverse dataset.

We further diversified the dataset with additional categories: the top dating apps, prominent “alt-tech” social networking platforms,¹⁵⁴ and two fintech platforms with meaningful social components.¹⁵⁵ Some definitions of social media exclude dating apps.¹⁵⁶ However, consistent with Michael Rustad and

149. Mobile applications have greater data gathering capabilities—and, thus, greater implications for consumer rights and privacy—than purely web-based platforms. *See supra* notes 89–95. Thus, we excluded 4chan, which does not offer a proprietary mobile application.

150. This criterion, unfortunately, precluded some interesting platforms from the dataset such as Douyin (similar to TikTok but available in China) and Taringa! (a social platform based in Argentina).

151. *See, e.g., Most Popular Social Networks Worldwide as of January 2022, Ranked by Number of Monthly Active Users*, STATISTA (June 21, 2022), <https://www.statista.com/statistics/272014/global-social-networks-ranked-by-number-of-users> (ranking seventeen social platforms by monthly active users); *Leading Social Media Apps Worldwide in 2021, By Downloads*, STATISTA (Jan. 27, 2022), <https://www.statista.com/statistics/1284900/top-social-media-apps-worldwide-by-downloads> (ranking ten social platforms by downloads).

152. *See Sarah E. Needleman, Behind Fake-Account Issue That Elon Musk Cited in Calling Twitter Deal ‘On Hold’*, WALL ST. J. (May 15, 2022), <https://www.wsj.com/articles/behind-fake-account-issue-that-elon-musk-cited-in-pausing-twitter-deal-11652612403> (pointing out that “[s]pam and fake accounts are an industrywide challenge.”).

153. *See Rajendra-Nicolucci & Zuckerman, supra* note 146.

154. Although alt-tech platforms have relatively smaller user bases than incumbent social networking platforms, we favor including them to diversify the dataset. *See Ethan Zuckerman & Chand Rajendra-Nicolucci, Deplatforming Our Way to the Alt-Tech Ecosystem*, KNIGHT FIRST AMEND. INST. (Jan. 11, 2021), <https://knightcolumbia.org/blog/deplatforming-our-way-to-the-alt-tech-ecosystem> (explaining the alt-tech ecosystem).

155. In the fintech category, we selected Venmo and Public but not PayPal or Robinhood because the former have more prominent social functions in their interfaces.

156. *See Rajendra-Nicolucci & Zuckerman, supra* note 146 (“Dating sites were more difficult, but in the end, we decided that they were more akin to platforms like Uber which

Thomas Koenig, we favor including the dating category for this study.¹⁵⁷ Dating apps manifest key functions and characteristics of social platforms that make them especially sensitive for consumers and public interests.¹⁵⁸ Thus, we included several of the most popular dating apps in the United States and worldwide.¹⁵⁹ Once we selected the seventy-five platforms, we manually scraped the text of their TOUs and supplementary terms.¹⁶⁰

We also collected metadata on key terms and characteristics of the platforms and their terms.¹⁶¹ Our metadata analysis includes several variables: app domicile, word counts, user base, governing law, dispute resolution (arbitration or litigation, arbitration opt-outs, and class waivers), and app category. *App domicile* indicates the home country or headquarters of the platform. *Word count* refers, simply, to the number of words in a TOU or the supplementary terms. *User base* is the number of active users on a platform. *Governing law* is the applicable law, as specified in the TOU. *Dispute resolution* variables include *arbitration* or *litigation*, plus additional binary (yes/no) inputs for TOUs with arbitration: *opt-outs* and *class waivers*. *App category* refers to the market category of the platform.¹⁶²

B. METHODOLOGY: METRICS AND COMPUTATION

Readability is frequently defined as the ease with which a text can be read and understood in terms of its linguistic features.¹⁶³ Text length, syntactic structures, lexical features, text cohesion, paragraph size, sentence length,

operate two-sided marketplaces—i.e., Tinder is a matchmaking platform with social features.”).

157. Like this Article, Rustad and Koenig study a dataset of social platform TOUs. *See* Rustad & Koenig, *supra* note 4, at 1442–43.

158. *See supra* notes 101–103, 107–108 and accompanying text.

159. *See Most Popular Dating Apps in the United States in July 2023, By Number of Monthly Downloads*, STATISTA (Aug. 8, 2023), <https://www.statista.com/statistics/1238390/most-popular-dating-apps-us-by-number-of-downloads>.

160. To prepare the dataset for analysis with R, a series of computational algorithms and manual formatting was employed for data preparation and formatting utilizing XML tagging, the Unix command line, and R packages dplyr and the tidyverse. *See generally* HADLEY WICKHAM & GARRETT GROLEMUND, *R FOR DATA SCIENCE: IMPORT, TIDY, TRANSFORM, VISUALIZE, AND MODEL DATA* (1st ed. 2017).

161. For the results of our metadata analysis, see *infra* Section IV.D.

162. We use an adapted version of the approach to categorizing social platforms developed by the Knight First Amendment Institute. *See* Rajendra-Nicolucci & Zuckerman, *supra* note 146.

163. *See, e.g.*, Scott Crossley, Stephen Skalicky & Mihai Dascalu, *Moving Beyond Classic Readability Formulas: New Methods and New Models*, 42 J. RSCH. IN READING 541, 543 (2019) (“Text readability is best defined as the ease with which a text can be read and understood in terms of the linguistic features found within a text.”).

syllable structures, and word type all factor into linguistic difficulty.¹⁶⁴ Recognizing the multivariate reality of reading difficulty, our analysis employs diverse points of measurement. We supplement traditional readability tests with measures of linguistic complexity that consider lexical and syntactic structures. All together, we apply five metrics to the dataset: two traditional readability formulas, an index that measures the syntactic complexity of verb structures, a composite score of syntactic complexity that weighs nineteen separate nominal structures, and a lexical diversity test.

1. *Traditional Metrics*

Our calculations include two traditional readability metrics, the Flesch Reading Ease (FRE) test¹⁶⁵ and the Flesch-Kincaid (F-K) test.¹⁶⁶ FRE was developed by Rudolph Flesch in the 1940s.¹⁶⁷ Decades later, the F-K test, designed by Flesch and John P. Kincaid, was tested on U.S. Navy technical personnel.¹⁶⁸ FRE results range on a scale of zero to one hundred. The higher the FRE score, the more readable the text is supposed to be. Although the inputs are the same, the coefficients of the F-K¹⁶⁹ test differ from the FRE¹⁷⁰ formula, producing results on a scale that indicates the grade level(s) required for reading ease and understanding. Thus, the lower the F-K score, the more readable the text is supposed to be. F-K is a reformulation of FRE—not a fundamentally different test.¹⁷¹

Generally, readability formulas are based on the length of sentences and words within a text.¹⁷² *Words per sentence* functions as a proxy for syntactic

164. *See id.* at 542–43 (noting a variety of factors that contribute to linguistic difficulty); Edward G. Fichtner, *Measuring Syntactic Complexity: The Quantification of One Factor in Linguistic Difficulty*, 13 DIE UNTERRICHTSPRAXIS (TEACHING GERMAN) 67, 67–70 (1980) (same).

165. *See* Rudolph Flesch, *A New Readability Yardstick*, 32 J. APPLIED PSYCH. 221 (1948).

166. *See* J. PETER KINCAID, ROBERT P. FISHBURNE JR., RICHARD L. ROGERS & BRAD S. CHISSOM, DERIVATION OF NEW READABILITY FORMULAS (AUTOMATED READABILITY INDEX, FOG COUNT AND FLESCH READING EASE FORMULA) FOR NAVY ENLISTED PERSONNEL, INST. FOR SIMULATION & TRAINING (1975).

167. *See* Rustad & Koenig, *supra* note 4, at 1459 n.150 (referencing the origins of the FRE test).

168. *See* Kincaid et al., *supra* note 166.

169. The F-K formula is computed as $(0.39 \times \text{ASL}) + (11.8 \times \text{ASW}) - 15.59$. ASL represents average sentence length while ASW represents average number of syllables per word.

170. The FRE formula is computed as $06.835 - (1.015 \times \text{ASL}) - (84.6 \times \text{ASW})$.

171. Ian Gallacher, “*When Numbers Get Serious*”: *A Study of Plain English Usage in Briefs Filed Before the New York Court of Appeals*, 46 SUFFOLK U. L. REV. 451, 460 (2013) (“The [F-K] test is a reformulation of the [FRE] Score test that expresses its result in terms of the grade level a hypothetical reader should have achieved before the selected passage would be readable.”).

172. Rustad & Koenig, *supra* note 4, at 1458–61 (same); Crossley et al., *supra* note 163, at 542 (“Generally, these formulas rely on superficial text-based features to assess readability

complexity; *syllables per word* acts as a proxy for lexical difficulty.¹⁷³ Limitations aside, traditional formulas have some advantages: they are readily available, simple to use, and easily scalable. Even common Microsoft products like Word and Outlook can execute FRE and F-K tests. Such advantages might help explain why FRE and F-K remain widely used, including by educational institutions and military agencies.¹⁷⁴ A further advantage is specific to this Article: using traditional formulas in our analysis allows us to compare our results with previous TOU studies.¹⁷⁵

That said, traditional readability formulas face major criticisms. Despite their billing as “readability” tests, traditional formulas—such as FRE, F-K, and several others—are limited by their narrow scope of inputs.¹⁷⁶ At best, they are simplistic and outdated. At worst, they lack construct validity¹⁷⁷ and perform poorly at their purported function of predicting readability.¹⁷⁸ Linguists have largely abandoned the traditional readability formulas, relying instead on more advanced metrics for evaluating the difficulty of a text. For the purposes of our study, we view traditional formulas as helpful points of reference—particularly in concert with more robust linguistic metrics—but inadequate as a standalone methodology. Accordingly, our analysis also includes syntactic complexity and lexical diversity.

including the number of words per sentence, which is meant to act as a proxy for syntactic complexity, and the number of characters per word, which is meant to act as a proxy for lexical difficulty.”).

173. Crossley et al., *supra* note 163, at 542.

174. See Kathy Conklin, Richard Hyde & Fabio Parente, *Assessing Plain and Intelligible Language in the Consumer Rights Act: A Role for Reading Scores?*, 39 LEGAL STUDIES 378, 385–87 (2019) (outlining examples); see also S.C. Code Ann. § 37-4-105(B) (2015) (requiring certain consumer-oriented insurance disclosures to score “no higher than seventh grade on the Flesch-Kincaid readability test”).

175. See *infra* Table 1 (comparing FRE and F-K scores from our corpus with previous studies).

176. That limitation also applies to other classic readability formulas such as FOG and SMOG. See Conklin et al., *supra* note 174, at 385–87 (reviewing prominent readability formulas).

177. Scott A. Crossley, Stephen Skalicky, Mihai Dascalu, Danielle S. McNamara & Kristopher Kyle, *Predicting Text Comprehension, Processing, and Familiarity in Adult Readers: New Approaches to Readability Formulas*, 54 DISCOURSE PROCESSES 340, 342 (2017) (“[Traditional readability] formulas are generally not based on theories of reading or comprehension but rather rely on statistical correlations to develop predictive power.”).

178. See Crossley et al., *supra* note 163, at 557 (finding that more advanced methods outperformed traditional readability formulas); see also Scott P. Ardoin, Shannon M. Suldo, Joseph Witt, Seth Aldrich & Erin McDonald, *Accuracy of Readability Estimates’ Predictions of CBM Performance*, 20 SCHOOL PSYCH. Q. 1, 15 (2005) (finding low accuracy among readability formulas).

2. *Syntactic Complexity*

Syntax is another distinctive internal linguistic factor at play in text readability.¹⁷⁹ Syntax refers to the ways that words may be combined to create meaningful units of language. The grammatical categories and linguistic patterns involved in a phrase or sentence, including verbs and nominals, form syntactic structures. Thus, *syntactic complexity* reflects the range and complexity of language forms in a given text.¹⁸⁰ Compound sentences, embedded structures, and modifying clauses, for instance, make sentences more syntactically complex. The simple sentence (“Tracking helps us.”) becomes more syntactically complex by adding further grammatical elements. For example, the sentence (“Among other things, tracking helps us.”) is more syntactically complex with a prepositional modifying phrase (“among other things”).

Linguists often measure syntactic complexity with specific or composite scores that quantify structures and categories of syntax.¹⁸¹ Linguistic studies have considered syntactic complexity in diverse settings, from legal texts to spoken language.¹⁸² To assess syntactic complexity in our dataset, we rely on two analytical tools: Fichtner’s C index¹⁸³ and the Tool for the Automated Analysis of Syntactic Sophistication and Complexity (TAASSC).¹⁸⁴ Whereas the C index measures the complexity of verb structures, we use TAASSC to quantify the complexity of nominal structures.¹⁸⁵ Thus, the results we generate with Fichtner’s C and TAASSC are complementary. Capturing the syntactic

179. See John Brennan, Yuval Nir, Uri Hasson, Rafael Malach, David J. Heeger & Liina Pylikkanen, *Syntactic Structure Building in the Anterior Temporal Lobe During Natural Story Listening*, 120 BRAIN & LANGUAGE 163 (2012); see also Miloš Stanojević, Shohini Bhattasali, Donald Dunagan, Luca Campanelli, Mark Steedman, Jonathan R. Brennan & John Hale, *Modeling Incremental Language Comprehension in the Brain with Combinatory Categorical Grammar*, PROC. OF THE WORKSHOP ON COGNITIVE MODELING & COMPUTATIONAL LINGUISTICS 23 (2021).

180. See Larsson & Kaatari, *supra* note 23, at 1.

181. See, e.g., Eugène Mollet, Alison Wray, Tess Fitzpatrick, Naomi R. Wray & Margaret J. Wright, *Choosing the Best Tools for Comparative Analyses of Texts*, 15 INT’L J. CORPUS LINGUISTICS 429, 443–47 (2010) (discussing linguistic metrics that measure grammatical sophistication).

182. See, e.g., Tatian Tkacukova, *Forensic Linguistics and Language and the Law*, in AN INTRODUCTION TO APPLIED LINGUISTICS (2019); see also Zamanian & Heydari, *supra* note 23.

183. See generally Fichtner, *supra* note 164.

184. See Kristopher Kyle, *Measuring Syntactic Development in L2 Writing: Fine Grained Indices of Syntactic Complexity and Usage-Based Indices of Syntactic Sophistication* (May 9, 2016) (Ph.D. dissertation, Georgia State University), <https://doi.org/10.57709/8501051>.

185. Nominal groups, generally, are grammatical units that can be used as nouns. The noun phrase (“our users”) includes the possessive dependent (“our”) with the main noun (“users”). This noun phrase can be made more complex by adding an adjectival modifier (“diverse”) as in (“our diverse users”).

complexity of both verb and nominal structures enhances the diversity and scope of our results.

a) Fichtner's C Index: Verb Structures.

Verbs are an important indicator of syntactic complexity. Fichtner's C index approaches syntactic complexity by measuring the density of verb structures: the number of verbs per sentence scaled by average sentence length.¹⁸⁶ Put another way, Fichtner's C is calculated as "the number of word tokens times the number of lexical verb tokens, divided by the square of the number of sentences."¹⁸⁷ Thus, the formula is operationalized across a sample text as a proportion of verbs per sentence relative to the number of words per sentence. That operation allows for accurate comparisons across texts of varying lengths.

A key insight of Fichtner's theory: the syntactic complexity of a text is driven by the density of lexical verbs within sentences. In other words, Fichtner saw syntactic complexity as a function of the number of lexical verbs per sentence in relation to the length of those sentences.¹⁸⁸ That insight is simple but effective. In a comprehensive study of 381 metrics derived from approximately 200 analytical tools for comparative linguistic analysis, Fichtner's C index was found highly effective.¹⁸⁹ In fact, the Fichtner's C index was identified as the "most promising" of all the tools studied for evaluating linguistic complexity.¹⁹⁰

Although Fichtner's C requires a minimum word count for reliable score output, the following short sentences help to illustrate differences in the syntactic complexity of verb structures.¹⁹¹ The simple sentence ("The cat sleeps") would contribute to a lower overall Fichtner's C score. By comparison, the sentence ("The cat sleeps and eats and chases birds all day") would register a higher overall score.

Complex, technical sentences with elaborate verb structures score highest in Fichtner's C index. Our results indicate that such sentences are relatively

186. See Fichtner, *supra* note 164, at 71.

187. Mollet et al., *supra* note 181, at 445.

188. *Id.*

189. *Id.*

190. *Id.* (characterizing Fichtner's C as "most promising, on the basis of its relative simplicity, its mathematical robustness, and its correlation with other measures").

191. A sample should contain at least 500 words for measurement with this index. See Fichtner, *supra* note 164, at 71.

common in TOUs.¹⁹² For instance, the indemnification clause from Twitch’s TOU registers an exceptionally high complexity score:¹⁹³

To the fullest extent permitted by applicable law, you agree to indemnify, defend, and hold harmless Twitch, its affiliated companies, and each of our respective contractors, employees, officers, directors, agents, third-party suppliers, licensors, and partners (individually and collectively, the “Twitch Parties”) from any claims, losses, damages, demands, expenses, costs, and liabilities, including legal fees and expenses, arising out of or related to your access, use, or misuse of the Twitch Services, any User Content you post, store, or otherwise transmit in or through the Twitch Services, your violation of the rights of any third party, any violation by you of these Terms of Service, or any breach of the representations, warranties, and covenants made by you herein.

This indemnification clause is a characteristic example of the grammatical complexity and linguistic patterns within TOUs. It combines length and lexical difficulty with elevated syntactic complexity.

b) TAASSC: Nominal Structures.

We use TAASSC to measure the complexity of nominal structures. TAASSC works by counting and tagging different syntactic structures and their averages across texts of interest.¹⁹⁴ Crucially, rather than scores based on the number of words, TAASSC uses grammatical relations to calculate syntactic complexity.¹⁹⁵ Namely, TAASSC counts the number of dependents per governing phrase type. Take, for instance, a sentence (“You retain your rights to your content.”) that includes two dependent nominal phrases of the governing verb *retain*. The dependents of the verb are the nominal subject, (“You”) and the direct object (“rights”). These nominal phrases include the following dependents: the possessive adjective “your” (which occurs twice) and one prepositional phrase. The average number of adjectival dependents per nominal is 1.0 (two divided by two). By making computations based on grammatical relations, TAASSC avoids over-indexing for structures that have higher average word counts (for instance, prepositional phrases versus adjectival modifiers).

192. See *infra* Section IV.B (comparing Fichtner’s C results between our dataset and other genres of English).

193. *Terms of Service*, TWITCH, <https://www.twitch.tv/p/en/legal/terms-of-service> (last updated Oct. 27, 2023).

194. TAASSC uses python to parse texts and collect the averages for over 30 different types of clause and phrase structures. TAASSC outputs variables of syntactic, clause, and phrase complexity. We use TAASSC version 1.3.8 and python version 2.7.

195. See Kyle, *supra* note 184, at 54–55.

Embedding is another key phenomenon associated with text complexity.¹⁹⁶ Embedding refers to the insertion of grammatical units into additional units.¹⁹⁷ Examples of insertion include the placement of phrases, dependents, or other clause types within sentences, clauses, or phrases. Embedding and complex noun phrase structures are key characteristics of academic writing, for instance.¹⁹⁸ Previous research has also found greater use of these patterns in the writing of more fluent English language learners—an indication of higher writing sophistication.¹⁹⁹ Embedding in syntactic structures is also associated with greater difficulty in terms of cognitive processing and reading ease.²⁰⁰

TAASSC examines four main categories of syntactic sophistication and complexity, with over thirty indices of clausal and phrasal complexity.²⁰¹ We focus our analysis on the results of noun phrase (NP) elaboration, the composite score of all nineteen TAASSC noun phrase types and embedding indices. Specifically, NP elaboration measures grammatically embedded elements, including the number of dependents per noun phrase type, determiners, adjectives, prepositions, and verbal modifiers of nominals.²⁰² Averages for each type and dependents per type are calculated with TAASSC and then combined for the NP elaboration results.²⁰³ Annex 1 provides further illustration of inputs in the NP elaboration score.

196. See María Belén Díez-Bedmar & Pascual Pérez-Paredes, *Noun Phrase Complexity in Young Spanish EFL Learners' Writing: Complementing Syntactic Complexity Indices with Corpus-Driven Analyses*, 25 INT'L J. OF CORPUS LINGUISTICS 4, 8 (2020).

197. See, e.g., LISE FONTAINE, *ANALYSING ENGLISH GRAMMAR: A SYSTEMIC-FUNCTIONAL INTRODUCTION* 23 (2012) (explaining how embedding can increase complexity and providing examples).

198. See Douglas Biber & Bethany Gray, *Grammatical Change in the Noun Phrase: The Influence of Written Language Use*, ENGLISH LANGUAGE & LINGUISTICS 223, 223 (2011) (noting that academic writing styles rely “heavily on nominal structures, with extensive phrasal modification and a relative absence of verbs”); see also Kyle, *supra* note 184, at 16.

199. See Kyle, *supra* note 184, at 34; Larsson & Kaatari, *supra* note 23, at 5.

200. See Martínez et al., *supra* note 23, at 2, 6; Arthur C. Graesser, Danielle S. McNamara, Zhiqiang Cai, Mark Conley, Haiying Li & James Pennebaker, *Cob-Matrix Measures Text Characteristics at Multiple Levels of Language and Discourse*, 115 ELEMENTARY SCHOOL J. 210, 213 (2014); Haeran Jae, *Cognitive Load and Syntactic Complexity of Printed Advertisements: Effects on Consumers' Attitudes*, 21 MARKETING MGMT. J. 152, 153, 157–08 (2011).

201. See Kyle, *supra* note 184, at 51–56.

202. See Díez-Bedmar & Pérez-Paredes, *supra* note 196, at 9; Kyle *supra* note 184, at 71–72.

203. Noun phrase types include passive nominal subjects like (“your account”) in the sentence, “Your account was terminated.” Another passive example is the nominal complement (“her notice”) in the sentence, “The individual was given her notice.” In addition to averages of noun phrase types, NP elaboration measures the number of dependents per type. A higher number of dependents yields increased NP complexity.

Complex nominal structures contribute to higher NP elaboration scores. Previous research using TAASSC has focused predominately on language learners and educational contexts.²⁰⁴ Those studies indicate that English learners incorporate greater NP complexity in their writing as they increase their language proficiency.²⁰⁵ In other words, NP complexity and writing sophistication are closely associated. Our results indicate that complex syntactic structures are especially prevalent in TOUs.²⁰⁶ For instance, this sentence from a “user-generated content” clause in TikTok’s TOU would contribute to a higher NP elaboration score:²⁰⁷

If you only own the rights in and to a sound recording, but not to the underlying musical works embodied in such sound recordings, then you must not post such sound recordings to the Services unless you have all permissions, clearances from, or are authorized by, the owner of any part of the content to submit it to the Services.

3. *Lexical Diversity*

Lexical diversity metrics are another way to consider the complexity of a text. Previous studies have considered lexical richness in the legal context, including advocacy in favor of plain English and less technical jargon in legal texts.²⁰⁸ Metrics for evaluating lexical diversity are computed based on the type-token ratio: the total number of different words (i.e., types) divided by the total number of words (i.e., tokens) in the dataset.²⁰⁹ More traditional measures of lexical diversity rely on a simple calculation of vocabulary size divided by total number of words. The problem with the traditional type-token approach is that the results are affected by the length of a text.²¹⁰ Shorter texts, for instance, may have artificially high type-token ratios because the denominator is small.

204. See generally Díez-Bedmar & Pérez-Paredes, *supra* note 196; Kristopher Kyle & Scott A. Crossley, *Measuring Syntactic Complexity in L2 Writing Using Fine-Grained Clausal and Phrasal Indices*, 102 MODERN LANG J. 333 (2018).

205. See, e.g., Díez-Bedmar & Pérez-Paredes, *supra* note 196, at 5, 26.

206. See *infra* Section IV.B (comparing TAASSC results between our dataset and other genres of English).

207. *Terms of Service*, TIKTOK, <https://www.tiktok.com/legal/terms-of-service-us> (last updated Nov. 2023).

208. See generally Anna Sobota, *The Plain Language Movement and Modern Legal Drafting*, 20 COMP. LINGUISTICS 50 (2014); TERESA FANEGO & PAULA RODRÍGUEZ-PUENTE, CORPUS BASED RESEARCH ON VARIATION IN ENGLISH LEGAL DISCOURSE (2019).

209. See VACLAV BREZINA, STATISTICS IN CORPUS LINGUISTICS 57 (2018).

210. See Covington & McFall, *supra* note 23, at 94 (“The problem is that the TTR of a text sample is affected by its length; obviously, the longer the text goes on, the more likely it is that the next word will be one that has already occurred.”).

We use the Moving Average Type-Token Ratio (MATTR) score to measure lexical diversity.²¹¹ Linguists have proposed variations on the type-token ratio, such as MATTR, to accommodate for the effects of dataset size and text length. MATTR mitigates the text length problem by calculating the ratios on a moving average window across the full length of the text sample, which normalizes the results.²¹² As a result, MATTR measures lexical diversity but avoids the effects of text length and statistical assumptions.²¹³ We utilize the R package *quanteda* to compute the MATTR results across different subsections of the dataset. MATTR is a useful way to evaluate lexical aspects of text complexity because it calculates vocabulary richness across all possible subsets of the data.

4. *Comparative Analysis*

Another point of differentiation in our methodology is that we perform comparative analysis across diverse genres of English. Our comparative analysis underscores the characteristics of app-based consumer contracts by establishing external reference points. Specifically, we compare the results from our dataset with other corpora that represent genres of English: a broad and multi-genre collection of modern American English (the Brown Corpus) and a canon of iconic English literature (the Jane Austen Corpus). These comparisons add context and texture to our results.

Nelson Francis and Henry Kučera compiled the Brown University Standard Corpus of Present-Day American English, commonly referred to as the Brown Corpus.²¹⁴ The Brown Corpus is the first computerized collection of American English and remains a widely used dataset. It consists of just over 1 million words of carefully sampled texts from fifteen different genres of American English from the 1960s.²¹⁵ The corpus contains a wide range of style and prose. Fiction and news media were included in the corpus, but forms like verse and drama were excluded because they present problems for consistent linguistic analysis.²¹⁶ The stated aim for selection was representativeness—as

211. *Id.*

212. MATTR utilizes an overlapping window throughout the data to compute the type-token ratio across each window; the results are then averaged to for each window calculation. *Id.* at 96.

213. *Id.* (“The mean of all these TTRs is a measure of the lexical diversity of the entire text and is not affected by text length nor by any statistical assumptions.”).

214. W. Nelson Francis & Henry Kučera, *Brown Corpus Manual*, <http://icame.uib.no/brown/bcm.html> (1979).

215. The Brown Corpus consists of 500 texts, each consisting of just over 2,000 words. *Id.*

216. The texts were sampled from 15 different text categories: press reports (44 texts), press editorials (27 texts), press reviews (17 texts), religious (17 texts), skill and hobbies (36

opposed to a subjective quality of excellence.²¹⁷ Comparative study was an intended use of the corpus.²¹⁸

As another point of comparison, the Jane Austen Corpus is a notable source of literature texts, at just over 854,000 words. It is composed of six novels written by Jane Austen: *Mansfield Park*, *Sense and Sensibility*, *Emma*, *Pride and Prejudice*, *Northanger Abbey*, and *Persuasion*. Jane Austen is a world-renowned author, famous for her distinctive writing style and witty portrayal of social norms.²¹⁹ Austen's novels were compiled by Project Gutenberg, a free online library founded in 1971 with the mission of preserving literary and other genres of writing.²²⁰ We obtained those novels from Project Gutenberg, then processed the raw text following Julia Silge's methodology for the *janeaustenr* package and dataset.²²¹

5. Calculations

Each of the analytics is calculated across different divisions of data. Our analysis includes word, sentence, clause, and document-level metrics. At the word and sentence divisions, our metrics consider the linguistic complexity of the dataset. At the document level, we examine the TOUs and supplementary terms in our dataset, drawing comparisons between TOUs and the various categories of agreements (e.g., privacy policies versus TOUs versus community guidelines).²²² We also examine linguistic complexity at a clause-specific division, comparing arbitration clauses with other provisions. Finally, for the sake of context and comparative analysis, we apply and compare the dataset with other external corpus datasets.²²³

As for computational methods, we implement algorithms and functions using the R Programming Language for Statistics and Graphics with R

texts), popular lore (48 texts), belles-lettres (75 texts), government and law (30 texts), academic/learned (80 texts), general fiction (29 texts), mystery fiction (24 texts), science fiction (6 texts), adventure fiction (29 texts), romance fiction (29) texts, and humor (9 texts). *Id.*

217. *Id.*

218. *Id.* (expressing hope that the corpus will be used in comparative studies).

219. *See generally* MARILYN BUTLER, JANE AUSTEN, OXFORD UNIVERSITY PRESS (2010); *see also* CLAIRE TOMALIN, JANE AUSTEN: A LIFE (2007).

220. *Background, History and Philosophy of Project Gutenberg*, PROJECT GUTENBERG, <https://www.gutenberg.org/about/background/index.html> (last visited Aug. 2, 2022).

221. *See* Julia Silge, *janeaustenr*: Jane Austen's Complete Novels, v. 0.1.5 (2017).

222. *See infra* Sections IV.A–D.

223. *See supra* notes 214–220 and accompanying text.

packages *quanteda*,²²⁴ *tidytext*,²²⁵ and *polmineR*.²²⁶ Our data processing also involves submission of the data to part-of-speech tagging, tokenization, and lemmatization through the *spacyr* and *udpipe* packages and corresponding functions.²²⁷ Developed at Bell Labs, R is a language and environment for statistical computing and graphics.²²⁸ R offers tools at every stage of data processing: cleaning, organizing, formatting, analyzing, and visualizing. R is also an open-source language, so it is free to use and has a vibrant worldwide community of users.²²⁹ R compiles and runs on a wide variety of platforms including Unix, Windows, and macOS. Finally, we visualize the data with Tableau Public.

IV. FINDINGS AND DISCUSSION

In this Part, we illustrate and discuss the results. We begin with findings from traditional readability formulas. We then illustrate our findings for syntactic complexity: the results of our Fichtner's C index and TAASSC scores. Following that, we explain our findings on lexical richness, the MATTR scores. Finally, we outline and discuss the results of our metadata analysis. A table of selected results and metadata across all the individual platforms in our dataset is included in Annex 2.²³⁰

A. TRADITIONAL READABILITY METRICS

This Section IV.A explains and illustrates the results of our calculations with traditional readability metrics, including some comparisons with previous studies.

224. See Kenneth Benoit, Kohei Watanabe, Haiyan Wang, Paul Nulty, Adam Obeng, Stefan Müller, & Akitaka Matsuo, *quanteda: An R Package for the Quantitative Analysis of Textual Data*, 3 J. OPEN SOURCE SOFTWARE 744 (2018).

225. See Julia Silge & David Robinson, *tidytext: Text Mining and Analysis Using Tidy Data Principles in R*, 1 J. OPEN SOURCE SOFTWARE 37 (2016).

226. See Andreas Blætte & Christoph Leonhardt, *polmineR: Verbs and Nouns for Corpus Analysis*, v. 0.8.0 (2019).

227. See Kenneth Benoit & Akitaka Matsuo, *spacyr: Wrapper to the 'spaCy' 'NLP' Library*, v. 1.2.1 (2022); see also Jan Wijffels, Milan Straka, & Jana Straková, *udpipe: Tokenization, Parts of Speech Tagging, Lemmatization and Dependency Parsing with the 'UDPipe' 'NLP' Toolkit*, v. 0.8.9 (2022).

228. *What is R?*, R, <https://www.r-project.org/about.html> (last visited Oct. 28, 2023).

229. R is a different implementation of the S language and is maintained internationally by a team of developers through the Comprehensive R Archive Network (CRAN). *The R Project for Statistical Computing*, R-PROJECT, <https://www.r-project.org> (last visited Aug. 2, 2022).

230. Annex 2 illustrates, for each platform: app category, FRE, MATTR, Fichtner's C, TAASSC, word count, domicile, and governing law.

1. Flesch Reading Ease (FRE)

FRE scores represent the difficulty of reading and understanding texts. As noted in our methodology explanation, FRE scores are calculated based on average sentence length and average syllables per word.²³¹ Figure 1 (below) displays the results of our FRE calculations. The higher the FRE score, the more readable the text is. FRE scores above sixty are considered to meet a “plain English” standard.²³² By way of reference, *Reader’s Digest* scores around sixty-five whereas *Time* magazine scores about fifty-two.²³³ In our calculations, the Austen Corpus scores over sixty and the TOUs in our dataset average just over thirty.

Figure 1: FRE Scores

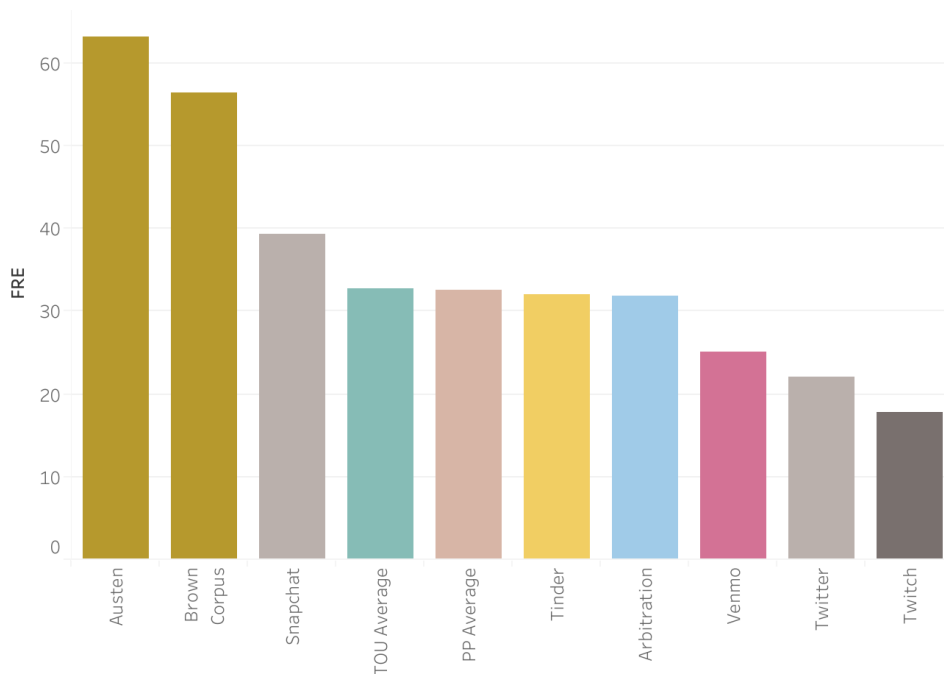


Figure 1 illustrates the average FRE scores for the TOUs and privacy policies. This figure also illustrates scores for the Austen Corpus, the Brown Corpus, and some individual platform TOUs. These results suggest that most

231. See *supra* notes 172–173.

232. See Karen A. Schriver, *Plain Language in the U.S. Gains Momentum: 1940-2015*, 60 IEEE TRANSACTIONS ON PROFESSIONAL COMM’N 343, 351 (2017).

233. *Id.*

TOUs are incomprehensible to a broad audience.²³⁴ FRE results for all seventy-five TOUs produced an average of 32.69 points and a median score of 32.63. No TOU in the dataset scored above forty-seven points. The Swarm TOU, for instance, registered the highest individual FRE score but still falls well short of plain language standards. And the least readable TOUs are very unreadable: thirty-one platforms are in the lowest range of FRE scores (zero to thirty), which would require the completion of undergraduate and potentially some graduate level education.²³⁵ Tantan, for instance, the least readable TOU in the dataset, has an FRE score of 15.5. Arbitration clauses register especially low scores, slightly lower than the TOU average. The FRE results indicate major differences between legal texts and other genres of language—a common thread throughout our results.²³⁶ Curiously, however, the FRE formula does not detect a major difference between privacy policies and TOUs.²³⁷

2. *Flesch-Kincaid (F-K) Test*

F-K score results range on a scale of zero to eighteen, which approximates the years of education required to understand the text. Thus, the lower the score, the more readable the text is. Because the F-K test operates on the same inputs and illustrates the same characteristics as the FRE test, we do not discuss the F-K results separately at length. Our abbreviated F-K findings: Across TOUs, the median and mean results of the F-K calculations were 15.83 and 15.76, respectively, which indicate that at least some undergraduate coursework is required to understand the average TOU in our dataset. As external points of reference, our F-K results indicate that understanding the Jane Austen Corpus requires ninth grade education and the Brown Corpus requires upper-level high school education.

As indicated by Table 1 (below), the readability scores of online TOUs appear to have declined sharply. In the case of FRE scores, that means lower numeric values. The drop is consistent across both of the more recent datasets. For the F-K results, the decline in readability registers as a higher score, which suggests that the years of education needed to understand TOUs increased by

234. According to Zamanian and Heydari, the estimated percentage of U.S. adults at the 7th grade reading level is about 88%, but the rates drop quickly at higher levels of reading ability. For instance, the percentage of adults at eighth to ninth grade reading levels is 83% and at college level is 33%. *See* Zamanian & Heydari, *supra* note 23, at 45.

235. *Id.* at 44–45.

236. *See infra* Figures 2–4.

237. The median FRE score for TOUs is 32.6 while the median score for privacy policies is 32.2. We discuss this divergence at length in Section IV.B. However, the syntactic complexity scores diverge significantly. *See infra* notes 245–249.

about four years. TOUs were already quite unreadable when they were measured by Rustad and Koenig around 2014.²³⁸ Unlike Rustad and Koenig, which focused on social platforms, the Benoliel and Becher dataset in 2019 was a general TOU dataset. Our comparison across datasets suggests TOUs have grown more complex in recent years, but more research is needed to fully explore this trend.

Table 1: Median FRE and F-K Scores for TOUs

Study	FRE	F-K
Rustad & Koenig (2014)	49	11
Benoliel & Becher (2019)	34.2	14.9
Samples, Ireland, Kraczon (2024) (this Article)	32.6	15.83

B. SYNTACTIC COMPLEXITY METRICS

This Section IV.B explains and illustrates the results of our calculations using syntactic complexity metrics.

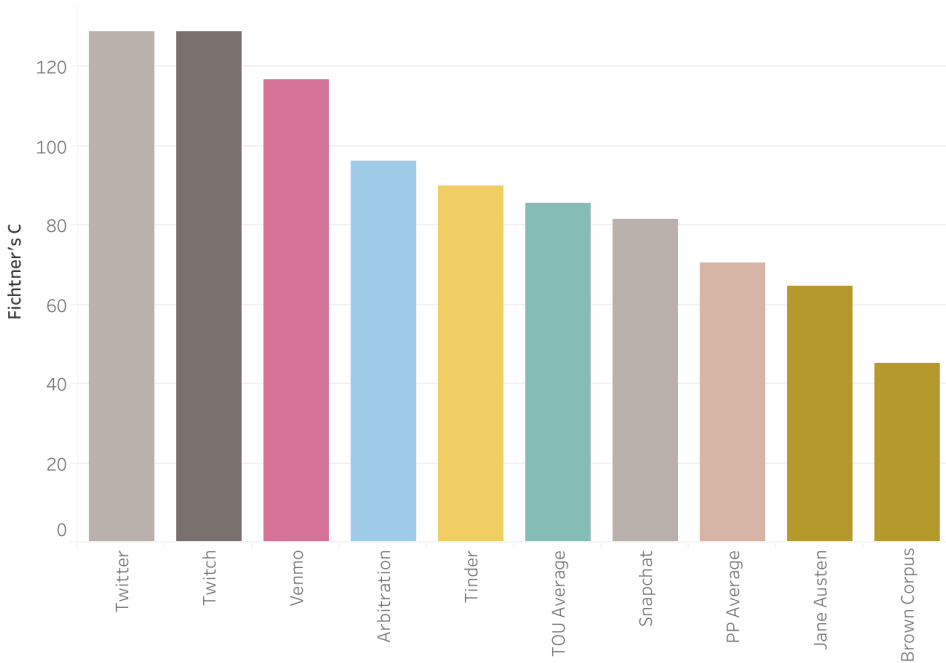
1. *Fichtner's C Scores.*

The Fichtner's C index measures the syntactic complexity of verb structures.²³⁹ The higher the Fichtner's C score, the more syntactically complex the text is. Thus, a text with elaborate sentences, prepositional phrases, and subordinate clauses will register a higher score. Figure 2 (below) displays the results of our Fichtner's C calculations including average scores for TOUs, privacy policies, and arbitration clauses within the TOUs. Figure 2 also illustrates scores for the Austen Corpus, the Brown Corpus, and some individual platform TOUs.

238. See Rustad & Koenig, *supra* note 4, at 1460–63.

239. See *supra* notes 179–190 and accompanying text (explaining the Fichtner's C measurement in detail).

Figure 2: Fichtner's C Scores



Within TOUs, arbitration clauses produce especially high Fichtner's C scores, scoring even above the average individual TOU.²⁴⁰ Privacy policies, on the other hand, register less verb complexity. Similarly, the Austen Corpus, which is the most readable according to traditional formulas, has a significantly higher Fichtner's C score than the Brown Corpus. On other metrics—the two traditional readability and MATTR scores—the Austen and Brown corpora tracked more closely. The difference in verb complexity may be related to structural tendencies across text genres.²⁴¹ The Austen Corpus, for instance, contains much more character dialogue than the Brown Corpus.²⁴² Still, the Austen and Brown corpora registered significantly lower C index scores than the TOU average.

240. This exposes a potential gap in traditional readability metrics because there is not a direct correlation between these groups of results.

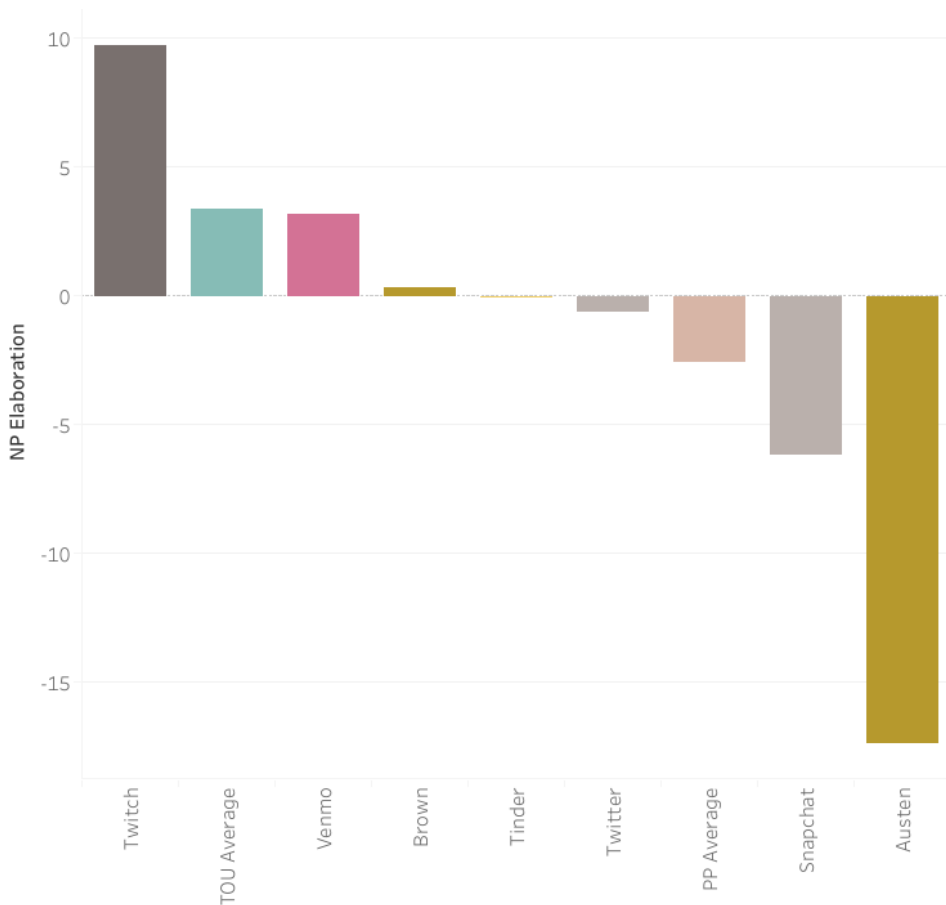
241. For a discussion of syntactic tendencies across genres, see DOUGLAS BIBER & SUSAN CONRAD, REGISTER, GENRE & STYLE (2019). Though the Brown Corpus contains some fiction, it contains a wide range of general prose in modern English. *See supra* notes 214–220 (describing the Austen and Brown corpora).

242. Fiction is just one component of the Brown Corpus. *See supra* notes 214–220 (describing the Austen and Brown corpora).

2. TAASSC: Noun Phrase Elaboration Scores.

Here, we report the results of NP elaboration, the composite score of all nineteen TAASSC noun phrase types and embedding indices. Like Fichtner's C, the higher the NP score, the greater the syntactic complexity. Figure 3 (below) displays those results across the Jane Austen Corpus, the Brown Corpus, and selected individual platform TOUs.

Figure 3: TAASSC Noun Phrase Elaboration



The NP elaboration results indicate that TOUs contain highly complex noun structures, such as embedding. Embedded phrases weigh heavily in the TAASSC results, which is a composite score. Embedding has proven a key

element in reading difficulty.²⁴³ As the TAASSC results suggest, embedding is especially prevalent in academic and legal writing. Consider, for instance, one type of embedding (prepositions per nominal) from the first sentence in the Twitch TOU:

Welcome to the services operated by Twitch Interactive, Inc. (collectively with its affiliates, “Twitch” or “We”) consisting of the website available at <https://www.twitch.tv>, and its network of websites, software applications, or any other products or services offered by Twitch (the “Twitch Services”).

This sentence—though not overwhelming in length—is rather awkward to read. Embedding has a lot to do with that. Consider, for instance, the prepositions per nominal. They present in multiple embedded phrases: *to the services*, *by Twitch Interactive*, *with its affiliates*, *of the website*, *at twitch.tv*, *of websites*, and *by Twitch*. On its own, the occasional prepositional phrase is not overly perplexing. However, once several of them are embedded in a single sentence, the text quickly becomes more difficult to read.

Variations in NP scores appear to track with distinctive tendencies across genres and categories. For instance, the gap between the Austen Corpus and TOUs is especially stark in NP complexity. That result indicates that the literary prose in the Austen Corpus contains far fewer prepositions per nominal and other types of embedding such as determiners and adjectival modifiers. A similar tendency registers within categories of the Brown Corpus. For instance, categories of fiction in the Brown Corpus produce low NP complexity scores—on par with the Austen Corpus. Meanwhile, NP scores are very high within divisions of the Brown Corpus that contain academic and legal texts—on par with the TOU average.²⁴⁴

Across both syntactic complexity metrics—Fichtner’s C index and the NP index—TOUs register especially high syntactic complexity. Our results suggest a high degree of overall difficulty and sophistication across TOUs.²⁴⁵ Our results also reveal a curious divergence between privacy policies and TOUs. Whereas traditional readability scores for TOUs and privacy policies are

243. Studies have shown that embedding—for instance, center-embedded clauses—is a key factor in reading difficulty. *See supra* notes 196–200 and accompanying text.

244. The “learned” category of the Brown Corpus contains academic, technical, and scholarly texts. Another miscellaneous category contains mostly government and legal texts. Those two categories had even higher NP scores than the TOU average. *See supra* notes 215–216 (describing the contents of the Brown Corpus).

245. Readers may find that observation consistent with examples (provided in Part III, above) of sentences that contribute to higher complexity scores. Those fragments came from the Twitch (for Fichtner’s C) and TikTok (for NP elaboration) TOUs, respectively. *See supra* notes 193, 207 and accompanying text.

virtually the same, they diverge in our syntactic complexity results.²⁴⁶ In verb and noun structures, TOUs score as significantly more complex than privacy policies.²⁴⁷ Those results align with our anecdotal observations.²⁴⁸ In sum, traditional readability metrics appear to overlook linguistic differences between privacy policies and TOUs. That divergence underscores doubts about the validity of traditional readability metrics and deserves further research.²⁴⁹ For now, we speculate that traditional readability formulas might be overlooking linguistic features that make TOUs especially difficult to read.

C. LEXICAL RICHNESS

The vocabulary found within a text plays a distinctive role in linguistic structures and overall text complexity. Lexical richness refers to the number of unique words used in a text—in other words, the variety of the vocabulary. We illustrate lexical richness with MATTR, a reliable indicator of lexical diversity.²⁵⁰ For MATTR scores, the scale ranges from zero to one. A higher MATTR score indicates more lexical richness. Figure 4 (below) displays the results of our MATTR calculations for individual TOUs from selected platforms as well as all arbitration clauses in our dataset. Figure 4 also illustrates MATTR results for the Austen and Brown corpora.

246. The median FRE scores of TOUs and privacy policies are almost identical. *See supra* note 237 and accompanying text.

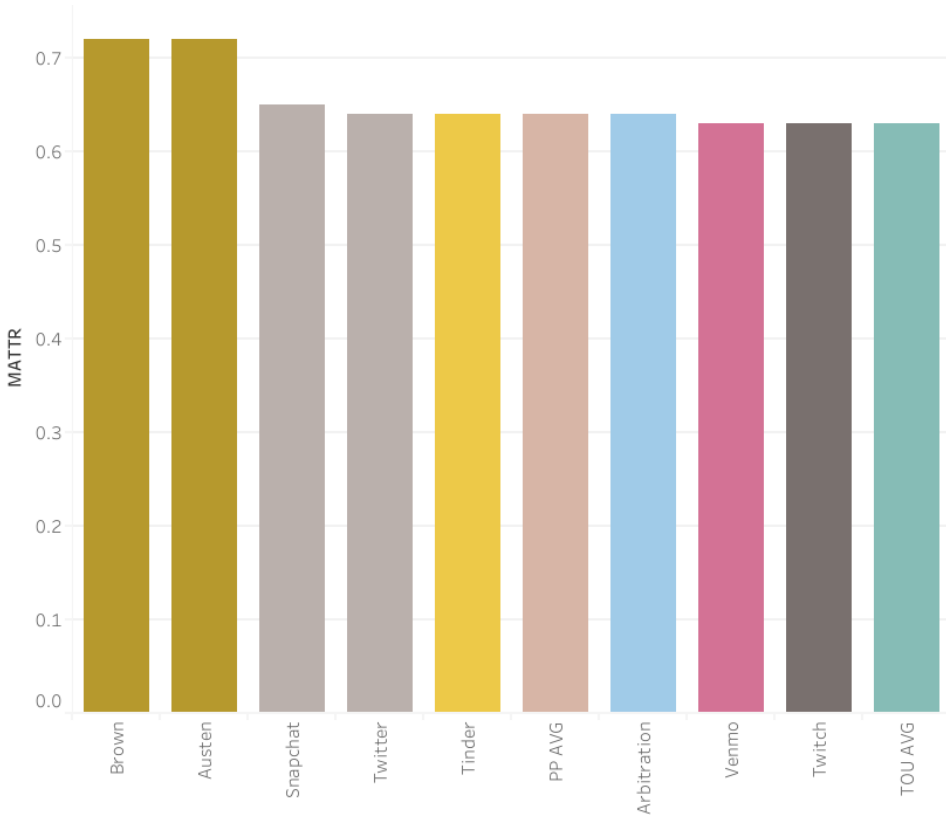
247. The median Fichtner's C (verb complexity) score for TOUs is 86.3 while the median score for privacy policies is 68.1. The median NP score (noun complexity) for TOUs is 4.38 while the median score for privacy policies is -2.5. *See supra* Figures 2–3.

248. In our exposure to the texts throughout this study, we found the language in privacy policies generally easier to read than TOUs.

249. *See supra* notes 172–178.

250. *See* BREZINA, *supra* note 209, at 58–59; Covington & McFall, *supra* note 23., at 95–96, 99.

Figure 4: MATTR Scores



The corpora with the highest readability scores and the lowest linguistic complexity scores also register highest in lexical richness. In a way, that result may seem counterintuitive. We might expect higher degrees of lexical richness—in essence, more diverse vocabularies—to be associated with more challenging and complex texts. However, we observe the opposite. For instance, the Jane Austen and Brown corpora, which have significantly higher MATTR scores, also exhibit lower syntactic complexity and higher FRE scores. In other words, they have more diverse vocabularies yet are also easier to read.

A potential explanation for those correlations: TOUs tend to repeat complex legal jargon, frequently, in long sentences. That tendency produces lower lexical diversity *and* relatively difficult texts. For instance, the word “indemnification,” if used frequently enough throughout a text, could simultaneously reduce traditional readability scores and the MATTR score of a text. Arbitration clauses exhibit a similar pattern on the linguistically difficult end of the spectrum: low MATTR scores with high complexity and low

readability scores. A similar explanation likely applies.²⁵¹ These patterns suggest that lexical diversity—as opposed to syntactic complexity or perhaps even lexical difficulty—is not an ideal proxy for understanding the linguistic difficulty of contract texts.

D. METADATA

We gathered metadata for several variables in two divisions: platform-level metadata and TOU-level metadata. The platform-level variables we collected are category, domicile, and user base.²⁵² Among the TOU-level variables we gathered: word count, dispute resolution and jurisdiction, modification, and governing law. For TOUs that contain arbitration clauses, we also collected data on opt-outs and class waivers. Below we illustrate and discuss some of the results of our metadata analysis.

1. *The “TL” in TL;DR: Word Count*

Our dataset exhibits a remarkably wide range in word count. The shortest, Telegram, with just seventy-five words, is something of an outlier.²⁵³ Telegram, founded by Russian entrepreneurs and headquartered in Dubai, exhibits unusual features. In addition to its extremely low total word count, the Telegram TOU is silent on critical questions like governing law and dispute resolution. At the high end of the range is Venmo’s TOU at 20,505 words, which is situated around the length of a shorter novella or a law review article.²⁵⁴ The average length across the TOUs in our dataset is 6,712 words; the median is 5,830 words. Figure 5 (below) illustrates the word counts of individual apps alongside the mean and median word counts of TOUs and

251. For instance, a sample sentence from Snapchat’s arbitration clause: “Notwithstanding any other provision of this Agreement, the Arbitration Agreement or ADR Services’ Rules, disputes regarding the interpretation, applicability, or enforceability of this waiver may be resolved only by a court and not by an arbitrator.” *Snap Inc. Terms of Service*, SNAP INC., <https://snap.com/en-US/terms> (last updated Aug. 15, 2023).

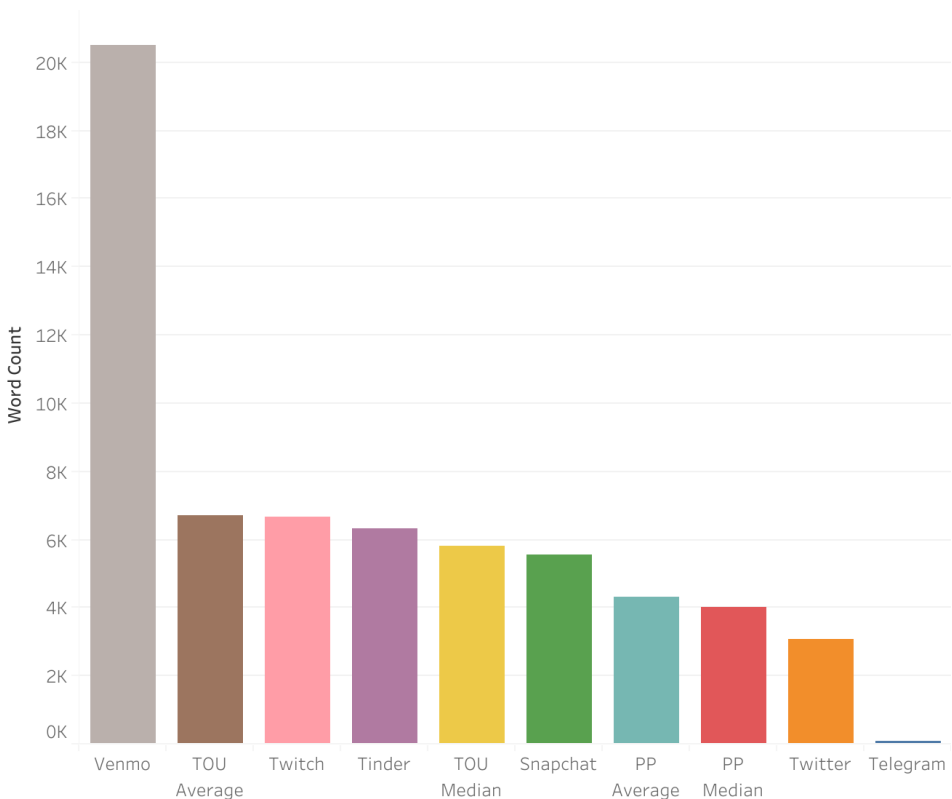
252. We exclude user base from our analysis because data on active users is unreliable. For larger platforms, particularly those that are publicly listed, data is widely available and somewhat reliable. *See supra* note 152 and accompanying text. However, for smaller or unlisted platforms, data on active users is intermittent at best.

253. After our scrape, Telegram added more TOU language in an update when the platform rolled out Telegram Premium in June 2022. *See 700 Million Users and Telegram Premium*, TELEGRAM (June 19, 2022), <https://telegram.org/blog/700-million-and-premium>. Still, even at 1,412 words, the Telegram TOU remains exceptionally short. *See Terms of Service*, TELEGRAM, <https://telegram.org/tos/terms-of-service-for-telegram-premium> (last visited Sept. 2, 2022).

254. *See* Chuck Sambuchino, *How Long is a Novella? And How Do You Query Agents For Them?*, WRITER’S DIGEST (Nov. 18, 2008), <https://www.writersdigest.com/publishing-insights/how-long-is-a-novella-and-how-do-you-query-agents-for-them> (“Novellas generally run 20,000–50,000 words. About 30,000 words are average.”).

privacy policies. The TOU range is dramatic with the highest at 20,505 words (Venmo) and the lowest at just 75 words (Telegram).

Figure 5: Word Counts by Agreement Category and Apps.



Overall, the volume of TOUs is extraordinary. Word count volumes are substantial and appear to increase over time, as Table 2 (below) illustrates. We observe a meaningful increase in word counts in comparisons with other TOU and privacy policy datasets. For instance, our dataset is substantially similar to the dataset compiled by Rustad and Koenig, as both datasets focus the consumer contracts of social platforms. Whereas our dataset includes 195 primary terms, including seventy-five TOUs, theirs includes 329 TOUs. Across the two datasets with a roughly eight-year time horizon, the median word count jumps from 3,910 words to 5,830 words. Table 2 shows a substantial increase in TOU word counts across these two datasets. This

comparison is consistent with other studies finding that online TOUs and privacy policies have expanded in length over time.²⁵⁵

Table 2: Word Counts in Social Platform TOUs, 2014–22

Metric	Rustad & Koenig (2014)	Samples, Ireland, Kraczon (2024) (this Article)
Mean	4,418	6,712
Median	3,910	5,830
Range	249 to 37,239	75 to 20,505

On top of TOUs, privacy policies and community guidelines also present considerable burdens in terms of length and reading costs. The average word count across the privacy policies in our dataset is 4,462; the median is 4,150. For community guidelines, we calculate an average word count of 2,477 and a median of 980. The total word count per platform in our dataset: 12,592 words. Thus, to review just the primary terms for a typical social platform in our dataset, a consumer would need to read a substantial amount of complex language. Any such review typically takes place on a smartphone at the time the user downloads the app and registers an account—an environment that is not conducive for reading important legal materials.

We observe anecdotal evidence that privacy policies, like TOUs, have grown substantially in length over time. Table 3 (below) illustrates the median word counts of privacy policies in three different studies. As a study of seventy-five privacy policies from popular websites in the United States, the dataset developed by Aleecia McDonald and Lorrie Cranor has strong parallels with the privacy policies in our dataset.²⁵⁶ But the median length of privacy policies in our dataset is 4,150 words, compared to 2,514 words in theirs. As another indication of word count trajectory, Isabel Wagner’s longitudinal study of website privacy policies found that the average length has quadrupled since 2000.²⁵⁷ As shown in Table 3, the increase in median word counts across these datasets suggests that privacy policies have become significantly longer in recent years.

255. Wagner, *supra* note 24, at 1 (“We find that the length of the average privacy policy has approximately doubled in the last ten years and quadrupled since 2000.”).

256. See generally Aleecia M. McDonald & Lorrie Faith Cranor, *The Cost of Reading Privacy Policies*, 4 J.L. & POL’Y INFO. SOC’Y 543 (2008).

257. Wagner, *supra* note 24, at 1.

Table 3: Word Counts of Online Privacy Policies (PPs)

Study	Dataset	Median Word Count
McDonald & Cranor (2008) ²⁵⁸	PPs of 75 popular websites	2,514
Amos, et al. (2009) ²⁵⁹	910,546 PPs from 108,499 websites	876
Amos, et al. (2019) ²⁶⁰		1,522
Samples, Ireland, Kraczon (2024) (this Article)	PPs of 75 social platforms	4,150

Whereas platforms incur very little cost in adding terms to online contracts, snowballing length poses enormous transaction and opportunity costs for consumers. If a consumer decides to read TOUs, the time and effort required to read long, technical texts is considerable. McDonald and Cranor estimated an aggregate opportunity cost of \$781 billion in 2008. More startling, perhaps, is how much higher those numbers would be today. Adjusted for inflation, that would be \$1.053 trillion in 2022 terms.²⁶¹ Also, since 2012, the smartphone contracting ecosystem has expanded significantly.²⁶² TOUs have also grown longer.²⁶³ The median word count in McDonald and Cranor’s dataset was just 2,514 words (versus 4,150 in ours).²⁶⁴ Also, their cost estimate assumes a reading speed of 250 words per minute.²⁶⁵ People most likely read TOUs at a substantially slower rate.²⁶⁶

258. McDonald & Cranor, *supra* note 256, at 544.

259. See generally Ryan Amos, Gunes Acar, Eli Lucherini, Mihir Kshirsagar, Arvind Narayanan & Jonathan Mayer, *Privacy Policies Over Time: Curation and Analysis of a Million-Document Dataset* (2021), <https://dl.acm.org/doi/10.1145/3442381.3450048> (showing changes in readability scores of privacy policies between 2009 and 2019).

260. *Id.*

261. This calculation uses May 2008 to May 2022 as the time horizon. See *CPI Inflation Calculator*, U.S. BUREAU OF LABOR STATISTICS, https://www.bls.gov/data/inflation_calculator.htm (last visited Jan. 20, 2024).

262. Market research indicates that, on average, people have as many as eighty or ninety apps installed on their phone, but they actively use as few as thirty per month or ten per day. SPOTLIGHT ON CONSUMER APP USAGE: PART 1, APP ANNIE 6–7 (2017), http://files.appannie.com.s3.amazonaws.com/reports/1705_Report_Consumer_App_Usage_EN.pdf; Irfan Ahmad, *60+ Fascinating Smartphone Apps Usage Statistics For 2019*, SOC. MEDIA TODAY (Mar. 23, 2019) <https://www.socialmediatoday.com/news/60-fascinating-smartphone-apps-usage-statistics-for-2019-infographic/550990>.

263. See *supra* Tables 2–3.

264. See McDonald & Cranor, *supra* note 256, at 554.

265. *Id.*

266. See Marc Brysbaert, *How Many Words Do We Read Per Minute? A Review and Meta-Analysis of Reading Rate*, 109 J. MEMORY & LANGUAGE 1, 15 (2019) (finding that the reading rate for a sample of difficult texts was 203 words per minute versus 261 for easier texts).

Like our dataset of seventy-five social platforms, McDonald and Cranor assessed seventy-five websites. But privacy policies are just one segment of consumer contracting arrangements. Most platforms present multiple contracts and policies. Almost all use a TOU and a privacy policy, but there are other agreements too. In our dataset, which encompasses the entire contracting framework (TOUs *and* supplementary terms), the average total word count per platform is about 12,644—far more than the McDonald and Cranor dataset, which focuses exclusively on privacy policies.

Practically speaking, reading complex documents on a mobile phone is fairly daunting, even when relatively brief. At over 20,000 words, the Venmo TOU is both complex and long.²⁶⁷ Not only must a consumer read the TOU to understand the contractual arrangement, but also other supplementary terms.²⁶⁸ In the case of Venmo, that includes a privacy policy (5,302 words), an acceptable use policy (1,095 words), a consent to receive electronic disclosures (973 words), and others that depend on optional functions. For instance, Venmo users who trade cryptocurrency also agree to the Venmo cryptocurrency TOU, adding another 6,743 words.²⁶⁹ Thus, a Venmo user who enables crypto trading would need to review, at a minimum, roughly 35,000 words. On top of that, consumers are legally bound to unilateral modifications made by platforms, even when they are carried out in minimally transparent updates.²⁷⁰

Consumers are assumed by law to have reviewed TOUs when they download an app and click through the installation prompts.²⁷¹ Given the nature of mobile platforms, consumers are likely to interact with TOUs on a smartphone screen. Intuitively, that may seem impractical: to read thousands—or even tens of thousands—of words of dense legal text on a phone screen at the moment the app is downloaded. Research confirms that intuition. Considering the practical and cognitive factors at play, understanding human behaviors in response to long consumer contracts is critical, especially

267. As part of highly regulated industries, fintech and payment service platforms are likely to have more extensive, longer terms.

268. *User Agreement*, VENMO, <https://venmo.com/legal/us-user-agreement> (last updated Oct. 6, 2023) (stating that users “agree to comply with the following additional policies and each of the other agreements” that Venmo posts).

269. *Venmo Cryptocurrency Terms and Conditions*, VENMO, <https://venmo.com/legal/crypto-terms> (last updated Oct. 23, 2023).

270. *See infra* notes 317–328 and accompanying text (discussing modification clauses and practices among platforms).

271. *See supra* notes 51–52 and accompanying text.

for documents that contain dense and incomprehensible language.²⁷² Research suggests that reading comprehension on smartphones is relatively low.²⁷³ There are also indications that reading comprehension deteriorates with document length.²⁷⁴

2. *Disputes & Jurisdiction*

Arbitration has a long history in the United States, particularly as a mechanism for disputes related to labor-management relations and commercial transactions.²⁷⁵ With support from key decisions by the Supreme Court, arbitration has expanded into a wide variety of settings, including consumer contracts.²⁷⁶ Our metadata confirms that social platforms have joined that trend. In our dataset, a 64% majority of the TOUs (or forty-eight of seventy-five) contain arbitration clauses. In some instances, arbitration clauses in our dataset are jurisdiction-specific, applicable only to users in the United States.²⁷⁷ In the United States, federal law—specifically, the Federal Arbitration Act—and decades of case law have produced a very favorable environment for arbitration.²⁷⁸ As for TOUs without arbitration clauses, most (twenty-one of twenty-seven) provided for litigation while a handful (six of twenty-seven) were either unspecified or unclear as to dispute resolution.

272. See, e.g., OMRI BEN-SHAHAR & CARL E. SCHNEIDER, MORE THAN YOU WANTED TO KNOW: THE FAILURE OF MANDATED DISCLOSURE 28–29 (2014) (finding that long mandated disclosures create cognitive problems for the reader).

273. Smartphone reading, compared to reading on a paper medium, produces lower reading comprehension. See generally Motoyasu Honma, Yuri Masaoka, Natsuko Iizuka, Sayaka Wada, Sawa Kamimura, Akira Yoshikawa, Rika Moriya, Shotaro Kamiyo & Masahiko Izumizaki, *Reading on a Smartphone Affects Sight Generation, Brain Activity, and Comprehension*, 12 SCI. REPORTS 1589 (2022). Research also suggests that smartphone reading produces lower comprehension than reading on a desktop computer. See R.I. Singh, M Sumeeth & J. Miller, *Evaluating the Readability of Privacy Policies in Mobile Environments*, 3 INT’L J. OF MOBILE HUMAN COMPUT. INTERACTION 1, 71 (2011).

274. That appears to be true for both mobile and desktop reading environments. See Singh et al., *supra* note 273, at 71 (“An inverse dependency between the length of privacy statement and Cloze test scores shows that readers’ comprehension drops with length; a similar conclusion was drawn from the desktop environment.”).

275. See Linda J. Demaine & Deborah R. Hensler, “Volunteering” to Arbitrate Through Predispute Arbitration Clauses: The Average Consumer’s Experience, 67 LAW & CONTEMP. PROBS. 55, 55–56 (2012) (describing the expansion of arbitration in the United States).

276. See Michael L. Rustad, Richard Buckingham, Diane D’Angelo & Katherine Durlacher, *An Empirical Study of Predispute Mandatory Arbitration Clauses in Social Media Terms of Service Agreements*, 34 U. ARK. LITTLE ROCK L. REV. 643, 676–80 (2012).

277. See, e.g., DISCORD, *supra* note 142 (“IF YOU’RE A U.S. RESIDENT, YOU ALSO AGREE TO THE FOLLOWING MANDATORY ARBITRATION PROVISIONS”).

278. See, e.g., *Moses H. Cone Mem’l Hosp. v. Mercury Constr. Corp.*, 460 U.S. 1, 24 (1983) (framing the FAA as a “congressional declaration of a liberal policy favoring arbitration agreements, notwithstanding any state substantive or procedural policies to the contrary”).

Importantly, almost all the arbitration clauses (forty of forty-eight) in our dataset contain class waivers, which prevent a user from participating in collective or class actions of any kind.²⁷⁹ A typical class waiver, as presented as part of an arbitration clause in the Truth Social TOU:²⁸⁰

... YOU AGREE TO ABSOLUTELY AND UNCONDITIONALLY WAIVE ANY AND ALL RIGHTS TO PARTICIPATE IN OR TO BE INCLUDED IN ANY CLASS ACTION LAWSUITS OR INCLUSION IN ANY MULTI-PARTY ACTIONS OR SUITS AGAINST US.²⁸¹

Businesses began including class action waivers—primarily in consumer contracts and employment agreements—to reduce the risk of class action litigation.²⁸² As these waivers proliferated, so did their controversies. Questions about waivers and class arbitration have appeared frequently before the Supreme Court in recent years.²⁸³ Class waivers are particularly sensitive when they appear in unilaterally drafted agreements with consumers and employees. Courts were initially reluctant to enforce these waivers to funnel employees and consumers towards arbitration.²⁸⁴ Despite that initial hesitancy, a series of opinions from the Supreme Court reinforced the use of class waivers in a wide variety of contexts, including consumer contracts.²⁸⁵

Consumers, particularly residents of the United States, have seen their access to the judicial system dramatically curbed in the online environment. Rights to a jury trial and collective mechanisms are regularly waived in routine

279. Particularly controversial in employment and consumer contracts, class waivers have been litigated heavily in recent years, including some prominent SCOTUS cases.

280. *Truth Social Terms of Service*, TRUTH SOCIAL, <https://help.truthsocial.com/legal/terms-of-service> (last updated Feb. 18, 2022).

281. Another feature of TOUs we reserve for future research is the role of all-caps text in the overall linguistic difficulty for consumers. This question has been addressed in laboratory experiments. See Yonathan A. Arbel & Andrew Toler, *ALL-CAPS*, 17 J. EMPIRICAL L. STUD. 862 (2020).

282. See JON O. SHIMABUKURO & JENNIFER A. STAMAN, *MANDATORY ARBITRATION AND THE FEDERAL ARBITRATION ACT*, CONG. RES. SERV. 11–12 (Sept. 20, 2017), <https://sgp.fas.org/crs/misc/R44960.pdf>.

283. See Gary Born & Claudio Salas, *The United States Supreme Court and Class Arbitration: A Tragedy of Errors*, 2012 J. DISP. RESOL. 21, 21 (2012) (“[T]he U.S. Supreme Court has issued a series of confusing and, at times, confused opinions on class arbitration.”).

284. See, e.g., Ryan Miller, *Next-Gen Arbitration: An Empirical Study of How Arbitration Agreements in Consumer Form Contracts Have Changed after Conception and American Express*, 32 GEO. J. LEGAL ETHICS 793, 794–99 (2019).

285. See *AT&T Mobility LLC v. Concepcion*, 563 U.S. 333 (2011) (overturning a California rule that classified many collective-arbitration waivers in consumer contracts as unconscionable); Shimabukuro & Staman, *supra* note 282, at 11–14 (reviewing high-profile cases on class waivers).

consumer transactions.²⁸⁶ As the district court in *Selden v. Airbnb* put it, those fundamental rights are foregone “as a condition of simply participating in today’s digital economy” through arbitration provisions in TOUs.²⁸⁷ The practice is widespread enough to play a plot-defining role in an episode of *Silicon Valley*, a comedy series by HBO that portrays tech start-ups in a satirical light.²⁸⁸ Our results shed light on the extent to which arbitration and class waivers have reshaped those rights in the smartphone contracting environment.

Our results also yield comparisons with previous empirical work on the use of arbitration in consumer contracts. We illustrate the high-level comparison among those results in Table 4, below. In their 2004 article, Linda Demaine and Deborah Hensler found that arbitration clauses were common in consumer contracts (35.4%), but especially prevalent in the financial category (69.2%).²⁸⁹ A 2008 study of online retail contracts by Ronald Mann and Travis Siebeneicher revealed that less than a tenth had installed arbitration clauses.²⁹⁰ Finally, and most akin to our dataset, Rustad and Koenig examined the use of pre-dispute arbitration specifically among the TOUs of social platforms, finding that 29% imposed arbitration on users in their 2014 article.²⁹¹ Just eight years later, our results reflect a significantly higher rate: 64%.²⁹²

The comparisons in Table 4 show a remarkably high frequency of arbitration clauses in social platform TOUs. The frequency of arbitration in our dataset is significantly higher than previous TOU studies, including the Rustad and Koenig dataset, which also focused on social platforms.²⁹³

286. See Shelley McGill, *Consumer Arbitration Clause Enforcement: A Balanced Legislative Response*, 47 AM. BUS. L.J. 361 (2010) (“An arbitration clause is included in the contract to insulate the corporation from the punishing effects of class actions and not as a serious choice of alternative forum.”).

287. *Selden v. Airbnb, Inc.*, No. 16-CV-00933, 2016 WL 6476934, *2 (D.D.C. Nov. 1, 2016), *aff’d*, 4 F.4th 148 (D.C. Cir. 2021).

288. The show has won two Emmys and many nominations. *Silicon Valley*, HBO, <https://www.hbo.com/silicon-valley> (last visited Sept. 14, 2022).

289. Demaine & Hensler, *supra* note 275, at 62.

290. Ronald J. Mann & Travis Siebeneicher, *Just One Click: The Reality of Internet Retail Contracting*, 108 COLUM. L. REV. 984, 999 (2008) (“Perhaps the most surprising finding is that arbitration clauses appear in less than one-tenth of the contracts (only 44 of 500 retailers).”); We speculate that the number would be higher today.

291. Rustad & Koenig, *supra* note 4, at 1469.

292. We acknowledge that these datasets are similar but not exact matches. Also, arbitration displays significant variation across industries, which makes the Rustad and Koenig dataset an especially relevant analog with ours. See, e.g., *supra* note 289 and accompanying text (showing especially high prevalence of arbitration clauses in the financial industry contracts).

293. See generally Rustad & Koenig, *supra* note 4.

Table 4: Frequency of Arbitration Clauses in TOUs.

Study	Sample	Arbitration Clauses (%)
Demaine & Hensler (2004) ²⁹⁴	161 TOUs of various industries	35.4
Mann & Siebeneicher (2008) ²⁹⁵	500 TOUs of internet retailers	8.8
Rustad & Koenig (2014) ²⁹⁶	328 TOUs from social platforms	29.0
Samples, Ireland, Kraczon (2024) (this Article)	75 TOUs of social platforms	64.0

3. *Arbitration Opt-Outs*

Another feature of arbitration clauses and access to justice we examine at the metadata level: opt-outs.²⁹⁷ Usually embedded in arbitration clauses, opt-outs offer users the ability to decline arbitration as the default mechanism for dispute resolution.²⁹⁸ Opt-outs are fairly common in our dataset: almost half (twenty-two of forty-eight) of the TOUs with arbitration clauses provide some form of opt-out rights. The legal strategy behind the opt-out trend might be understood as a preemptive measure to defeat unconscionability arguments raised by potential plaintiffs.²⁹⁹ In *Suarez v. Uber*, for instance, the court dismissed procedural unconscionability in light of the plaintiffs' "absolute right" to opt-out of arbitration.³⁰⁰

Yet opt-out rights have major limitations. Many expire within a relatively short period—thirty days, for instance.³⁰¹ Also, the instructions for opt-out

294. Demaine & Hensler, *supra* note 275, at 62 (finding that "fifty-seven of the 161 sampled businesses (35.4%) included arbitration clauses in their consumer contracts").

295. Mann & Siebeneicher, *supra* note 290, at 987.

296. *See generally* Rustad & Koenig, *supra* note 4, at 1469.

297. *See* Farshad Ghodoosi & Monica M. Sharif, *Arbitration Effect*, 60 AM. BUS. L.J. 235, 255 (2023) (discussing consumer tendencies to opt out of arbitration clauses when informed about them).

298. Typically, when a user opts-out of an arbitration agreement, a jurisdiction clause specifying venue/forum applies. *See, e.g., Terms of Service*, KIK, <https://www.kik.com/terms-of-service> (last updated Aug. 23, 2021) ("To the extent the arbitration requirement does not apply (if ever), you agree that any action at law or in equity for any Dispute shall be filed only in the state and federal courts located in Los Angeles County, California . . .").

299. *See* Ghodoosi & Sharif, *supra* note 297, at 255.

300. *Id.*; *see also* *Suarez v. Uber Techs., Inc.*, No. 8:16-cv-166-T-30MAP, 2016 WL 2348706, at *4 (M.D. Fla. May 4, 2016).

301. Most platforms allow thirty days. *See, e.g., SNAPCHAT*, *supra* note 251 ("To opt out, you must notify Snap in writing no later than 30 days after first becoming subject to this

procedures are buried within arbitration clauses. Our results show that these clauses tend to be long and exceptionally complicated.³⁰² It is unknown, and perhaps doubtful, whether many consumers read and exercise their opt-out rights.³⁰³ Consumers almost never read TOUs at the moment of contract formation (or, for that matter, within thirty or ninety days of that moment). Even if they do read the relevant segment of the arbitration clause within the opt-out period, consumers might not fully appreciate the consequences of waiving their rights to access courts and participate in class actions. A recent study indicates that consumers are unlikely to opt-out of arbitration even when directly presented with the option in a prompt.³⁰⁴

Opt-out procedures, practically speaking, create significant transactional friction. Opting out requires fairly sophisticated knowledge and proactive steps by the user. Sometimes procedural burdens are substantial. Venmo's opt-out procedures, for instance, are remarkably cumbersome. In order to opt-out of Venmo's arbitration agreement, a consumer must *mail* a letter—a physical letter, not a “click” on a device or even an email—to a specific address in San Jose, California.³⁰⁵ Opting out of the arbitration agreement (printing, filling out, and then mailing a form) is considerably more difficult than entering into the contract (a tap as the user opens the app for the first time).³⁰⁶ Also worth noting: Venmo's cumbersome modifications to the opt-out procedures were embedded in a seemingly routine TOU update, which actually constituted a unilateral and minimally transparent alteration of material terms.³⁰⁷

Perhaps the most remarkable fact about Venmo's burdensome opt-out requirements: they are not so usual. Though some opt-outs provide an email option,³⁰⁸ several others require physical mailing like Venmo.³⁰⁹ In a July 26,

Arbitration Agreement.”). Some exceptions: Bubble (31 days), Discord (90 days), and Gettr (5 days).

302. See *supra* Table 4.

303. In July 2022, we contacted legal departments at twenty-one platforms to request data on opt-outs. To date, none have supplied data or substantive information about users' opt-out behaviors.

304. See Ghodoosi & Sharif, *supra* note 297, at 255–60.

305. See VENMO, *supra* note 268.

306. See Adam Levitin, *Venmo's Unfair and Abusive Arbitration Opt-Out Provision*, CREDIT SLIPS (Apr. 26, 2022), <https://www.creditslips.org/creditslips/2022/04/-venmos-unfair-and-abusive-arbitration-opt-out-provision.html> (“What's so ridiculous about requiring a hand-written form to be sent through the mail is that Venmo will surely digitize the form.”).

307. See *id.* (characterizing the modification that contains the opt-out as “unfair and abusive”).

308. Platforms that allow email notice for opt-outs: Badoo, Bumble, Bunch, Coffee Meets Bagel, Discord, Grindr, Hinge, Match, OkCupid, Snapchat, TikTok, and Tinder.

309. Platforms that require a written/mailed letter for opt-outs: Kik, Gettr, Imo, Instagram, Public, Venmo, WhatsApp, and Wink.

2022 modification, Instagram implemented arbitration with a mail-in procedure for opt-outs.³¹⁰ Two platforms—Her, a dating app, and TextFree, a messaging platform—require both!³¹¹ There are other quirks as well. Grindr requires an image of a driver’s license as part of the opt-out procedures.³¹² The Viber TOU contains a passing mention of an opt-out right in the header of the agreement, but no procedure is ever specified.³¹³ Gettr, which requires a mailed letter, allows users just five business days for submitting an opt-out notice. But the Gettr clause does not specify whether the five-day time limit applies to a postmarked or actual receipt:³¹⁴

Unless you give us notice of opt-out within five (5) business days of your first use of the Service, addressed to: 3 Columbus Cir, 20th Floor New York, NY 10019, all actions or proceedings . . . shall be submitted to JAMS (www.jamsadr.com) for final and binding arbitration.

Opt-out procedures offer an example of how design principles have the potential to remake TOUs for consumers, perhaps as a more user-friendly experience.³¹⁵ In our dataset, opting out of arbitration tends to be far more difficult than forming the contract. For one, to become aware of the opt-out requires reading the contract, which forming the contract does not. In fact, the vast majority of TOUs are agreed upon before the act of reading. (Arguably, TOUs are not even truly intended to be read by consumers.) Second, the procedure itself: agreeing to a TOU (and related policies) often requires a mere click or a swipe. Procedurally, opt-outs require a lot more work, shifting the

310. That modification was made after our initial scrape in January 2022. *Terms of Use*, INSTAGRAM, <https://help.instagram.com/581066165581870> (last updated July 26, 2022).

311. *Terms of Service*, HER, <https://weareher.com/terms> (last updated May 25, 2018) (“You must send your opt-out notice to: hello@weareher.com and 1760 Mission Street, San Francisco, CA, 94103.”); *Master Terms of Service*, TextFree, <https://www.pinger.com/privacy-policy/terms-and-conditions> (last updated Dec. 8, 2023).

312. *Terms of Service*, GRINDR, <https://www.grindr.com/terms-of-service> (last updated Apr. 30, 2023) (“You must email Your legal name, mailing address . . . email address(es) associated with Your Account(s) to which the opt-out applies, and an unaltered digital image of Your valid driver’s license . . .”).

313. Despite a clear statement that opt-out rights exist at the beginning of the TOU, the arbitration clause is silent on opt-outs. See *Terms of Use*, VIBER, <https://www.viber.com/en/terms/viber-terms-use> (last updated Apr. 17, 2023) (“YOU HAVE THE RIGHT TO OPT OUT AS DETAILED IN THE ARBITRATION SECTION BELOW.”).

314. *Terms of Use*, GETTR, <https://gettr.com/terms> (last updated May 17, 2023).

315. These theories, often explored in the business-to-business context, may have compelling application in the business-to-consumer environment. See generally Gerlinde Berger-Walliser, Thomas D. Barton & Helena Haapio, *From Visualization to Legal Design: A Collaborative and Creative Process*, 54 AM. BUS. L.J. 347 (2017) (articulating the potential for more innovative contract design).

burden of time and effort to the consumer. These practices beg questions that are not limited to opt-out procedures.³¹⁶ Is the overall length and difficulty of TOUs an intentional strategy to deter reading and obfuscate unfavorable terms? Are opt-out procedures designed to enable consumer choices, or part of a legal strategy to defeat unconscionability?

4. *Modification*

As noted above, many platforms use modifications to update and alter their TOUs. Modification clauses set the terms for future modifications or amendments to an agreement. Schmuël Becher and Uri Benoliel use the term “sneak in contracts” to describe TOUs with unilateral and broad modification clauses.³¹⁷ Their project includes a detailed examination of multiple variables within modification clauses.³¹⁸ At a high level, our primary finding around these clauses: platforms almost always reserve unilateral and unconditional modification rights. Virtually all the platforms in our dataset—almost 95% (seventy-one of seventy-five)—grant themselves unilateral modification rights in their TOUs.³¹⁹ These results are consistent with the more comprehensive modification findings by Becher and Benoliel, which indicate that a vast majority (over 98%) of the TOUs in their dataset include unilateral modification rights.³²⁰

In our dataset, platforms typically reserve unconditional (or nearly unconditional) rights to modify the contract as frequently as needed and without material limitations.³²¹ Put simply, modification rights are deeply unilateral among social platform TOUs. Tinder’s modification clause, for instance, reads:³²²

316. Literature on law and strategy has developed useful frameworks for questions like these. *See generally* Justin W. Evans & Anthony L. Gabel, *Legal Entrepreneurship and the Strategic Virtues of Legal Uncertainty*, 57 AM. BUS. L.J. 593 (2020); George J. Siedel & Helena Haapio, *Using Proactive Law for Competitive Advantage*, 47 AM. BUS. L.J. 641 (2010).

317. Their article offers a comprehensive empirical study of modification clauses and three defining elements of sneak in contracts: unilaterality, breadth, and transparency. *See* Shmuël I. Becher & Uri Benoliel, *Sneak in Contracts*, 55 GA. L. REV. 657, 674–75 (2021).

318. *Id.* at 685 (illustrating the “sneakiness” variables in their study).

319. Modification rights in a small minority (4 of 75) TOUs were vaguely bilateral, unclear, or unspecified.

320. *See* Becher & Benoliel, *supra* note 317, at 681 (finding that 98.54% of the modification clauses in their dataset granted the platform unilateral rights to change the TOU).

321. Our anecdotal observation here is consistent with more detailed findings by Becher and Benoliel. *See supra* note 317, at 681–85 (outlining findings).

322. *Terms of Use*, TINDER, <https://policies.tinder.com/terms/intl/en> (last updated Nov. 19, 2021).

We may revise this user agreement and any of the policies listed above from time to time. The revised version will be effective at the time we post it, unless otherwise noted. If our changes reduce your rights or increase your responsibilities we will provide notice to you of at least 21 days. We reserve the right to amend this agreement at any time without notice, subject to applicable law. By continuing to use our services after any changes to this user agreement become effective, you agree to abide and be bound by those changes. If you do not agree with any changes to this user agreement, you may close your account.

Consistent with the above example, the critical common denominator among nearly all modification clauses: open-ended and unilateral rights—for the platform—to amend the TOU at will. Most also stipulate that a user’s continued use of the platform constitutes an acceptance of any modifications.³²³ Notice obligations for modification exhibit more variation, however. Curiously, the Tinder modification clause (above) contains a notice commitment yet also reserves an almost unqualified right to amend without notice. Those terms seem awkward to reconcile. Other modification clauses contain commitments to provide notifications for material changes to the TOU.³²⁴ However, as illustrated in the Truth Social modification clause, consumers often bear the burden of monitoring the updates and modifications to the TOUs:

It is your responsibility to periodically review these Terms of Service to stay informed of updates. You will be subject to and will be deemed to have been made aware of and to have accepted, the changes in any revised Terms of Service by your continued use of the Site and the App after the date such revised Terms of Service are posted.

Many platforms frequently modify their TOUs.³²⁵ Because modification rights tend to be so open-ended and unilateral, adverse changes are an ongoing risk for consumers. Those risks are more than theoretical: Venmo, for instance, recently implemented particularly difficult requirements for consumers who wish to opt-out of arbitration.³²⁶ As another example, last year TikTok unilaterally revised its privacy policies to authorize itself to collect

323. See, e.g., *Terms of Service*, DISCORD, *supra* note 142 (“If you continue to use our services after the changes have taken effect, it means that you agree to the changes.”).

324. See, e.g., *Terms of Service*, GRINDR, <https://www.grindr.com/terms-of-service> (last updated Apr. 30, 2023) (“If Grindr determines, in its sole discretion, that the changes We make to this Agreement are material, We will notify You in advance (e.g., within the App or via email).”).

325. See Marotta-Wurgler & Taylor, *supra* note 22, at 274–75.

326. See *supra* notes 305–309.

“biometric identifiers and biometric information” from user content.³²⁷ After our scrape, as we wrote and prepared this Article, several of the platforms in our dataset modified their TOUs. Instagram, for one, reinstated an arbitration clause.³²⁸

Unilateral modification at scale has undeniable efficiencies. With billions or millions of parties involved, modifications with real notice, review, and assent could have major transaction costs. Yet, as with other aspects of form contracting at scale, asymmetry prevails: efficiency is transferred to the drafting party while risk and costs are transferred to consumers.

V. CONCLUSION

Nowadays, almost everyone has a smartphone. People spend a lot of time—often, several hours per day—on those devices. The average smartphone has dozens of apps, many of which harvest enormous quantities of intimate data. The most influential social platforms have grown systemically important, mediating unprecedented swaths of data, human activity, and commerce.³²⁹ Yet, in the United States, the current state of law and policy means that many digital platforms are effectively self-regulated. That status quo elevates the consequence of platform-to-consumer contracts. As a result, the TOUs of the largest platforms are much more than garden-variety consumer contracts; they are de facto frameworks of digital governance. They often determine profound questions facing technology and society.

Meanwhile, the yawning gap between classic contract doctrine and modern contracting is widening. The advent of wrap contracts prompted a reckoning with contracting fundamentals in the 1990s.³³⁰ Then came the Internet Age. Online TOUs and privacy policies brought a slew of new challenges. Now, with contracts forming on a societal scale through mobile devices, the

327. See *Privacy Policy*, TIKTOK, <https://www.tiktok.com/legal/privacy-policy-us?lang=en> (last updated June 2, 2021); see also Sarah Perez, *TikTok Just Gave Itself Permission to Collect Biometric Data on U.S. Users, Including ‘Faceprints and Voiceprints’*, TECHCRUNCH (June 3, 2021), <https://techcrunch.com/2021/06/03/tiktok-just-gave-itself-permission-to-collect-biometric-data-on-u-s-users-including-faceprints-and-voiceprints> (summarizing modifications to the TikTok privacy policy around biometric data).

328. *Terms of Use*, INSTAGRAM, <https://help.instagram.com/581066165581870> (last updated July 26, 2022). Instagram’s TOU as of January 2022 did not contain an arbitration clause. That omission is curious because Instagram’s TOU used arbitration clauses as early as 2012. See Jonathan Weber & Dan Levine, *Instagram Retreats on Some Service Terms After Backlash*, REUTERS (Dec. 20, 2012), <https://www.reuters.com/article/us-usa-instagram-changes-idUSBRE8BK03K20121221>.

329. See *supra* Section II.B.

330. See *supra* Section II.A.

smartphone era has introduced new pressures for traditional doctrines. As TOUs overwhelm consumers in their volume and difficulty, they also overwhelm fundamental tenets of contract law. Yet, despite profound changes in the marketplace and modern consumer reality, contract law remains static. Our findings suggest that the disconnect between contract doctrine and consumer reality is wider than ever.

Using interdisciplinary methods, we illustrate key dimensions of that decoupling. As for volume, we demonstrate that the length of platform-to-consumer contracts transfers substantial burdens and costs to users.³³¹ Additionally, our longitudinal comparisons with other empirical studies suggest that length has expanded in recent years.³³² In terms of linguistic features, our results illustrate the extraordinary complexity of platform-to-consumer contracts across multiple metrics.³³³ In effect, most TOUs are beyond the grasp of almost any audience outside of judges and lawyers. Our longitudinal comparisons with previous research highlight the need for further research into the direction of change (e.g., increasing or decreasing complexity) in platform-to-consumer contracts over time.³³⁴

Our results quantify dramatic asymmetries in platform-to-consumer contracting. Procedural asymmetries—such as volume, costs, and difficulty—have warped the concepts of reasonable notice and meaningful assent. Put another way, the “signal-to-noise” ratio for consumers is more painful than ever.³³⁵ But there are acute substantive asymmetries as well. Our metadata illustrates some of those tendencies: highly unilateral conditions of modification, the frequency of arbitration clauses and class waivers, and onerous opt-out procedures.³³⁶ In sum, our findings offer evidence that TOUs—already long, difficult, and asymmetrical—have become even longer, more difficult, and more asymmetrical. Finally, as for methodology, this Article

331. *See supra* Section IV.D.

332. *See supra* Tables 2–3.

333. *See supra* Sections IV.A–B.

334. *See supra* Table 1.

335. *See* James Grimmelmann, *Saving Facebook*, 94 IOWA L. REV. 1137, 1182 (2009) (“Between the lawyerly caution, the weasel words, the commingling of many standard terms with the occasional surprising one, the legally mandated warnings and disclaimers, and the legalese, most privacy policies have a painfully low signal-to-noise ratio.”).

336. *See supra* Section IV.D. As for longitudinal trends, further research is needed, but there are some indications that TOUs are increasingly asymmetrical in substantive terms as well. Arbitration clauses, for instance, are far more common in our dataset than in previous studies. *See supra* Table 4.

also presents a novel approach to using corpus linguistics methods in legal research, an approach we hope to develop further in future work.³³⁷

VI. ANNEX 1: INDICES OF NOUN PHRASE COMPLEXITY

<i>Phrase Types</i>	<i>Description</i>	<i>Label</i>	<i>Example</i>
Passive nominal subject	NP that serves as the syntactic subject of a passive clause	nsubj_pass	[Your account] ^{nsubj_pass} was terminated.
Nominal subject	Subject of a (nonpassive) clause that is an NP	nsubj	[You] ^{nsubj} are responsible for safeguarding your account.
Nominal complement	Noun or NP that serves as a complement in a copular clause	ncomp	Twitter is [a social platform]. ^{ncomp}
<i>Dependent Types</i>	<i>Description</i>	<i>Label</i>	<i>Example</i>
Determiners	Quantifiers, articles, and demonstratives	det	Twitter gave you [a] ^{det} notice.
Adjectival modifiers	Adjective that modifies an NP or a noun	amod	Tiktok is a [diverse] ^{amod} community.
Prepositional phrases	Prepositional phrase that modifies an NP or a noun	prep	You are responsible [for safeguarding your account]. ^{prep}
Possessives	Possessive pronoun or noun that modifies a noun or NP	poss	[Our] ^{poss} community guidelines support individuals.
Nouns as modifiers	Noun or NP that modifies a noun or NP	nn	We do not allow [terrorist] ⁿⁿ organizations on this platform.

Sources: Kyle (2016), Kyle & Crossley (2018).

Notes: This table displays selected examples of noun phrase types and dependent types measured in TAASSC Noun Phrase Elaboration. For the sake of clarity, we do not include the full list of indices, which are available at the sources cited directly above. The example sentences are selected and edited text samples from our dataset.

337. See *supra* notes 18–22, 139–141 and accompanying text (distinguishing our methods in this Article from legal corpus linguistics scholarship geared towards judicial interpretation).

VII. ANNEX 2: SELECTED TOU RESULTS & METADATA

<i>Platform</i>	<i>Category</i>	<i>FRE</i>	<i>MATTR</i>	<i>Fichtner's C</i>	<i>TAASSC</i>	<i>Word Count</i>	<i>Governing Law</i>
Badoo	Dating	39.55	.65	96.07	1.85	9053	Texas
BeReal	Social	22.21	.65	51.48	4.97	2355	France
Bigo Live	Creator	31.28	.64	73.38	7.5	3238	Singapore
Brainly	Q&A	27.81	.61	105.69	7.12	10611	New York
Bumble	Dating	35.85	.64	84.87	5.41	8716	Texas
Bunch Group	Chat	29.23	.63	83.56	3.54	4536	California
Coffee M. Bagel	Dating	29.76	.63	85.01	-1.1	5764	California
Discord	Chat	33.13	.63	97.68	5.84	7135	California
eHarmony	Dating	25.93	.65	67.65	5.59	9633	California
Facebook	Social	43.76	.65	72.91	-16.18	4140	California
Gab	Social	29.31	.63	77.63	11.49	4897	Pennsylvania
Gettr	Social	27.02	.64	112.37	5.29	11197	New York
Grindr	Dating	40.86	.61	66.51	7.53	11282	California
GroupMe	Chat	42.09	.63	47.62	1.22	14449	Other
Hago	Chat	27.67	.64	145.05	6.67	7774	Singapore
happn	Dating	34.6	.65	46.69	10.16	8349	France
Helo	Social	27.04	.63	158.71	7.33	6950	Singapore
Her	Dating	38.05	.62	72.88	1.42	6763	California
Hinge	Dating	29.77	.65	83.56	4.29	12041	Texas
Hoop	Dating	46.20	.63	58.41	-9.47	3180	France
Imgur	Creator	41.25	.66	72.45	-3.68	1818	California
imo	Chat	36.32	.65	86.31	0.74	5095	California
Instagram	Social	42.74	.65	75.29	-12.5	3345	California
Kik	Chat	28.26	.63	96.34	0.09	7514	California
Likee	Creator	28.19	.63	110.46	4.57	4110	Singapore
Line	Chat	43.26	.60	134.18	10.65	3383	Japan
LinkedIn	Social	39.55	.63	69.60	-9.7	4323	California
MarcoPolo	Chat	37.17	.64	71.39	2.33	5702	California
Match	Dating	32.11	.65	100.09	4.38	12282	Texas
MeWe	Social	35.31	.63	74.01	1.16	4787	California
OK	Social	32.49	.59	72.37	23.65	8884	Russia
OkCupid	Dating	26.18	.64	111.53	4.79	12418	Texas
Parler	Social	28.73	.64	95.72	5.3	2964	D.C.
Pinterest	Social	43.61	.67	55.09	-4.83	2303	California
Public	FinTech	26.19	.63	107.03	4.59	9227	New York
QQ	Chat	33.5	.61	86.75	6.48	6787	China
Quora	Q&A	37.53	.64	62.45	4.96	5479	California
Qzone	Social	21.25	.59	125.74	2.99	4706	Hong Kong

<i>Platform</i>	<i>Category</i>	<i>FRE</i>	<i>MATTR</i>	<i>Fichtner's C</i>	<i>T.A.A.S.S.C</i>	<i>Word Count</i>	<i>Governing Law</i>
Rave	Chat	19.13	.61	119.67	5.16	7031	Ontario
Reddit	Subculture	33.41	.63	106.25	-3.78	3765	California
Rumble	Creator	25.17	.63	101.44	9.66	5358	Texas
ShareChat	Chat	40.8	.64	57.66	-3.49	4067	India
Signal	Chat	38.38	.63	43.10	-3.15	1545	California
Sina (Weibo)	Social	33.76	.62	64.05	15.24	3308	California
Skype	Chat	42.09	.63	47.62	1.22	14449	Other
Slack	Chat	21.96	.64	70.43	11.91	5830	California
Snapchat	Chat	39.25	.65	88.02	-6.19	5543	California
Soul	Dating	38.85	.63	109.43	6.22	11916	China
Swarm	Dating	46.27	.62	48.33	-4.14	1666	California
SweetMeet	Dating	30.23	.62	106.82	14.27	5064	Czech Rep.
Tagged	Dating	29.68	.61	95.22	8.7	6292	California
Tango	Creator	28.02	.62	108.37	5.49	12533	California
Tantan	Dating	15.48	.65	144.97	6.99	4109	Hong Kong
Teams	Chat	42.09	.63	47.62	1.22	14449	Other
Telegram	Chat	47.23	.73	15.80	-5.03	75	Other
Textfree	Chat	27.92	.62	117.04	3.16	9744	California
The League	Dating	35.38	.63	96.59	5.68	9336	California
TikTok	Creator	28.78	.63	144.32	6.89	7497	Other
Tinder	Dating	31.95	.64	107.39	-0.06	6338	Texas
Tiya	Chat	34.97	.64	75.43	-0.86	1827	Singapore
Truth Social	Social	24.64	.62	145.89	5.28	7934	Florida
Tumblr	Social	32.49	.64	98.76	1.99	6620	New York
Twitch	Creator	17.8	.63	110.25	9.79	6644	California
Twitter/X	Social	22.15	.64	136.44	-0.62	3074	California
Venmo	FinTech	25.03	.63	141.14	3.2	20505	New York
Viber	Chat	36.23	.63	78.72	0.32	8788	England
Vimeo	Creator	33.48	.67	53.48	-1.89	5012	New York
VK	Social	28.86	.60	83.03	29.04	7387	Russia
Wattpad	Creator	45.87	.66	61.41	-1.85	2804	Ontario
WeChat	Chat	29.11	.60	98.77	4.85	8596	Singapore
Weixin	Chat	25.04	.63	95.03	12.47	5775	China
WhatsApp	Chat	28.78	.63	91.76	0.85	5289	California
Wink	Dating	34.7	.65	99.97	-0.8	9105	California
Youtube	Creator	34.84	.64	82.81	-3.32	3606	California
Yubo	Chat	35.44	.65	68.73	6.9	3954	France
Average	—	32.80	.63	88.75	3.44	6720	—
Median	—	32.49	.63	86.31	4.19	5830	—
Mode	—	42.08	.63	47.62	4.38	14449	California

RESEARCHER ACCESS TO SOCIAL MEDIA DATA: LESSONS FROM CLINICAL TRIAL DATA SHARING

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ABSTRACT

For years, social media companies have sparred with lawmakers over how much independent access to platform data they should provide researchers. Sharing data with researchers allows the public to better understand the risks and harms associated with social media, including areas such as misinformation, child safety, and political polarization. Yet researcher access is controversial. Privacy advocates and companies raise the potential privacy threats of researchers using such data irresponsibly. In addition, social media companies raise concerns over trade secrecy: the data these companies hold and the algorithms powered by that data are secretive sources of competitive advantage. This Article shows that one way to navigate this difficult strait is by drawing on lessons from the successful governance program that has emerged to regulate the sharing of clinical trial data. Like social media data, clinical trial data implicates both individual privacy and trade secrecy concerns. Nonetheless, clinical trial data's governance regime was gradually legislated, regulated, and brokered into existence, managing the interests of industry, academia, and other stakeholders. The result is a functionally successful (albeit imperfect) clinical trial data-sharing ecosystem. Part II sketches the status quo of researchers' access to social media data and provides a novel taxonomy of the problems that arise under this regime. Part III reviews the legal structures governing sharing of clinical trial data and traces the history of scandals, investigations, industry protest, and legislative response that gave rise to the mix of mandated sharing and experimental programs we have today. Part IV applies lessons from clinical trial data sharing to social media

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data and charts a strategic course forward. Three primary lessons emerge: first, the benefits of research on otherwise secret data are cascading and unpredictable; second, law without institutions to implement the law is insufficient; and, third, data access regimes must be tailored to the different sorts of data they make available.

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I. INTRODUCTION

In 2018, researchers at Harvard University announced that they had entered into a landmark voluntary partnership with Facebook called Social Science One (SS1) to gather and share data on the inner workings of the social media goliath. The announcement was met with great fanfare. Researchers had been clamoring for data access in order to better understand the dynamics of social media and its effects on everything from elections to teenage mental health to free speech online. Today, however, this grand experiment in voluntary social media data sharing is remembered as a fiasco. Facebook delivered only a fraction of the data it had promised; technical “fixes” made by the company to protect user privacy rendered certain data useless for research; and funders, academics, and civil society partners all eventually withdrew from the project.¹

Two years after SS1, researchers at New York University’s (NYU) Ad Observatory announced that they were taking a different approach to studying Facebook: conducting large-scale research, with or without the company’s consent. The Ad Observatory focused on understanding political advertising on Facebook and tracked electoral races across the country. Ad Observatory researchers developed a browser extension, externally audited for security and privacy, that scraped ad data from Facebook and contributed it to an NYU-run database. Months later, Facebook suspended the Ad Observatory researchers’ access to Facebook. Facebook’s stated justification was to “protect people’s privacy.”²

These two abbreviated anecdotes illuminate a few things about the current state of researchers’ access to social media. First, they highlight that significant numbers of researchers in academia and civil society actively want to research social media and will go to great lengths to do so. Second, they show that independent researchers lack sufficient access to various forms of social media data, including content data about what users see, moderation data about how platforms such as Facebook promote and censor content, and distribution data about what kinds of users see what kinds of content. Third, they show that when platforms themselves wield absolute control over which researchers get access to data (and how much, and on what terms), platforms can thwart critical research and shape the literature that emerges by selectively providing access to data.

As we explain in this Article, we need research on social media to flourish if we, as a social-media-obsessed world, are to flourish. For example,

1. *Infra* Section II.B.

2. *Id.*

understanding how content is shared and amplified on social media is essential to understanding how right-wing populism, xenophobia, and conspiratorial misinformation about COVID-19 have attracted large and growing online followings.³ Understanding social media is also essential to understanding ourselves—how our psyches and societies are reshaped by our screentime and social media’s new norms. Understanding social media is essential, too, to understanding social media platforms, some of the 21st century’s richest and most powerful companies—how they forestall competition and regulation,⁴ how they expand data collection in increasingly elaborate and far-reaching schemes of “informational capitalism” (or, perhaps, “surveillance capitalism”),⁵ and more.⁶

3. ELIZABETH HANSEN SHAPIRO, MICHAEL SUGARMAN, FERNANDO BERMEJO & ETHAN ZUCKERMAN, *NEW APPROACHES TO PLATFORM DATA RESEARCH* (2021); CAITLIN VOGUS, *IMPROVING RESEARCHER ACCESS TO DIGITAL DATA: A WORKSHOP REPORT 19* (2022), <https://cdt.org/wp-content/uploads/2022/08/2022-08-15-FX-RAtD-workshop-report-final-int.pdf>; *see also* Julia Angwin, *The Gatekeepers of Knowledge Don’t Want Us to See What They Know*, N.Y. TIMES (July 14, 2023) (“To truly hold the platforms accountable, we must support the journalists who are on the front lines of chronicling how despots, trolls, spies, marketers and hate mobs are weaponizing tech platforms or being enabled by them.”).

4. KRISTINA KARLSSON, *NEW RULES FOR BIG TECH: A CONVERSATION FOR CHANGE 1* (2018) (“Facebook has continued to expand its market power and adapt to trends in the space by acquiring potential competitors, such as Instagram and WhatsApp. Antitrust regulators have failed to understand how these platforms are nascent competitors and thus waded through a series of mergers that greatly diminished consumer choice of social media platforms.”).

5. JULIE E. COHEN, *BETWEEN TRUTH AND POWER: THE LEGAL CONSTRUCTIONS OF INFORMATIONAL CAPITALISM* (2019) (describing “informational capitalism” as an economic system in which information production and information processing are dominant modes of producing and capturing value); SHOSHANA ZUBOFF, *THE AGE OF SURVEILLANCE CAPITALISM* (2019) (describing “surveillance capitalism” as an economic system in which users’ data is used to make predictions about users, control their behavior, and so extract value); Amy Kapczynski, *The Law Of Informational Capitalism*, 129 YALE L.J. 1460, 1466 (2020); Nathaniel Persily & Joshua A. Tucker, *Conclusion: The Challenges And Opportunities For Social Media Research*, in *SOCIAL MEDIA AND DEMOCRACY: THE STATE OF THE FIELD, PROSPECTS FOR REFORM* 313, 313 (Nathaniel Persily & Joshua A. Tucker eds., 2020).

6. Irene V. Pasquetto, Briony Swire-Thompson, Michelle A. Amazeen, Fabrício Benevenuto, Nadia M. Brashier, Robert M. Bond, Lia C. Bozarth, Ceren Budak, Ullrich K. H. Ecker, Lisa K. Fazio, Emilio Ferrara, Andrew J. Flanagin, Alessandro Flammini, Deen Freelon, Nir Grinberg, Ralph Hertwig, Kathleen Hall Jamieson, Kenneth Joseph, Jason J. Jones, R. Kelly Garrett, Daniel Kreiss, Shannon McGregor, Jasmine McNealy, Drew Margolin, Alice Marwick, Filippo Menczer, Miriam J. Metzger, Seungahn Nah, Stephan Lewandowsky, Philipp Lorenz-Spreen, Pablo Ortellado, Gordon Pennycook, Ethan Porter, David G. Rand, Ronald E. Robertson, Francesca Tripodi, Soroush Vosoughi, Chris Vargo, Onur Varol, Brian E. Weeks, John Wihbey, Thomas J. Wood & Kai-Cheng Yang, *Tackling Misinformation: What Researchers Could Do with Social Media Data*, HARV. KENNEDY SCHOOL (HKS)

Yet researchers' access to data remains controversial. Independent privacy advocates raise concerns over the sensitivity of social media data held by companies and the potential threats of researchers using such data irresponsibly.⁷ Social media companies themselves increasingly deploy (or perhaps "weaponize") arguments about individual privacy to justify intense secrecy.⁸ These companies wield privacy arguments at both the doctrinal and theoretical levels, arguing that researcher access (1) would violate various extant laws, such as the European Union's General Data Protection Regulation (GDPR), and (2) is normatively undesirable because it would expose individuals who use social media to a raft of harms that outweigh the research's foreseeable benefits.⁹ In addition, the same social media companies raise separate but equally serious concerns over intellectual property. Again, these companies raise commercial secrecy objections at both the doctrinal level and the theoretical level, asserting that researcher access would (1) violate state and federal trade secrecy law, and (2) be normatively undesirable because it would encourage "free riding" by competitors and thereby erode crucial "incentives to innovate."¹⁰

In industry's telling, and in much popular discourse, privacy and incentives to innovate have become a kind of "Scylla and Charybdis" of sharing social media data—two obstacles that any data-sharing effort must navigate to

MISINFORMATION REV. 1, 8 (2020) (on social media platforms' role in propagation of misinformation).

7. SHAPIRO ET AL., *supra* note 3, at 45 ("The rules and regulations around user privacy, combined with the political force of privacy advocates, are by far the biggest barrier to platform companies' ability and willingness to share data with researchers."); VOGUS, *supra* note 3, at 33 ("Properly balancing competing interests, such as the risks to user privacy, may require policymakers to take incremental steps to improve researchers' access to data, and to carefully assess whether those steps are serving the public interest.").

8. For a broad analysis, see Rory Van Loo, *Privacy Pretexts*, 108 CORNELL L. REV. 1 (2022). For a specific example, see generally AMY O'HARA & JODI NELSON, EVALUATION OF THE SOCIAL SCIENCE ONE—SOCIAL SCIENCE RESEARCH COUNCIL—FACEBOOK PARTNERSHIP (2020) (explaining how Facebook concluded it could not provide previously-promised data access to researchers because of concerns over user privacy).

9. *Id.*; see also Matias Vermeulen, *The Keys to the Kingdom* (July 27, 2021), <https://knightcolumbia.org/content/the-keys-to-the-kingdom> (analyzing whether GDPR creates barriers to researcher access).

10. FACEBOOK, COMMENTS TO THE FEDERAL TRADE COMMISSION ON DATA PORTABILITY 13 (2020) (arguing that portability of and access to "all observed and inferred data could also result in a different sort of burden: the disclosure of trade secret or other proprietary information developed by a business to enhance or differentiate its services. Enabling people to port that kind of information could reduce incentives for businesses to develop it in the first place"); VOGUS, *supra* note 3, at 25 ("[A]ccess to non-public data raises greater risks of invading users' privacy and revealing trade secrets or security measures used by hosts.").

succeed.¹¹ Social media companies cast this two-headed trap as so fearsome that it may ultimately doom even the cleverest efforts. Some regulators and legislators have nonetheless persisted in proposing and enacting new laws to expand researcher access to social media data,¹² but they face stiff headwinds. Concerns over privacy and incentives to innovate have chilled nascent efforts toward real transparency and accountability of social media.¹³

The key question that this Article addresses is this: Does a regulatory pathway exist to achieve meaningful researcher access to social media data while protecting privacy and incentives to innovate?

This is an urgent question, and we are far from the first to write on it. Daphne Keller;¹⁴ Aline Iramina, Maayan Perel & Niva Elkin-Koren;¹⁵ Rebekah Tromble;¹⁶ and the Working Group established by the European Digital Media Observatory¹⁷ are among those who have offered important views on this question. The European Union is already moving to mandate researcher access to social media platform data.¹⁸ Its Digital Services Act, among other initiatives, requires qualifying platforms to grant access to certain

11. E.g., Paddy Leerssen, *Platform Research Access in Article 31 of the Digital Services Act*, VERFASSUNGSBLOG (Sept. 7, 2021), <https://verfassungsblog.de/power-dsa-dma-14/>. The twin obstacles of privacy and incentives to innovate are discussed in greater detail in *infra* Part II.

12. See generally VOGUS, *supra* note 3 (discussing U.S. legislative proposals to guarantee researcher access to social media data); Alex Engler, *Platform Data Access Is a Lynchpin of the EU's Digital Services Act*, BROOKINGS INST. (Jan. 15, 2021), <https://www.brookings.edu/blog/techtank/2021/01/15/platform-data-access-is-a-lynchpin-of-the-eus-digital-services-act/> (presenting researcher access provisions of EU's Digital Services Act).

13. See SHAPIRO ET AL., *supra* note 3; VOGUS, *supra* note 3.

14. Daphne Keller, *Delegated Regulation on data access provided for in the Digital Services Act—Comment of Daphne Keller*, EUR. COMM'N (May 22, 2023), https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13817-Delegated-Regulation-on-data-access-provided-for-in-the-Digital-Services-Act/F3422727_en; Daphne Keller & Max Levy, *What's the Best Path Forward for Platform Transparency Regulation*, LAWFARE (July 11, 2022), <https://www.lawfaremedia.org/article/getting-transparency-right>.

15. Aline Iramina, Maayan Perel (Filmar) & Niva Elkin-Koren, *Paving the Way for the Right to Research Platform Data* (June 19, 2023), <https://ssrn.com/abstract=4484052>.

16. Rebekah Tromble, *Where Have All the Data Gone? A Critical Reflection on Academic Digital Research in the Post-API Age*, 7 SOC. MEDIA + SOC'Y 1 (2021).

17. EUROPEAN DIGITAL MEDIA OBSERVATORY WORKING GROUP, REPORT OF THE EUROPEAN DIGITAL MEDIA OBSERVATORY'S WORKING GROUP ON PLATFORM-TO-RESEARCHER DATA ACCESS (2022), <https://edmo.eu/wp-content/uploads/2022/02/Report-of-the-European-Digital-Media-Observatorys-Working-Group-on-Platform-to-Researcher-Data-Access-2022.pdf>.

18. Iramina et al., *supra* note 15.

requested information to vetted researchers, although the processes for doing so have not yet been finalized.¹⁹

We think the answer is yes—a regulatory pathway *does* exist to achieve meaningful researcher access to social media data while protecting privacy and incentives to innovate. While the Digital Services Act’s vetted researcher access mandate is a valuable source of insight and inspiration, we choose to make a complementary case focusing and drawing on U.S. law to argue that researcher access can be achieved here in the United States—because, indeed, in other technology industries, it has already. We do not have to look only to “pro-regulatory” Europe for comparative lessons on the potential virtues of regulation: our own regulatory history and landscape offers such lessons, too.²⁰

The main contribution of this Article is comparative. It imports hard-won lessons from other fields of technology—pharmaceuticals²¹ and medical devices—to enrich the current debate over researcher access to social media data.²² The complexity of these technologies rivals that of social media—as does the power of their industries and lobbies, especially in the United States. And yet in pharma and medical devices, we have successfully established mechanisms for broad sharing of what would otherwise be secret industry data.²³ Along the way, these fields successfully navigated a similarly narrow strait between potential harms to individual privacy and harms to incentives to innovate.

19. Regulation on a Single Market for Digital Services (Digital Services Act), 2022 O.J. (L 277) 1, 27 (“This Regulation therefore provides a framework for compelling access to data from very large online platforms and very large online search engines to vetted researchers affiliated to a research organisation within the meaning of Article 2 of Directive (EU) 2019/790, which may include, for the purpose of this Regulation, civil society organisations that are conducting scientific research with the primary goal of supporting their public interest mission.”). For an explainer of researcher access and the processes ahead, see John Albert, *A Guide to the EU’s New Rules for Researcher Access to Platform Data*, ALGORITHM WATCH (Dec. 7, 2022), <https://algorithmwatch.org/en/dsa-data-access-explained/>.

20. This point is not meant to undercut the significance of the Digital Services Act for non-EU researchers who will likely, under the delegated acts, gain access to hitherto unavailable social media platform data.

21. Throughout this Article, for concision, we generally use the terms “pharmaceutical” and “drug” broadly to describe both small-molecule drug products and biologic drug products. This broad usage is admittedly inexact but consistent with the common practice of the Food & Drug Administration (FDA) and others. See, e.g., *Drugs@FDA Glossary*, FDA, <https://www.accessdata.fda.gov/scripts/cder/daf/index.cfm?event=glossary.page> (last visited Dec. 27, 2023) (defining “Drug” to include biological products).

22. Small portions of a preliminary version of the ideas in this Article were published in a 2022 white paper, GABRIEL NICHOLAS & DHANARAJ THAKUR, *LEARNING TO SHARE: LESSONS ON DATA-SHARING FROM BEYOND SOCIAL MEDIA* (2022).

23. See *infra* Part III.

In this Article, we focus on one specific kind of data generated by pharmaceutical and medical device companies: clinical trial data. Clinical trials are research studies on human volunteers that answer questions about the safety and efficacy of different health interventions, such as drugs, vaccines, and devices. They are the “gold standard” of evidence-based medicine. They are expensive to conduct, and their data is enormously valuable to doctors’ care for patients, regulatory approval, businesses’ decision-making and marketing, and scientific research.

Until the 1990s and 2000s, the pharmaceutical and medical device industries could and did keep clinical trial results proprietary. The result was a comparative dark age of information, with drug companies “cherry-picking” only their most favorable data for publication in the medical literature, and falsely marketing unsafe and ineffective products as wonder drugs. A series of high-profile scandals ensued, which involved companies that hid unfavorable data from independent researchers and the broader public, leading to widespread patient harm. These scandals ultimately provoked landmark federal legislation in 2007 that, for the first time, mandated that industry share certain clinical trial data at an across-the-board baseline level. Today, independent researchers around the world use this data to double check the industries’ claims and the work of the industries’ central regulator, the Food & Drug Administration (FDA), identify unsafe and ineffective products, and advance science.

Before the 2007 clinical trial data-sharing mandate, the pharmaceutical and medical device industries fought it by advancing privacy and incentives-to-innovate arguments similar to those that social media companies deploy today.²⁴ For example, the largest pharmaceutical lobby warned that mandatory clinical trial data sharing would “fail to protect adequately trade secrets and confidential commercial information,” and therefore “harm the public health by discouraging the very innovation necessary to bring new medical advances to the market.”²⁵ And like most social media data, much clinical trial data implicates acute privacy concerns, as individuals’ detailed medical statuses are encoded in the data, including many statuses that expose people to discrimination and exploitation.²⁶

24. *Supra* Section III.C.

25. Letter from William W. Chin, Executive Vice President, and Jeffrey K. Francer, Vice President & Senior Counsel Scientific & Regulatory Affairs, PhRMA, to Jerry Moore, NIH Regulations Officer, National Institutes of Health (Mar. 25, 2015) (on file with the National Institutes of Health).

26. *Supra* Section III.A.

Yet in the years since Congress legislated the clinical trial data-sharing mandate, no real harm to privacy or to incentives has occurred, even as independent research on that data has unlocked new uses and social benefits. If anything, the trend in clinical trial data sharing today is to push further, expanding researcher access to the most sensitive kinds of data, especially individual patient-level data (IPD) and methodological protocols that reveal exactly how companies conduct their trials and generate and interpret their own data.²⁷ As we show below, there are important proof-of-concept data-sharing initiatives led by academic centers and by administrative agencies in the United States and Canada that demonstrate even the most highly sensitive data can, under the right conditions, be shared responsibly with researchers.

We recognize that the parallels between social media data and clinical trial data are inexact. Clinical trial data sets are more standardized and far smaller than that of social media platforms. The data subjects in clinical trials are volunteers, enrolled pursuant to elaborate and independently vetted processes of informed consent, while the quality of informed consent for data collection from users of social media is widely perceived as laughable.²⁸ Some individuals' social media data is intensively sensitive in ways that even the most detailed medical data is not; social media data may reveal, for example, users' political affiliations and organizing activities, romantic preferences, travel histories, and more. The variety and profundity of harms that flow from discriminatory and other unwanted uses of social media data can therefore be even greater than the harms that flow from unwanted uses of medical data. Furthermore, social media and medical products implicate very different tradeoffs. Medical products are generally seen as innovations vital for society; social media innovations, such as algorithms targeting ads or recommending content, for example, are increasingly seen as socially deleterious.²⁹ Clinical trial and social media data access systems both need to manage tradeoffs between protection of trade secrecy and utility to researchers, but where they draw those lines will be very different.

Yet as we endeavor to show in this Article, the benefits of sharing are likely to be broadly similar. Indeed, we argue that important parallels do exist and that the history of clinical trial data sharing therefore holds important lessons for social media data sharing.³⁰ We focus on clinical trial data not because this

27. *Supra* Section III.D.

28. See Ari Ezra Waldman, *Privacy, Notice, and Design*, 21 STAN. TECH. L. REV. 74 (2018).

29. See generally MARIANA MAZZUCATO, *THE VALUE OF EVERYTHING: MAKING AND TAKING IN THE GLOBAL ECONOMY* (2018).

30. Social media companies sometimes insist that their technologies are unprecedented and *sui generis*, and thus cannot be regulated like technologies past; a rich literature shows that's false. See, e.g., MARIANA MAZZUCATO, *THE ENTREPRENEURIAL STATE* (1st ed. 2013)

data is, as a technical matter, most similar to social media data, but because the technical, institutional, and legal structures that *govern* clinical trial data sharing are particularly mature, tested, and successful, as we show below. In future work, we and other scholars may draw other instructive lessons from efforts to share other kinds of medical data, such as electronic medical record data.³¹

In this Article, we offer three primary lessons for those studying, advocating, and legislating social media data sharing: first, the benefits of research on otherwise secret data are cascading and unpredictable; second, law without institutions to implement the law is insufficient; and third, different kinds of data must be treated differently.³²

The history of clinical trial data sharing shows that effective researcher access and use of industry data is impossible without powerful independent institutions that can serve as counterweights to extraordinarily powerful industries. Such counterweight institutions, whether public agencies, private independent institutions, or both, could serve as “regulators” of the social media industry. To support research, these regulators may serve many roles:

(technology and pharmaceutical companies arguing they deserve regulatory exceptions); Rebecca Haw Allensworth, *Antitrust’s High-Tech Exceptionalism*, 130 YALE L.J. F. 588 (2021) (detailing how courts granted tech companies special exceptions to antitrust rules due to “views about digital markets in the early 2000s—that they were uniquely dynamic, innovative, and competitive” that are not only false, but have also prevented competition in the tech sector); Yaël Eisenstat & Nils Gilman, *The Myth of Tech Exceptionalism*, NOEMA MAGAZINE (Feb. 10, 2022), <https://www.noemamag.com/the-myth-of-tech-exceptionalism/> (detailing how big tech companies use the narrative of innovation to ward off regulation); Richard Waters, *Tech’s Self-Declared Exceptionalism is Coming to an End*, FIN. TIMES (Sept. 19, 2019), <https://www.ft.com/content/1cf9ac56-da5d-11e9-8f9b-77216ebe1f17>; see generally LOUIS HYMAN, TEMP: THE REAL STORY OF WHAT HAPPENED TO YOUR SALARY, BENEFITS, AND JOB SECURITY (2019) (detailing the historical roots of gig work in outsourcing innovations of the 1960s and 1970s). The belief in new technologies’ revolutionary status is closely linked to cults of genius that arise around technology company founders. Luke Savage, *Elon Musk is Destroying the Myths of Silicon Valley in Front of Our Very Eyes*, JACOBIN (Nov. 27, 2022), https://jacobin.com/2022/11/elon-musk-twitter-silicon-valley-myth?mc_cid=aa8219b840&mc_cid=f0c834022c (“The main ingredient in this futurist cocktail is typically said to be a rare breed of exceptional individuals who rise to the top through a combination of eccentric genius and personal grit.”).

31. For more on efforts to share electronic medical record data, see, e.g., SHARONA HOFFMAN, ELECTRONIC HEALTH RECORDS AND MEDICAL BIG DATA (thorough survey of the state of electronic health record sharing as of 2016); *European Health Union: A European Health Data Space for People and Science*, EUR. COMM’N (May 3, 2022), https://ec.europa.eu/commission/presscorner/detail/en/ip_22_2711 (describing the European Health Data Space initiative). For a brief analysis of parallels between sharing such data and sharing social media data, see Naomi Shiffman, *Tools for Platform Research: Lessons from the Medical Research Industry*, TECH POL’Y PRESS (Apr. 26, 2023), <https://techpolicy.press/tools-for-platform-research-lessons-from-the-medical-research-industry/>.

32. See *infra* Part II, especially Section II.C through Section II.E.

they monitor and enforce industries' compliance with data sharing laws; collect, standardize, curate, steward, and share data; govern researchers' access and use of data; explain to researchers and the broader public how to use data; and sometimes fund worthy research. These institutions need not be public (though most are in the world of clinical trial data sharing); they can be academic or non-governmental organizations. But they do need to be functionally independent from industry; pharmaceutical industry-funded clinical trial data sharing initiatives failed to spark useful research and to check the industry's worst excesses.

The history of clinical trial data sharing also shows that different kinds of data should be treated differently. Perhaps the point is self-evident, but it is also vital. Today federal legislation mandates sharing of certain clinical trial data—so-called “summary data” characterizing broad trends, as well as certain “metadata” on how data is generated—on a public website accessible from anywhere in the world. This kind of blunt mandatory disclosure works well for data of high value to researchers and for which sharing poses low risk. For more sensitive data—individual participant data (IPD), which can easily be reidentified, or certain trial protocols that reveal industries' innovative and confidential scientific methods—blunt disclosure to the general public is inappropriate. Instead, more sensitive data tends to be shared only with trusted researchers subject to a raft of constraints on access and use.

Before we turn to the body of the Article, a word on the Article's limitations—on what this Article is and is not. First, we intend this Article as a primarily descriptive, positivist account of how law and technology currently work. Much of the description and analysis of clinical trial data sharing (and sharing of other kinds of medical data) is in the medical and scientific literature rather than the law review literature, and thus has received comparatively little attention from legal scholars, activists, and other researchers focused on social media.³³ We see value in building a bridge between distinct literatures and distinct readerships.

Second, we recognize and decline to address, in this Article, a large set of important theoretical and doctrinal questions attached to the value of social media data sharing. For example, what is the fundamental value of social media? Is the collection of social data ethical and desirable in the first place? What theory (or theories) of privacy should inform laws governing social media? Under existing doctrine, does any form of social media data qualify for

33. *But see* Naomi Shiffman, *Tools for Platform Research: Lessons from the Medical Research Industry*, TECH POL'Y PRESS (Apr. 26, 2023), <https://techpolicy.press/tools-for-platform-research-lessons-from-the-medical-research-industry/> (drawing explicit parallels between sharing privacy-sensitive medical data and sharing social media data).

trade secrecy protection, or other forms of intellectual property protection? Should it, from a public policy perspective? The three of us have grappled with some of these questions in other work,³⁴ and will continue to, but we put these questions aside for this Article.

Third, this Article largely accepts the social media industry's professed concerns over privacy and incentives to innovate. There are, of course, compelling reasons to be skeptical.³⁵ But here we endeavor to show that it is possible to take the social media industry's concerns seriously and overcome them. This Article argues that legislators and regulators concerned with protecting privacy and intellectual property rights in sensitive privately held data can nonetheless devise rules and institutions to share that data with independent researchers responsibly. This is, at the very least, precisely what has happened with the pharmaceutical and medical device industries.

The Article proceeds as follows. Part II provides a legal and technical description of the current state of researchers' access to social media data and presents a novel taxonomy of its problems. It also describes the law and normative arguments that created and perpetuate today's status quo, with focus on trade secrecy and privacy in the United States. Part III lays out relevant lessons from clinical trial data, explaining what clinical trial data is, how it compares to social media data, and how regulatory and voluntary efforts managed to responsibly share even the most sensitive personal and trade secret data with independent researchers. Part III also gives the history of these efforts, describing first the "dark ages" of clinical trial data secrecy, when the pharmaceutical companies that created and exploited this data wielded near-total control over access to it, and then how the industry emerged from these dark ages after Congress passed data sharing requirements and invested in countervailing public and nonprofit institutions. Part IV applies the clinical trial data sharing framework's legal and institutional lessons to social media data and charts a strategic course forward toward responsible and effective social media data sharing. As noted above, one key lesson is the need to empower public or nonprofit institutions capable of confronting the powerful social media industry. Another is the value of treating different kinds of data differently. In particular, clinical trial data's tripartite distinction of individual data, summary data, and metadata promotes distinct governance structures

34. See Christopher J. Morten, *Publicizing Corporate Secrets*, 171 U. PENN. L. REV. 1319 (2023); Gabriel Nicholas, *Taking It with You: Platform Barriers to Entry and the Limits of Data Portability*, 27 MICH. TECH. L. REV. 263 (2021); see generally Salome Viljoen, *A Relational Theory of Data Governance*, 131 YALE L.J. 573 (2021).

35. See Van Loo, *Privacy Pretexts*, *supra* note 8; see also Yafit Lev-Aretz & Katherine J. Strandburg, *Privacy Regulation and Innovation Policy*, 22 YALE J.L. & TECH. 256 (2020).

that maximize researcher utility while minimizing risks to data subjects and incentives to innovate. Part V briefly concludes with a discussion of proposed legislation.

II. THE STATE OF SOCIAL MEDIA DATA SHARING

Social media companies have a wide range of approaches they can take to sharing data with researchers. This Part offers a snapshot of the status quo of how sharing occurs currently and the legal and technical arrangements that support that sharing. It also lays out the primary legal challenges to addressing the problem of researcher access to data that animate the rest of the Article.

A. HOW RESEARCHERS USE SOCIAL MEDIA DATA

Researchers are interested in all sorts of social media data for all sorts of reasons. Many seek to better understand the dynamics and external effects of social media ecosystems. Social and computer science researchers use platform data to better understand widespread popular problems such as the spread of mis- and dis-information,³⁶ the effects of algorithmic speech systems,³⁷ online

36. See Miriam J. Metzger, Andrew J. Flanagin, Paul Mena, Shan Jiang & Christo Wilson, *From Dark to Light: The Many Shades of Sharing Misinformation Online*, 9 MEDIA & COMMUN 134, 135 (2021); AOIFE GALLAGHER, MACKENZIE HART & CIARÁN O'CONNOR, ILL ADVICE: A CASE STUDY IN FACEBOOK'S FAILURE TO TACKLE COVID-19 DISINFORMATION 8 (2021); Chengcheng Shao, Giovanni Luca Ciampaglia, Onur Varol, Kai-Cheng Yang, Alessandro Flammini & Filippo Menczer, *The Spread of Low-Credibility Content by Social Bots*, 9 NATURE COMMUN 1 (2018).

37. E.g., Andrew Guess, Kevin Aslett, Richard Bonneau, Jonathan Nagler & Joshua A. Tucker, *Cracking Open the News Feed: Exploring What U.S. Facebook Users See and Share with Large-Scale Platform Data*, 1 J. QUANTITATIVE DESCRIPTION: DIGIT. MEDIA 1, 10–11 (2021); Cody Buntain, Richard Bonneau, Jonathan Nagler & Joshua A. Tucker, *YouTube Recommendations and Effects on Sharing Across Online Social Platforms*, 5 PROCS. ACM ON HUM.-COMPUT. INTERACTION 1 (2021); MARC FADDOUL, GUILLAUME CHASLOT & HANY FARID, A LONGITUDINAL ANALYSIS OF YOUTUBE'S PROMOTION OF CONSPIRACY VIDEOS (2020).

extremism,³⁸ child welfare,³⁹ free speech online,⁴⁰ and online discourse around elections and other democratic processes.⁴¹

Some smaller scale work may not require researchers to have access to more or different data than is available to ordinary users. For instance, sociological research that focuses on small online communities can be done without special access to data, so long as researchers can embed themselves within those communities.⁴² Larger scale and more macro-level research, however, requires access to more data than any one regular user has access to through non-automated means. For example, researchers looking to understand public views of gender-based violence on X, née Twitter (referred to from here as “Twitter”), need access to hundreds of thousands or millions

38. E.g., Homa Housseinmardi, Amir Ghasemian, Aaron Clauset, Markus Mobius, David M. Rothschild & Duncan J. Watts, *Examining the Consumption of Radical Content on YouTube*, 118 PROCS. NAT'L ACAD. SCIS. 1 (2021); WEI WEI, KENNETH JOSEPH, HUAN LIU & KATHLEEN M. CARLEY, THE FRAGILITY OF TWITTER SOCIAL NETWORKS AGAINST SUSPENDED USERS 9 (Jian Pei et al. eds., 2015); Yannick Veilleux-Lepage & Emil Archambault, *Mapping Transnational Extremist Networks: An Exploratory Study of the Soldiers of Odin's Facebook Network, Using Integrated Social Network Analysis*, 13 PERSPS. ON TERRORISM 21 (2019).

39. E.g., MUHAMMAD SHAHROZ NADEEM, PRIVACY VERIFICATION OF PHOTO/DNA BASED ON MACHINE LEARNING IN SECURITY AND PRIVACY FOR BIG DATA, CLOUD COMPUTING AND APPLICATIONS, 263–64 (Wei Ren et al. eds, 2019); Adrian Ulges, Christian Schulze, Damian Borth & Armin Stahl, *Pornography Detection in Video Benefits (a lot) from a Multi-Modal Approach*, in AMVA 12: PROCEEDINGS OF THE 2012 ACM INTERNATIONAL WORKSHOP ON AUDIO AND MULTIMEDIA METHODS FOR LARGE-SCALE VIDEO ANALYSIS 21 (2012).

40. E.g., Michael D. Conover, Jacob Ratkiewicz, Matthew Francisco, Bruno Gonçalves, Alessandro Flammini, Filippo Menczer, *Political Polarization on Twitter*, 5 PROCS. INT'L AAAI CONF. ON WEB & SOC. MEDIA 89, 90 (2011); ERWAN LE MERRER, BENOÎT MORGAN & GILLES TRÉDAN, SETTING THE RECORD STRAIGHTER ON SHADOW BANNING (2021).

41. E.g., DEEN FREELON, CHARLTON D. MCLWAIN & MEREDITH CLARK, BEYOND THE HASHTAGS: #FERGUSON, #BLACKLIVESMATTER, AND THE ONLINE STRUGGLE FOR OFFLINE JUSTICE (2016); CENTER FOR DEMOCRACY AND TECHNOLOGY, AN UNREPRESENTATIVE DEMOCRACY: HOW DISINFORMATION AND ONLINE ABUSE HINDER WOMEN OF COLOR POLITICAL CANDIDATES IN THE UNITED STATES (Dhanaraj Thakur & DeVan L. Hankers eds., 2022); Orestis Papakyriakopoulos, Christelle Tesson, Arvind Narayanan & Mihir Kshirsagar, *How Algorithms Shape the Distribution of Political Advertising: Case Studies of Facebook, Google, and TikTok*, AIES '22: PROCS. 2022 AAAI/ACM CONF. ON AI, ETHICS, & SOC'Y (2022).

42. E.g., Carolina Are, *The Shadonban Cycle: an autoethnography of pole dancing, nudity and censorship on Instagram*, 22 FEMINIST MEDIA STUDS. 2002 (2022); Ysabel Gerrard, *Beyond the Hashtag: Circumventing Content Moderation on Social Media*, 20 NEW MEDIA & SOC'Y 4492, 4497 (2018); Julia R. DeCook & Jennifer Forestal, *Of Humans, Machines, and Extremism: The Role of Platforms in Facilitating Undemocratic Cognition*, 67 AM. BEHAV. SCIENTIST 629 (2023).

of posts to be able to discern recurring behaviors and rhetorical patterns.⁴³ Researchers who attempt to reverse engineer or uncover patterns in recommendation algorithms require particularly large volumes of detailed data to produce significant results, since any one user's recommendations only reflects their own tastes, not the system as a whole.⁴⁴

Researchers are also interested in accessing social media data in order to confirm or refute otherwise unverifiable claims made by companies, particularly about changes in their practices. *The Markup* used data collected from its Citizen Browser to reveal that Facebook had not stopped recommending anti-vaccine groups as it claimed it had.⁴⁵ In April 2022, researchers used data collected from Russian TikTok to show that TikTok had not had as complete of a ban of Russian pro-war propaganda as it had claimed.⁴⁶ Researchers have also used data to show when social media services have made good on their promises to improve. For example, researchers used data scraped from YouTube to confirm that it had reduced the prevalence of conspiratorial content in its recommendation algorithms.⁴⁷

Giving researchers access to social media data can confirm theoretical problems on social media or uncover new problems not previously known to exist. The now-famous “filter bubble” phenomenon, for example, was able to be confirmed by researchers with access to data donated by social media users.⁴⁸ Work from Jonas Kaiser and Adrian Rauchfleisch studying YouTube's

43. *E.g.*, HEMANT PUROHIT, TANVI BANERJEE, ANDREW HAMPTON, VALERIE L. SHALIN, NAYANESH BHANDUTIA & AMIT P. SHETH, GENDER-BASED VIOLENCE IN 140 CHARACTERS OR FEWER: A #BIGDATA CASE STUDY OF TWITTER (2015) (using 14 million posts); Aparup Khatua, Erik Cambria & Apalak Khatua, *Sounds of Silence Breakers: Exploring Sexual Violence on Twitter*, 2018 IEEE/ACM INT'L CONFERENCE ON ADVANCES SOC. NETWORKS ANALYSIS & MINING (ASONAM) 397, 397 (2018) (using 700,000 posts); CENTER FOR DEMOCRACY AND TECHNOLOGY, *supra* note 37 (using over 100,000 posts).

44. *See, e.g.*, Matthew Hindman, Nathaniel Lubin & Trevor Davis, *Facebook has a Superuser-Supremacy Problem*, ATLANTIC: FACEBOOK PAPERS (Feb. 10, 2022), <https://www.theatlantic.com/technology/archive/2022/02/facebook-hate-speech-misinformation-superusers/621617/>.

45. Corin Faife & Dara Kerr, *Facebook Said it Would Stop Recommending Anti-Vaccine Groups. It Didn't*, MARKUP: CITIZEN BROWSER (May 20, 2021), <https://themarkup.org/citizen-browser/2021/05/20/facebook-said-it-would-stop-recommending-anti-vaccine-groups-it-didnt>.

46. MARC FADDOUL, SALVATORE ROMANO, ILIR RAMA, NATALIE KERBY & GIULIA GIORGI, TRACKING EXPOSED SPECIAL REPORT: CONTENT RESTRICTIONS ON TIKTOK IN RUSSIA FOLLOWING THE UKRAINIAN WAR 4 (2022), <https://tracking.exposed/pdf/tiktok-russia-12april2022.pdf>.

47. FADDOUL ET AL., *supra* note 37.

48. Seth Flaxman, Sharad Goel & Justin M. Rao, *Filter Bubbles, Echo Chambers, and Online News Consumption*, 80 PUB. OP. Q. 298, 312 (2016); Colin Lecher & Leon Yin, *One Year After the Capitol Riot, Americans Still See Two Very Different Facebooks*, MARKUP: CITIZEN BROWSER

recommendation algorithm in Brazil found that users could go down rabbit holes of videos of sexually suggestive videos of children.⁴⁹ The Stanford Internet Observatory used data from Mastodon to discover a large decentralized distribution network of human- and computer-generated child sexual abuse material.⁵⁰

Some areas of social media research require access beyond what is available on the internet publicly. For example, most research related to personalization requires information on real people's profiles, activities, and recommendations, which, if not public, can only be obtained through donation by the users or the platform itself. Though more challenging from a privacy perspective, this research is still critically important. For instance, research using data donated from Facebook users found that the platform drastically overcounted some and undercounted other political ads, including tens of thousands of ads that ran during its "moratorium" on political ads around the U.S. 2020 elections, raising questions about the company's ability to effectively enforce its own policies.⁵¹

Researchers that study topics beyond social media may also be interested in data from platforms. Linguists, for example, use social media to understand emerging subject areas such as how emojis are used and how people from different generations speak online.⁵² Machine learning researchers use labeled image data and unlabeled text data from social media to train generative AI models.⁵³ Hundreds of scientific articles have sought to use social media posts

(Jan. 6, 2022, 10:30 AM), <https://themarkup.org/citizen-browser/2022/01/06/one-year-after-the-capitol-riot-americans-still-see-two-very-different-facebooks>; Michael Wolfowicz, David Weisburd & Badi Hasisi, *Examining the Interactive Effects of the Filter Bubble and the Echo Chamber on Radicalization*, 19 J. EXPERIMENTAL CRIMINOLOGY 119, 124, 129 (2023).

49. Jonas Kaiser & Adrian Rauchfleisch, *The Implications of Venturing Down the Rabbit Hole*, 8 INTERNET POL'Y REV. 1 (2019).

50. DAVID THIEL & RENÉE DIRESTA, CHILD SAFETY ON FEDERATED SOCIAL MEDIA (2023), <https://purl.stanford.edu/vb515nd6874>.

51. VICTOR LE POCHAT, LAURA EDELSON, TOM VAN GOETHEM, WOUTER JOOSEN, DAMON MCCOY & TOBIAS LAUNGER, AN AUDIT OF FACEBOOK'S POLITICAL AD POLICY ENFORCEMENT 13 (2022), <https://cybersecurityfordemocracy.org/audit-facebook-political-ad-policy-enforcement>.

52. GRETCHEN MCCULLOCH, BECAUSE INTERNET: UNDERSTANDING THE NEW RULES OF LANGUAGE (2020).

53. Mehtab Khan & Alex Hanna, *The Subjects and Stages of AI Dataset Development: A Framework for Dataset Accountability*, 19 OHIO ST. TECH. L. J. 172, 174 (2023); Mike Isaac, *Reddit Wants to Get Paid for Helping to Teach Big A.I. Systems*, N.Y. TIMES (Apr. 18, 2023), <https://www.nytimes.com/2023/04/18/technology/reddit-ai-openai-google.html>.

to detect mental illness.⁵⁴ And at least while it was publicly available, the U.S. Geological Survey used Twitter data to track earthquakes, which in some cases has been shown to work even better than a Richter scale.⁵⁵ It is easy to imagine many other use cases of social data: ornithologists accessing photos of birds on Instagram, social scientists accessing relational information to predict gun violence, and so on.

Social media companies themselves of course stand to gain a lot of value from the data generated by their own services, and many have business models that entirely depend on such data.⁵⁶ Companies can use their data to target advertisements, increase the amount of time users spend on a service, or sell it to data brokers and other actors that can monetize the data. For instance, when Reddit began charging for its API in 2023, the company claimed it was because Google and OpenAI were using their data to train large language models, although critics argued it was also for them to wrestle control over their advertising revenue from third-party apps.⁵⁷ Companies can also use data from their platforms to better understand how users use their services, and use that information to improve the user experience or the safety and integrity of their communities. Many legal scholars have written about the market benefits of requiring social media companies to make certain data available to competitors,⁵⁸ but those efforts have different normative values from providing researchers with data—facilitation of markets as opposed to the generation of knowledge—and entail very different governance decisions outside the scope of this Article.

B. CURRENT RESEARCHER ACCESS TO SOCIAL MEDIA DATA

Social media companies vary widely in what data they share with researchers and how they make it available. Many platforms make little to no

54. Tianlin Zhang, Annika M. Schoene, Shaoxiong Ji & Sophia Ananiadou, *Natural Language Processing Applied to Mental Illness Detection: A Narrative Review*, 5 NPJ DIGIT. MED. 46, 5 (2022).

55. *How the USGS uses Twitter Data to Track Earthquakes*, TWITTER: BLOG (Oct. 7, 2015), https://blog.twitter.com/en_us/a/2015/usgs-twitter-data-earthquake-detection.

56. Amy Kapczynski, *The Law of Informational Capitalism*, 129 YALE L.J. 1460, 1469 (2020); COHEN, *supra* note 5.

57. Isaac, *supra* note 53. Despite charging for API access, ChatGPT is still likely trained on Reddit. See *ChatGPT's Web Browser Could Deflate Reddit's API Pricing*, SAMIS TOAST (June 17, 2023), <https://samstoast.substack.com/p/chatgpt-can-already-circumvent-reddits>.

58. Oscar Borgogno & Giuseppe Colangelo, *Data Sharing and Interoperability: Fostering Innovation and Competition Through APIs*, 35 COMPUT. L. & SEC. REV. 105314, 105314 (2019); Gabriel Nicholas, *Taking It with You: Platform Barriers to Entry and the Limits of Data Portability*, 27 MICH. TECH. L. REV. 263, 272 (2021); Chris Riley, *Unpacking Interoperability in Competition*, 5 J. CYBER POL'Y 94, 94 (2020).

data available to researchers, including private messaging apps such as WhatsApp, Telegram, and iMessage; team chat apps such as Slack and Discord; semi-private social networks such as Snapchat; and public social networks such as LinkedIn and Pinterest. There are also large public social networks such as YouTube and TikTok that, as of this writing, make some data available to researchers—and recently increased that amount due to recent regulatory efforts—but still not enough or under too restrictive agreements to be adopted by researchers en masse.⁵⁹

Other large public-facing platforms offer data access but only under certain conditions. Most platforms at least have their data protected under terms of service, but some have additional restrictions they impose upon researchers in exchange for access to more data. Meta, for instance, allows approved academics and independent researchers to access data sets about election ads and URL shares on Facebook.⁶⁰ However, those researchers are required to sign a data agreement that, among other things, limits their ability to share data with third party reviewers, prevents them from using Facebook data in conjunction with other data, and allows Meta to review any published material ahead of time for “any Confidential Information or any Personal Data that may be included or revealed in those materials and which need to be removed prior to publication or disclosure.”⁶¹

There are two primary ways companies make data available to researchers: static public datasets and application programming interfaces (APIs). Static data datasets allow companies to share a snapshot of the data on their platform, but since they are not dynamic, they can go out of date. APIs, on the other hand, allow live, up-to-date access to data hosted on a platform. They are more expensive for companies to build, maintain, and operate, but unlike static data sets, they allow companies to retain extensive control over who can access what data and how much.

Social media companies have not shied away from severely limiting data access through APIs, even to researchers. Before Twitter raised the cost of its

59. See *YouTube Researcher Program*, YOUTUBE, <https://research.youtube/> (last visited Nov. 23, 2023); Vanessa Pappas, *Strengthening our Commitment to Transparency*, TIKTOK: NEWSROOM (July 27, 2022), <https://newsroom.tiktok.com/en-us/strengthening-our-commitment-to-transparency>; Emma Lurie, *Comparing Platform Research API Requirements*, TECH POLY PRESS (Mar. 22, 2023), <https://techpolicy.press/comparing-platform-research-api-requirements/>.

60. *Academic Resources: Meta Data for Independent Research*, META, <https://research.facebook.com/data/> (last visited Nov. 23, 2023).

61. *Research Data Agreement*, SOC. SCI. ONE 2–3, 8, https://socialscience.one/files/socialscienceone/files/fort_non-monetary_rda_with_public_institution_and_developer_terms.pdf (last accessed Jan. 21, 2024).

API from free to \$42,000 per month (a move many see as Elon Musk thumbing his nose at researchers),⁶² Twitter offered researchers with university affiliations an Academic API, which allowed them to access Twitter's full archive of historical tweets and perform more refined searches.⁶³ However, it limited researchers to accessing ten million tweets per month, or the equivalent of about one fiftieth of all tweets sent *per day*.⁶⁴ YouTube's API is far more limited: by default, it allows researchers to make 100 search requests or 10,000 video information requests per day.⁶⁵ While some of these numbers sound large, they constitute a very small fraction of the activity that happens on these platforms.⁶⁶ Researchers complain that these limitations significantly stifle or prevent research.⁶⁷

With APIs, platforms can also change the data they make available or revoke data access to individuals as they see fit. Facebook and Twitter, for example, both drastically reduced what and how much data users, including researchers, could access shortly after news of the Cambridge Analytica scandal broke.⁶⁸ Researchers with informal and ad hoc arrangements with

62. Get it? 420? *See* Chris Stokel-Walker, *Twitter's \$42,000-per-Month API Prices Out Nearly Everyone*, WIRED (Mar. 10, 2023), <https://www.wired.com/story/twitter-data-api-prices-out-nearly-everyone/>.

63. Suhem Parack, *Introducing the New Academic Research Product Track*, TWITTER: DEVS. (Jan. 2021), <https://twittercommunity.com/t/introducing-the-new-academic-research-product-track/148632/1>.

64. *Id.*

65. *YouTube Data API Overview*, YOUTUBE, <https://developers.google.com/youtube/v3/getting-started#calculating-quota-usage> (last modified Nov. 11, 2022); Researchers can apply to increase their quota. *See How It Works*, YOUTUBE, <https://research.youtube/how-it-works/> (last visited Nov. 23, 2023).

66. Twitter publishes 500 million tweets per day. *See* Claire Beveridge, *33 Twitter Stats that Matter to Marketers in 2023*, HOOTSUITE: BLOG (Mar. 16, 2022), <https://blog.hootsuite.com/twitter-statistics/>. YouTube likely has more than 500 hours of video uploaded per minute. *See Hours of Video Uploaded to YouTube Every Minute as of February 2020*, STATISTA (Feb. 2020), <https://www.statista.com/statistics/259477/hours-of-video-uploaded-to-youtube-every-minute/>.

67. VOGUS, *supra* note 3 (“[I]f researchers do not know what data a host collects and maintains, they do not know what data to ask the host for. This lack of knowledge, some researchers said, limits the research questions that they ask, because they do not know whether certain platforms may have data that would allow them to answer different kinds of questions.”); Nathaniel Persily & Joshua A. Tucker, *How to Fix Social Media? Start with Independent Research.*, BROOKINGS (Dec. 1, 2021), <https://www.brookings.edu/research/how-to-fix-social-media-start-with-independent-research/>.

68. *Graph API*, META: DEVS., <https://developers.facebook.com/docs/graph-api/changelog/versions> (last visited Nov. 23, 2023); *Previewing Changes to the User and Mentions Timeline API Endpoints*, TWITTER: DEV. PLATFORM BLOG (Mar. 19, 2019), https://blog.twitter.com/developer/en_us/topics/tools/2019/previewing-changes-to-the-user-and-mentions-timeline-api-endpoints.

specific companies to access data may be particularly vulnerable to losing data access without warning.⁶⁹ Social media companies can also censure specific researchers for using data in ways they deem improper, as will be discussed further in Section II.B.2 with the case of NYU Ad Observatory.

Finally, social media companies can withdraw support for their data sharing tools or remove them entirely. Twitter and Reddit have both recently been in the news for starting to charge extremely high prices for their once-free APIs.⁷⁰ More quietly, Meta appears to be slowly sunsetting CrowdTangle, a popular social media monitoring tool acquired by Facebook in 2016.⁷¹ CrowdTangle is a particularly popular tool with researchers for studying COVID misinformation,⁷² election misinformation,⁷³ and online hate⁷⁴ in a wide range of languages. Recently however, Meta has reduced support for the product, allowing it to become buggy and less usable, and has plans to shut it down entirely.⁷⁵ Critics argue that Meta is deprecating CrowdTangle because it has contributed to negative press about the company.⁷⁶

69. VOGUS, *supra* note 3.

70. *See* Isaac, *supra* note 53; Stokel-Walker, *supra* note 62.

71. Casey Newton, *Facebook Buys CrowdTangle, the Tool Publishers Use to Win the Internet*, VERGE (Nov. 11, 2016), <https://www.theverge.com/2016/11/11/13594338/facebook-acquires-crowdtangle>.

72. James W. Salazar, Jennifer D. Claytor, Anand R. Habib, Vinay Guduguntla & Rita F. Redberg, *Spread of Misinformation About Face Masks and COVID-19 by Automated Software on Facebook*, 181 JAMA INTERNAL MED. 1251, 1251 (2021); Aimei Yang, Jieun Shin, Alvin Zhou, Ke M. Huang-Isherwood, Eugene Lee, Chuqing Dong, Hye Min Kim, Yafei Zhang, Jingyi Sun, Yiqi Li, Yuanfeixue Nan, Lichen Zhen & Wenlin Liu, *The Battleground of COVID-19 Vaccine Misinformation on Facebook: Fact Checkers vs. Misinformation Spreaders*, 2 HARV. KENNEDY SCH. MISINFORMATION REV. 1, 11 (2021).

73. *E.g.*, Fabio Giglietto, Nicola Righetti, Luca Rossi & Giada Marino, *It Takes a Village to Manipulate the Media: Coordinated Link Sharing Behavior During 2018 and 2019 Italian Elections*, 23 INFO., COMMUN & SOC'Y 867, 874 (2020); Zeve Sanderson, Megan A. Brown, Richard Bonneau, Jonathan Nagler & Joshua A. Tucker, *Twitter Flagged Donald Trump's Tweets with Election Misinformation: They Continued to Spread Both on and off the Platform*, 2 HARV. KENNEDY SCH. MISINFORMATION REV. 1, 14 (2021).

74. AVAAZ, MEGAPHONE FOR HATE: DISINFORMATION AND HATE SPEECH ON FACEBOOK DURING ASSAM'S CITIZENSHIP COUNT 15 (2019); Sandra Miranda, Fábio Malini, Branco Di Fatima & Jorge Cruz, *I Love to Hate!: The Racist Hate Speech in Social Media*, 9 PROCS. 9TH EUR. CONF. ON SOC. MEDIA 137, 139 (2022).

75. Davey Alba, *Meta Pulls Support for Tool Used to Keep Misinformation in Check*, BLOOMBERG (June 23, 2022), <https://www.bloomberg.com/news/articles/2022-06-23/meta-pulls-support-for-tool-used-to-keep-misinformation-in-check?leadSource=uverify%20wall>.

76. Kevin Roose, *Inside Facebook's Data Wars*, N.Y. TIMES (Oct. 4, 2021), <https://www.nytimes.com/2021/07/14/technology/facebook-data.html>; John Albert, *Facebook's Gutting of CrowdTangle: A Step Backward for Platform Transparency*, ALGORITHM WATCH (Aug. 3, 2022), <https://algorithmwatch.org/en/crowdtangle-platform-transparency/>.

Platformed-sanctioned methods, however, are not the only ways for researchers to be able to access social media data. Researchers can appeal directly to users themselves to give permission to read their data, usually either through authenticating a third-party application (aka a “Sign in with ___” button) or through installing a browser extension that scrapes websites on their behalf. These platform-unsanctioned methods can pose additional risks for users because bad actors can use elevated permissions to exfiltrate data. Researchers who build these tools are also at risk of violating a platform’s Terms of Service, if not the Computer Fraud and Abuse Act.⁷⁷

However, unsanctioned methods allow for research that could not be otherwise possible under platform sanctioned methods, including research a platform may try to preclude since it could reflect unfavorably on the platform.⁷⁸

C. WHAT HAPPENS WHEN RESEARCHERS TRY TO USE THIS ARCHITECTURE?

Two public controversies showcase the deficiencies and barriers of the current state of social media data access: Social Science One and the New York University Ad Observatory.⁷⁹ In the first case, researchers tried to work within the platform’s data sharing architecture but ran into shortcomings and had no way to negotiate the additional access they needed, despite being well connected and resourced. In the second, researchers tried to work outside the platform’s data sharing architecture, but the platform rejected them, despite their research being safe, secure, socially beneficial, and impossible to do within the company’s platform-sanctioned methods.

1. *Social Science One (SS1)*

On March 17, 2018, *The New York Times* and *The Observer* revealed that the conservative political consulting firm Cambridge Analytica had harvested private information from more than fifty million Facebook profiles and used that data to influence elections around the world.⁸⁰ Facebook was already at

77. Sara R. Benson, *Social Media Researchers and Terms of Service: Are We Complying with the Law*, 47 AIPLA Q.J. 191 (2019). Twitter also sued researchers at the Center for Countering Digital Hate under the CFAA. See Bryan Pietsch, *Twitter, now X, sues group that researched hate speech on platform*, WASH. POST (Aug. 1, 2023).

78. SHAPIRO ET AL., *supra* note 3, at 14.

79. The use of Facebook in both examples is not meant to be a specific criticism of Facebook’s practices. Facebook arguably shares *more* data than many other social media companies do, and therefore has more opportunities for illustrative failures. See *infra* Section I.C.1.

80. Matthew Rosenberg, Nicholas Confessore & Carole Cadwalladr, *How Trump Consultants Exploited the Facebook Data of Millions*, N.Y. TIMES (Mar. 17, 2018), <https://>

the center of controversy for its role in the 2016 United States presidential election, Brexit, and the spreading of Russian-influenced propaganda, but Cambridge Analytica turned a gradual public relations crisis into an acute one.

Facebook higher ups soon after began to look for new ways to support independent research to help avoid future election interference, and honed in on one method proposed by Harvard social scientists Gary King and Nate Persily.⁸¹ King and Persily argued that researchers inside social media companies had access to data but no credibility or independence, while researchers outside the companies had the inverse. To resolve this, they proposed giving some academics access to a company's data but having them sign NDAs and preventing them from publishing. Those academics on the inside could then help decide what data is important and how to share it with third-party researchers in a privacy-preserving way.⁸²

Facebook quickly put the proposal into practice. About three weeks after the Cambridge Analytica leak (and one day before Zuckerberg was slated to testify before the Senate), Facebook announced a new initiative to allow academics independent access to Facebook data.⁸³ King and Persily established SS1 as the organization that would operate within Facebook, and they brought on the Social Science Research Council (SSRC) to manage external researchers, who would apply for access to the data they made available. King and Persily raised ten million dollars for the initiative from an ideologically diverse group of seven foundations.⁸⁴

In July 2018, SS1 announced the data set Facebook would release: every URL that had ever been shared publicly on Facebook between January 1, 2017 and June 11, 2018, along with information about who shared it, how often it

www.nytimes.com/2018/03/17/us/politics/cambridge-analytica-trump-campaign.html;
Carole Cadwalladr & Emma Graham-Harrison, *Revealed: 50 Million Facebook Profiles Harvested for Cambridge Analytica in Major Data Breach*, OBSERVER (Mar. 17, 2018), <https://www.theguardian.com/news/2018/mar/17/cambridge-analytica-facebook-influence-us-election>.

81. O'HARA & NELSON, *supra* note 8, at 3–4.

82. Gary King & Nathaniel Persily, *A New Model for Industry-Academic Partnerships*, 53 PS: POL. SCI. & POLITICS 703, 703 (2020).

83. Mark Zuckerberg, FACEBOOK (Apr. 9, 2018), <https://www.facebook.com/zuck/posts/10104797374385071>; Elliot Schrage & David Ginsberg, *Facebook Launches New Initiative to Help Scholars Assess Social Media's Impact on Elections*, META (Apr. 9, 2018), <https://about.fb.com/news/2018/04/new-elections-initiative/>.

84. The list of foundations includes The William and Flora Hewlett Foundation, The Charles Koch Foundation, The John S. and James L. Knight Foundation, Laura and John Arnold Foundation, the Alfred P. Sloan Foundation, The Democracy Fund, and Omidyar Network. O'HARA & NELSON, *supra* note 8, at 7–8.

was shared, and how many people saw it.⁸⁵ SSRC and SS1 put out a request for proposals for research projects and granted \$50,000 to each project along with access to the URL share dataset.⁸⁶

However, the endeavor faced legal and political headwinds. Europe's General Data Protection Regulation (GDPR) took effect in May 2018 and California passed the California Consumer Privacy Act a month later, introducing new legal complexities. The Electronic Privacy Information Center (EPIC) also sent an open letter to SS1 claiming that the project complied with neither GDPR's personal data protection requirements nor Facebook's 2011 consent decree from the Federal Trade Commission to obtain user consent before sharing data.⁸⁷

The project also faced technical headwinds. Facebook needed to comb through a huge volume of data to create the URL shares dataset. Facebook had over two billion active users, the URL shares dataset was initially calculated to include sixty billion public posts, and preparing just the shares and interaction metrics required processing more than fifty terabytes per day.⁸⁸ Many researchers would likely not have the computing resources to ingest this much data. Simultaneously, Facebook tried to respond to privacy concerns by implementing differential privacy, a statistical method that adds noise to a dataset to make individuals less identifiable, while still maintaining certain core patterns in the data.⁸⁹ In 2018, differential privacy was still relatively new and

85. Solomon Messing, Bogdan State, Chaya Nayak, Gary King & Nathaniel Persily, *Facebook URL Shares: Codebook*, HARVARD DATAVERSE 1 (July 11, 2018), <https://doi.org/10.7910/DVN/EIAACS/PMQG9X> ("URLs are included if shared by at least 20 unique accounts, and shared publicly at least once."). By the time the data set launched, it was expanded to go through February 19, 2019, but would only include URLs shared more than 100 times. Gary King & Nathaniel Persily, *Unprecedented Facebook URLs Dataset Now Available for Academic Research through Social Science One*, SOC. SCI. ONE BLOG (Feb. 13, 2020), <https://socialscience.one/blog/unprecedented-facebook-urls-dataset-now-available-research-through-social-science-one>.

86. *Social Science One Public Launch*, SOC. SCI. ONE BLOG (July 11, 2018), <https://socialscience.one/blog/social-science-one-public-launch>; O'HARA & NELSON, *supra* note 8, at 10.

87. Letter from Marc Rotenberg, Christine Bannan, Sunny Kang, Sam Lester, Electronic Privacy Information Center to Gary King & Nathaniel Persily, Soc. Sci. One (July 12, 2018), <https://epic.org/wp-content/uploads/privacy/facebook/EPIC-ltr-SocialScienceOne-July-2018.pdf>.

88. Josh Constantine, *Facebook Now Has 2 Billion Monthly Users . . . And Responsibility*, TECH CRUNCH (June 27, 2017), <https://techcrunch.com/2017/06/27/facebook-2-billion-users/>; O'HARA & NELSON, *supra* note 8, at 17.

89. Cynthia Dwork, Frank McSherry, Kobbi Nissim & Adam Smith, *Calibrating Noise to Sensitivity in Private Data Analysis*, in 3876 THEORY OF CRYPTOGRAPHY CONF. 2006, LECTURE NOTES IN COMPUT. SCI. 265, 265 (Shai Halevi & Tal Rabin eds., 2006); O'HARA & NELSON, *supra* note 8, at 17.

Facebook engineers underwent lots of trial and error to make it work at such a scale.⁹⁰

The technical and legal challenges plagued the project with delays and eventually led to its collapse. SS1 and SSRC believed that Facebook would be able to provide the URL shares data by fall 2018, but they gave no information until January 2019, when they admitted to further delay. SSRC announced the first research grant winners in April 2019, which included more than sixty researchers from thirty academic institutions in eleven countries, but Facebook still had no URL shares data.⁹¹ When Facebook did finally share data, it was a “light” version of the dataset, which excluded demographic and exposure data. This meant researchers could not study who and how many people different posts reached, likely hampering research on such topics as mis- and disinformation. At the end of SS1’s year-long funding period, all seven funders sent a joint letter to SSRC announcing that they would discontinue funding. As they explained:

It now seems clear that the technical and legal complexities associated with making proprietary data available to independent scholars are greater than any of the parties originally understood, and Facebook has as a result been unable to deliver all the data initially anticipated.⁹²

Facebook continued the project on its own, and the full URL shares dataset was finally made available to researchers in February 2020. However, statistical analysis from King and others suggest that the differential privacy methods Facebook used added significant statistical bias.⁹³ In 2021, Facebook also revealed that the data accidentally excluded URLs shared by any U.S. user without detectable political leanings, about half of all US Facebook users.⁹⁴

A 2019 post-mortem released by the Hewlett Foundation offered multiple interpretations of the events of SS1. One is that funders, SS1, and SSRC put

90. O’HARA & NELSON, *supra* note 8, at 17.

91. Elliot Schrage & Chaya Nayak, *First Grants Announced for Independent Research on Social Media’s Impact on Democracy Using Facebook Data*, META (Apr. 29, 2019), <https://about.fb.com/news/2019/04/election-research-grants/>.

92. Letter from Funders Supporting Independent Scholarly Access to Facebook Data to The Social Science Research Council (Aug. 27, 2019), https://ssrc-static.s3.amazonaws.com/sdi/resources/SMDRG_funder_letter_august_2019.pdf.

93. Georgina Evans & Gary King, *Statistically Valid Inferences from Differentially Private Data Releases, with Application to Facebook URLs Dataset*, POL. ANALYSIS 1, 1 (2022), <https://gking.harvard.edu/dpdw>; Simon Hegelich, *Facebook Needs to Share More with Researchers*, NATURE (Mar. 24, 2020), <https://www.nature.com/articles/d41586-020-00828-5>.

94. Craig Timberg, *Facebook Made Big Mistake in Data It Provided to Researchers, Undermining Academic Work*, WASH. POST (Sept. 10, 2021), <https://www.washingtonpost.com/technology/2021/09/10/facebook-error-data-social-scientists/>.

the cart before the horse: “investing in research was premature given the uncertainty of data access.”⁹⁵ Another is that SS1 was unable to motivate Facebook to share data.⁹⁶ Both may be right.

All in all, SS1 is widely seen as a failure, or as Persily put it to the press, “I’m happy to be quoted saying this: This was the most frustrating thing I’ve been involved in, in my life.”⁹⁷ Persily later stated that the demise of SS1 “demonstrates why we need government regulation to force social media companies to develop secure data sharing programs with outside independent researchers.”⁹⁸

2. NYU Ad Observatory

Laura Edelson and Damon McCoy of the NYU Cybersecurity for Democracy group started the NYU Ad Observatory on September 15, 2020.⁹⁹ The Observatory was meant to increase political ad transparency on social media ahead of the 2020 elections, and let researchers independently search for and analyze political ads by state, races, targeting criteria, funding sources, money spent, and messaging. The Observatory quickly saw adoption, particularly from journalists reporting on federal and local elections, including in Florida, Kentucky, Missouri, and Utah.¹⁰⁰

Data for the NYU Ad Observatory came from a mix of platform sanctioned and unsanctioned sources. It used reports provided by Facebook such as the Facebook API, CrowdTangle, and Ad Library reports, as well as

95. This is harder to verify since communications between SS1 and Facebook were under NDA. O’HARA & NELSON, *supra* note 8, at 18.

96. *Id.*

97. Issie Lapowsky, *Why Facebook’s Data-Sharing Project Ballooned Into A 2-Year Debacle*, PROTOCOL (Feb. 13, 2020), <https://www.protocol.com/facebook-data-sharing-researchers>.

98. Timberg, *supra* note 94.

99. NYU TANDON SCHOOL OF ENGINEERING, NEW TOOL TO ANALYZE POLITICAL ADVERTISING ON FACEBOOK REVEALS MASSIVE DISCREPANCIES IN PARTY SPENDING ON PRESIDENTIAL CONTEST (2020), <https://engineering.nyu.edu/sites/default/files/2020-09/NYU-Ad-Observatory.pdf>.

100. Christine Stapleton, *How Much Have Local Congressional Candidates Spent on Facebook Ads?*, PALM BEACH POST (Sept. 18, 2020), <https://www.palmbeachpost.com/story/news/politics/2020/09/18/how-much-local-congressional-candidates-spending-facebook-ads/3492178001/>; Craig Silverman & Ryan Mac, *Facebook Promised to Label Political Ads, but Ads for Biden, the Daily Wire, and Interest Groups are Slipping Through*, BUZZFEED NEWS (Oct. 22, 2020), <https://www.buzzfeednews.com/article/craigsilverman/facebook-biden-election-ads>; Tessa Weinberg, *Social Media Ads Another Battleground to Reach Voters in Missouri Governor’s Race*, MISSOURI INDEP. (Oct. 20, 2020), <https://missouriindependent.com/2020/10/20/social-media-ads-another-battleground-to-reach-voters-in-missouri-governors-race/>; Brittany Glas, *KSL Investigates: Who is Behind the Millions in Facebook Political Ads Targeting Utah?*, KSL.COM (Oct. 9, 2020), <https://www.ksl.com/article/50028514/ksl-investigates-who-is-behind-the-millions-in-facebook-political-ads-targeting-utah>.

an unsanctioned browser extension called the Ad Observer that users could install to scrape ad data from the Facebook website to donate to the Observatory. The Ad Observer is an open-source tool that underwent independent reviews of its code and privacy practices to ensure it adequately obtained user consent and collected only the data it needed.¹⁰¹ Edelson claimed that they could not depend solely on data Facebook made available—particularly Facebook’s Ad Library—because it had many reporting inconsistencies and thousands of missing ads.¹⁰²

In late October 2020, Facebook sent a cease and desist letter to Edelson and McCoy, demanding NYU Cybersecurity for Democracy shut down its Ad Observer plug-in and delete any data collected from it. Civil society groups lashed back: more than fifty signed onto a letter from Mozilla demanding Facebook withdraw the cease and desist.¹⁰³ The Knight First Amendment Institute provided legal representation for Edelson and McCoy.¹⁰⁴ Little was heard from the case for the next several months while negotiations between Facebook and NYU Cybersecurity for Democracy continued behind closed doors.

On August 3, 2021, negotiations broke down and Facebook suspended Edelson, McCoy, and others’ Facebook accounts, thereby cutting off their access to Facebook’s sanctioned tools, the API, Ad Library, and CrowdTangle. Facebook had cut off other ad transparency tools in the past, including ones from ProPublica, Mozilla, and Who Targets Me, but they largely did this by updating their own website in a way that broke those tools, not by suspending

101. JASON CHUANG, AD OBSERVER PRIVACY PROPERTIES & DATA COLLECTION 1, MOZILLA BUGZILLA, <https://bug1676407.bmoattachments.org/attachment.cgi?id=9187255> (last visited Jan. 30, 2024). Specifically, that info was from the “Why am I seeing this ad?” box of each ad a user saw. *Id.* at 2.

102. Jeremy B. Merrill, *How Facebook’s Ad System Lets Companies Talk Out of Both Sides of Their Mouths*, MARKUP (Apr. 13, 2021), <https://themarkup.org/citizen-browser/2021/04/13/how-facebooks-ad-system-lets-companies-talk-out-of-both-sides-of-their-mouths>; Laura Edelson, *Audit of Facebook Ad Transparency Finds Missed Political Ads*, MEDIUM (Oct. 22, 2020), <https://medium.com/online-political-transparency-project/audit-of-facebook-ad-transparency-finds-missed-political-ads-603f95027cc6>.

103. Letter from Mozilla to Mark Zuckerberg, CEO of Facebook, Dear Facebook: Withdraw Your Cease & Desist to NYU (Oct. 28, 2020), <https://foundation.mozilla.org/en/blog/dear-mr-zuckerberg/>.

104. *Researchers, Knight Institute Condemn Facebook Effort to Squelch Research on Disinformation*, KNIGHT FIRST AM. INST. COLOM. U. (Oct. 23, 2020), <https://knightcolumbia.org/content/researchers-knight-institute-condemn-facebook-effort-to-squelch-research-on-disinformation>.

researchers' accounts.¹⁰⁵ In a blog post titled, "Research Cannot Be the Justification for Compromising People's Privacy," Facebook claimed that they "took these actions to stop unauthorized scraping and protect people's privacy in line with our privacy program under the FTC Order," and offered the Ad Library as an alternative.¹⁰⁶

There was immediate public outrage from academics, civil society, journalists, and lawmakers.¹⁰⁷ Edelson published an opinion piece in *The New York Times* a week after the incident arguing against Facebook's justifications blocking their work.¹⁰⁸ Edelson testified before Congress at the end of September, where she argued that to use the Ad Library, researchers were required to "sign an agreement that limits how they use and share the data, which significantly hampers meaningful publication of any research findings, as the dataset that would be necessary for other researchers to reproduce any findings cannot be publicly shared."¹⁰⁹ Edelson also argued that many ads were missing from the Ad Library and that others were intentionally mislabeled as non-political by bad actors.¹¹⁰ FTC Acting Director of the Bureau of Consumer Protection Samuel Levine soon sent a letter clarifying that the NYU Ad Observer did not break Facebook's consent decree:

Had you honored your commitment to contact us in advance, we would have pointed out that the consent decree does not bar Facebook from creating exceptions for good-faith research in the public interest. Indeed, the FTC supports efforts to shed light on

105. Jeremy B. Merrill & Ariana Tobin, *Facebook Moves to Block Ad Transparency Tools—Including Ours*, PROPUBLICA (Jan. 28, 2019), <https://www.propublica.org/article/facebook-blocks-ad-transparency-tools>.

106. Mike Clark, *Research Cannot be the Justification for Compromising People's Privacy*, META (Aug. 3, 2021), <https://about.fb.com/news/2021/08/research-cannot-be-the-justification-for-compromising-peoples-privacy/>.

107. *Standing with Laura Edelson in Support of Tech Industry Accountability Research*, EDELSON-SOLIDARITY (Aug. 6, 2021), <https://edelson-solidarity.neocities.org/>; Lisa Macpherson, *Observe and Report: Facebook Versus NYU Ad Observatory Proves the Need for Policy Interventions*, PUB. KNOWLEDGE (Aug. 11, 2021), <https://publicknowledge.org/observe-and-report-facebook-versus-nyu-ad-observatory-proves-the-need-for-policy-interventions/>; Taylor Hatmaker, *Facebook Cuts Off NYU Researcher Access, Prompting Rebuke from Lawmakers*, TECHCRUNCH (Aug. 4, 2021), <https://techcrunch.com/2021/08/04/facebook-ad-observatory-nyu-researchers/>.

108. Laura Edelson & Damon McCoy, *We Research Misinformation on Facebook. It Just Disabled Our Accounts.*, N.Y. TIMES (Aug. 10, 2021), <https://www.nytimes.com/2021/08/10/opinion/facebook-misinformation.html>.

109. Testimony of Laura Edelson, NYU Cybersecurity for Democracy, Before the Subcomm. on Investigations & Oversight of the H. Comm. on Sci., Space, and Tech., 117th Cong. 2 (2021), <https://docs.house.gov/meetings/SY/SY21/20210928/114064/HHRG-117-SY21-Wstate-EdelsonL-20210928.pdf>.

110. Laura Edelson, Tobias Lauinger & Damon McCoy, *A Security Analysis of the Facebook Ad Library*, 2020 IEEE SYMP. ON SEC. & PRIV. (SP) 661, 667 (2020).

opaque business practices, especially around surveillance-based advertising. While it is not our role to resolve individual disputes between Facebook and third parties, we hope that the company is not invoking privacy—much less the FTC consent order—as a pretext to advance other aims.¹¹¹

Despite being cut off from some data, NYU Cybersecurity for Democracy was able to release a new version of the Ad Observatory ahead of the 2022 elections.¹¹² Facebook (now Meta) has not shared whether or not they have reinstated any of the researchers' accounts as of this writing, but the company has expanded their own Ad Library to include more in-depth targeting information about political ads. However, researchers continue to argue that Ad Library misses several political ads since those running the ads do not identify them as political.

D. A TAXONOMY OF PROBLEMS WITH RESEARCHER ACCESS TO SOCIAL MEDIA DATA

We identify two broad categories of problems that currently afflict social media data sharing. The first is *poor research quality*; existing approaches to giving researchers access to data negatively impact the quality and utility of research that gets produced. The second is *unrealized research*; some socially beneficial types of research cannot be done at all with the data currently made available.

1. *Poor Research Quality*

a) Limited by Data Access Arrangements

Platforms sometimes require researchers to sign burdensome contracts in order to gain access to data, as the NYU Ad Observatory argued Facebook has done.¹¹³ Platforms can also impose large technical burdens, like how TikTok requires researchers using its research API to refresh results “at least every fifteen (15) days, and delete data that is not available from the TikTok Research API at the time of each refresh.”¹¹⁴ Even without requiring pre-publication approval, a platform has unilateral power over the data it makes

111. Samuel Levine, *Letter from Acting Director of the Bureau of Consumer Protection Samuel Levine to Facebook*, FED. TRADE COMM'N: CONSUMER BLOG (Aug. 5, 2021), <https://www.ftc.gov/blog-posts/2021/08/letter-acting-director-bureau-consumer-protection-samuel-levine-facebook>.

112. *New, Enhanced Adobservatory.Org Provides Transparency & Insights on Digital Political Spending*, NYU TANDON (Aug. 3, 2022), <https://medium.com/cybersecurity-for-democracy/new-enhanced-adobservatory-org-provides-transparency-insights-on-digital-political-spending-784f87a12006>.

113. *See supra* Section II.B.2.

114. *TikTok Research API Services Terms of Service*, TIKTOK § I.3.e, <https://www.tiktok.com/legal/page/global/terms-of-service-research-api/en>.

available and may be able to pressure researchers to suppress results that reflect on it negatively. This is particularly acute when companies provide ad hoc access to individual researchers, or when researchers receive direct funding from companies. The inability to share data further makes research results less robust and more difficult to publish since it is unreproducible and unverifiable.

b) Unstable Data Access

Platforms regularly change which data they make available to researchers and under what terms, often with little warning. Shortly after Musk acquired Twitter, for instance, the service very suddenly raised the cost of its API from free to \$42,000 a month, making it inaccessible to nearly all academic researchers and jeopardizing hundreds of in-progress research projects.¹¹⁵ Data access can change also because new threats to privacy and security are uncovered, as happened with SS1 and the Facebook Graph API in the wake of Cambridge Analytica.¹¹⁶ The possibility of data access changing precludes entire research methodologies, such as longitudinal research, and threatens in-progress projects.

c) Decontextualized Data Production

Platforms often share only limited information about how they generate the data they share and how it has been filtered. Without understanding the provenance of data from platforms' tools, researchers often cannot know or predict how their data is skewed. This problem is not just theoretical. Studies show that tweets from Twitter's livestream API, which shares 1% of all live traffic, are not randomly sampled.¹¹⁷ Often, platform-permissioned tools are not designed with research in mind, so they can be missing basic

115. Justin Calma, *Twitter Just Closed the Book On Academic Research*, VERGE (May 31, 2023), <https://www.theverge.com/2023/5/31/23739084/twitter-elon-musk-api-policy-chilling-academic-research>; *Letter: Twitter's New API Plans Will Devastate Public Interest Research*, COALITION FOR INDEP. TECH. RSCH. (Apr. 3, 2023), <https://independenttechresearch.org/letter-twitters-new-api-plans-will-devastate-public-interest-research/>. Even those who pay for it claim it doesn't work. See Matt Binder, *Twitter's API Keeps Breaking, Even For Developers Paying \$42,000*, MASHABLE (June 29, 2023), <https://mashable.com/article/twitter-api-elon-musk-developer-issues-apps>.

116. See *Graph API Reference*, META FOR DEVELOPERS, <https://developers.facebook.com/docs/graph-api/changelog/version3.0#gapi-90> (last visited Aug. 8, 2023).

117. Fred Morstatter, Jürgen Pfeffer & Huan Liu, *When is it Biased? Assessing the Representativeness of Twitter's Streaming API*, WWW '14 COMPANION: PROCS. 23RD INT'L CONF. ON WORLD WIDE WEB 555 (2014).

information.¹¹⁸ Even when these tools are designed for researchers, opacity around the processes in which they are built can lead to huge oversights that even the platforms themselves miss, as occurred with SS1.¹¹⁹

d) Streetlight Effect

The streetlight effect is a type of bias wherein people only search for something where it is easiest to look, just as someone who lost their keys outside at night might only look where there are streetlights.¹²⁰ A similar effect plays out in social media research: researchers often study the platforms where they can access the most data, not necessarily the ones most relevant to the effect they are trying to study.¹²¹ Entire domains of research can end up centralizing around non-representative data sources, as some argue occurred with Twitter.¹²²

The streetlight effect also creates perverse incentives for companies not to share data. Companies that provide data may end up receiving more scrutiny and criticism from researchers. They may not even experience the public relations benefits of openness because they may be publicly criticized, as frequently and harshly as companies that share no data at all, for sharing insufficient data or in ways that make it difficult to use.¹²³

e) Denominator Problem

The denominator problem is when researchers are unable to use the volume of overall activity on a platform to contextualize their findings.¹²⁴ For instance, imagine that a researcher found five thousand tweets in Hindi over a week-long period of time that promote ethnic violence against Muslims. Without certain baseline information, such as the total number of tweets per week, tweets in Hindi per week, or total active users versus active Hindi-speaking users, that researcher will not know whether their five thousand tweets should be considered a lot or a little.

118. Tromble, *supra* note 16 (“[T]he non-randomness of data captured via [Twitter’s] APIs means that, even in the best of times, many Twitter studies have drawn conclusions based on substantially biased inferences.”).

119. See *supra* Section II.B.1.

120. DAVID H. FREEDMAN, *WRONG: WHY EXPERTS* KEEP FAILING US—AND HOW TO KNOW WHEN NOT TO TRUST THEM* (2010).

121. E.g., Tromble, *supra* note 16; Michael Zimmer & Nicholas Proferes, *A Topology of Twitter Research: Disciplines, Methods, and Ethics*, 66 *ASLIB J. INFO. MGMT.* 250 (2014).

122. Nicolas Kayser-Bril, *Under the Twitter Streetlight: How Data Scarcity Distorts Research*, *ALGORITHM WATCH*, <https://algorithmwatch.org/en/data-access-researchers-left-on-read/>.

123. SHAPIRO ET AL., *supra* note 3, at 24–26.

124. *Id.* at 46.

2. *Unrealized Research*

a) Inability to Evaluate Social Media Claims

Social media companies frequently roll out changes to their systems. Sometimes, these changes are publicly announced and are meant to address controversies or harms uncovered by research.¹²⁵ However, without access to adequate data, researchers are unable to evaluate the effectiveness of these interventions, or whether they have been rolled out at all. Claims related to opaque technical systems, such as recommendation algorithms and content moderation practices, are nearly impossible to evaluate, making it difficult for the public to distinguish between public relations puffery and meaningful changes.

b) Unequal Access Leads to Less Diverse Research

Researchers with personal connections to large social media companies are more easily able to gain access to data through both informal and formal means. Well-connected researchers are more likely to convince companies to share data in ad hoc ways for one-off projects.¹²⁶ They are also better able to defend their unsanctioned access since they may have powerful allies, such as when the Knight First Amendment Institute offered legal defense to NYU Cybersecurity for Democracy for its Ad Observatory.¹²⁷ Less resourced and connected researchers may not even have the budget to purchase the computing power necessary to do certain research.

This unmeritocratic approach to doling out access to data may lead to worse outcomes. The best-connected researchers are not necessarily the ones who come up with the best research questions or plans of execution. Underrepresented researchers may bring unique insights and approaches that more well-connected researchers do not.

c) Inability to Discover Unexpected Effects

Social media companies share non-public data with researchers in some areas more than others. Meta, for example, offers more information about political advertisements than it does non-political advertisements, in part

125. E.g., Vanessa Pappas & Kudzi Chikumbu, *A Message to Our Black Community*, TikTok Newsroom (June 1, 2020); Vijaya Gadde & Kavyon Beykpour, *Setting the Record Straight on Shadow Banning*, X BLOG (July 26, 2018); Mark Zuckerberg, *A Blueprint for Content Governance and Enforcement*, X BLOG (Nov. 15, 2018).

126. E.g., Nancy Scola, *Facebook's Next Project: American Inequality*, POLITICO (Feb. 19, 2018), <https://www.politico.com/story/2018/02/19/facebook-inequality-stanford-417093> (reporting that Facebook shared data with Stanford economist Raj Chetty, "a favorite among tech elites," but not with other researchers or the broader public).

127. *Researchers, Knight Institute Condemn Facebook Effort*, *supra* note 104.

because researchers have appealed to democratic values to gain such access.¹²⁸ By limiting access to other data not deemed as important, however, platforms may prevent researchers from discovering new, unexpected effects of different technological architectures, user interfaces, and policy designs. A change in the way a social network displays advertisements, for instance, could drastically increase how often users fall for cryptocurrency fraud. This effect would be unexpected and important, but impossible for researchers to discover for a number of reasons: researchers do not have access to data regarding how the company rolled out the change to advertisements (e.g., A/B test data), which content gets flagged as cryptocurrency fraud, which ads can be categorized as cryptocurrency ads, or how much engagement those ads receive. Companies are disincentivized from finding or sharing with the public new negative social impacts of their services.

d) Slow Responses to Sudden Problems

Sudden social, economic, and political upheavals often play out on social media. Fast evolving and paradigm shifting events such as COVID-19, the January 6th attacks, and the Russian attack on Ukraine are both reflected on and affected by the online information ecosystem.¹²⁹ Researcher organizations that use platform data access mechanisms to run social media monitoring programs, including the Stanford Internet Observatory and the Global Disinformation Lab at UT Austin, may be uniquely poised to give platforms the information they need to act quickly. Sharing timely data with external researchers, such as watchdog organizations and journalists, could help companies and the public better understand what is happening on platforms, and in turn, improve responses to such upheavals. Platforms, however, do not have policies to allow emergency access to data, even if it may be useful for all parties.

E. THE LEGAL LANDSCAPE OF DATA SHARING

This Section takes a step back to consider the state of social media data sharing from a legal point of view.

128. See Paddy Leerssen, Tom Dobber, Natali Helberger & Claes de Vreese, *News from the Ad Archive: How Journalists Use the Facebook Ad Library to Hold Online Advertising Accountable*, 26 INFO. COMMUN & SOC'Y 1381, 1383 (2021).

129. See, e.g., Mia Sato, *Ukrainian Influencers Bring the Frontlines to TikTok*, VERGE (Mar. 16, 2022), <https://www.theverge.com/c/22971491/ukraine-tiktok-influencers-russian-invasion>; Cathleen O'Grady, *In the Line of Fire*, 375 SCI. 1338 (2022).

1. *What Made Things This Way?*

As the case studies above highlight, the barriers to data access are not only technical, but also legal. Subject to a few narrow exceptions outlined in state and federal privacy laws, social media data is subject to private ordering: once data subjects have consented to their data being collected, companies enjoy broad discretion to determine who gains access to social media data and on what terms such access is granted.

Companies assert both legal rights and legal duties to control and manage access to proprietary data. Technically, there is no recognized legal property right in data per se, despite enduring debate over recognizing one.¹³⁰ Instead, companies rely on two kinds of legal claims to approximate full-throated entitlement rights over data access and control: rights to limit access to data to protect commercial secrets and competitive advantage, and obligations companies owe data subjects to limit access to data, which may arise under companies' terms of service or privacy laws. Together, these two kinds of legal claims allow companies to justify broad, contractually governed discretion over how researchers gain access to data.

Both trade secrecy and privacy claims generally arise out of underlying contractual legal relationships that structure companies' claims to and obligations regarding social media data. Two kinds of contractual relationships govern, to a large degree, how social media data is collected, processed, and used. First, terms of service govern collection and the relationship between companies and data subjects, and second, data use agreements govern data access and the relationship between companies and researchers.

Companies have been able to constrain access to data in the contractual realm because of their success at invoking underlying privacy and trade secrecy rationales—rationales that companies use as obstacles to increased public oversight and control over researcher access. Thus, we focus on privacy and trade secrecy because these are the doctrinal obstacles and normative justifications that platforms invoke in public statements against researcher access. To retrieve affirmative public rights of researcher access from the realm of private contractual ordering requires us to address these privacy and trade secrecy claims.

130. See generally James Grimmelmann & Christina Mulligan, *Data Property*, 72 AM. U. L. REV. 829 (2023) (arguing for personal property-like rights in personal data); Michael C. Pollack, *Taking Data*, 86 U. CHI. L. REV. 77 (2019) (arguing for property-like rights in personal data against government use of data); Jorge L. Contreras, *The False Promise of Health Data Ownership*, 94 N.Y.U. L. REV. 624 (2019) (detailing the challenges and risks of recognizing personal property claims to health data).

a) Trade Secrecy (and Other Entitlement-Like Claims)

First, companies make trade secrecy claims to protect their commercial interests in data acquired from users and used to develop their products.¹³¹ As Tait Graves and Sonia Katyal have written (in a broad survey of recent trends in trade secrecy law), “companies are increasingly exploiting [gaps in trade secrecy doctrine] to assert trade secret rights in a growing range of nontraditional contexts.”¹³² Under now-dominant definitions of a trade secret, information qualifies for trade secret protection if it (1) is generally not known to others in the same industry; (2) is not readily ascertainable from the use of limited time and effort; (3) has actual or potential independent economic value to competitors; and (4) is reasonably guarded as secret.¹³³ This broad definition permits companies to claim—often without substantiation—proprietary rights over a sweeping range of information.¹³⁴ Once a claim of trade secrecy is made, companies wield the claim to withhold the information from researchers and even regulators.¹³⁵ These companies argue that disclosure of the secret information—even to these noncommercial audiences—will inevitably lead to some leaks to competitors, encouraging free riding and thereby eroding crucial incentives to innovate.¹³⁶

Tech platforms have a track record of making such trade secrecy claims. For instance, in its 2020 comments to the FTC on data portability, Facebook alleged that data such as granular use logs, non-human understandable data, and data stored in formats that rely on proprietary technology “make clear that

131. Frederick Mostert & Alex Urbelis, *Social Media Platforms Must Abandon Algorithmic Secrecy*, FIN. TIMES (June 16, 2021), <https://www.ft.com/content/39d69f80-5266-4e22-965f-efbc19d2e776> (noting the obstacles trade secret law creates for accountability and transparency); King & Persily, *supra* note 82 (“[P]rogress in data sharing for social good will occur only if all incentives are aligned—if individual privacy is protected, company trade secrets and related proprietary information are respected, and the standards and independence of the scientific process are secured.”).

132. Charles Tait Graves & Sonia K. Katyal, *From Trade Secrecy to Seduction*, 109 GEO. L.J. 1337, 1351 (2021).

133. U.T.S.A. § 1(4); 18 U.S.C. § 1839(3).

134. Graves & Katyal, *supra* note 132, at 1352–68; *see also* Deepa Varadarajan, *Business Secrecy Expansion and FOIA*, 68 UCLA L. REV. 462 (2021); Morten, *Publicizing Corporate Secrets*, *supra* note 34; Amy Kapczynski, *The Public History of Trade Secrets*, 55 UC DAVIS L. REV. 1367 (2022); Christopher J. Morten & Amy Kapczynski, *The Big Data Regulator, Rebooted: Why and How the FDA Can and Should Disclose Confidential Data on Prescription Drugs and Vaccines*, 109 CALIF. L. REV. 493 (2021).

135. Graves & Katyal, *supra* note 132, at 1353–54; *see also* Elizabeth A. Rowe, *Striking a Balance: When Should Trade-Secret Law Shield Disclosures to the Government?*, 96 IOWA L. REV. 791 (2011) (describing the phenomenon of regulated companies withholding alleged trade secret information from regulators).

136. Rowe, *supra* note 135, at 793–94.

including all observed and inferred data could also result in a different sort of burden: the disclosure of trade secret or other proprietary information developed by a business to enhance or differentiate its services. Enabling people to port that kind of information could reduce incentives for businesses to develop it in the first place.”¹³⁷ In 2021, Facebook withheld internal research on the impact of its platforms on youth mental health from senators, stating that “its internal research is proprietary and ‘kept confidential to promote frank and open dialogue and brainstorming internally.’”¹³⁸ In 2023, the Information Technology Industry Council (ITI), issued a statement expressing concern over the European Union Data Act’s data sharing provisions. ITI, which includes Google, Meta, Microsoft, and Snap as members, argued the law should be amended to permit companies to “refus[e] to share data in specific circumstances where disclosure of trade secrets would be likely to cause serious damage to the data holder.”¹³⁹ A bit further afield, Uber Eats and two other food delivery platforms challenged a New York City municipal ordinance requiring platforms share customer data with the underlying restaurant fulfilling an order. All three platforms asserted that the law constitutes a violation of their trade secrecy rights under the Second Circuit standard.¹⁴⁰

Companies also use other entitlement-like claims to limit extra-contractual researcher access. For instance, despite recent cases limiting the application of such laws to certain forms of research, many companies still include language in their terms of service indicating that activity that violates their terms will be referred to law enforcement for prosecution under the Computer Fraud and Abuse Act (CFAA).¹⁴¹ Copyright enforcement has similarly endowed

137. FACEBOOK, *supra* note 10.

138. Georgia Wells, Jeff Horwitz & Deepa Seetharaman, *Facebook Knows Instagram is Toxic for Teen Girls, Company Documents Show*, WALL ST. J. (Sept. 14, 2021), <https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739>.

139. *Global Tech Association ITI Raises Concerns Ahead of Crucial Week for EU Data Act Adoption*, INFO. TECH. INDUSTRY COUNCIL (Mar. 13, 2023), <https://www.iti.org/news-events/news-releases/global-tech-association-iti-raises-concerns-ahead-of-crucial-week-for-eu-data-act-adoption>.

140. *See, e.g.*, Complaint, *Portier v. City of New York*, No. 21-cv-10347, 2021 WL 5758964 (S.D.N.Y. 2021) (“The personal data that users have entrusted to Uber Eats constitute trade secrets, which required significant investment and expenditure to accumulate. The Ordinance plainly interferes with Uber Eats’ exclusive and economic use of those trade secrets.”); *see also* *DoorDash v. City of New York*, No. 21-cv-7695 (S.D.N.Y. filed Sept. 15, 2021), *Grubhub v. City of New York*, No. 21-cv-10602 (S.D.N.Y. filed Dec. 10, 2021).

141. Nat Meysenburg, *Cybersecurity Research Should Not Be A Crime*, NEW AM. (Nov. 18, 2021), https://d1y8sb8igg2f8e.cloudfront.net/documents/Research_Exemptions_One-Pager.pdf; *see also* Sandvig v. Barr 451 F. Supp. 3d 73 (D.C. Cir. 2020) (concluding that the CFAA does not criminalize mere terms-of-service violations on consumer websites, and

platforms with legal rights to control and manage access. For instance, the Digital Millennium Copyright Act (DMCA) not only establishes a takedown regime for unauthorized content, but also includes prohibitions against circumventing technical access protections, knowingly and improperly obtaining valuable trade secrets, and distributing technologies that facilitate circumvention.¹⁴² The practical upshot of the DMCA, particularly the provision against trafficking in circumvention technologies themselves, is that platforms enjoy strong rights over access control protocols.¹⁴³

b) Privacy

Second, companies assert that the privacy obligations they owe consumers (either via the contractual promises they make to data subjects or due to privacy regulations with which they must comply) are reasons to deny researcher access.¹⁴⁴ These concerns, while sometimes used as pretexts by companies to protect the value of walled-off data assets, are not always levied in bad faith or without merit. Users have legitimate privacy interests in the data at issue in researcher access; protecting this legitimate interest makes researcher access a legally and ethically tricky problem.¹⁴⁵ Indeed, researchers

therefore that the Plaintiffs' proposed research plans were not criminal activity under the CFAA); *Facebook, Inc. v. Power Ventures, Inc.*, 844 F.3d 1058, 1065–69 (9th Cir. 2016) (holding a third-party platform civilly liable under the CFAA for accessing Facebook users' data).

142. To be clear, the DMCA does not directly apply to social media data (which is not as a general matter copyrightable), but it has featured significantly as a background law governing the relationship between online platforms and external researchers of those platforms, and depending on the research in question, may be implicated in a given form of social media research.

143. COHEN, *supra* note 5, at 126.

144. While not all information privacy laws apply to social media data, laws like the Children's Online Privacy and Protection Act (COPPA) and the Fair Credit Reporting Act (FCRA) either explicitly or arguably extend to social media activity. Children's Online Privacy and Protection Act of 1998 (COPPA) (codified at 15 U.S.C. § 6501–06 (2018)); Fair Credit Reporting Act (FCRA) (1970) (codified at 15 U.S.C. § 1681 (2018)). In addition to federal laws, several states have passed prominent privacy laws that impose additional obligations on social media platforms. This includes both specific uses of data such as Illinois' Biometric Information Privacy Act (BIPA), and omnibus laws like California's Consumer Privacy Act (CCPA). California Consumer Privacy Act (CCPA), Cal. Civ. Code §§ 1798.100(a)(1), 1798.110(3); 1798.135. Biometric Information Privacy Act (BIPA), Pub. Act 095-994 (codified at 740 Ill. Comp. Stat. 14/1 (2008)); Family Educational Rights and Privacy Act (FERPA) (1974) (codified at 20 U.S.C. § 1232g (2018)).

145. The argument that researcher access is normatively good for user privacy is orthogonal to the argument of this Article. That said, there are compelling reasons to think that well-designed researcher access mechanisms for social media data may have salutary effects on the overall privacy of social media users. This view is suggested by the FTC's favorable response to NYU's Ad Observatory and other research that seeks to "shed light on

themselves have recognized that proposals to increase access to social data pose privacy risks to platform users.¹⁴⁶

Some information privacy laws affirmatively grant data subjects additional rights and impose additional duties on platforms. For example, the California Consumer Privacy Act (CCPA) grants data subjects rights to request information about what data is being collected about them and whether any of their personal data is being sold or disclosed to third parties.¹⁴⁷ It also grants data subjects the right to opt out of the sale of their personal information.¹⁴⁸ The Children’s Online Privacy Protection Act (COPPA) imposes additional obligations on platforms regarding data collected from children under thirteen years of age.¹⁴⁹ To comply, platforms must post comprehensive policies regarding their practices for such data and obtain verified parental consent prior to any data collection, among other requirements. Although COPPA does not prohibit children under the age of thirteen from sharing their data with platforms, many social media platforms prohibit children under age thirteen from using their services due to the costs and risks associated with violating COPPA.¹⁵⁰ These contractual terms—and several federal privacy laws, including COPPA—are in turn regulated by the Federal Trade Commission Act’s § 5 authority and state consumer protection laws.¹⁵¹

opaque business practices,” in the wake of Meta’s efforts to use obligations under its 2012 FTC consent decree as a justification to shut down that research. *See supra* Section II.C. Such cases, where two sides of a dispute both marshal privacy arguments to advance their claims (in this case, companies and social media researchers), present an instance of what David Pozen calls a ‘privacy-privacy tradeoff.’ *See* David E. Pozen, *Privacy-Privacy Tradeoffs*, 83 U. CHI. L. REV. 221 (2016).

146. Daphne Keller, *User Privacy vs. Platform Transparency: The Conflicts are Real and We Need to Talk About Them*, CTR. FOR INTERNET & SOC’Y (Apr. 6, 2022), <https://cyberlaw.stanford.edu/blog/2022/04/user-privacy-vs-platform-transparency-conflicts-are-real-and-we-need-talk-about-them-0>; *see also* David E. Pozen, *Privacy-Privacy Tradeoffs*, 83 U. CHI. L. REV. 221 (2016).

147. California Consumer Privacy Act of 2018 (CCPA), Cal. Civ. Code §§ 1798.100(a)(1), 1798.110(3); 1798.135.

148. *See id.* *But see* Salome Viljoen, *The Promise and Pitfalls of California’s Consumer Privacy Act*, DIGITAL LIFE INITIATIVE: CRITICAL REFLECTIONS (Apr. 11, 2020), <https://www.dli.tech.cornell.edu/post/the-promise-and-pitfalls-of-the-california-consumer-privacy-act> (canvassing the law’s deficiencies).

149. 15 U.S.C. §§ 6501–06.

150. *Id.* COPPA applies both to services that are “directed to children” under 13, such as children’s online games, and those that knowingly collect personal information from people under 13. Platforms look to avoid charges of “actual knowledge” under COPPA by requiring users to input a birthdate on their registration page, and disallowing any user that responds with a year that suggests they are under 13.

151. *See* 15 U.S.C. § 45(a)(1) (2018) (prohibiting “unfair or deceptive acts or practices in or affecting commerce”). All states have incorporated similar consumer protection clauses into

As the case studies above highlight, the legal barriers erected by privacy obligations to researcher access (as well as the perceived legal risks accompanying these barriers) are significant. In the case of SS1, the growing legal complexities around compliance with the GDPR and CCPA were key contributors to the consortium's failure. In the case of the NYU Ad Observatory, Facebook invoked privacy duties—its supposed obligations under its FTC consent decree, and its obligations to users under their terms of service—to cut off researcher access.

These cases also demonstrate additional complexities when it comes to assessing the merit of privacy claims. On the one hand, social media companies may invoke privacy obligations in bad faith to withhold data that makes them look bad.¹⁵² In the case of the NYU Ad Observatory, for example, Facebook's attempt to use its FTC consent decree to block access to data was undermined by the FTC itself.¹⁵³ The agency clarified that it welcomed and encouraged greater researcher access to platform data.

On the other hand, companies also underinvest in privacy, and sharing data with researchers can raise legitimate privacy risks. Perhaps the most infamous example here is the Cambridge Analytica scandal, which nominally involved data harvested for a research project. SS1 sits somewhere in between this example and the NYU Ad Observatory example. Researchers and Facebook became mired in concerns over what SS1 would mean for Facebook's obligations under significant, new data protection laws. Some viewed Facebook's privacy concerns as pretextual; the company used exaggerated estimates of the perceived legal risk of new laws to wriggle out of obligations it no longer wanted to fulfill. However, Facebook was not alone in its assessment of risk. Credible third-party groups, including EPIC, clearly thought that SS1 raised genuine privacy concerns.¹⁵⁴

their civil codes, and state attorney general offices use their enforcement authority under such statutes and myriad other state privacy laws to regulate consumer digital terms and services. Danielle Keats Citron, *The Privacy Policymaking of State Attorneys General*, 92 NOTRE DAME L. REV. 747, 754 (2016). State attorneys general have set up specialized units or departments to bring digital privacy-related enforcement actions. *See, e.g., Bureau of Internet and Technology*, N.Y. ATTY GEN.'S OFF., <https://ag.ny.gov/bureau/internet-bureau>; Privacy Unit (last visited Nov. 23, 2023), *Privacy and Data Security*, CAL. ATTY' GEN.'S OFF., <https://oag.ca.gov/privacy>. For a list of state privacy laws, see *Privacy Laws by State*, ELEC. PRIV. INFO. CTR. (EPIC), <https://epic.org/privacy/consumer/states.html> (last visited Nov. 23, 2023).

152. Van Loo, *supra* note 8.

153. *See supra* Section II.C.

154. Letter from Marc Rotenberg, EPIC President, Christine Bannan, EPIC Administrative Law and Policy Fellow, Sunny Kang, EPIC International Consumer Council, and Sam Lester, EPIC Consumer Privacy Fellow, to Gary King and Nathaniel Persily, ELEC.

Regardless of whether companies raise privacy concerns in good or bad faith, courts and would-be legislators must consider the merit of such claims.¹⁵⁵ On this count, the privacy concerns of data sharing clearly present a challenge to unfettered researcher access, and they require good faith engagement.

2. *Navigating a Path Forward Between Privacy and Trade Secrecy*

Alongside the strong legal claims of companies over social media data is the conspicuous *absence* of rights to access for other entities. Users themselves have some individual rights over their data, but researchers and even government agencies have limited countervailing legal rights over data to supersede those of companies.¹⁵⁶ This is notable, given that absolute rights of any kind are rare in law, particularly with respect to intangible goods, and that government claims that limit or supersede private (commercial) claims of right in the course of ordinary socioeconomic legislation were once more common.¹⁵⁷

The lack of public rights in social media is also extraordinary given the magnitude of the public interests at stake. Social media companies are some of the largest companies in the world. They exert significant influence on the public sphere, affecting how billions of people around the world interact with one another and with the news of the day. These spaces are key to self, social, and political formation. They generate billions, if not trillions, of dollars of revenue. And yet very little is known about how they actually work.

As this Article endeavors to show, we must overcome the legal barriers to researcher access imposed by trade secrecy and privacy claims to examine how these platforms work. Or, more accurately (and more humbly), we must find ways to navigate safely past these barriers. For this, we now turn to the lessons

PRIV. INFO. CTR. (July 12, 2018), <https://epic.org/wp-content/uploads/privacy/facebook/EPIC-ltr-SocialScienceOne-July-2018.pdf>.

155. Salome Viljoen, *Privacy Puzzles* (draft on file with author).

156. The obvious exception here is access for purposes of criminal investigations, which are subject to warrants. Several scholars have argued that the law permits, even requires, expanding countervailing public rights over privately held data. See Mary D. Fan, *The Public's Right to Benefit from Privately Held Consumer Big Data*, 96 N.Y.U. L. REV. 1438 (2021) (arguing for a public right to benefit from privately held consumer data such as social media data); Aziz Huq, *The Public Trust in Data*, 110 GEO. L. J. 333 (2021); Salome Viljoen, *A Relational Theory of Data Governance*, 131 YALE L.J. 573 (2021) (developing an account of data interests that accrue at the population-level and must be governed via public rights and institutions).

157. Amy Kapczynski, *The Lochnerized First Amendment and the FDA: Toward a More Democratic Political Economy*, 118 COLUM. L. REV. 179, 179–80 (2018), Jedediah Purdy, *Beyond the Bosses' Constitution: The First Amendment and Class Entrenchment*, 118 COLUM. L. REV. 2161, 2174 (2018); Amy Kapczynski, *The Public History of Trade Secrets*, 55 U.C. DAVIS L. REV. 1367, 1429–36 (2022); Christopher J. Morten, *Publicizing Corporate Secrets*, 171 U. PENN. L. REV. 1319, 1340–47 (2023).

of another powerful industry where researchers have been granted access to valuable and sensitive commercial data: pharmaceutical and medical device companies' clinical trials.

III. CLINICAL TRIAL DATA SHARING: MANDATE AND EXPERIMENTS

What is clinical trial data? What is the clinical trial data sharing mandate, and why might it matter for governance of social media data? What mechanisms have emerged for responsible sharing of even the most sensitive components of clinical trial data? This Part answers these questions.

In this Part, Section III.A introduces clinical trial data. Section III.B provides historical context for the clinical trial data sharing mandate that emerged in the United States in the 21st century. Section III.C then describes the 2007 legislation—the Food & Drug Administration Amendments Act (FDAAA)—that forms the foundation of that mandate. The law works, albeit imperfectly, and it has unlocked benefits for researchers, patients, and the broader public. Section III.D then describes the institutions that implement FDAAA and other laws that govern researcher access to clinical trial data. Section III.D also shows that some institutions that share clinical trial data have been able to achieve deeper sorts of data sharing with researchers. These relationships have made the most sensitive components of trial data—individual patient data (IPD) and detailed trial methodologies that may implicate companies' trade secrets—accessible to researchers. Section III.E distills key features.

Today researchers have meaningful access to much of the very same data that companies rely on for their research and development (R&D), regulatory approvals, and profits. So far, at least, clinical trial data sharing also capably protects the interests of the people who create this data by volunteering for clinical trials.

A. WHAT IS CLINICAL TRIAL DATA, AND WHY DOES IT MATTER?

1. *Clinical Trial Data Defined*

Clinical trials are research studies on human volunteers. Clinical trials answer questions about different health interventions, such as surgeries, drugs, vaccines, knee replacements, and changes in exercise or diet.

The highest quality clinical trials are randomized and controlled. Human subjects are assigned at random to different “groups” within the trial; one of the groups is a “control group” that receives a standard intervention, a placebo, or no intervention at all. By comparing outcomes in the treatment and control

group, the safety, efficacy, and other properties of the intervention under study can be measured. Randomized controlled trials are the most important means of testing whether a particular intervention is safe and effective—the “gold standard” of evidence-based medicine.¹⁵⁸

Clinical trials are traditionally categorized into one of four “phases.” “Phase 1” trials are the first trials conducted on a new intervention. Small and cautious, they are primarily used to evaluate safety. “Phase 2” trials are larger and longer; they gather more safety information and begin to explore the intervention’s efficacy. “Phase 3” trials are still larger; they weigh benefits and harms and examine rare adverse events in a larger population. “Phase 4” trials are done after an intervention is already on the market and in wide use, to study longer-term safety and effectiveness, new uses in new patient populations, and other outstanding questions.¹⁵⁹

Clinical trials generate lots of data, especially large Phase 3 and Phase 4 trials. One 1999 estimate concluded that a typical Phase 3 clinical trial design with 2,000 patients studied for twelve months could “generate up to 3 million data points.”¹⁶⁰ Thousands of clinical trials are conducted every year, making the total quantity of trial data enormous.

There are numerous components of clinical trial data, each with its own properties, utility, and sensitivities. Before proceeding further, we provide a brief taxonomy of clinical trial data. Clinical trial data contains three distinct components: (1) individual patient-level data (IPD), (2) summary data, and (3) metadata.¹⁶¹ Together, these three components constitute the body of information collectively referred to as clinical trial data.

158. *Clinical Research: Benefits, Risks, and Safety*, NAT’L INST. ON AGING, NAT’L INST. OF HEALTH, <https://www.nia.nih.gov/health/clinical-trials-and-studies/clinical-research-benefits-risks-and-safety>.

159. *Step 3: Clinical Research, Clinical Research Phase Studies*, FDA, https://www.fda.gov/patients/drug-development-process/step-3-clinical-research#Clinical_Research_Phase_Studies [<https://perma.cc/5V65-MRQG>].

160. ROUNDTABLE ON RESEARCH AND DEVELOPMENT OF DRUGS, BIOLOGICS, AND MEDICAL DEVICES, INSTITUTE OF MEDICINE, ASSURING DATA QUALITY AND VALIDITY IN CLINICAL TRIALS FOR REGULATORY DECISION MAKING: WORKSHOP REPORT 45 (Jonathan R. Davis et al. eds., 1999).

161. COMMITTEE ON STRATEGIES FOR RESPONSIBLE SHARING OF CLINICAL TRIAL DATA, INSTITUTE OF MEDICINE, SHARING CLINICAL TRIAL DATA: MAXIMIZING BENEFITS, MINIMIZING RISK 7 (2015).

a) Individual Patient-Level Data (IPD)

The first and perhaps most obvious component of clinical trial data is individual patient-level data (IPD).¹⁶² IPD is the “raw” data collected on individual patients. Among other things, it reveals the precise health statuses of different patients—the testing, care, and diagnoses they receive; the side effects and other “adverse events” they experience; and so on.¹⁶³ Expert users of data, such as academics and the FDA’s regulatory scientists, may be most interested in IPD, but other users, such as journalists and patient groups, may find it difficult to use and understand.

IPD is the most sensitive data component from a patient privacy perspective. It is the rich, detailed personally identifying information (PII) of the clinical trial world, as it links specific health status information with specific individuals.¹⁶⁴ IPD can be de-identified by redacting obvious identifiers such as name, birth year, and zip code,¹⁶⁵ but it remains IPD after de-identification as it continues to characterize the health status of individual people rather than larger groups. Thus, even after de-identification, IPD remains at risk of re-identification and subsequent effects on individual patients.

b) Summary Data

The second data component of clinical trial data is summary data, also known as aggregate data. As the name suggests, this data does not reveal the health status of individual people but instead reveals something about *groups* of people—e.g., the treatment and control arms of a clinical trial, or demographic subgroups of patients in the trial (such as patients over age sixty-five). Some summary data includes explanations and simple “takeaways” digestible to non-expert readers, such as high-level conclusions about a drug’s safety and efficacy (or lack thereof) in a group of people.

162. In the context of clinical trials, the phrase individual *participant* data is used synonymously with individual patient-level data.

163. For richer description of the “structure” of IPD in clinical trials, see Deborah A. Zarin & Tony Tse, *Sharing Individual Participant Data (IPD) within the Context of the Trial Reporting System (TRS)*, 13 PLOS MED 1, e1001946 (2016).

164. Patients in trials are typically assigned a code number or other anonymous identifier and are not identified by name. But detailed demographic data such as age, gender, weight, height, race, and zip code is often included in “anonymous” IPD, making “anonymized” IPD identifiable. Katherine Tucker, Janice Branson, Maria Dilleen, Sally Hollis, Paul Loughlin, Mark J. Nixon & Zoë Williams, *Protecting patient privacy when sharing patient-level data from clinical trials*, 16 BMC MED. RSCH. METHODOLOGY 77 (2016). IPD is a form of protected health information (PHI); PHI is the term of art used in the HIPAA Privacy Rule. 45 C.F.R. § 164.514 (2021).

165. See, e.g., 45 C.F.R. §§ 160.103, 164.514 (defining “identifiable health information” and “protected health information”).

Summary data may span multiple trials. The FDA, for example, synthesizes IPD from multiple trials to produce summary data useful to patients and doctors.¹⁶⁶

The term “summary” clinical trial data suggests brevity, but some important summary data runs long. Standard summary clinical study reports (CSRs) can run many thousands of pages and provide expert readers with a wealth of information.¹⁶⁷

c) Metadata

The third component of clinical trial data is metadata. Metadata is data about the other data components. It describes how, exactly, IPD and/or summary data is generated, recorded, analyzed, and presented. Analysis of metadata alongside IPD and summary data can confirm that IPD and summary data are trustworthy—and reveal and discourage manipulation and mistakes.¹⁶⁸

In the context of clinical trials, the term “metadata” commonly refers to specific standardized documents and data elements: the clinical trial protocol, the statistical analysis plan (SAP), and any analytic code used in connection with the SAP. Together, these resources provide a trial’s precise methodology: what questions the trial was intended to answer; what patients were included in and excluded from the trial; what patient “outcomes” it measured (such as tumor size or cholesterol levels); how those measurements were taken and processed; and more.

2. *The Value of Clinical Trial Data and Clinical Trial Data Sharing*

Clinical trial data is terrifically valuable and expensive to generate. Even a simple trial costs millions of dollars to run; larger, longer Phase 3 trials typically cost tens of millions of dollars.¹⁶⁹ The costs are worth incurring because the

166. For example, the FDA publishes simple “Medication Guides” that explain to patients how to make safe use of certain relatively risky drugs. 21 C.F.R. § 208.24 (2022). The FDA also publishes more detailed “approval” packages, described *infra* Section III.C.1, that likewise synthesize findings from multiple trials.

167. Joshua M. Sharfstein, James Dabney Miller, Anna L. Davis, Joseph S. Ross, Margaret E. McCarthy, Brian Smith, Anam Chaudhry, G. Caleb Alexander & Aaron S. Kesselheim, *Blueprint for Transparency at the U.S. Food and Drug Administration: Recommendations to Advance the Development of Safe and Effective Medical Products*, 45 J.L. MED. & ETHICS 7, 17 (2017).

168. See John P.A. Ioannidis, Arthur L. Caplan & Rafael Dal-Ré, *Outcome Reporting Bias in Clinical Trials: Why Monitoring Matters*, 2017 BMJ 356 (2017) (describing value of comparing published trial results against trial protocols).

169. Linda Martin, Melissa Hutchens, Conrad Hawkins & Alaina Radnov, *How Much Do Clinical Trials Cost?*, 16 NATURE REVIEWS DRUG DISCOVERY 381 (2017); Thomas J. Moore, James Heyward, Gerard Anderson & G. Caleb Alexander, *Variation in the Estimated Costs of Pivotal*

data generated is scientifically and commercially valuable. Drug, vaccine, device, and other for-profit companies around the world spend tens of billions of dollars on clinical trials to guide their research, to support marketing efforts, and to generate sufficient data to earn approval from the FDA and other regulators around the world.¹⁷⁰

As with social media data, the stakeholders in clinical trial data are numerous. Key stakeholders include patients themselves; doctors, nurses, and other providers whose care is shaped by trial results; hospitals, clinics, and other organizations that employ the providers (and are liable for many of their actions); innovative companies that develop and sell new drugs, devices, and vaccines; generic and biosimilar companies that seek to sell similar products at lower prices; scientific researchers in academia, government, and nonprofit nongovernmental organizations who do basic research; government regulators who conduct, referee, and pay for research; journalists, academics, and civil society researchers who watchdog those regulators and the healthcare system as a whole; and the public at large, who pay for the regulators and pay a fortune for healthcare.¹⁷¹

All these stakeholders are important, but for purposes of this Article, we focus on researchers and research uses of clinical trial data that provide benefits to the broader public. In 2015, a landmark report from the Institute of Medicine (now known as the National Academy of Medicine) characterized the benefits of IPD sharing as follows:¹⁷²

Clinical Benefit Trials Supporting the US Approval of New Therapeutic Agents, 2015–2017: A Cross-Sectional Study, 10 *BMJ OPEN* 1 (2020). Some industry-funded estimates based on industry-provided data put the average cost of a Phase 3 trial over \$200 million. See, e.g., CONG. BUDGET OFF., *RESEARCH AND DEVELOPMENT IN THE PHARMACEUTICAL INDUSTRY* (2021), <https://www.cbo.gov/publication/57126#footnote-069-backlink> (citing Joseph A. DiMasi Henry G. Grabowski & Ronald W. Hansenal, *Innovation in the Pharmaceutical Industry: New Estimates of R&D Costs*, 47 *J. HEALTH ECON.* 20, 24–25).

170. GRAND VIEW RESEARCH, *CLINICAL TRIALS MARKET SIZE, SHARE & TRENDS ANALYSIS REPORT BY PHASE (PHASE I, PHASE II, PHASE III, PHASE IV), BY STUDY DESIGN, BY INDICATION (PAIN MANAGEMENT, ONCOLOGY, CNS CONDITION, DIABETES, OBESITY), BY REGION, AND SEGMENT FORECASTS, 2023–2030*, <https://www.grandviewresearch.com/industry-analysis/global-clinical-trials-market>.

171. *National Health Expenditure Data: Historical*, CTRS. FOR MEDICARE & MEDIAID SERVS., <https://www.cms.gov/research-statistics-data-and-systems/statistics-trends-and-reports/nationalhealthexpenddata/nationalhealthaccountshistorical> (last modified Sept. 6, 2023) (providing statistics on U.S. health spending, and reporting that U.S. healthcare spending reached \$4.3 trillion in 2021).

172. INSTITUTE OF MEDICINE, *supra* note 161, at 32 (citations omitted); see also NATIONAL ACADEMIES OF SCIENCES., *ENG'RS & MED., REFLECTIONS ON SHARING CLINICAL TRIAL DATA: CHALLENGES AND A WAY FORWARD* (2020).

From the perspective of society as a whole, sharing of data from clinical trials could provide a more comprehensive picture of the benefits and risks of an intervention and allow health care professionals and patients to make more informed decisions about clinical care. Moreover, sharing clinical trial data could potentially lead to enhanced efficiency and safety of the clinical research process by, for example, reducing unnecessary duplication of effort and the costs of future studies, reducing exposure of participants in future trials to avoidable harms identified through the data sharing, and providing a deeper knowledge base for regulatory decisions.

In the long run, sharing clinical trial data could potentially improve public health and patient outcomes, reduce the incidence of adverse effects from therapies, and decrease expenditures for medical interventions that are ineffective or less effective than alternatives. In addition, data sharing could open up opportunities for exploratory research that might lead to new hypotheses about the mechanisms of disease, more effective therapies, or alternative uses of existing or abandoned therapies that could then be tested in additional research.

In the following Sections, we show in more detail how independent researchers have used access to IPD and other clinical trial data to interrogate manufacturers' claims about their products and help protect the public from unsafe, ineffective, or exaggerated products (think Ad Observatory, but for drugs). For now, one vivid example of the value of clinical trial data sharing: the antidepressant paroxetine ("Paxil").

Paroxetine was never approved for use in children but became popular with providers, who wrote over two million prescriptions for children per year in the early 2000s on the basis of a 2001 medical journal article. The drug's manufacturer, GlaxoSmithKline, funded and disseminated the article,¹⁷³ which claimed that the medicine was "generally well tolerated and effective" in young patients.¹⁷⁴ In fact, paroxetine caused suicidal thinking and suicide in many children.¹⁷⁵ In 2003 and 2004, after widespread anecdotal reports of teen suicides caused by paroxetine, FDA scientists reanalyzed earlier-submitted clinical trial data and concluded that the drug causes increased risk of suicide and suicidal ideation.¹⁷⁶ This led to stricter prescribing rules and a wave of

173. Joanna Le Noury, John M. Nardo, David Healy, Jon Jureidini, Melissa Raven, Catalin Tufanaru & Elia Abi-Jaoude, *Restoring Study 329: Efficacy and Harms of Paroxetine and Imipramine in Treatment of Major Depression in Adolescence*, 351 *BMJ* 1 (2015).

174. *Id.*

175. *Id.*

176. Tarek A. Hammad, *Review and Evaluation of Clinical Data*, U.S. FOOD & DRUG ADMIN. 45 (Aug. 16, 2004), <https://web.archive.org/web/20080625161255/https://www.fda.gov/>

litigation against GlaxoSmithKline. GlaxoSmithKline ultimately pled guilty to fraud,¹⁷⁷ and paroxetine is no longer widely prescribed to children.

In the 2010s, independent academic researchers eventually convinced GlaxoSmithKline to share more comprehensive data from the trial described in the 2001 article. They found that the trial data had shown the risks all along and that GlaxoSmithKline had misrepresented the data.¹⁷⁸ The researchers concluded that the affair “illustrates the necessity of making primary trial data and protocols available to increase the rigor of the evidence base.”¹⁷⁹ Had GlaxoSmithKline’s data been shared with independent researchers in 2001, they might have raised the alarm then, and years of harm might have been averted.

Independent research conducted with clinical trial data is not limited to investigation of questions of safety and efficacy, vital as those questions obviously are. Independent research also helps private and public payers allocate resources better. For example, the nonprofit organization Institute for Clinical and Economic Review (ICER) uses trial data and other medical data to undertake detailed analyses of the cost-effectiveness of various medical interventions, including everything from comparison of all FDA-approved multiple sclerosis drugs¹⁸⁰ to service dogs as treatment for post-traumatic stress disorder.¹⁸¹ Meta-analysis of pooled clinical trial data established that the blockbuster influenza drug oseltamivir (“Tamiflu”) is only modestly effective and that massive stockpiling was a poor use of billions of dollars of public money.¹⁸²

OHRMS/DOCKETS/ac/04/briefing/2004-4065b1-10-TAB08-Hammads-Review.pdf

(“No individual trial showed a statistically significant signal for suicidality. However, many had a RR of 2 or more and some of the overall estimates, across various trial groupings, were statistically significant.”).

177. Katie Thomas & Michael S. Schmidt, *Glaxo Agrees to Pay \$3 Billion in Fraud Settlement*, N.Y. TIMES (July 2, 2012), <https://www.nytimes.com/2012/07/03/business/glaxosmithkline-agrees-to-pay-3-billion-in-fraud-settlement.html>.

178. See Joanna Le Noury, John M. Nardo, David Healy, Jon Jureidini, Melissa Raven, Catalin Tufanaru & Elia Abi-Jaoude., *Restoring Study 329: Efficacy and Harms of Paroxetine and Imipramine at 2.in Treatment of Major Depression in Adolescence*, 2015 BMJ 351; see also Deborah A. Zarin & Tony Tse, *Sharing Individual Participant Data (IPD) within the Context of the Trial Reporting System (TRS)*, 13 PLOS MED e1001946, 4–5 (2016).

179. Noury et al., *supra* note 178, at 1.

180. *Multiple Sclerosis: CIS, RRMS, and SPMS*, INST. FOR CLINICAL & ECON. REV., <https://icer.org/assessment/multiple-sclerosis-2023/> (last updated Feb. 21, 2023).

181. *PTSD: Service Dogs*, INST. FOR CLINICAL & ECON. REV., <https://icer.org/assessment/ptsd-service-dogs-2021/> (last updated Jan. 31, 2022).

182. Peter Doshi, Tom Jefferson & Chris Del Mar, *The Imperative to Share Clinical Study Reports: Recommendations from the Tamiflu Experience*, 9 PLOS MED 1 (2012).

3. *The Dangers of Clinical Trial Data Sharing*

Of course, sharing clinical trial data with researchers has risks, too. There are legitimate and strong countervailing interests that often militate against sharing. The two predominant interests here are patients' privacy (especially as to IPD) and innovative companies' competitive interests.¹⁸³ The latter are often articulated in terms of "incentives to innovate" and "protection from free-riders," or framed in terms of specific intellectual property doctrines, such as trade secrecy.

Others' work has thoroughly analyzed both these important interests, in the context of clinical trial data, in the context of healthcare more broadly, and in the context of valuable data writ large.¹⁸⁴ In the Sections that follow, we will show specific instances of such arguments being raised by the pharmaceutical

183. See, e.g., Morten & Kapczynski, *The Big Data Regulator, Rebooted*, *supra* note 134, at 531; FDA Commissioner Scott Gottlieb, M.D., *On New Steps FDA is Taking to Enhance Transparency of Clinical Trial Information to Support Innovation and Scientific Inquiry Related to New Drugs*, U.S. FOOD & DRUG ADMIN. (Jan. 16, 2018) (identifying (1) patient privacy and (2) trade secrecy and the related concept of "confidential commercial information" as justifications for caution in sharing clinical trial data); Memorandum in Support of Pfizer Motion to Intervene at 3, Pub. Health & Med. Pro. for Transparency v. Food and Drug Admin., No. 4:21-CV-01058-P (N.D. TX Jan. 21, 2022) (expressing Pfizer's view that its clinical trial data and related data on its COVID-19 vaccine contain "personal privacy information of individuals who participated in clinical trials and confidential business and trade secret information of Pfizer"); Letter to Jerry Moore, *supra* note 25; 79 Fed. Reg. 69,566 (Nov. 21, 2014); Docket No. NIH-0003 (Mar. 23, 2015) at 2 (arguing that benefits of clinical trial data sharing "must be pursued in a manner that protects other important public health goals such as maintaining patient privacy and protecting incentives for innovative medical research.").

184. For scholarship on privacy and intellectual property (IP) as pro-secrecy interests in clinical trial data specifically, see Erika Lietzan, *A New Framework for Assessing Clinical Data Transparency Initiatives*, 18 MARQ. INTELL. PROP. L. REV. 33 (2014); INSTITUTE OF MEDICINE, *supra* note 161; Morten & Kapczynski, *supra* note 134. For scholarship on privacy and IP interests in broader medical data, see Sharona Hoffman, *Citizen Science: The Law and Ethics of Public Access to Medical Big Data*, 30 BERKELEY TECH. L.J. 1741 (2015); Timo Minssen & Justin Pierce, *Big Data and Intellectual Property Rights in the Health and Life Sciences*, in *BIG DATA, HEALTH LAW, AND BIOETHICS* 307 (I. Glenn Cohen et al. eds., 2018); Elizabeth Rowe, *Sharing Data*, 104 IOWA L. REV. 287 (2018). Much has been written on privacy and IP interests in personal data, and on methods of generating and using that data. See, e.g., HELEN NISSENBAUM, *PRIVACY IN CONTEXT: TECHNOLOGY, POLICY, AND THE INTEGRITY OF SOCIAL LIFE* (2010); COHEN, *supra* note 5. Governmental bodies like the FDA and the European Medicines Agency have also sometimes taken the position that some clinical trial data—metadata especially—may constitute valid, protected trade secrets. See, e.g., *External Guidance on the Implementation of the European Medicines Agency Policy on the Publication of Clinical Data for Medicinal Products for Human Use*, EUR. MEDS. AGENCY 49–52 (Oct. 15, 2018), https://www.ema.europa.eu/en/documents/regulatory-procedural-guideline/external-guidance-implementation-european-medicines-agency-policy-publication-clinical-data_en-3.pdf.

or medical device industry and then accommodated or rebutted by the legislators and governors of the clinical trial data-sharing mandate.

Note here that the parallels with social media data are strong. Just as platform companies have invoked patient privacy and innovation to limit sharing their data with researchers, so too have large, incumbent companies that hold and profit from clinical trial data.¹⁸⁵ For example, in 2015, shortly after the National Institutes of Health (NIH) proposed a new rule mandating expanded sharing of certain summary and metadata from clinical trials with researchers and the broader public,¹⁸⁶ the Pharmaceutical Research and Manufacturers of America (PhRMA) association warned, ominously, that “the rule does not adequately protect the process of medical research innovation. Failure to protect adequately trade secrets and confidential commercial information would harm public health by discouraging the very innovation necessary to bring new medical advances to the market.”¹⁸⁷ NIH responded that PhRMA’s concerns were overblown and that NIH’s rule struck an appropriate balance.¹⁸⁸ Since NIH’s rule went into effect in 2017, NIH has proven correct—as the next two Sections show.

B. “DARK AGES” OF CLINICAL TRIAL SECRECY: LITTLE RESEARCHER ACCESS, UNREALIZED BENEFITS, AND HARM TO PATIENTS

This Section explains how today’s clinical trial data sharing mandate emerged out of comparative “dark ages” of data secrecy, contestation, and unnecessary human suffering.

Consider the United States in 1960. There was then no explicit law governing researcher access to clinical trial data and other kinds of medical research data. In addition, more rudimentary information technology meant that data was more difficult to share and use.

Because no law mandated researcher access, drug companies, medical device manufacturers, universities, and other entities that conducted clinical trials were free to disseminate or withhold data as they saw fit. They massaged data, such as by publishing selective data in medical journals that painted their

185. For a broad, independent view of the pharmaceutical industry’s claims of trade secrecy in clinical trial data, see W. Nicholson Price II & Timo Minssen, *Will Clinical Trial Data Disclosure Reduce Incentives to Develop New Uses of Drugs?*, 33 NATURE BIOTECHNOLOGY 685 (2015).

186. See *infra* Sections III.B & III.C.1. NIH did not propose, and has not proposed, mandatory sharing of IPD from the same broad swath of clinical trials.

187. Letter to Jerry Moore, *supra* note 25, at 2.

188. See, e.g., 81 Fed. Reg. 64982, 64968, 64995.

products in the best possible light.¹⁸⁹ The medical literature was thus incomplete and manipulated.

In fact, as of 1960, drug companies sometimes withheld clinical trial data not just from researchers but from the FDA itself. An infamous example: In 1960 and 1961, one FDA scientist, Frances Kelsey, grew concerned over a lack of safety data to the FDA on the drug thalidomide, even as the drug had been approved and entered widespread use in Europe and Australia. Kelsey came to suspect that the drug's manufacturer, the William S. Merrell Company, was withholding safety data from the FDA¹⁹⁰ and requested this missing data from the company.¹⁹¹ Kelsey's insistence on receiving the data parallels the FTC's recent insistence that social media companies turn over certain data pursuant to a past consent decree.¹⁹² Kelsey's lengthy review of thalidomide prevented widespread use in the United States. By late 1961, reports of thousands of horrifying birth defects and fetal deaths caused by the drug in other countries led to its withdrawal from pharmacies worldwide. Kelsey was justifiably hailed as a hero for protecting Americans from its harms.

The thalidomide catastrophe, and a broader "full disclosure movement" that coalesced in drug regulation in the wake of other, smaller drug scandals,¹⁹³ prompted Congress to enact the first important federal clinical trial data sharing legislation: the 1962 Kefauver-Harris Amendments to the Food, Drug & Cosmetics Act. This legislation mandated, for the first time, that drug companies submit clinical trial data to the FDA as a condition of market approval, and it gave the FDA legal authority to dictate exactly how that data was packaged and presented to the agency. If companies didn't comply, the

189. See DANIEL CARPENTER, REPUTATION AND POWER (2010); PATRICK RADDEN KEEFE, EMPIRE OF PAIN: THE SECRET HISTORY OF THE SACKLER DYNASTY (2021); see also MILTON M. SILVERMAN & PHILIP R. LEE, PILLS PROFITS, AND POLITICS 105 (1974) (explaining that the new FDA Commissioner took office in 1966 and criticized the practice of "conscious withholding of unfavorable animal or clinical data" from the FDA).

190. These were case reports on peripheral neuropathy held by the company. CARPENTER, *supra* note 189, at 221.

191. See Stephen Phillips, *How a Courageous Physician-Scientist Saved the U.S. From Birth-Defects Catastrophe*, UCHICAGO MED. (Mar. 9, 2020), <https://www.uchicagomedicine.org/forefront/biological-sciences-articles/courageous-physician-scientist-saved-the-us-from-a-birth-defects-catastrophe>; CARPENTER, *supra* note 189, at 221.

192. E.g., Agreement Containing Consent Order, *In re* Facebook, Inc., File No. 092 3184, Part IV (Fed. Trade Comm. Dec. 5, 2021), <https://www.ftc.gov/sites/default/files/documents/cases/2011/11/111129facebookagree.pdf>.

193. CARPENTER, *supra* note 189, at 237.

FDA could keep products off the U.S. market. The FDA became the world's largest reservoir of clinical trial data, which it remains today.¹⁹⁴

But the Kefauver-Harris Amendments did not guarantee researcher or public access to that data. The “full disclosure” in “full disclosure movement” meant full disclosure *to the FDA*, not to independent researchers. Against a statutory blank canvas, the FDA had no legal obligation to disclose any of the clinical trial data in its possession to the broader public.¹⁹⁵ Through the 1960s, the FDA's choice was to keep most of this data confidential; its expert reviewers worked mostly in secret. Independent researchers outside the FDA typically learned the results of clinical trials from the medical literature, where industry continued to cherry-pick the data it wanted to share.

At least as early as 1969, some FDA officials expressed a desire to change this state of affairs and make all clinical trial data held by the agency public once the product in question had been approved for sale.¹⁹⁶ Tentative, inconsistent efforts to do so through discretionary agency action proved unsuccessful, in part because they were undone by a rotating cast of more industry-friendly, pro-secrecy FDA commissioners, and in part because for years, the FDA was threatened with legal challenge by the powerful pharmaceutical industry.¹⁹⁷

194. U.S. FOOD & DRUG ADMIN., DRIVING BIOMEDICAL INNOVATION: INITIATIVES TO IMPROVE PRODUCTS FOR PATIENTS 22 (2011), <https://www.ipqpubs.com/wp-content/uploads/2012/02/FDA-Driving-Biomedical-Innovation.pdf>.

195. The Freedom of Information Act (FOIA), first enacted in 1966, might seem to offer researchers a vehicle to demand and obtain clinical trial data held by the FDA, as, on its face, FOIA empowers any member of the public to demand most documents held by almost every federal agency, including the FDA. See Margaret B. Kwoka, *FOIA, Inc.*, 65 DUKE L.J. 1361 (2016); Morten & Kapczynski, *supra* note 134. Yet in practice, FOIA has proved to be of modest utility. In 1974, under a secrecy-friendly, Nixon-appointed Commissioner, the FDA first promulgated regulations promising to keep essentially all industry-submitted clinical trial data secret from FOIA requesters, and these regulations remain on the books today. 21 C.F.R. § 4.61, promulgated in 1974, since recodified to 21 C.F.R. § 20.61; FDA INFORMATION DISCLOSURE MANUAL (1999), https://www.governmentattic.org/6docs/FDA-InfoDiscManual_1999.pdf. For deeper analysis, see Rebecca S. Eisenberg, *The Role of the FDA in Innovation Policy*, 13 MICH. TELECOMM. & TECH. L. REV. 345, 381 (2007); Lietzan, *supra* note 184, at 51–53. Some skilled and determined researchers have succeeded in using FOIA to obtain clinical trial data, but only with great effort. See CARPENTER, *supra* note 189, at 381; Charles Seife, *FDA Documents Reveal Depths of Internal Rancor Over Drug's Approval Process*, UNDARK (Aug. 2, 2017), <https://undark.org/2017/08/02/fda-eteplirsen-janet-woodcock/>.

196. See Silverman & Lee, *supra* note 189, at 241 (recounting that the then-FDA Commissioner, appointed in 1969, “urged . . . that the results of all animal and human trials and similar clinical data should be made public”).

197. Robert M. Halperin, *FDA Disclosure of Safety and Effectiveness Data: A Legal and Policy Analysis*, 1979 DUKE L.J. 286, 294 (1979); Thomas O. McGarity & Sidney A. Shapiro, *The*

From the 1970s to the 1990s, there remained no coherent statutory regime guaranteeing researcher access to clinical trial data, even as researchers clamored for access. In 1978, a bill that would have mandated disclosure of summary data, metadata, and IPD, called the Drug Regulation Reform Act (DRRA), was defeated in Congress.¹⁹⁸ The bill failed to pass despite support from the Center for Law and Social Policy, the Environmental Defense Fund, and Public Citizen.¹⁹⁹ In 1980, McGarity and Shapiro published an article in the *Harvard Law Review* criticizing the FDA's then-skimpy disclosure of industry-generated clinical trial data in the agency's possession;²⁰⁰ this practice contrasted with the EPA's much richer data disclosure of testing data on pesticides²⁰¹ and the FDA's own richer data disclosure on food additives.²⁰² The 1984 Hatch-Waxman Act was, in early drafts of the legislation, to have included a DRRA-like provision that would have required the FDA to publish volumes of clinical trial data when product applications were approved or denied.²⁰³ The pharmaceutical industry's lobby watered down the statutory language, arguing that mandatory disclosure would undermine patient privacy and its trade secrecy interests.²⁰⁴ At the same time, the FDA Commissioner testified in Congress on the alleged benefits of data secrecy and urged construction of the watered-down statutory language in ways that perpetuated the secretive status quo.²⁰⁵ In the late 1990s, the FDA began voluntary,

Trade Secret Status of Health and Safety Testing Information: Reforming Agency Disclosure Policies, 93 HARV. L. REV. 837, 837–38 (1980).

198. William W. Vodra, *The Drug Regulation Reform Act of 1978: Putting Some Economic Issues into Different Contexts*, 1 MANAGERIAL & DECISION ECON. 184 (1980).

199. Drug Regulation Reform Act of 1978: Hearings on S. 27755 Before the Subcomm. on Health & Sci. Rsch. of the Comm. On Hum. Res., 95th Cong. 2 (1978) at 625–26 (CLSP), 645–46 (EDF), 668 (Public Citizen).

200. McGarity & Shapiro, *supra* note 197, at 867. Around the same time, as Matthew Herder has documented, there were also some brief but important flashes of discretionary data transparency from the FDA, as when the agency disclosed secret data on the safety and efficacy of sulfinpyrazone (Anturane) to combat misleading messaging by the drug's manufacturer. See Matthew Herder, *Reviving the FDA's Authority to Publicly Explain Why New Drugs Are Approved or Rejected*, 178 JAMA INTERNAL MED. 1013 (2018).

201. *Id.* at 873.

202. *See id.* at 872.

203. See James T. O'Reilly, *Knowledge Is Power: Legislative Control of Drug Industry Trade Secrets*, 54 U. CIN. L. REV. 1, 16–17 (1985); Jane A. Fisher, *Disclosure of Safety and Effectiveness Data Under the Drug Price Competition and Patent Term Restoration Act*, 41 FOOD DRUG COSM. L. J. 268 (1986).

204. O'Reilly, *supra* note 203; Fisher, *supra* note 203.

205. Then-FDA Commissioner Frank Young intervened during the negotiation and passage of the Hatch-Waxman Act in 1984 to express the view that the statutory text of Act did and should not expand the agency's obligation to disclose safety and efficacy data, despite statutory language mandating that "[s]afety and efficacy data" "be made available to the public, upon request," under various circumstances. O'Reilly, *supra* note 203, at 20–21; Fisher, *supra*

discretionary disclosure of some summary data and metadata from clinical trials, but shared this data only after product approval for a subset of approved products²⁰⁶ and on a leisurely timeline.²⁰⁷

The pharmaceutical industry largely thwarted researcher access into the 2000s.²⁰⁸ For example, in 2000, David Willman of *The Los Angeles Times* reported a meticulous, Pulitzer-Prize-winning series of articles²⁰⁹ on seven drugs that had been withdrawn between 1993 and 2000 for causing death and other serious side effects, revealing weaknesses in the FDA's drug approval process and in the pharmaceutical industry's ethics.²¹⁰ Willman remarked on the difficulty of his investigation and the FDA's then-still-prevalent culture of data secrecy. For example, data from one important clinical trial showing deaths in kidney transplant patients taking the immunosuppressive drug tacrolimus ("Prograf") had been disclosed to the FDA but not made readily available to outside researchers; per Willman, "the only way for doctors or patients to find that data is to search the medical literature or seek the FDA's review documents" through FOIA.²¹¹ Similarly, in 2004, Barry Meier of *The New York Times* reported that medical researchers seeking to investigate the safety of antidepressants "could get only pieces of" relevant trial data, as "drug companies refused to turn over data . . . even though these researchers had

note 203, at 283–84 (describing letter from Commissioner Young asserting that the FDA would construe the Act to permit the FDA keep data secret if the data "have commercial value as confidential business information").

206. INSTITUTE OF MEDICINE, *THE FUTURE OF DRUG SAFETY: PROMOTING AND PROTECTING THE HEALTH OF THE PUBLIC* INSTITUTE OF MEDICINE 142–43 (Alina Baciuc et al. eds., 2006); Zarin & Tse, *supra* note 178.

207. See Marion F. Gruber, *US FDA Review and Regulation of Preventive Vaccines for Infectious Disease Indications: Impact of the FDA Amendments Act 2007*, 10 EXPERT REV. VACCINES 1011, 1018 (2011) (observing that prior to 2007, "only limited documentation had to be sent forward for redaction and posting immediately upon product approval, with supportive documentation to be provided in the following months"); Marian S. McDonagh, Kim Peterson, Howard Balshem & Mark Helfand, *US Food and Drug Administration Documents Can Provide Unpublished Evidence Relevant to Systematic Reviews*, 66 J. CLINICAL EPIDEMIOLOGY 1071, 1078 (2013); McGarity & Shapiro, *supra* note 197, at 867.

208. See Shankar Vedantam, *Antidepressant Makers Withhold Data*, NBC NEWS (Jan. 28, 2004, 8:59 PM), <https://www.nbcnews.com/id/wbna4091562> (documenting unmet public demand for clinical trial data as of 2004); Barry Meier, *Contracts Keep Drug Research Out of Reach*, N.Y. TIMES (Nov. 29, 2004), <https://www.nytimes.com/2004/11/29/business/contracts-keep-drug-research-out-of-reach.html> (documenting industry resistance to legislation mandating clinical trial data sharing).

209. CARPENTER, *supra* note 189, at 735.

210. David Willman, *How a New Policy Led to Seven Deadly Drugs*, L.A. TIMES (Dec. 20, 2000), <https://www.latimes.com/nation/la-122001fda-story.html>.

211. *Id.*

helped come up with it.”²¹² Meier added that companies blocked researchers from “shar[ing] their own data with colleagues who had not worked” on a particular trial, siloing researchers from one another.²¹³ In 2006, two representatives of the prominent nonprofit Public Citizen, Peter Lurie and Allison Zieve, summarized the lamentable state of affairs: “Those committed to the free exchange of scientific information have long complained about various restrictions on access to [the FDA’s] pharmaceutical data and the resultant restrictions on open discourse.”²¹⁴

During this time, there was some voluntary sharing of data by drug and device manufacturers. As noted above, these companies selectively published data in medical literature. Some companies went further and made databases of certain clinical trial data and other data (e.g., genetic data) available to academic and other researchers. Companies that shared more were praised for “transparency,” but this transparency was selective and subject to some of the same “pathologies” of voluntary sharing of social media data identified in Part II—decontextualization and streetlight effects especially. (For example, Merck, a company that received praise in the 1990s for voluntary sharing of some kinds of data,²¹⁵ was later shown to have hidden other data on the safety of rofecoxib (“Vioxx”) that contributed to the deaths of tens of thousands of people.²¹⁶) As Deborah Zarin and Tony Tse stated in 2007, there were twelve “pharmaceutical industry-sponsored clinical trial databases,” but they were “generally not reviewed by experts external to the company.” An independent investigation “found that when conclusions were listed in these databases, they tended to be more favorable for the company’s product than those found in published articles or FDA reviews of the same trials.”²¹⁷

Perhaps not coincidentally, the 1990s and 2000s were marked by a series of increasingly high-profile scandals involving drug companies that hid unfavorable clinical trial data from independent researchers and the broader public, leading to widespread harm to patients. Two of the highest-profile scandals involved the drugs paroxetine (“Paxil”) and rofecoxib (“Vioxx”).

212. Barry Meier, *Contracts Keep Drug Research Out of Reach*, N.Y. TIMES (Nov. 29, 2004), <https://www.nytimes.com/2004/11/29/business/contracts-keep-drug-research-out-of-reach.html>.

213. *Id.*

214. Peter Lurie & Allison Zieve, *Sometimes the Silence Can Be Like the Thunder: Access to Pharmaceutical Data at the FDA*, 69 L. & CONTEMP. PROBS. 85 (2006).

215. Eliot Marshall, *Ethics in Science: Is Data-Hoarding Slowing the Assault on Pathogens?*, 275 SCI. 777 (1997); Eliot Marshall, *HGS Opens its Databanks for a Price*, 266 SCI. 25 (1994).

216. *Infra* notes 219–224 and surrounding text.

217. Zarin & Tse, *supra* note 178, at 2115–18.

The basic details of the paroxetine scandal are summarized above. GlaxoSmithKline gathered evidence that its drug fueled tens of thousands of teen suicides, then intentionally hid that evidence from the public.²¹⁸ The paroxetine scandal gripped the public consciousness and helped spur Congress to action. When the FDA decided to warn doctors and parents to stop giving paroxetine to children in 2003, the story made headline news.²¹⁹ Media not only covered paroxetine's contributions to a spike in teen suicides but also big pharma's culture of data secrecy. A 2004 *New York Times Magazine* story observed "public outrage at revelations that a number of pharmaceutical companies had deliberately withheld damning information about [antidepressants including Paxil]—specifically, data from clinical trials that suggested that these drugs were both more dangerous and less effective for adolescents than millions of consumers had been led to believe."²²⁰

The rofecoxib ("Vioxx") scandal was perhaps even more shocking. Rofecoxib, a painkiller, was approved by the FDA in 1999 and quickly became a blockbuster, earning Merck billions of dollars.²²¹ Then, in 2004, Merck abruptly removed the drug from the market, with encouragement from the FDA and other drug regulators because—Merck admitted—it caused heart attacks, strokes, and heart failures.²²² Merck held, internally, clinical trial data establishing these deadly side effects but did not disclose the data to independent researchers or the broader public. Merck moved to withdraw the drug only because a courageous FDA scientist with access to the data, David Graham, double-checked the agency's analysis and raised concerns, first with the agency and then with the U.S. Senate and the broader public.²²³ The relevant trial data was first made available to independent researchers only

218. See *supra* Section II.A.2; see also Benedict Carey, *Antidepressant Paxil Is Unsafe for Teenagers*, *New Analysis Says*, N.Y. TIMES (Sept. 16, 2015), https://www.nytimes.com/2015/09/17/health/antidepressant-paxil-is-unsafe-for-teenagers-new-analysis-says.html?ref=health&_r=0; David Dobbs, *The Human Cost of a Misleading Drug-Safety Study*, ATLANTIC (Sept. 18, 2015), <https://www.theatlantic.com/health/archive/2015/09/paxil-safety-bmj-depression-suicide/406105/>.

219. See, e.g., Associated Press, *Paxil Not for Kids, FDA Warns*, L.A. TIMES (June 20, 2003), <https://www.latimes.com/archives/la-xpm-2003-jun-20-na-paxil20-story.html>.

220. Jonathan Mahler, *The Antidepressant Dilemma*, N.Y. TIMES MAG. (Nov. 21, 2004), <https://www.nytimes.com/2004/11/21/magazine/the-antidepressant-dilemma.html>

221. Harlan M. Krumholz, *What Have We Learnt From Vioxx?*, 334 BRIT. MED. J. 120, 122 (2007).

222. Joseph S. Ross, David Madigan, Kevin P. Hill, David S. Egilman, Yongfei Wang & Harlan M. Krumholz., *Pooled Analysis of Rofecoxib Placebo-Controlled Clinical Trial Data: Lessons for Postmarket Pharmaceutical Safety Surveillance*, 169 ARCHIVES INTERNAL MED. 1976, 1976–77 (2009).

223. Matthew Herper, *Face of the Year: David Graham*, FORBES (Dec. 13, 2004), https://www.forbes.com/2004/12/13/cx_mh_1213faceoftheyear.html?sh=ed7b36d6d576.

years later, through litigation.²²⁴ These researchers quickly proved that signals of these risks were present in data held by Merck and the FDA nearly 3.5 years before the drug was withdrawn from the market.²²⁵ Had independent researchers gotten access to the data sooner, they could have caught the problem and averted at least 39,000 deaths.²²⁶ Prominent scientists pointed to Vioxx as evidence that clinical trial data should be “stored on an academic site, analysed by non-company investigators, and eventually made accessible to the public for scrutiny.”²²⁷ *The New York Times* covered the Vioxx scandal at length, publishing stories on the FDA’s promises of greater clinical trial data sharing²²⁸ and the pharmaceutical industry’s unreliable commitments to transparency.²²⁹

In short, Vioxx and Paxil were “Cambridge Analytica moments” for the pharmaceutical industry. GlaxoSmithKline’s efforts to downplay safety problems with a different drug, rosiglitazone (“Avandia”), constituted a third such moment, prompting more Congressional hearings and calls for reform.²³⁰ Pharmacia’s manipulation of data on another blockbuster painkiller drug, celecoxib (“Celebrex”), arguably created yet a fourth.²³¹ Clinical trial data

224. See Aaron S. Kesselheim & Jerry Avorn, *The Role of Litigation in Defining Drug Risks*, 297 JAMA 308, 309 (2007).

225. Ross et al., *supra* note 222, at 1979.

226. David J. Graham, David Campen, Rita Hui, Michele Spence, Craig Cheetham, Gerald Levy, Stanford Shoor & Wayne A. Ray, *Risk of Acute Myocardial Infarction and Sudden Cardiac Death in Patients Treated with Cyclo-Oxygenase 2 Selective and Non-Selective Non-Steroidal Anti-Inflammatory Drugs: Nested Case-Control Study*, 365 LANCET 475, 480 (2005); see also Carolyn Abraham, *Vioxx Took Deadly Toll: Study*, GLOBE & MAIL (Jan. 25, 2005), <https://www.theglobeandmail.com/life/vioxx-took-deadly-toll-study/article1113848>.

227. Krumholz, *supra* note 221, at 334.

228. Gardiner Harris, *F.D.A. Moves Toward More Openness with the Public*, N.Y. TIMES (Feb. 20, 2005), <https://www.nytimes.com/2005/02/20/us/health/fda-moves-toward-more-openness-with-the-public.html>.

229. Alex Berenson, *Despite Vow, Drug Makers Still Withhold Data*, N.Y. TIMES (May 31, 2005), <https://www.nytimes.com/2005/05/31/business/despite-vow-drug-makers-still-withhold-data.html>.

230. Joanne Silberner, *FDA Criticized for Diabetes Drug Avandia*, NPR (May 22, 2007), <https://www.npr.org/2007/05/22/10318764/fda-criticized-for-diabetes-drug-avandia>; *Senators Reveal Efforts by the FDA to Suppress Scientific Dissent and Downplay Safety Concerns*, U.S. SENATE COMM. ON FIN. (July 24, 2007), <https://www.finance.senate.gov/chairmans-news/senators-reveal-effort-by-the-fda-to-suppress-scientific-dissent-and-downplay-safety-concerns>.

231. Pharmacia published a misleading study in the medical literature suggesting that celecoxib helps guard against ulcers while withholding from the public more complete data showing the drug actually does not. The scandal was reported by *The Washington Post*, *The New York Times*, and other major newspapers. See, e.g., Susan Okie *Missing Data on Celebrex*, WASH. POST (Aug. 5, 2001), <https://www.washingtonpost.com/archive/politics/2001/08/05/missing-data-on-celebrex/59d3748b-6683-4ca7-8890-d711aad07241/>; Melody Petersen, *Study Finding Celebrex Safer Was Flawed, Journal Says*, N.Y. TIMES (June 1, 2002), <https://>

secrecy had become a matter of national attention. Resulting public outrage²³² prompted Congress to revisit the possibility of legislation mandating data sharing by pharmaceutical and medical device companies and resulted in breakthrough federal legislation that forms the foundation of today's data sharing mandate.

The pharmaceutical and medical device industries fought data-sharing legislation from the start. As Galbraith details,²³³

Not surprisingly, the pharmaceutical industry's trade group did not support the FACT Act [proposed federal legislation that would mandate sharing of clinical trial data]. Originally, the Pharmaceutical Research and Manufacturers of America (PhRMA) asserted that a results reporting requirement was unnecessary.²⁰² However, in January of 2005, faced with pressure from lawmakers, the medical community, and the public, the four largest pharmaceutical trade groups in the world, including PhRMA, released a joint statement on the disclosure of clinical trial information.²⁰³ While the group members pledged to release a nominal amount of information regarding ongoing trials, they did not commit to submitting the data to a comprehensive, government-sponsored registry.²⁰⁴ Instead, the provisions left open the possibility of publishing the information on individual, company-sponsored websites that could contain internal rules that might not be publicly disclosed and consequently may differ from one site to the next Furthermore, with regard to completed trials, the pharmaceutical manufacturers agreed only to make public "summary results" of the studies and, additionally, asserted such disclosure "must maintain protections for . . . intellectual property and contract rights."

Just as Facebook and other social media platform companies claim today, pharmaceutical companies in the 2000s argued that laws mandating data sharing would compromise their trade secrets and the privacy of individual data subjects.²³⁴ Congress enacted mandate legislation anyway.²³⁵ When NIH then proposed the rule implementing the legislation, the pharmaceutical lobby

www.nytimes.com/2002/06/01/us/study-finding-celebrex-safer-was-flawed-journal-says.html.

232. See, e.g., CARPENTER, *supra* note 189, at 588; *Drug Safety: Improvement Needed in FDA's Postmarket Decision-making and Oversight Process*, GAO-06-402, U.S. GOV'T ACCOUNTABILITY OFF. (Mar. 31, 2006), <https://www.gao.gov/products/gao-06-402>.

233. Christine D. Galbraith, *Dying to Know: A Demand for Genuine Public Access to Clinical Trial Results Data*, 78 MISS. L. J. 705, 738–39 (2009).

234. *Id.* at 752, 764 (citing, *inter alia*, Shankar Vedantam, *Antidepressant Makers Withhold Data on Children*, WASH. POST (Jan. 29, 2004), at A1); Joel Lexchin, *The Secret Things Belong Unto the Lord Our God: Secrecy in the Pharmaceutical Arena*, 26 MED. & L. 417 (2007).

235. *Infra* Section III.C.

again sang the same tune, warning that “the rule does not adequately protect the process of medical research innovation. Failure to protect adequately trade secrets and confidential commercial information would harm public health by discouraging the very innovation necessary to bring new medical advances to the market.”²³⁶

As we describe in the next Section, the pharmaceutical lobby’s concerns proved unfounded. NIH and other stewards of sensitive and previously secret clinical trial data have proven capable of collecting it from industry and sharing it with researchers without compromising patient privacy or incentives to innovate. The legislation that the pharmaceutical lobby resisted now forms the cornerstone of today’s clinical trial data sharing mandate, pushing the industry out of the dark ages.

C. LEGISLATING TODAY’S CLINICAL TRIAL DATA SHARING MANDATE

The story of today’s clinical trial data sharing mandate begins with the legal system: first legislation, and then regulation to implement and extend legislation. As in many other contexts, public law provided a necessary counterweight to private power. Public law mandated that drug and device companies make clinical trial data available to researchers and empowered federal regulators, such as the FDA and the NIH, to enforce compliance and govern that data.

The single most important piece of American law in the clinical trial data sharing mandate is the Food and Drug Administration Amendments Act (FDAAA), enacted in 2007. FDAAA was described by the then-FDA commissioner as “massive legislation” informed by a “spirit of transparency.”²³⁷ A key achievement of FDAAA was to mandate universal disclosure of summary and metadata from clinical trials (though not IPD).

FDAAA achieved much broader researcher access to clinical trial data in two ways: (1) mandatory publication by the FDA of “approval packages” that contain clinical trial data (and more); and (2) mandatory submission of clinical trial data to NIH, for validation and posting by NIH on a public website, ClinicalTrials.gov. We discuss each in turn.

1. *Mandatory Publication of Approval Packages*

FDAAA mandates that every time the FDA approves a new drug or vaccine, the agency must publish an “approval package”²³⁸ providing summary

236. Letter to Jerry Moore, *supra* note 25, at 2.

237. Andrew C. von Eschenbach, *The FDA Amendments Act: Reauthorization of the FDA*, 63 FOOD & DRUGS L.J. 579, 581 (2008)

238. Also known as an “action package.”

data and metadata from all the clinical trials on which it relied for approval.²³⁹ The approval package provides a summary of both the drug manufacturer's data and the FDA's independent analysis.²⁴⁰ The FDA must publish the approval package within thirty days of approval.²⁴¹ In effect, this provision of FDAAA obliges the FDA to share some of its vast reservoir of data with the public.

Today the FDA publishes approval packages as a matter of routine practice, on a website it calls "Drugs@FDA."²⁴² These packages fuel important research.²⁴³ For example, a 2013 review article observed that "FDA documents contain unpublished evidence that can be highly useful in resolving

239. 21 U.S.C. § 355(l). The FDA had done this previously, since at least the late 1990s, but only discretionarily, and more slowly and less consistently. *See* Gruber, *supra* note 207, at 1017–18. Note that this disclosure mandate is limited to new molecular entities and biological products; newly approved products that do not contain any previously unapproved active moiety or active ingredient (such as newly approved reformulations of existing drugs) are exempt from the statute's disclosure mandate. 21 U.S.C. § 355(l)(2)(A).

240. U.S. FOOD & DRUGS ADMIN, *NDAs/BLAs/Efficacy Supplements: Action Packages and Taking Regulatory Actions*, MAPP 6020.8 Rev. 1, 13 (June 13, 2016), <https://www.fda.gov/media/72739/download> (specifying that action packages consist of "a compilation of (1) FDA-generated documents related to review of an NDA or efficacy supplement (i.e., from submission to final action), (2) documents (e.g., meeting minutes, pharmacology reviews) pertaining to the format and content of the application generated during drug development (investigational new drug [IND]), and (3) labeling submitted by the applicant").

241. *Id.*

242. *Drugs@FDA*, U.S. FOOD & DRUGS ADMIN., <https://www.accessdata.fda.gov/scripts/cder/daf/index.cfm> (last visited Nov. 12, 2023). *Drugs@FDA* is not quite comprehensive of all drugs. *See Drugs@FDA Frequently Asked Questions*, U.S. FOOD & DRUG ADMIN., <https://www.accessdata.fda.gov/scripts/cder/daf/index.cfm?event=faq.page#> contains ("What products are not in *Drugs@FDA*?"). FDA maintains separate but very similar databases for vaccines and other biological products. *See, e.g., Vaccines Licensed for Use in the United States*, U.S. FOOD & DRUG ADMIN., <https://www.fda.gov/vaccines-blood-biologics/vaccines/vaccines-licensed-use-united-states>; *Approved Cellular and Gene Therapy Products*, U.S. FOOD & DRUG ADMIN., <https://www.fda.gov/vaccines-blood-biologics/cellular-gene-therapy-products/approved-cellular-and-gene-therapy-products>.

243. Letter from Peter Doshi et al. to the FDA (Aug. 23, 2019), <http://freepdfhosting.com/19eabf06a7.pdf> (identifying uses to which researchers put approval packages: systematic reviews and meta-analyses of medical products, and improving methods; researching regulatory, publication, and drug approval processes; comparing regulatory review times and outcomes across jurisdictions; developing consumer and professional decision-making tools and case studies of particular drug approval decisions; and evaluating the impact of federal policy); *see also* Erick H. Turner, *How to Access and Process FDA Drug Approval Packages for Use in Research*, 347 BRIT. MED. J. 1 (2013); Aviv Ladanie, Hannah Ewald, Benjamin Kasenda & Lars G. Hemkens, *How to Use FDA Drug Approval Documents for Evidence Synthesis*, 362 BMJ 1, 1 (2018). *But see* Matthew Herder, Christopher J. Morten & Peter Doshi, *Integrated Drug Reviews at the US Food and Drug Administration—Legal Concerns and Knowledge Lost*, 180 JAMA INTERN MED, 629 629–30 (2020) (criticizing recent the FDA's move to less information-rich approval packages).

publication bias and selective outcome and analysis reporting, identifying important harms, and filling gaps in knowledge about understudied subpopulations, outcomes, and comparisons.”²⁴⁴ In effect, approval packages equip independent researchers to overcome structural problems that afflict independent research, including the problem of decontextualized data production (by giving researchers more objective context, including the FDA’s own analysis) and the streetlight effect (by giving researchers access to the FDA’s data, rather than simply to a cherry-picked subset that drug manufacturers choose to publish in the medical literature).

To show the value of the FDA’s approval packages to independent researchers and the broader public, a few concrete examples: In 2014, independent researchers used an approval package to detect and publicize errors in clinical trial data reporting by the drug company Roche on its anti-influenza drug oseltamivir (“Tamiflu”).²⁴⁵ In the same year, different researchers used an approval package to establish that the anti-inflammatory drug roflumilast (“Daxas”) provides net benefits to patients with severe chronic obstructive pulmonary disease (COPD), but not patients with milder disease, reshaping prescribing habits.²⁴⁶ In similar ways, independent academic and nonprofit researchers have used approval package data in combination with other data (from the medical literature and other sources) to conduct research on the diabetes drug rosiglitazone (“Avandia”),²⁴⁷ the painkiller valdecoxib (“Bextra”),²⁴⁸ and cosmetic injections of botulinum toxin (better known under the brand name Botox).²⁴⁹

244. McDonagh et al., *supra* note 207, at 1072.

245. Tom Jefferson, Mark Jones, Peter Doshi, Elizabeth Spencer, Igho Onakpoya & Carl J. Heneghan, *Oseltamivir for Influenza in Adults and Children: Systematic Review of Clinical Study Reports and Summary of Regulatory Comments*, 348 *BMJ* 1, 7 (2014).

246. Tsung Yu, Kevin Fain, Cynthia M. Boyd, Sonal Singh, Carlos O. Weiss, Tianjing Li, Ravi Varadhan & Milo A. Puhan, *Benefits and Harms of Roflumilast in Moderate to Severe COPD*, 69 *THORAX* 616, 622 (2014).

247. Joshua D Wallach, Kun Wang, Audrey D. Zhang, Deanna Cheng, Holly K. Grossetta Nardini, Haiqun Lin, Michael B. Bracken, Mayur Desai, Harlan M. Krumholz & Joseph S. Ross, *Updating Insights into Rosiglitazone and Cardiovascular Risk Through Shared Data: Individual Patient and Summary Level Meta-Analyses*, 368 *BMJ* 1 (2020). This paper was corrected in 2021. 373 *BMJ* n1302 (2021).

248. Sidney Wolfe, *Public Citizen to Call on FDA to Ban Celebrex and Bextra*, *PUB. CITIZEN* (Dec. 17, 2004), <https://www.citizen.org/news/public-citizen-to-call-on-fda-to-ban-celebrex-and-bextra/>.

249. *Petition Requesting Regulatory Action Concerning the Spread of Botulinum Toxin (Botox, Myobloc) to Other Parts of the Body*, *PUB. CITIZEN* (Jan. 23, 2008), <https://www.citizen.org/article/petition-requesting-regulatory-action-concerning-the-spread-of-botulinum-toxin-botox-myobloc-to-other-parts-of-the-body/>; Peter Lurie, *Statement: FDA Grants Public Citizen*

The FDA's data transparency has benefits for the agency's public credibility, as well. In November 2020, at a moment when the American public's trust in the FDA had been damaged by interference in its COVID-19 vaccine review process from then-President Trump and his political appointees,²⁵⁰ the agency was able to restore some trust in the agency and in the vaccines themselves by committing to publish complete approval packages even as the agency was short-cutting other steps of the standard vaccine approval process in the emergency setting of a global pandemic.²⁵¹ Independent researchers dissected these approval packages once published and, by and large, confirmed COVID vaccines' safety and efficacy, and the wisdom of the FDA's decision to hurry them into patients' arms.²⁵²

2. *Mandatory Submission and Publication of Clinical Trial Data to ClinicalTrials.gov*

A separate provision of FDAAA mandates that an even broader set of summary data and metadata must be shared with researchers via an independent means: ClinicalTrials.gov, a free and publicly accessible website administered by the NIH.²⁵³ Regardless of whether a particular drug, vaccine, or device is approved or unapproved by the FDA, the results of Phase 2, 3, or 4 trials studying the drug or device in the United States must, by law, be published on ClinicalTrials.gov.²⁵⁴ FDAAA's ClinicalTrials.gov mandate requires that the results of clinical trials be individually submitted to NIH by the companies, universities, and other entities ("responsible parties" per the statute) that run them.

Petition on Botox, PUB. CITIZEN (Apr. 30, 2009), <https://www.citizen.org/article/statement-fda-grants-public-citizen-petition-on-botox/>.

250. See, e.g., Alec Tyson, Courtney Johnson & Cary Funk, *U.S. Public Now Divided Over Whether to Get COVID-19 Vaccine*, PEW RSCH. CTR. (Sept. 17, 2020), <https://www.pewresearch.org/science/2020/09/17/u-s-public-now-divided-over-whether-to-get-covid-19-vaccine/>.

251. Stephen M. Hahn, Commissioner of Food and Drugs, *COVID-19 Update: FDA's Ongoing Commitment to Transparency for COVID-19 EUAs*, U.S. FOOD & DRUGS ADMIN. (Nov. 17, 2020), <https://www.fda.gov/news-events/press-announcements/covid-19-update-fdas-ongoing-commitment-transparency-covid-19-euas>.

252. See, e.g., Hilda Bastian, *The FDA Really Did Have to Take This Long*, ATLANTIC (Aug. 23, 2021), <https://www.theatlantic.com/science/archive/2021/08/fda-pfizer-vaccine-full-approval/619870/> (observing that "early, publicly available data have now been thoroughly scrutinized").

253. 42 U.S.C. § 282(j).

254. Deborah A. Zarin, Kevin M. Fain, Heather D. Dobbins, Tony Tse, & Rebecca J. Williams, *10-Year Update on Study Results Submitted to ClinicalTrials.gov*, 381 NEW ENG. J. MED. 1966 (2019).

FDAAA is detailed and exacting. It specifies the precise summary data and metadata that responsible parties must submit to ClinicalTrials.gov and thereby disclose, data element by data element.²⁵⁵ When FDAAA was being debated and implemented, many entities that conduct clinical trials protested that the statute's and subsequent rule's data elements were overly detailed, overly rigid, or unreasonably different from the idiosyncratic ways in which they formatted their own data.²⁵⁶ However, the consistent, predictable format of summary data provided on ClinicalTrials.gov has helped independent researchers understand and use its data.

The mandatory metadata-sharing provisions of FDAAA merit attention too, as they likewise help independent researchers contextualize trial results and perform useful research. FDAAA requires responsible parties to share detailed metadata: “[t]he full protocol or such information on the protocol for the trial as may be necessary to help to evaluate the results of the trial.”²⁵⁷ NIH has elaborated on this statutory provision with a rule specifying that responsible parties must also share their statistical analysis plans.²⁵⁸ This mandatory sharing of metadata makes the summary data richer for researchers, and permits researchers to root out errors and manipulation.

FDAAA's mandatory metadata-sharing requirement was fought by the pharmaceutical and medical device industries. As NIH observed when it promulgated the rule that implemented this provision of FDAAA, multiple commentators from relevant industries alleged that requiring disclosure of trial protocols would violate privacy and intellectual property interests: “Some asserted that protocols contain personally identifiable information, proprietary information, or other information that, if publicly disclosed, could be damaging to business interests.”²⁵⁹ The largest biotech industry lobbying group, the Biotechnology Innovation Organization (BIO), argued that NIH's commitment to sharing protocols (and summary data, too) “may undermine

255. 42 U.S.C. §§ 282(j)(3)(C), (D); *see also* 42 C.F.R. § 11.48.

256. *See, e.g.*, Clinical Trials Registration and Results Information Submission, 81 Fed. Reg., *supra* note 188, at 64,982, 65,006 (“While the Agency appreciates that accepting a variety of submission formats . . . may be less burdensome for responsible parties, [FDAAA] requires the final rule to establish a standard format for the submission of clinical trial information. This standard format will, in turn, facilitate search and comparison of entries in the registry data bank, as is also required under the statute.”).

257. 42 U.S.C. § 282 (j)(3)(D)(iii)(III). A trial's protocol is “[t]he written description of a clinical study. It includes the study's objectives, design, and methods. It may also include relevant scientific background and statistical information.” *Protocol*, CLINICALTRIALS.GOV, <https://clinicaltrials.gov/ct2/about-studies/glossary> (last visited Nov. 11, 2023).

258. 42 C.F.R. § 11.48(a)(5).

259. Clinical Trials Registration and Results Information Submission, 81 Fed. Reg., *supra* note 188, at 64,982, 65,000.

incentives to innovate by forcing premature disclosure of proprietary information.”²⁶⁰ The largest medical device industry lobbying group, AdvaMed, echoed BIO and went further, threatening litigation over NIH’s interference with its alleged trade secrets:

[NIH’s] disclosure of “trade secret and confidential commercial information” would constitute a taking in violation of the Fifth Amendment, AdvaMed stated. The device lobby group also asserted the disclosure of proprietary, confidential clinical trial data for products not approved would chill interest in developing new and innovative devices.²⁶¹

NIH proceeded anyway. However, in a concession to industry, NIH allows companies to redact portions of their trial protocols that they consider trade secrets before posting them to ClinicalTrials.gov,²⁶² “so long as the redaction does not include any specific information that is otherwise required to be submitted under” the law.²⁶³

NIH held the line on summary data and, through rulemaking, extended FDAAA’s disclosure mandate to reach experimental products not yet approved by the FDA.²⁶⁴ NIH does not permit companies to redact any portion of their summary data, even if they fear competitors’ use of the information.²⁶⁵

Industry’s threats of litigation proved hollow. NIH has never been sued by industry over its implementation of FDAAA. Nor have the FDA or the U.S. Department of Health and Human Services (HHS). The pharmaceutical and

260. Erin Durkin, *Califf, Biden Task Force Touts NIH Rule Requiring Failed Trial Data be Posted*, 22 INSIDEHEALTHPOLICY.COM’S FDA WEEK 11 (2016).

261. *Id.*

262. Clinical Trials Registration and Results Information Submission, 81 Fed. Reg., *supra* note 188, at 64,982, 65,000 (“[I]f there is a case in which a responsible party believes that a protocol does contain trade secret and/or confidential commercial information, the responsible party may redact that information, so long as the redaction does not include any specific information that is otherwise required to be submitted under this rule.”).

263. 42 C.F.R. § 11.48(a)(5); Clinical Trials Registration and Results Information Submission, 81 Fed. Reg., *supra* note 188, at 64,982, 65,000.

264. Clinical Trials Registration and Results Information Submission, 81 Fed. Reg., *supra* note 188, at 64,982, 64,986.

265. *Id.* at 64,982, 64,996 (“A few commenters suggested that if the proposal is adopted, only a limited number of primary or key secondary outcomes prior to regulatory approval should be required to be submitted, or the final rule should allow the submission of redacted results information, especially when the product has not been approved, licensed, or cleared by FDA. The Agency disagrees; we believe that results information submission for all pre-specified primary and secondary outcomes, as required in the statute, is necessary to serve the public interest in having access to full and complete information.”).

medical device industries have stopped criticizing FDAAA and quietly begun complying with its mandates.

To be sure, compliance with FDAAA's ClinicalTrials.gov reporting rules is less than perfect: Independent analysis by "FDAAA Trials Tracker," a project of the Bennett Institute for Applied Data Science at Oxford University, suggests that only about 78% of trials with a legal obligation to comply with reporting rules have done so.²⁶⁶ In addition, many trials that do report are late; in 2021, independent experts estimated that fewer than 50% of covered trials report results on time.²⁶⁷ But this data sharing is meaningful, as much of this data is unavailable elsewhere. NIH's ClinicalTrials.gov has become the world's largest publicly accessible database of clinical trial data.²⁶⁸

And ClinicalTrials.gov has proven the value of the clinical trial data sharing mandate. Since assuming its modern form in 2017,²⁶⁹ ClinicalTrials.gov's vault of data has been used in a wide range of socially beneficial research. For example, a 2014 study compared data reported on ClinicalTrials.gov with data reported in medical literature and found that "nearly all had at least 1 discrepancy in the cohort, intervention, or results reported between the two sources."²⁷⁰ This study underscored ongoing errors in and manipulation of medical literature (where data reporting is less standardized and, in some journals, less scrutinized than ClinicalTrials.gov). Researchers used ClinicalTrials.gov—primarily the metadata reported pursuant to FDAAA—to critique the proliferation of many small, relatively low-quality trials of COVID therapeutics in 2020 and early 2021.²⁷¹ Such critique helped to prompt the U.S.

266. *Who's Sharing Their Clinical Trial Results?*, FDAAA TRIALS TRACKER, <https://fdaaa.trialstracker.net/> (last updated Oct. 25, 2023).

267. Nicholas J. DeVito & Ben Goldacre, *Evaluation of Compliance with Legal Requirements Under the FDA Amendments Act of 2007 for Timely Registration of Clinical Trials, Data Verification, Delayed Reporting, and Trial Document Submission*, 18 JAMA INTERNAL MED. 1128 (2021).

268. Guodong Liu, Gang Chen, Lawrence I. Sinoway & Arthur Berg, *Assessing the Impact of the NIH CTSA Program on Institutionally Sponsored Clinical Trials*, 6 CLINICAL & TRANSLATIONAL SCI. 196 (2013).

269. It was in 2017 that NIH's Final Rule defining regulated entities' precise responsibilities finally went into effect. *See FDAAA 801 and the Final Rule*, CLINICALTRIALS.GOV, <https://clinicaltrials.gov/ct2/manage-recs/fdaaa> (last updated Jan. 2022).

270. Jessica E. Becker, Harlan M. Krumholz, Gal Ben-Josef, & Joseph S. Ross, *Reporting of Results in ClinicalTrials.gov and High-Impact Journals*, 311 JAMA 1063, 1064 (2014).

271. Krishna Pundi, Alexander C. Perino, & Robert A. Harrington, *Characteristics and Strength of Evidence of COVID-19 Studies Registered on ClinicalTrials.gov*, 180 JAMA INTERNAL MED. 1398 (2020); Paul P. Glasziou, Sharon Sanders & Tammy Hoffmann, *Waste in Covid-19 Research*, 369 BMJ 1 (2020); Deborah A. Zarin & Stephen Rosenfeld, *Lack of Harmonization of Coronavirus Disease Ordinal Scales*, 18 CLINICAL TRIALS 263 (2020).

government to promise better coordination of government-funded trials.²⁷² Deborah Zarin, Director of ClinicalTrials.gov from 2005–2018, wrote in 2022,²⁷³

[The ClinicalTrials.gov] database has been in existence since 2008, and has been continually updated and improved during that time. Thousands of responsible parties have used it to submit over 51,000 sets of results. Research has shown that about half of these—results for about 25,000 trials—are not available in the published literature, making ClinicalTrials.gov the unique public source of this information.

Research into safety, efficacy, and the accuracy of companies' claims often complements the work of government regulators. Independent research critiques and ultimately reinforces the credibility and reliability of government regulators such as the FDA. This sort of research not only informs the public, but also actively checks and reshapes the regulatory process. For example, independent analysis of drug safety by the nonprofit organization Public Citizen, using data from ClinicalTrials.gov, Drugs@FDA, and other sources, helped convince the FDA to remove at least twenty-three dangerous drugs from the U.S. market, as of 2019.²⁷⁴ Independent analysis of the clinical trial data that supported approval of Purdue Pharma's addictive oxycodone product, Oxycontin, and other opioid painkillers by drug regulators worldwide has underscored the paucity of evidence on addiction that regulators initially demanded, and has helped shape a present-day consensus that regulators must more carefully scrutinize new drugs for addictive potential.²⁷⁵ In the past two years, independent analysis of the results of COVID-19 vaccines clinical trials has consistently corroborated the FDA's conclusion that the vaccines are safe,

272. See, e.g., *Accelerating COVID-19 Therapeutic Interventions and Vaccines (ACTIV): Overview*, NAT'L INST. HEALTH, <https://www.nih.gov/research-training/medical-research-initiatives/activ> (last visited Nov. 11, 2023).

273. Ed Silverman, 'A Blind Eye': NIH Fails to Ensure Clinical Trial Results are Reported, and Still Funds Researchers Who don't File Results, STAT (Aug. 17, 2022), <https://www.statnews.com/pharmalot/2022/08/17/nih-clinical-trials-transparency-fda/>.

274. Public Citizen & Center for Science in the Public Interest et al. as Amici Curiae Supporting Respondents, *Food Marketing Institute v. Argus Leader Media*, 139 S. Ct. 2356 (2019) (No. 18-481), 2018 WL 7890208, 18, https://www.citizen.org/wp-content/uploads/food_market_institute_v_argus_leader.pdf.

275. See James Heyward, Thomas J. Moore, Jennifer Chen, Kristin Meek, Peter Lurie & G. Caleb Alexander, *Key Evidence Supporting Prescription Opioids Approved by the U.S. Food and Drug Administration, 1997 to 2018*, 173 ANNALS INTERNAL MED. 956 (2020); Jessica Pappin, Itai Bavli & Matthew Herder, *On What Basis Did Health Canada Approve OxyContin in 1996? A Retrospective Analysis of Regulatory Data*, 19 CLINICAL TRIALS 584, 585 (2022).

and helped to counter some of the hesitance and misinformation that have surrounded the vaccines.²⁷⁶

The ClinicalTrials.gov database is free and accessible all over the world.²⁷⁷ As such, it reduces longstanding inequities in access to trial data²⁷⁸ and has catalyzed research not just in the United States but around the world. Some of the research conducted with ClinicalTrials.gov is conducted by researchers outside the United States.²⁷⁹ Data from ClinicalTrials.gov has also been used to study the extent of research conducted in Global North-South collaboration.²⁸⁰

D. IMPLEMENTATION OF THE CLINICAL TRIAL DATA SHARING MANDATE AND EXPERIMENTATION WITH RESEARCHER ACCESS TO MORE SENSITIVE DATA

This Section elaborates on FDAAA's data-sharing mandate in two important regards.

First, this Section elaborates on implementation: How, exactly, does clinical trial data sharing *work*? For example, who enforces compliance with data-sharing mandates, and how? Because this Section focuses on implementation, it necessarily focuses on institutions. These institutions perform a number of important roles in the clinical trial data sharing ecosystem: they request or mandate submission of clinical trial data by industry, academia, and other sectors that perform clinical trial research; verify clinical trial data and hold it securely; mediate access to it; oversee uses by

276. See, e.g., Steven K. Korang, Elena von Rohden, Areti Angeliki Veroniki, Giok Ong, Owen Ngalamika, Faiza Siddiqui, Sophie Juul, Emil Eik Nielsen, Joshua Buron Feinberg, Johanne Juul Petersen, Christian Legart, Afoke Kokogho, Mathias Maagaard, Sarah Klingenberg, Lehana Thabane, Ariel Bardach, Agustín Ciapponi, Allan Randrup Thomsen, Janus C. Jakobsen & Christian Gluud, *Vaccines to prevent COVID-19: A Living Systematic Review with Trial Sequential Analysis and Network Meta-Analysis of Randomized Clinical Trials*, 17 PLOS ONE 1, 2 (2022); Kushal T. Kadakia, *Leveraging Open Science to Accelerate Research*, 384 NEW ENG. J. MED. 1, 3 (2021); Bastian, *supra* note 252.

277. Drugs@FDA is too.

278. Satyen Shenoy, *From Bench to the Public: Open Access*, 31 MED. WRITING 6, 6 (2022) (“Paywalls and subscription fees are neither new nor unheard of in scientific publishing. However, for long, these practices have been a hindrance to dissemination of research findings, especially to the scientific and medical community in the global south, due to non-affordability.”).

279. See, e.g., Glasziou, *supra* note 271 (analysis of ClinicalTrials.gov data by researchers in Australia).

280. Hesborn Wao, Yan Wang, & Melvin A. Wao, *Factors associated with North-South Research Collaboration Focusing on HIV/AIDS: Lessons from ClinicalTrials.gov*, 18 AIDS RSCH. & THERAPY 1 (2021).

researchers; and monitor and enforce compliance with the laws that govern each of these steps.

Second, this Section describes how some institutions have begun pioneering giving researchers access to more sensitive data. As traced in Section III.C, FDAAA's clinical trial data sharing mandate is limited to high-reward, low-risk data: summary data and some metadata. The mandate does not reach IPD—the most sensitive data, from a privacy perspective—nor does it reach all information industry describes as its trade secrets. Yet, as we show, some institutions have pioneered mechanisms for sharing this data responsibly.

A key theme is that *institutional* governance of medical data sharing is vital to the success of *legal* governance of the same. Law on paper is only modestly effective without associated institutions to implement, elaborate, and enforce that law. It is institutions—people—that get things done.

1. *Key Institutional Governors of the Clinical Trial Data Sharing Mandate: FDA and NIH*

FDAAA's results-sharing mandate did not effectuate itself; FDAAA requires two federal agencies, the FDA and NIH, to implement the legislation's data-sharing mandate, and govern access to and use of clinical trial data.

The FDA, NIH, and other federal scientific agencies play a variety of important roles in managing not just clinical trial data but a wealth of other scientific and technical data. As Contreras observed, “the state's role in fostering innovation and scientific advancement is often analyzed in terms of incentives that the state may offer to private actors” such as tax credits, IP protections, direct grants, and provision of infrastructure.²⁸¹ Yet Contreras convincingly argues that this view is incomplete, at least in the fields of medicine and biotechnology. In the United States, the medical “innovation system” depends on the U.S. government not just as incentive-setter but as a central *actor* in the “information economy,” managing data flows:

The state plays a number of well-understood roles with respect to the planning, provisioning, and maintenance of publicly owned infrastructure resources such as highways, prisons, and public utilities. Likewise, the state is often involved in the oversight, regulation, and operation of private and public-private infrastructural resources such as airports and telecommunications networks. Why then should the same types of complementary and

281. Jorge Contreras, *Leviathan in the Commons: Biomedical Data and the State*, in GOVERNING MED. KNOWLEDGE COMMONS 19–20 (Katherine J. Strandburg et al. eds., 2017).

overlapping relationships not arise with respect to data resources that form an integral part of the research infrastructure?²⁸²

Contreras maps nine distinct roles that U.S. government agencies play in the governance of medical data, writ large: (1) creator, (2) funder, (3) convenor, (4) collaborator, (5) endorser, (6) curator, (7) regulator, (8) enforcer, and (9) consumer.²⁸³

In the world of clinical trial data sharing, the FDA and NIH play all nine roles, but in this Section, we focus on four overlapping roles we consider particularly important to the success of clinical trial data sharing: curator, funder, regulator, and enforcer.

a) FDA and NIH Curate Data

Institutions curate data by aggregating, hosting, and explaining data for other stakeholders to access and use. FDAAA mandates that NIH and the FDA play these curatorial roles: NIH with ClinicalTrials.gov, and FDA with Drugs@FDA.²⁸⁴

NIH's National Library of Medicine (NLM) aggregates and hosts the massive ClinicalTrials.gov database. NLM also actively safeguards the quality, accuracy, and usability of each submission of clinical trial data.²⁸⁵ NLM conducts an extensive quality control process to ensure that data is submitted to ClinicalTrials.gov completely and in the correct format.²⁸⁶ NLM also maintains an elaborate "customer support" site and helpline for staff at universities, drug companies, and other institutions who encounter problems when preparing and submitting data to the database.²⁸⁷ In this way, NLM protects the credibility and usability of the database.

NLM has curated not just data *submission* but data *use* by researchers and the general public; it maintains an extensive Glossary and FAQ page to guide researchers through searching and interpreting the database.²⁸⁸ NLM has also

282. *Id.* at 25.

283. *Id.* at 22–24.

284. 42 U.S.C. § 282(j)(3) (NIH); 21 U.S.C. § 355(l) (FDA).

285. *See* Contreras, *supra* note 281, at 38.

286. Rebecca Williams, *ClinicalTrials.gov Webinar: Updated Quality Control and Posting Procedures*, NAT'L INST. HEALTH (Oct. 15, 2019), https://www.nlm.nih.gov/oet/ed/ct/30_day_post.html.

287. *Submit Studies to ClinicalTrials.gov PRS*, CLINICALTRIALS.GOV, <https://clinicaltrials.gov/ct2/manage-recs/submit-study> (last visited Nov. 11, 2023).

288. *Frequently Asked Questions*, CLINICALTRIALS.GOV, <https://clinicaltrials.gov/ct2/manage-recs/faq> (last visited Nov. 11, 2023).

published research guides in the medical literature, detailing how to make effective use of ClinicalTrials.gov.²⁸⁹

The FDA similarly aggregates, hosts, and explains the data it publishes on its own Drugs@FDA website in the form of the approval packages required by FDAAA. The FDA does not simply republish industry-submitted trial data, but also independently reviews the data and provides its own written critique and summary.²⁹⁰ Like NLM, the FDA maintains a glossary²⁹¹ and FAQ²⁹² to help researchers use Drugs@FDA.

b) FDA and NIH Fund Data-Sharing Initiatives and Research Itself

The FDA and NIH serve separate roles as funders. They fund private initiatives to steward and share data, and they fund academic researchers who make socially beneficial uses of data. This role flows from law; Congress's appropriations bills earmark public money to the agencies for these very purposes. This role, too, explains the success of the clinical trial data sharing mandate.

NIH is the world's largest medical research grant-maker,²⁹³ and some of the billions disbursed go to researchers who use ClinicalTrials.gov in their research.²⁹⁴ The FDA has formed multi-year partnerships with Johns Hopkins, Stanford, the University of Maryland, the Mayo Clinic, and Yale to study

289. See, e.g., Tony Tse, Kevin M. Fain & Deborah A. Zarin, *How to Avoid Common Problems when Using ClinicalTrials.gov in Research: 10 Issues to Consider*, 361 *BMJ* 1 (2018).

290. *Drugs@FDA: FDA-Approved Drugs*, FDA, <https://www.accessdata.fda.gov/scripts/cder/daf/> (last visited Nov. 11, 2023); Herder, Morten & Doshi, *supra* note 243.

291. *Drugs@FDA Glossary of Terms*, FDA, <https://www.fda.gov/drugs/drug-approvals-and-databases/drugsfda-glossary-terms> (last visited Nov. 11, 2023).

292. *Drugs@FDA Frequently Asked Questions*, FDA, <https://www.accessdata.fda.gov/scripts/cder/daf/index.cfm?event=faq.page> (last visited Nov. 11, 2023).

293. W. Nicholson Price II, *Grants*, 34 *BERKELEY TECH. L.J.* 1, 4 (2019).

294. See, e.g., Richeek Pradhan, David C. Hoaglin, Matthew Cornell, Weisong Liu, Victoria Wang & Hong Yu, *Automatic Extraction of Quantitative Data From ClinicalTrials.gov to Conduct Meta-Analyses*, 105 *J. CLIN. EPIDEMIOL.* 92 (2019) (independent research funded by NIH to create an automated tool to extra data from ClinicalTrials.gov more quickly and easily); Joshua D. Wallach, John H. Krystal, Joseph S. Ross & Stephanie S. O'Malley, *Characteristics of Ongoing Clinical Trials for Alcohol Use Disorder Registered on ClinicalTrials.gov*, 77 *JAMA PSYCHIATRY* 1081 (2020) (independent research funded by the National Institute on Alcohol Abuse and Alcoholism (an NIH Institute) studying the quantity and quality of trials for alcohol use disorder registered on ClinicalTrials.gov); Sarah F. Ackley, Scott C. Zimmerman, Willa D. Brenowitz, Eric J. Tchetgen Tchetgen, Audra L. Gold, Jennifer J. Manly, Elizabeth Rose Mayeda, Teresa J. Filshstein, Melinda C. Power, Fanny M. Elahi, Adam M. Brickman, & M. Maria Glymour, *Effect of Reductions in Amyloid Levels on Cognitive Change in Randomized Trials: Instrumental Variable Meta-Analysis*, 372 *BMJ* 1, n.156 (2021) (NIH-funded independent meta-analysis of existing clinical trial data available on ClinicalTrials.gov and other sources to explore the link between beta-amyloid levels in the brain and cognitive function).

pharmaceutical and medical device regulation to scrutinize and improve the FDA's regulatory work. These government-academic initiatives are called Centers of Excellence in Regulatory Science and Innovation (CERSI).²⁹⁵ Researchers funded by the FDA in this way have critiqued and improved the FDA's own work, e.g., by using FDA-published trial data and other data to question the use of "real-world evidence" in lieu of traditional clinical trials²⁹⁶ and asking whether the FDA is sufficiently attentive to evidence of side effects gathered after drug approval.²⁹⁷

The FDA has also experimented with funding academic institutions, nonprofits, and patient groups to become data-sharing platforms themselves. That is, the FDA has sponsored private institutions to aggregate and share certain clinical trial data. These initiatives include the Rare Disease Cures Accelerator-Data and Analytics Platform (RDCA-DAP).²⁹⁸ Indeed, some other emerging "private" medical data-sharing initiatives led by patients, academia, and/or industry are funded partly with public resources; they do not always emerge entirely "organically" without the hand of the state. One such example is the Yale Open Data Access (YODA) Project, discussed more below.

c) FDA and NIH Regulate and Enforce the Data Sharing Mandate

Finally, we consider the roles of NIH and the FDA as regulators and enforcers of FDAAA's clinical trial data sharing mandate. NIH and the FDA force the pharmaceutical and medical device industries to share otherwise proprietary clinical trial data, consistent with FDAAA's mandate. Congress gave FDAAA "teeth" by specifying draconian potential consequences for failing to submit clinical trial results to ClinicalTrials.gov, including fines of over \$10,000 per day per missing trial and a "freeze" on any grant money

295. *Centers of Excellence in Regulatory Science and Innovation (CERSIs)*, FDA (Jan. 5, 2023), <https://www.fda.gov/science-research/advancing-regulatory-science/centers-excellence-regulatory-science-and-innovation-cersis>. For an example grant, see Joseph S. Ross, *Yale-Mayo Clinic FDA Center of Excellence in Regulatory Science and Innovation (CERSI)*, GRANTOME, <https://grantome.com/grant/NIH/U01-FD005938-03/> (last visited Nov. 11, 2023).

296. Victoria L. Bartlett, Sanket S. Dhruva, Nilay D. Shah, Patrick Ryan & Joseph S. Ross, *Feasibility of Using Real-World Data to Replicate Clinical Trial Evidence*, 2 JAMA NETWORK OPEN: STAT. & RSCH. METHODS 1, 7 (2019).

297. Meera M. Dhodapkar, Xiaoting Shi, Reshma Ramachandran, Evan M. Chen, Joshua D. Wallach, & Joseph S. Ross, *Characterization and Corroboration of Safety Signals Identified from the US Food and Drug Administration Adverse Event Reporting System, 2008-19: Cross Sectional Study*, 379 BMJ 1, 8 (2022).

298. *Funded by FDA, C-Path and Nord to Launch Rare Disease Data Analytics Platform*, NAT'L. ORG. FOR RARE DISORDERS (Aug. 7, 2019), <https://rarediseases.org/funded-by-fda-c-path-and-nord-to-launch-rare-disease-data-analytics-platform/>.

disbursed by NIH, the FDA, and other constituent agencies of HHS.²⁹⁹ FDAAA also requires the FDA to name and shame responsible parties out of compliance with FDAAA's reporting rules, via public "Notices of Noncompliance" on a FDA-managed website crosslinked to ClinicalTrials.gov.³⁰⁰

The FDA and NIH have performed poorly in their role as enforcers. Since FDAAA's enactment, the FDA's enforcement efforts have been almost laughably minimal: just five Notices of Noncompliance issued and zero fines imposed, despite thousands of trials out of compliance (among tens of thousands of trials with results required under FDAAA).³⁰¹ It was only in 2022 that NIH began sending letters threatening to withhold grant money from grantees out of compliance with FDAAA's data sharing mandate.³⁰² NIH and the FDA have been criticized from many sides for not doing more enforcement, including by researchers seeking access to missing data,³⁰³ civil

299. 42 U.S.C. § 282(j).

300. *Id.*; *ClinicalTrials.gov—Notices of Noncompliance and Civil Money Penalty Actions*, FDA, <https://www.fda.gov/science-research/fdas-role-clinicaltrials.gov-information/clinicaltrials.gov-notices-noncompliance-and-civil-money-penalty-actions> (last visited Mar. 17, 2024).

301. *Id.*; see also Reshma Ramachandran, Christopher J. Morten & Joseph S. Ross, *Strengthening the FDA's Enforcement of ClinicalTrials.gov Reporting Requirements*, 326 JAMA 2131 (2021).

302. Ed Silverman, *After Years of Lax Oversight, the NIH is Starting to Contact Institutions About Unreported Clinical Trial Results*, STAT: PHARMALOT (Nov. 7, 2022), <https://www.statnews.com/pharmalot/2022/11/07/nih-clinical-trials-transparency-fda-2/>.

303. Nicholas J. DeVito & Ben Goldacre, *Evaluation of Compliance With Legal Requirements Under the FDA Amendments Act of 2007 for Timely Registration of Clinical Trials, Data Verification, Delayed Reporting, and Trial Document Submission*, 181 JAMA INTERNAL MED. 1128, 1130 (2021).

society groups,³⁰⁴ journalists,³⁰⁵ a former director of ClinicalTrials.gov,³⁰⁶ HHS's Office of Inspector General,³⁰⁷ and one of us.³⁰⁸

Yet even the FDA and NIH's meager enforcement has contributed to a significant increase in data-sharing compliance rates. Since 2020, when the FDA first promised to begin issuing Notices of Noncompliance and threatened fines,³⁰⁹ the percentage of applicable clinical trial results reported to the database rose from approximately 60–65%³¹⁰ to about 75–80%.³¹¹ Even light-touch enforcement prompts compliance. A 2021 analysis showed that when the FDA simply sent a few dozen short letters to responsible parties, stating that the agency had reason to believe their trials might be out of compliance with FDAAA's data reporting rules, more than 90% of recipients provided the missing data with a median response time of just a few weeks.³¹²

And the present, C-grade state of enforcement and compliance with ClinicalTrials.gov's reporting mandate is nonetheless sufficient to unlock enormous benefits.³¹³ As former ClinicalTrials.gov Director Zarin wrote in 2022, there are approximately 25,000 trial results reported on ClinicalTrials.gov

304. See, e.g., *Clinical Trials Transparency Campaign*, UNIVS. ALLIED FOR ESSENTIAL MEDS., https://www.uaem.org/transparency_campaign (last visited Nov. 11, 2023); *Clinical trial transparency at US universities*, TRANSPARIMED (Mar. 25, 2019), https://www.transparimed.org/_files/ugd/01f35d_8c22b87eda8e44ac83cf76642de94053.pdf?index=true (criticism from UAEM and TranspariMED).

305. Charles Piller, *FDA and NIH Let Clinical Trial Sponsors Keep Results Secret and Break the Law*, SCI. (Jan. 13, 2020), <https://www.science.org/content/article/fda-and-nih-let-clinical-trial-sponsors-keep-results-secret-and-break-law>.

306. Silverman, *supra* note 273; *Drug Researchers Refuse to Follow the Law. The Government Isn't Stopping Them*, SCI. FRIDAY (Jan. 24, 2020), <https://www.sciencefriday.com/segments/clinical-trial-reporting-government/>.

307. *The National Institutes of Health did Not Ensure that All Clinical Trial Results were Reported in Accordance with Federal Requirements*, DEP'T HEALTH & HUMAN SERVS. OFF. INSPECTOR GEN. (Aug. 12, 2022), <https://oig.hhs.gov/oas/reports/region6/62107000.asp>.

308. Ramachandran, *supra* note 301; Christopher Morten, Peter G. Lurie & Charles Seife, *Lost opportunities from FDA, NIH inaction when sponsors fail to report clinical trial results*, STAT (Apr. 13, 2020), <https://www.statnews.com/2020/04/13/lost-opportunities-clinical-trial-results-unreported-lost-opportunities/>.

309. Civil Money Penalties Relating to the ClinicalTrials.gov Data Bank; Guidance for Responsible Parties, Submitters of Certain Applications and Submissions to FDA, and FDA Staff, 85 Fed. Reg. 50028 (Aug. 17, 2020), <https://www.fda.gov/regulatory-information/search-fda-guidance-documents/civil-money-penalties-relating-clinicaltrialsgov-data-bank>.

310. Nicholas J. DeVito, Seb Bacon & Ben Goldacre, *Compliance with Legal Requirement to Report Clinical Trial Results on ClinicalTrials.gov: A Cohort Study*, 395 LANCET 361, 365 (2020); Piller, *supra* note 305.

311. *Who's Sharing Their Clinical Trial Results?*, FDAAA TRIALS TRACKER, <https://fdaaa.trialstracker.net/> (last visited Nov. 11, 2023).

312. Ramachandran, *supra* note 301, at 2132.

313. *Supra* Section II.C.2.

that are unreported in the medical literature, and thus presumably accessible to researchers nowhere but ClinicalTrials.gov.³¹⁴

Why such meager enforcement from the FDA and NIH? One major reason is that FDAAA imposed new regulatory obligations on both agencies without allocating new funding.³¹⁵ Both the FDA and NIH have many other obligations, and neither agency had strong incentives to dedicate personnel and attention to ClinicalTrials.gov. In addition, HHS's choice to divide enforcement responsibilities between the two agencies³¹⁶ rather than vesting responsibility entirely with one has made it easier for each agency to point to the other as the laggard.

2. *Pioneering Researcher Access to More Sensitive Data*

The entire clinical trial data sharing mandate described above requires sharing of just two components of clinical trial data: summary data and metadata. To recap, FDAAA mandates that summary data be disclosed without redaction.³¹⁷ It mandates that metadata be disclosed as well,³¹⁸ though NIH rules permits companies (and other trial sponsors) to redact information in trial protocols deemed a trade secret or confidential commercial information.³¹⁹ This means that FDAAA's clinical trial data sharing mandate does not reach IPD, the most detailed and most sensitive trial data.³²⁰ The mandate also does not reach some metadata in trial protocols that companies deem trade secrets.

Yet some institutions that share clinical trial data have pioneered ways to share sensitive information with independent researchers. These efforts show it is possible to navigate treacherous hazards to privacy and trade secrecy with careful institutional and legal design.

314. Ed Silverman, *'A Blind Eye': NIH Fails to Ensure Clinical Trial Results are Reported, and Still Funds Researchers who don't File Results*, STAT: PHARMALOT (Aug. 17, 2022), <https://www.statnews.com/pharmalot/2022/08/17/nih-clinical-trials-transparency-fda/>.

315. See Ramachandran, *supra* note 301, at 2132.

316. Office of the Commissioner of Food and Drugs; Delegation of Authority, 77 Fed. Reg. 59196 (Sept. 26, 2012).

317. 42 U.S.C. § 282(j)(3)(C).

318. *Id.* § 282(j)(3)(D)(iii)(III) (mandating disclosure of the trial protocol or “or such information on the protocol for the trial as may be necessary to help to evaluate the results of the trial”).

319. 42 C.F.R. § 11.48(a)(5).

320. See *supra* Section II.A.1.

a) Sharing IPD

Sharing raw clinical trial data that describes, in detail, the health statuses of individual patients—IPD—poses profound risks to patient privacy.³²¹ As the Institute of Medicine put it in 2015, “privacy concerns have been stated as a key obstacle to making these data available.”³²² Yet some kinds of research depend on IPD and cannot be done without it. For example, only researchers with access to IPD and the trial’s complete methodology can conduct reanalysis to confirm the correctness of the trial sponsor’s conclusions.

Numerous institutions now share IPD with researchers, and do so responsibly.³²³ Some of these databases are public—e.g., NIH’s Biologic Specimen and Data Repositories Information Coordinating Center (BioLINCC). Other databases are nonprofit and academic—e.g., the Yale Open Data Access Project (YODA). Others are industry-run.³²⁴

We describe these two IPD-sharing databases here. We do not attempt a comprehensive survey of IPD-sharing initiatives but instead present these as proofs-of-concept. Key features permit them to share sensitive data with researchers while protecting the data’s integrity and the interests of the data subjects.

As we trace below, a constant of these databases is that they are *not* universally accessible; they do not publish data for use by any and all comers. Instead, they discriminate among prospective users and provide access only to researchers deemed sufficiently responsible.

Further, the institutions that manage these databases use legal and/or technological constraints to limit researchers’ access to and use of the data, reducing the risk of harmful uses. Researchers’ access may be “tiered”; different kinds of researchers obtain different levels of access to different

321. See *supra* Section III.A.3.

322. *Sharing Clinical Trial Data: Maximizing Benefits*, *supra* note 161.

323. One driver of the recent uptick in IPD sharing has been prestigious medical journals, which have encouraged researchers who seek to report the results of clinical trials in those journals to commit to sharing deidentified IPD. See Darren Taichman, Peush Sahni, Anja Pinborg, Larry Peiperl, Christine Laine, Astrid James, Sung-Tae Hong, Abraham Haileamlak, Laragh Golloghy, Fiona Godlee, Frank A. Frizelle & Fernando Florenzano, *Data Sharing Statements for Clinical Trials: A Requirement of the International Committee of Medical Journal Editors*, 376 NEW ENGL. J. MED. 2277 (2017).

324. See *Our Mission*, CLINICALSTUDYDATAREQUEST.COM, <https://clinicalstudydatarequest.com/Default.aspx###> (last visited Nov. 11, 2023); *Convener, Collaborator, Catalyst in the Fight Against Cancer*, PROJECT DATA SPHERE, <https://www.projectdatasphere.org/> (last visited Nov. 11, 2023). Michael J. Pencina, *Supporting Open Access to Clinical Trial Data for Researchers: The Duke Clinical Research Institute—Bristol-Myers Squibb Supporting Open Access to Researchers Initiative*, 172 AM. HEART J. 64, 67(2016).

components or kinds of data. All this underscores the vital role of *institutions* in clinical trial data sharing; these databases require active stewardship.

i) NIH BioLINCC

In addition to the enormous ClinicalTrials.gov database, NIH curates and controls smaller databases of clinical trial data. A notable one is BioLINCC, a database that contains sensitive IPD from clinical trials in cardiovascular, pulmonary, and hematological diseases.³²⁵ BioLINCC has been in operation since the 2000s.³²⁶ NIH created and administers the center, but much of the information contained in BioLINCC's databases is contributed not by NIH itself but by nongovernmental entities, including drug and device companies.³²⁷ NIH requires these entities to submit data to BioLINCC as a condition of accepting NIH funding for their research. This straightforward quid pro quo leverages NIH's separate role as funder.

Because BioLINCC data typically contains IPD, NIH shares data conditionally, limiting access and use. BioLINCC requires would-be researchers to submit data use applications, which document the intended uses of specific data sets (prospective researchers' "Research Plan?"), data security practices, and commitments. NIH discriminates among users; NIH provides commercial users access only to a subset of BioLINCC's data and provides no access at all to would-be researchers that do not submit a credible Research Plan.³²⁸

NIH then enforces researchers' compliance with their Research Plans through contract. NIH imposes a data use agreement on every researcher who obtains access to IPD from BioLINCC. The data use agreement governs transfer, maintenance, and use of protected data. The agreement imposes

325. *BioLINCC Resource Overview*, NIH, https://biolincc.nhlbi.nih.gov/resource_overview/. In addition to clinical trial data, BioLINCC also shares with researchers other non-clinical trial medical data and biospecimens. *Id.*

326. *The BioLINCC Handbook: A Guide to the NHLBI Biologic Specimen and Data Repositories*, NAT'L HEART, LUNG, & BLOOD INST. 1 (2021), <https://biolincc.nhlbi.nih.gov/media/guidelines/handbook.pdf>. BioLINCC also shares physical samples of materials useful in biomedical research.

327. See *Guidelines for Preparing Clinical Study Data Sets for Submission to the NHLBI Data Repository*, NAT'L HEART, LUNG, & BLOOD INST., <https://www.nhlbi.nih.gov/grants-and-training/policies-and-guidelines/guidelines-for-preparing-clinical-study-data-sets-for-submission-to-the-nhlbi-data-repository> (instructions to non-BHLBI investigators running NHLBI-funded studies).

328. *The BioLINCC Handbook*, *supra* note 326, at 8 ("[F]or studies with commercial use data restrictions, investigators requesting data for commercial use would be eligible to receive only the subset of the overall dataset that was provided by subjects who consented to commercial research.").

constraints on researchers, both positive (incentivizing users to do beneficial things) and negative (disincentivizing users from doing harmful things). BioLINCC's current standard agreement includes all the following:³²⁹

Provisions that prohibit . . .

- commercial uses of data;
- further sharing of data; and
- reidentification of or contact with any patient whose IPD is in the data set.

Provisions that require . . .

- appropriate data security safeguards;
- regular updates to NIH on the status of research;
- notification to NIH in the event of data breach;
- notification to NIH and the FDA in the event the data user identifies in the data an ongoing risk to public health and safety;
- dissemination of any findings to the public, e.g., by publication in the peer-reviewed medical or scientific literature; and
- destruction of data when research is complete.

Data use agreements can specify penalties in the event a researcher breaches the agreement. These penalties can be financial or non-financial. BioLINCC's data use agreement does not contemplate financial penalties but does promise to ban breachers from any future access to data.³³⁰

BioLINCC's information-sharing program has succeeded. Hundreds of requesters have sought and received access to thousands of data sets, leading to dozens of high-profile scientific and medical publications in cardiology, infectious disease, and other fields of medical research.³³¹ Over 250 articles

329. Sean A. Coady, George A. Mensah, Elizabeth L. Wagner, Miriam E. Goldfarb, Denise M. Hitchcock & Carol A. Giffen, *Use of the National Heart, Lung, and Blood Institute Data Repository*, 376 NEW ENG. J. MED. 1849 (2017) (describing data use agreements used by NIH's BioLINCC); see also *How Can Covered Entities Use and Disclose Protected Health Information for Research and Comply with the Privacy Rule?*, NAT'L INST. HEALTH, https://privacyruleandresearch.nih.gov/pr_08.asp (last visited Nov. 11, 2023) (NIH publication describing data use agreement).

330. *The BioLINCC Handbook*, *supra* note 326, at 20 (“[F]ailure to adhere to the terms of the RMDA will be taken into consideration with respect to any future requests for data and/or biospecimens from the NHLBI repositories.”).

331. Joseph S. Ross, Jessica D. Ritchie, Emily Finn, Nihar R. Desai, Richard L. Lehman, Harlan M. Krumholz, & Cary P. Gross, *Data Sharing Through an NIH Central Database Repository: A Cross-Sectional Survey of BioLINCC Users*, 6 BMJ OPEN (2016); Carol A. Giffen, Leslie E. Carroll, John T. Adams, Sean P. Brennan, Sean A. Coady & Elizabeth L. Wagner, *Providing Contemporary Access to Historical Biospecimen Collections: Development of the NHLBI Biologic Specimen and Data Repository Information Coordinating Center (BioLINCC)*, 13 BIOPRESERVATION & BIOBANKING 271 (2015).

were published based on BioLINCC data accessed between January 2000 and May 2016.³³² In practice, NIH's scrutiny and data use agreements seem to work. No researcher misuse of BioLINCC data covered by a data use agreement has been reported in the years of BioLINCC's existence.

ii) Yale Open Data Access Project (YODA)

Another prominent institution with a track record of successfully sharing IPD is YODA, a nonprofit academic data center that holds complete data sets (including IPD) on over 400 trials.³³³

YODA is not the only non-governmental, not-for-profit institution that shares IPD. Two additional examples are Vivli and Project Data Sphere.³³⁴

YODA operates similarly to NIH's BioLINCC. Like BioLINCC, YODA holds data on its own servers, gatekeeps requests for access to data, and enforces compliance with its own rules for data sharing and use. To get YODA data, researchers must establish that they have a credible research plan and proper security measures in place.³³⁵ YODA refuses some applicants, especially when those applicants seek access to sensitive IPD. In difficult cases, YODA uses a peer-review-like process: it solicits reviews from two independent scientists to help decide whether to approve or deny applications.³³⁶ Like BioLINCC, YODA imposes data use agreements on all researchers who get access to the data.

YODA has convinced major medical technology companies—including Medtronic and Johnson & Johnson—to share, voluntarily, complete clinical trial data sets that would otherwise be proprietary. These companies benefit in various ways from contributing data to YODA, including a “halo effect” of good publicity and early access to scientific insights contributed by the researchers who use their data.³³⁷ The companies that contribute data to

332. See Coady et al., *supra* note 329, at 1849.

333. *Our Mission*, YALE UNIVERSITY OPEN DATA ACCESS (YODA) PROJECT, <https://yoda.yale.edu/> (last visited Jan. 31, 2023).

334. *About Vivli: Overview*, VIVLI, <https://vivli.org/about/overview/> (last visited Jan. 31, 2023); *About Project Data Sphere*, VIVLI, <https://www.projectdatasphere.org/about> (last visited Jan. 31, 2023).

335. *Frequently Asked Questions (FAQs)*, YALE U. OPEN DATA ACCESS (YODA) PROJECT, <https://yoda.yale.edu/about/frequently-asked-questions-faqs#Data%20Request%20Review%20Process> (last visited Jan. 31, 2023).

336. *Id.*

337. Researchers are required, under the terms of the YODA DUA, to share insights with the company that contributed the trial data under study even before they publish their findings for the world. *Procedures to Guide External Investigator Access to Clinical Trial Data*, YALE U. OPEN DATA ACCESS (YODA) PROJECT, <https://yoda.yale.edu/sites/default/files/files/>

YODA reserve their own rights to bring breach-of-contract claims against researchers who breach YODA's data use agreements.

Though rather small, YODA has been a success thus far: between 2014 and 2018, Johnson & Johnson voluntarily shared data from 200 clinical trials through YODA, generating at least a dozen new scientific publications,³³⁸ including analyses of the safety of ulcerative colitis treatments³³⁹ and the efficacy of schizophrenia drugs (which critiqued exaggerated claims made in the medical literature).³⁴⁰ All this occurred without evidence of privacy violations, breaches of the data use agreements, or harmful use of data by Johnson & Johnson's competitors.³⁴¹

YODA operates on a mixture of grants provided by industry (Medtronic and Johnson & Johnson), philanthropy, and government. The FDA and the Centers for Medicare & Medicaid Services (CMS) have both funded YODA, showing the role public money and institutions can play in nurturing private governors of data.³⁴²

b) Sharing Metadata That Contains Alleged Trade Secrets

In this Section III.D.2.b, we turn to an institution that has pioneered responsible sharing of (purported) trade secret data with researchers: Health Canada, Canada's central drug regulator.

Since 2019, Health Canada has shared rich data sets from clinical trials of agency-approved products, under a program called Public Release of Clinical

YODA%20Project%20Data%20Release%20Procedures%20February%202019.pdf (last visited Nov. 11, 2023).

338. Joseph S. Ross, Joanne Waldstreicher, Stephen Bamford, Jesse A. Berlin, Karla Childers, Nihar R. Desai, Ginger Gamble, Cary P. Gross, Richard Kuntz, Richard Lehman, Peter Lins, Sandra A. Morris, Jessica D. Ritchie, Harlan M. Kumholz, *Overview and Experience of the YODA Project with Clinical Trial Data Sharing After 5 Years*, 5 SCI. DATA 1, 8–9 (Nov. 27, 2018).

339. See David Cheng, Kelly C. Cushing, Tianxi Cai, Ashwin N. Ananthakrishnan, *Safety and Efficacy of Tumor Necrosis Factor Antagonists in Older Patients with Ulcerative Colitis: Patient-Level Pooled Analysis of Data from Randomized Trials*, 19 CLINICAL GASTROENTEROLOGY & HEPATOLOGY 939, 944 (2021).

340. Alexander Hodkinson, Carl Heneghan, Kamal R. Mahtani, Evangelos Kontopantelis & Maria Panagioti, *Benefits and Harms of Risperidone and Paliperidone for Treatment of Patients with Schizophrenia or Bipolar Disorder: A Meta-Analysis Involving Individual Participant Data and Clinical Study Reports*, 19 BMC MED. 1, 6–8 (2021).

341. Ross, *supra* note 338.

342. Joseph S. Ross, *Sharing Data Through the Yale University Open Data Access (YODA) Project: Early Experience*, YOUTUBE (Oct. 11, 2017), <https://www.youtube.com/watch?v=E2ex74Zn710>.

Information (PRCI).³⁴³ The data shared through PRCI is generated and compiled not by Health Canada but by the drug and device companies who submit it when seeking approval. In effect, PRCI works similarly to the FDA's Drugs@FDA database but is simultaneously deeper (providing more detailed summary data and metadata) and narrower (covering fewer products). As of March 2024, data on over 600 distinct drugs and devices, from dozens of companies, had been posted to PRCI.³⁴⁴

Academic researchers have used PRCI data to analyze and communicate the safety and efficacy of important medical products, constituting an important check on and complement to the work of Health Canada, the FDA, and other national regulators. For example, an academic group recently used PRCI data to show that extended-release oxycodone hydrochloride ("Oxycontin") was approved in the 1990s by Health Canada, the FDA, and other national regulators without any evaluation of the risks of misuse and addiction.³⁴⁵

The clinical trial data shared by Health Canada through PRCI implicates both patient privacy and trade secrecy. To protect these interests, Health Canada asks regulated entities to redact what it deems "confidential business information" (CBI)—essentially, trade secrets under U.S. law³⁴⁶—as well as information identifying individual trial participants before making data

343. *Clinical Information on Drugs and Health Products*, GOV'T CAN., <https://www.canada.ca/en/health-canada/services/drug-health-product-review-approval/clinical-information-drugs-health-products.html> (last updated Mar. 12, 2019). The European Union began and then suspended a similar program. For details, see Alexander C. Egilman, Amy Kapczynski, Margaret E. McCarthy, Anita T. Luxkaranayagam, Christopher J. Morten, Matthew Herder, Joshua D. Wallach & Joseph S. Ross, *Transparency of Regulatory Data Across the European Medicines Agency, Health Canada, and US Food and Drug Administration*, 49 J.L. MED. & ETHICS 456, 456–57, 459 (2021).

344. *Search for Clinical Information on Drugs and Medical Devices*, HEALTH CAN., <https://clinical-information.canada.ca/search/ci-rc> (last updated Mar. 17, 2024).

345. Jessie Pappin, Itai Bavli & Matthew Herder, *On What Basis Did Health Canada Approve OxyContin in 1996? A Retrospective Analysis of Regulatory Data*, 19 CLINICAL TRIALS 584, 584–85 (2022).

346. Health Canada's definition of CBI is nearly identical to the definition of "trade secret" that predominates in U.S. law: "business information[] that is not publicly available, in respect of which the person has taken measures that are reasonable in the circumstances to ensure that it remains not publicly available, and that has actual or potential economic value to the person or their competitors because it is not publicly available and its disclosure would result in a material financial loss to the person or a material financial gain to their competitors." *Guidance Document—Disclosure of Confidential Business Information Under Paragraph 21.1(3)(c) of the Food and Drugs Act*, GOV'T CAN., <https://www.canada.ca/en/health-canada/services/drug-health-product-review-approval/request-disclosure-confidential-business-information/disclosure-confidential-business-information/guidance.html#a1.2> (last visited Nov. 11, 2023).

accessible to routine users of PRCI.³⁴⁷ Users who wish to access and use these redacted data sets may do so with few restrictions, much like Drugs@FDA and ClinicalTrials.gov.

Yet Health Canada shares even more information with select researchers, including unredacted trade secrets. According to Paragraph 21.1(3)(c) of the Canadian Food and Drugs Act,³⁴⁸ Health Canada will share trade secrets (CBI) on certain conditions. First, researchers must submit a data use application that proves their proposed use is noncommercial and relates to “protection or promotion of human health or the safety of the public.”³⁴⁹ Second, the application must also explain “[h]ow the results of the proposed project will be disseminated to the Canadian public.”³⁵⁰ Any researchers granted access must then sign data use agreements insisting “the specified CBI can be used only for the purposes of the proposed project and must be kept confidential using appropriate safeguards.”³⁵¹ In the event a researcher detects a safety, efficacy, or quality problem in the data, Health Canada requests the researcher notify Health Canada as well as the public at large.³⁵²

In 2016, a medical researcher, Peter Doshi, used Paragraph 21.1(3)(c) to obtain detailed, previously secret data on the safety and efficacy of several medical products, including oseltamivir (“Tamiflu”) and vaccines for human papillomavirus (HPV).³⁵³ Doshi’s access to this CBI—and his legal authority to disseminate analysis of it—was upheld by the Canadian Federal Court.³⁵⁴

347. *Guidance document on Public Release of Clinical Information: Profile Page*, HEALTH CAN., <https://www.canada.ca/en/health-canada/services/drug-health-product-review-approval/profile-public-release-clinical-information-guidance.html> (last updated Mar. 29, 2019).

348. *Disclosure of Confidential Business Information*, HEALTH CAN., <https://www.canada.ca/en/health-canada/services/drug-health-product-review-approval/request-disclosure-confidential-business-information/disclosure-confidential-business-information.html> (last updated Nov. 17, 2020).

349. *Guidance Document—Disclosure of Confidential Business Information Under Paragraph 21.1(3)(c)*, *supra* note 347.

350. *Id.*

351. *Id.*

352. *Id.* (“Recipients of disclosed information are expected to make the findings of their project with the disclosed information publicly available when the findings provide additional knowledge about the therapeutic product under study. If the recipient of disclosed information has made a determination that the safety, efficacy or quality of a product(s) may change as a result of the evaluation of the CBI then the results should be submitted to Health Canada.”).

353. Trudo Lemmons, *Precedent Pushing Practice: Canadian Court Orders Release of Unpublished Clinical Trial Data*, BMJ OPINION (July 19, 2018), <https://blogs.bmj.com/bmj/2018/07/19/precedent-pushing-practice-canadian-court-orders-release-of-unpublished-clinical-trial-data/>.

354. *Doshi v. Attorney General of Canada*, [2018] F.C. 710 (Can. Ont.), <https://www.canlii.org/en/ca/fct/doc/2018/2018fc710/2018fc710.pdf>.

Doshi has not made inappropriate use of the data, and industry has not subsequently sued Health Canada to block similar disclosures.

E. CLINICAL TRIAL DATA IN ACTION: A RECAP

Perhaps the single most important lesson of Part III is that clinical trial data sharing *works*. Today's clinical trial data sharing mandate guarantees researchers meaningful access to components of clinical trial data that the R&D-driven pharmaceutical industry kept proprietary for decades. The mandate has fostered beneficial research that could not have occurred otherwise, some of which has challenged industries' overblown claims and improved the FDA's regulation. Indeed, the mandate seems to have contributed to a "new normal" of improved drug safety; in the years since FDAAA was enacted, we have not had scandals of unsafe products and manufacturer cover-ups on the level of Paxil or Vioxx.³⁵⁵

The pharmaceutical and medical device industries resisted clinical trial data sharing on the argument that sharing would harm privacy and incentives to innovate. But so far, clinical trial data sharing has capably protected those interests.

The clinical trial data sharing mandate emerged over years, not overnight, and remains a work in progress. Key to the mandate's qualified success are the institutions that give ongoing effect to its underlying law, especially FDAAA. Law cannot simply proscribe or prescribe behavior, nor can it reallocate power with the stroke of a pen. In our view, law must also create and nurture institutions to give law meaning and teeth. For the clinical trial data sharing mandate, the key institutions are the FDA and NIH, but they are surrounded by an array of other institutions, some private and some independent but government-funded.

Another key to the success of clinical trial data sharing, in our view, has been the recognition that different components of clinical trial data deserve different treatment. Clinical trial summary data and most metadata are low risk and high reward; they can be shared freely with users without restrictions on access and use. A small fraction of metadata may implicate trade secrecy, but such data can be shared carefully; data use agreements and other constraints preventing competitive use can protect innovative companies' first-mover advantages. Sharing IPD poses profound privacy risks, but IPD too can be

355. That is not to say that the pharmaceutical and medical device industries, or the FDA, have had a perfect track record since 2007. *See* Nicholas S. Downing, Nilay D. Shah, Jenerius A. Aminawung, Alison M. Pease, Jean-David Zeitoun, Harlan M. Krumholz, & Joseph S. Ross, *Postmarket Safety Events Among Novel Therapeutics Approved by the US Food and Drug Administration Between 2001 and 2010*, 317 JAMA 1854 (2017) (surveying safety problems).

shared responsibly with some users, subject to appropriate institutional and technical constraints.

IV. TOWARD A SOCIAL MEDIA DATA SHARING MANDATE

Part IV applies some of the primary lessons learned from clinical trial data sharing and charts a course toward responsible and effective social media data sharing. Section IV.A focuses on how the benefits of independent research cascade, emerge, and are unpredictable at the outset. Section IV.B focuses on the need for regulators. Here we use the term “regulators” to refer to both public and private entities that can impose accountability and exert countervailing power over social media companies by providing alternative forms of expertise, employment, and perspectives. Section IV.C, drawing from the concept of contextual integrity, transposes many of clinical trial data sharing’s solutions for navigating the Scylla and Charybdis of trade secrecy and privacy. These solutions apply context-specific controls over social media data to treat contextually and normatively distinct kinds of data differently, using tiered access and a variety of constraints on data access and use tailored to the goals and needs of particular applications.

In our view, clinical trial data sharing’s hybrid, “both and” approaches are successful. Various clinical trial data sharing initiatives deploy a mix of mandated sharing and voluntary arrangements, across data types of varying sensitivity, in order to balance the interests of commercial secrecy, individual privacy, and public benefits of research.

Clinical trial data sharing also shows that meaningful independent researcher access cannot be achieved without laws mandating that industry share more data. Clinical trial data’s journey from the dark ages to today’s robust ecosystem was made possible by the legal transformation of the rights in such data. What began as data governed almost exclusively by private ordering eventually incorporated public demands to constrain those interests and indexed a public right to quality research to provide accountability to a high-stakes sphere of life. Clinical trial data’s iterative process of legislation and regulation to enact and build on that legislation was the legal foundation needed to build a robust data sharing ecosystem.

Finally, the example of clinical trial data shows the importance of ensuring that data access mandates do not operate as mere transparency requirements. Laws to grant researcher access must materially and legally empower regulators to avoid this pitfall.

Data access mandates that allow companies to retain either discretionary control over who is granted access or financial control over how the work of access is funded do more harm than good. At best, such proposals will

empower a subset of well-connected and resourced researchers through narrow interpretations of such rules. At worst, such proposals may weaken pressure to impose more substantive regulation over the digital economy.

We do not believe transparency alone can provide a sufficient solution to the larger issues surveyed above in the social media research ecosystem, as the case of SS1 amply demonstrates. As AI Now noted in its 2023 annual report, data access regulation alone is not enough to promote a stronger and more robust independent researcher ecosystem.³⁵⁶

A. CASCADING (AND UNPREDICTABLE) BENEFITS OF BASIC RESEARCH

One lesson of clinical trials is that the benefits of basic research are not always obvious before research begins. Benefits are instead cascading and unpredictable. Just because these benefits are not readily apparent at the time access is granted does not mean such benefits will not be significant. (And to be clear, in the case of social media data, many pressing societal benefits for researcher access are already readily apparent, as we have argued in Part II).

Basic research is infrastructural. It is the first step in the process of refining unknown unknowns into known unknowns or known knowns.³⁵⁷ Basic research provides the scientific building blocks upon which many other forms of research and productive innovation rely. At the outset, the cascading, indirect benefits of basic research are near-impossible to predict because the stuff of value being built on or adapted for commercial use—a useful material or a surprising scientific breakthrough—is not even known to exist at the time.³⁵⁸ It seems obvious to say, but discovery of the previously unknown is the point of basic research.

The value and unpredictability of discovery are important to emphasize when weighing the potential benefits of researcher access against claims of the risks to secrecy and privacy. Addressing direct, currently known needs are just one of the emergent beneficial properties of the new institutions that will be created to facilitate social media access.

As Part III showed, researchers' access to clinical trial data has led to many cascading benefits: illumination of harms that regulators missed, improved patient care and public health, higher quality trials, combating misinformation,

356. AI NOW, 2023 LANDSCAPE: CONFRONTING TECH POWER 41 (2023), <https://ainowinstitute.org/wp-content/uploads/2023/04/AI-Now-2023-Landscape-Report-FINAL.pdf> (calling access to data a “weak policy response” to the problem of independent research).

357. To riff on the old chestnut from Donald Rumsfeld. See David Pozen, *Deep Secrecy*, 62 STAN. L. REV. 257, 259 (2009).

358. A famous example is the birth of a booming plastics industry following the funding of the space program.

and more. Nonprofit and broadly accessible clinical trial databases, including ClinicalTrials.gov, Drugs@FDA, and BioLINCC expand and democratize access to scientific data.

Reliable and growing access to clinical trial data has also helped to create a cadre of independent researchers able to use that data. Grants from NIH and FDA have contributed to a corps of independent experts able to manage and use this data for public benefit. This material independence in turn has fostered a larger ecosystem of expertise and knowledge production that exists outside of—and largely independent of—the pharmaceutical and medical device industries.

Independent access to social media data, done right, can also empower a greater diversity of researchers with the tools to access this data, and thus conduct scientific research with this resource. Because researchers will no longer need to rely on individual, bespoke relationships with companies, or be willing to assume the legal risk of proceeding without such relationships in place, it is reasonable to assume that greater numbers of researchers from less well-resourced institutions will be able to gain access to social media data. The same goes for researchers that may be interested in U.S. social media data but reside outside of the United States—making this data available to qualified researchers opens up access to a global research community. Indeed, we have already seen a similar benefit of the European Union’s recent efforts to grant researchers access to E.U. data; many U.S. researchers are extremely enthusiastic about the research potential of accessing E.U. data.³⁵⁹

Robust ecosystems of researcher data access take time to develop. They cannot be achieved in a day. Nevertheless, achieving a successful state of social media data access depends in part on the steps taken now. The cascading benefits of clinical trial data have taken years to realize and are still emerging. We are only at the very beginning of the process of implementing researcher access to social media data, and whether the process realizes its potential depends on the steps taken today.

B. EMPOWERING REGULATORS

To be successful, researcher access laws and policies must create and empower institutions, inside and outside government, with the funding, mandate, and expertise to manage the technical governance mechanisms of research data and to keep social media companies in compliance with existing law and accountable if they are not.

359. See discussion of the Digital Services Act’s mandated access for vetted researchers in the Introduction, *supra*.

Legislation to require access and prescribe certain data practices is an important first step. But to produce real results, the experience of clinical trial data sharing suggests that laws also need to empower regulators to engage in the day-to-day work of both keeping social media companies compliant with data sharing requirements and managing the technical governance mechanisms of access.

Empowerment of such regulators means a few different things, and it can take a range of forms. Below we offer a menu of options, a mix of which have been successfully deployed in the clinical trial data setting. Given the early days of social media data sharing, we endorse experimentation, hybridization, and pluralism in approach among the options surveyed below. But the key lesson behind all these options is that social media platforms should not retain gatekeeping (or funding) authority over who is granted access to data, what studies are deemed fundable or feasible, or which results may be published.

1. Independent, Preferably Public, Funding

First, empowered regulators must have access to secure, reliable public funding. Currently, much of the funding (directly or indirectly) for researcher access to social media data is provided by companies themselves. This leaves researchers vulnerable to changes in market forces or company priorities.³⁶⁰ It also produces a chilling effect on research considered overly critical. It is neither a sustainable model on which to build long-term access nor conducive to robust independent research.

As seen in Section III.D.2.a, public funding does not have to mean servers running under direct government control. Government agencies can and do fund several different institutional models of data curation and sharing. NIH directly funds, manages, and hosts its own databases, including ClinicalTrials.gov and BioLINCC. But the FDA and NIH also provide funding to private data stewards, including YODA. Recipients of public funding can be other public institutions (like public universities or research consortia), private academic or non-profit research institutions, or clusters of all the above (similar to CERSI).

Access mandates that both empower public and civil society institutions with independent funding and foster non-industry expertise in managing and providing access to such data can build these communities' material and intellectual capacity to do their work. Researcher access done right can thus play a key role in fostering the growth of meaningful regulators in the digital economy. As Part III shows, such institutions can play key roles in movement

360. See, e.g., Calma, *supra* note 115.

and coalition building. Free from material dependency on the companies, independent technology research ecosystems can provide the intellectual and civic seeds of the broad political mobilization needed to transform how we develop and manage the digital infrastructures of social and public life.

2. Control Over Standards and Terms of Access and Use

Second, empowered regulators are those that have meaningful control over (1) standards and processes of data sharing and (2) researchers' data access and use. Control over the standards and processes of data sharing means regulators must curate and safeguard data by protecting its quality, accuracy, and useability. Control over researchers' access and use means just that. Control can be effectuated through technical means, contracts (data use agreements), guides and protocols for use, and more.

Regulators can exert control via a range of options that empower them in their relationships with both companies and researchers. At its most simple and direct, institutional control begins with laws that require companies to share certain data with regulators, as seen with ClinicalTrials.gov and in the Canadian example of trusted researcher access in Sections III.C.2 and III.D.2.b. We believe some degree of compulsory data sharing is required to foster successful, independent research. However, as Section III.D more broadly shows, voluntary forms of sharing can supplement mandatory forms, expand the universe of data made available to researchers, and build on their success. As Part III also shows (particularly in Section III.C.2) and as will be discussed below, when companies do not provide the data they are required to share, regulators should also be empowered to enforce sharing requirements.

Importantly, institutional control also means data stewards should be tasked with administering researcher access and use of data to ensure researchers comply with necessary controls and safeguards.

The destination of compelled data can be a government curator, as is the case with ClinicalTrials.gov. This approach is particularly promising for managing datasets on features shared across social media companies, like active users, volume of activity, distribution of that activity, language, and country of origin.

However, curators need not be government entities. In the United States, the FDA funded RDCA-DAP and YODA, two exemplary non-governmental data sharing platforms. Non-governmental options may be particularly attractive for data that is more sensitive to privacy concerns that militate against permitting government agencies the capacity to hold, see, or use such data. Regardless of whether institutions are public or private, they should be given the means to manage data responsibly. This means funding to keep

servers running and curatorial experts employed. This also means: legal rights to determine how data is to be shared from companies; rights to curate and assess data for quality; and rights to set the terms (and/or manage the process) of screening applicants for access via their own data use agreements. Curatorial institutions ought to have the rights to hold data on their own servers, serve as gatekeepers for access to data, and develop internal protocols for screening and evaluating researcher access proposals, including peer-review mechanisms for access to particularly sensitive data.

3. *Meaningful Regulatory Enforcement*

Part III also highlights the importance of meaningful enforcement of data sharing mandates to ensure compliance. The experience of ClinicalTrials.gov presented in Section III.C.1 suggests both that some enforcement is necessary and that even minimal enforcement through “naming and shaming” a handful of noncompliant entities can spur significant compliance.³⁶¹

One condition of granting private entities data curation roles might be a requirement to regularly report noncompliance to the relevant public regulator. Public data stewards and regulators can be given the capacity to enforce compliance directly via mechanisms like naming and shaming, imposing fines, or a court-enforceable right of action to compel access, to name a few. If public stewards lack authority to enforce the law themselves, then they should at least be able to highlight non-compliance to the public and the relevant regulator.

The experience of clinical trial data sharing shows the modest but meaningful effectiveness of simple “naming and shaming” companies and other entities that withhold data from researchers despite a mandate to share. For instance, the FDAAA Trials Tracker, built by the Bennett Institute for Applied Data Science at Oxford, keeps track of which companies and clinical trials have shared their results as required under FDAAA.³⁶² For social media, regulation can help remove barriers to third-party development of similar accountability mechanisms.

C. TREATING DIFFERENT DATA DIFFERENTLY

Existing models of clinical trial data sharing show that it is possible to share data with researchers while also protecting data subjects from harm and preserving incentives to innovate. Clinical trial data sharing offers lessons

361. *See supra* Section III.D.1.c, on public institutional governors as regulators and enforcers.

362. As they say on their website, “The FDA are not publicly tracking compliance. So we are, here.” *FDAAA Trials Tracker*, BENNETT INST. FOR APPLIED DATA SCI., <https://fdaaa.trialstracker.net/rankings/> (last visited Jan. 28, 2023).

about the design of both the technology and the law. In both domains, the clinical trial sector has developed data-sharing mechanisms that are specific, contextual, and allow researchers to access useful data while remaining independent.

Valid privacy and trade secrecy concerns should be treated with a scalpel, not a broadsword. In order to do this, data sharing mechanisms need to be tailored to the affordances of the data they offer and the risks posed by that data to data subjects, researchers, and platforms. This basic insight is not new. Scholars including Helen Nissenbaum, Dan Solove, and Neil Richards have argued for some time that theories and applications of information privacy need to be attentive to the contextually specific purposes and norms that both motivate and constrain information sharing.³⁶³

However, Section III.D.2 shows how the legal, institutional, and technological responses that structured the still-evolving clinical trial data governance regime paralleled—perhaps even prefigured—these theoretical developments in information privacy law. Different tiers and mechanisms of access for different kinds of clinical trial data, users, and uses gradually emerged in response to live policy considerations of how to balance the risks to commercial secrecy and privacy with the social benefits of access. In other words, the solutions that emerged in clinical trial sharing look quite similar to what information privacy theorists have long observed and recommended for digital personal information subject to privacy and other concerns. This Section, IV.C, transposes many of clinical trial data sharing's solutions for navigating the twin barriers of trade secrecy and privacy. In line with existing theories of privacy law, these apply context-specific controls over social media data to treat contextually and normatively distinct kinds of data differently.

To this end, we argue that, as an initial matter, social media should adopt clinical trial data's useful tripartite distinction of data types: individual data, summary data, and metadata. Social media companies tend to lump all these types of data together, raising the lowest common denominator of necessary protection. In other words, all data gets treated with the privacy and security sensitivity of individual data and the trade secrecy sensitivity of metadata, even though certain data—especially summary data—could easily be shared that does not raise those concerns.

When resisting sharing data with researchers, social media companies by and large focus on the promises and pitfalls associated with sharing data about individuals' social media activity. This is evident in their most common

363. See NISSENBAUM, *supra* note 184, at 129; DANIEL SOLOVE, UNDERSTANDING PRIVACY 187–89 (2008); NEIL RICHARDS, WHY PRIVACY MATTERS 22–34 (2022).

methods, such as APIs and static data sets, and large data sharing initiatives such as SS1. Yet the same companies provide little information on how these data are generated (metadata) or aggregate data on their users and their activity (summary data).

Without metadata, there are looming questions about the provenance and representativeness of data available to researchers. Without metadata, researchers must trust companies to have answered these questions in their own undocumented methodologies, despite evidence that some of these companies unreliable and unrepresentative data before.³⁶⁴ For instance, Facebook's Ad Library comes in part from ads that the company's automatic detection algorithm flags as political.³⁶⁵ However, Facebook does not offer any metadata on what classifiers it uses. Therefore, some entire topics may not be included in the library, and researchers would have no idea.

Without summary data, researchers face difficulty contextualizing their results (e.g., understanding relative effect size) and verifying the numbers they receive from companies. For instance, researchers did not know that nearly half of all data was missing from SS1, or that so many advertisements were mislabeled on Facebook's Ad Library (before the NYU Ad Observatory uncovered it) because it was not possible to see if the numbers made sense.

The minimal metadata and summary data that social media companies do currently provide to researchers lacks the requisite methodological clarity and specificity to be useful. Instagram, for instance, shares some information about how it ranks posts for users' feeds or explore pages, but the information provided is too general to be used in academic research.³⁶⁶ The primary method companies use to share summary data is content moderation transparency reports, but these contain little information beyond how much content governments have requested be taken down and how often the platform complied.³⁶⁷ Social media companies keep secret even basic platform usage information such as monthly active users and volume of uploads. For

364. *See supra* Section II.B.

365. *About the Meta Ad Library*, META BUS. HELP CTR., <https://www.facebook.com/business/help/2405092116183307?id=288762101909005> (last visited Nov. 23, 2023).

366. *See generally* Adam Mosseri, *Shedding More Light on How Instagram Works*, INSTAGRAM BLOG (June 8, 2021), <https://about.instagram.com/blog/announcements/shedding-more-light-on-how-instagram-works>.

367. Caitlin Vogus & Emma Llansó, *Report—Making Transparency Meaningful: A Framework for Policymakers*, CTR. FOR DEMOCRACY & TECH. (Dec. 14, 2021), <https://cdt.org/insights/report-making-transparency-meaningful-a-framework-for-policymakers/>.

instance, the public learned that Instagram passed two billion monthly active users only when journalists leaked the information.³⁶⁸

Existing legal frameworks do little better. Proposed laws in the United States and passed laws in the European Union almost always focus on access to individual data, rather than summary data and metadata, and in turn, impose severe limitations to maintain privacy and trade secrecy. The Platform Accountability and Transparency Act, for instance, mostly focuses on sharing individual data with researchers, particularly high-profile users and content moderation actions taken against them. The Ad Transparency Act also focuses on individual ads instead of requiring companies to describe underlying ad targeting systems. And while the Digital Services Act in theory allows researchers to access all three types of data, this data is only available to certain vetted researchers.³⁶⁹

Below, we elaborate how not just individual data but summary and metadata on social media could be made available to researchers, and how access could be tailored to accommodate the privacy and trade secrecy considerations of each.

1. *Summary Data*

Summary data can be used by researchers to better understand who, how, and how many people use social media, while posing little trade secrecy or privacy risk. High level metrics (e.g., number of users, frequency of posts, or time spent on platform) broken down into certain categories (e.g., language or country of origin) can contextualize research and guide directions of future research. And if those categories are standardized, researchers can make comparisons across platforms. Summary data can also reveal self-sorted categories based on individual data, such as how many people use a given hashtag or remix a certain sound clip. For clinical trials, it took years of regulatory battles and clarification to get pharmaceutical and medical device companies to share summary data, but the resulting data sharing paradigm directly benefited the public, including by revealing discrepancies between

368. Salvador Rodriguez, *Instagram Surpasses 2 Billion Monthly Users While Powering Through a Year of Turmoil*, CNBC (Dec. 14, 2021), <https://www.cnn.com/2021/12/14/instagram-surpasses-2-billion-monthly-users.html>.

369. Digital Services Act, OJ L 277, 27.10.2022, Article 31. The closest thing to summary data made available to the public is which platforms have enough E.U. users to be considered Very Large Online Platforms and which do not. *See* Digital Services Act, Article 33; *see also* John Albert, *A Guide to the EU's New Rules for Researcher Access to Platform Data*, ALGORITHM WATCH (Dec. 7, 2022), <https://algorithmwatch.org/en/dsa-data-access-explained/>.

published medical literature and real data and forcing unsafe products off the market.³⁷⁰

Summary data that reveals information about narrow subcategories of social media users may be useful to researchers, but greater specificity can raise privacy concerns. Social media companies can similarly offer broad categories of summary data publicly and narrower categories with increased privacy risk only to more vetted researchers.

Summary data sharing initiatives should not require companies to collect data they do not already gather or infer themselves.³⁷¹ But companies may have tools for approximating some of this information for their own internal research, which they can readily share with external researchers. For instance, Meta does not collect the race of its users, but it still evaluates the impact of different product changes on different racial groups; a methodology called Bayesian Improved Surname Geocoding makes a prediction about a user's race using their last name and zip code.³⁷² Meta could potentially give researchers access to this or similar methodologies, or the data they collect from them.

2. *Metadata*

Social media companies could provide metadata about data they generate internally and share externally with researchers, including how data has been scrubbed or filtered, which data may be missing or overrepresented, and how different systems work. This metadata poses fewer risks to privacy than individual data and variable risks to trade secrecy. These privacy and trade secrecy risks that can be placed on a sliding scale. “Riskier” data can be shared only with trusted researchers, shared subject to stringent data use agreements, and shared subject to technical constraints, such as limits on storage and retransmission of data. We see the clinical trial sector engage in some of this line drawing activity, particularly with NIH's ClinicalTrials.gov and Health Canada's PRCI.³⁷³

370. Clinical Trials Registration and Results Information Submission, 81 Fed. Reg., *supra* note 188, at 64,982, 65,006.

371. E.g., *Twitter Infers Users Age Rather Than Always Collecting It. Geo, Gender, Language, and Age Targeting*, TWITTER BUS., <https://business.twitter.com/en/help/campaign-setup/campaign-targeting/geo-gender-and-language-targeting.html> (last visited Jan. 30, 2023).

372. Roy L. Austin, Jr., *Race Data Measurement and Meta's Commitment to Fair and Inclusive Products*, META NEWSROOM (Nov. 18, 2021), <https://about.fb.com/news/2021/11/inclusive-products-through-race-data-measurement/>.

373. See discussion *supra* Sections III.C.2 (ClinicalTrials.gov permits companies to redact metadata they consider trade secrets from public disclosure) & III.D.2.b (Health Canada will share trade secrets with researchers who promise confidentiality and high-value research).

Metadata does pose some real privacy risks. Metadata for social media encompasses a broader range of forms than metadata for clinical trials, and some social media metadata may reveal things about individual users, such as information on the users that initially posted content banned or restricted by a social media platform.

The trade secrecy risks posed to social media companies by sharing metadata likewise vary along on a sliding scale. Divulging methods of how summary data—i.e., statistics on hashtags—get generated is on the low-risk end of the spectrum, as is divulging the methods by which individual data gets produced and organized. Moderation and recommender systems pose greater risk to trade secrecy interests, as does information on systems for evaluating whether features should be rolled out. Metadata on how ad targeting systems work is perhaps still higher risk, as these ad targeting systems are currently social media platforms' main drivers of revenue. This sliding scale moves slowly from what is clearly data *about* data to what is data about how larger systems work. As such, it becomes harder to fit clearly into the category metadata and moves further from the factual parallelism of medical data.

We expect that controlled sharing of metadata from social media companies will yield real public benefits, broadly similar to those achieved by sharing metadata from clinical trials. With clinical trials, for instance, data sharing revealed limitations—even profound problems—with Tamiflu, Paxil, and Vioxx, but improved trust in certain COVID-19 vaccines. Similarly, social media metadata could be used to reveal the harms of some systems, but also to bolster public trust of others.

3. *Individual Data*

The concerns with individual data are a mirror of the concerns of those with summary data: they are not very likely to implicate trade secrecy concerns but can raise privacy concerns on a sliding scale from moderate to severe. And again, the tactic to manage this variance is to treat different data differently. Clinical trial data sharing initiatives do this very effectively. Clinical trial IPD is made available through tiered, tightly controlled access systems such as BioLINCC and YODA. The level of access provided to researchers and the sorts of research permitted depends on the data, the researchers, the intended research, and the associated privacy risks. More than two tiers of researcher access can exist, beyond one tier for “trusted researchers” and another for the broad public. The tailored access that YODA and BioLINCC provide useful models here.³⁷⁴

374. *Infra* Section II.D.

Some social media companies already tier data access, corroborating the notion that it can be done. For example, when Twitter offered its public facing API it had regular, enterprise, and academic versions.³⁷⁵ Facebook has some data it shares publicly and other data it shares with those who sign an agreement, including now the data from SS1.³⁷⁶

The experience of clinical trial data sharing shows that platforms can share more individual data than they already do, and that the stewards of that data can be trusted actors outside of social media companies themselves. Social media companies could, through tiered access data sharing programs, share some of the most sensitive social media data with trusted researchers who commit to avoid harmful uses. This sensitive data includes complete lists of removed posts, individual ad targeting information, and inferred data. Some of the most sensitive social media data that poses the greatest privacy risks, such as personally identifiable information and direct messages, may remain off-limits to even the most trusted researchers.

V. CONCLUSION

Social media is in its data secrecy dark age, just as pharmaceuticals were in previous decades.³⁷⁷ This Article has traced parallels between clinical trials' past and social media's present. For instance, both have witnessed high-profile crises caused by a lack of accountability and transparency: for clinical trials, Paxil's teen suicides and Vioxx's heart failures; for social media, Cambridge Analytica, the rise of online populism, and the degradation of truth in media and democracy. Just as intrepid health journalists in the 1990s and 2000s used the limited tools they had to shine a light on the shadowy pharmaceutical industry, so too have tech journalists and social media company whistleblowers bravely revealed some of the public consequences of surveillance capitalism and the attention economy. Pharmaceutical, medical device, and social media companies have all adopted similar tactics to appease or deflect popular demand for more information, including limited, cherry-picked "transparency" efforts.

In the past few years, a rash of new federal laws have been proposed that would mandate social media companies to share data with researchers—and, perhaps, bring in the light sufficient to end these dark ages. The Platform Accountability and Transparency Act, for instance, would empower the FTC

375. Adam Torres, *Enabling The Future of Academic Research with the Twitter API*, X DEVELOPER PLATFORM (Jan. 26, 2021), <https://developer.twitter.com/en/blog/product-news/2021/enabling-the-future-of-academic-research-with-the-twitter-api>.

376. *Infra* Section I.B.

377. *Infra* Section II.B.

to compel social media companies to share data with qualified researchers approved by the National Science Foundation.³⁷⁸ The Social Media Data Act proposes requiring platforms to create in-depth ad libraries for academic researchers.³⁷⁹ Other proposed U.S. laws such as the Kids Online Safety Act, the Digital Services Oversight and Safety Act, and the ACCESS Act could also allow researchers to access social media data in other ways.³⁸⁰

As of this writing, none of these proposals have become law. They remain the subject of intense debate, even controversy. Social media companies have fought them, just as pharmaceutical and medical device companies fought the legislation that mandates transparency of their clinical trial data. As if on cue, social media companies have invoked privacy and trade secrecy—this Article’s “Scylla and Charybdis”—as doctrinal and normative reasons to oppose these proposals.³⁸¹

This Article has argued it is possible for legislation and regulation to protect privacy and trade secrecy while simultaneously mandating and mediating researcher access to sensitive data. The precedent of clinical trial data sharing reveals both some pitfalls that await lawmakers seeking to create an effective social media data sharing mandate and some paths to avoid them. Even when clinical data sharing rules were enacted into law, it took years of rulemaking, enforcement, and public pressure to get pharmaceutical companies to actually share their data. And though those battles continue today, the fight has produced safer medical products. For those regulating social media in the United States, the history of sharing clinical trial data shows that merely requiring data access, as legislative proposals do now, is necessary but not sufficient: law also needs to empower regulatory institutions that can enforce those laws and tailor data sharing systems to narrowly manage the privacy and trade secrecy risks that accompany each data type.

In Part IV, we have done our best to distill useful lessons for governance of social media. Undoubtedly many readers will disagree that these are the right lessons. We hope, at very least, that the “thick” accounts of the need for researcher access to social media data and the history of clinical trial data sharing offered in Parts II and III inspire readers to make their own comparisons and derive their own lessons.

378. Platform Accountability and Transparency Act, S. 5339, 117th Cong., § 7 (2022).

379. Social Media DATA Act, H.R.3451, 117th Cong., § 2 (2022).

380. Kids Online Safety Act, S.3663, 117th Cong., § 7 (2022); Digital Services Oversight and Safety Act, H.R.6796, 117th Cong., §§ 6, 10 (2022); ACCESS Act of 2021, H.R.3849, 117th Cong., § 3 (2022).

381. *See supra* Section II.E.

Social media companies cast their industry as *sui generis*, one too complex and innovative for transparency regulation. But what is old is new again: social media is replaying some of the familiar beats of the sixty-plus-year battle for clinical trial data transparency. Social media is changing our world and our institutions in ways that we may not have sixty years to learn to counter. Researchers need better access to social media data to help us navigate this brave new world. We hope that lessons from the clinical trial precedent will help.

EVERYTHING YOU WANT: THE PARADOX OF CUSTOMIZED INTELLECTUAL PROPERTY REGIMES

Derek E. Bambauer[†]

ABSTRACT

Special interest groups share a dream: enacting legislation customized for, and hopefully drafted by, their industry. Customized rules created via legislative capture, though, are the worst-case scenario from a public choice perspective: they enable narrow interests to capture rents without generating sufficient societal benefits. American intellectual property (IP) law offers useful case studies in legislative capture: special interests have created their own rules three times in the past forty years with the Semiconductor Chip Protection Act, the Audio Home Recording Act, and the Vessel Hull Design Protection Act. Paradoxically, though, these customized IP systems have consistently disappointed their drafters: all three of these systems lie in desuetude. This result challenges the conventional wisdom about regulatory capture by special interests, suggesting there is less to fear from legislative capture than most legal scholars believe in intellectual property and beyond. The puzzle is why, when given free rein to design the rules that govern them, interest groups have done such a poor job in seizing that advantage.

This Article brings together two scholarly debates. The first is within intellectual property: should IP doctrines be tailored by industry, or comprise rules of general application? The second is within public choice: how risky is regulatory capture by special interests?

The Article identifies two key reasons for the ineffectiveness of customized regimes. First, industry groups are fragile, fractal-like coalitions of disparate interests; the fault lines between creators and copyists are often points of fracture. Second, interest groups embed current business models and technologies into these systems, making regulation vulnerable to disruptive innovation. It explores how these findings affect proposals for customized regimes for artificial intelligence, weather data, traditional knowledge, privacy, and fashion, and concludes that customized regimes are less effective and threatening than previously thought.

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I caution you not to interpret H.R. 1007 as a government hand-out to the semiconductor industry. Rather, H.R. 1007 is a simple, long overdue, step toward ensuring fair competition in the development and marketing of semiconductor chips.

—Representative Norman Y. Mineta, 1979.¹

When you hear somebody say, “This is not about money,” it’s about money.

—Senator Dale Bumpers, 1999.²

1. *Copyright Protection for Imprinted Design Patterns on Semiconductor Chips: Hearing on H.R. 1007 Before the Subcomm. on Cts., C.L. & the Admin. of Just. of the H. Comm. on the Judiciary*, 96th Cong. 17 (1979) [hereinafter *1979 SCPA Hearing*].

2. *Transcript: Former Sen. Dale Bumpers*, CNN (Jan. 21, 1999), <https://www.cnn.com/ALLPOLITICS/stories/1999/01/21/transcripts/bumpers.html>. Bumpers attributed the quote to H.L. Mencken, but it was first used by political cartoonist Frank McKinney Hubbard in 1916. See *Franklin Evening News*, at 4, AIM MEDIA (Nov. 24, 1916), https://aim.newspapers.com/browse/the-franklin-evening-star_3475/1916/11/04;When-They-Say-It's-Not-About-Money,-It's-About-Money, QUOTE RSCH. (Aug. 29, 2020), <https://quoteinvestigator.com/2020/08/29/about-money/#f+438293+1+1>.

I. INTRODUCTION

Be careful what you ask for.³

Regulated interest groups of every variety—corporations,⁴ charities and non-profits,⁵ colleges⁶—have one thing in common: they would like to write their own rules, usually to reduce competition. Intellectual property (IP), though sometimes an effective means to this end, is overall poorly suited to it.⁷ Systems such as copyright and patent law are relatively blunt instruments—political necessity dictates that they must embody compromises among industries and interest groups,⁸ with provisions that are rarely optimized for

3. The first part of the Article's title is borrowed from the 1999 hit song by pop group Vertical Horizon. Its lyrics strike a chord with the Article's thesis: "I am everything you want / I am everything you need / I am everything inside of you / That you wish you could be / I say all the right things / At exactly the right time / But I mean nothing to you and I don't know why."

4. See David Streitfeld, *Tech Giants Settle Antitrust Hiring Suit*, N.Y. TIMES (Apr. 24, 2014), <https://www.nytimes.com/2014/04/25/technology/settlement-silicon-valley-antitrust-case.html> (describing settlements by seven major technology firms in litigation over "no poaching" agreement for engineers); Findings of Fact, *United States v. Microsoft Corp.*, Nos. 98-1232 & 98-1233 (D.D.C. Nov. 5, 1999), <https://www.justice.gov/sites/default/files/atr/legacy/2006/04/11/msjudge.pdf>.

5. See *Kars 4 Kids Inc. v. Am. Canl*, 2022 U.S.P.Q. 2d (BNA) 548 (D.N.J. June 10, 2022), on remand from 8 F.4th 209, 216 (3rd Cir. 2021) (deciding trademark suit between similarly-named charities); *Nat'l Soc'y of Prof'l Engineers v. United States*, 435 U.S. 679 (1978) (imposing antitrust liability on non-profit professional organization that prohibited price competition among members); see generally Tomas J. Philipson & Richard A. Posner, *Antitrust In the Non-Profit Sector*, Nat'l Bureau of Econ. Rsch., Working Paper No. 12132 (Mar. 2006), https://www.nber.org/system/files/working_papers/w12132/w12132.pdf (contending non-profit firms have incentives similar to for-profit firms to limit competition).

6. See Melissa Korn, *Yale, Georgetown, Other Top Schools Illegally Collude to Limit Student Financial Aid, Lawsuit Alleges*, WALL ST. J. (Jan. 10, 2022), <https://www.wsj.com/articles/yale-georgetown-other-top-schools-illegally-collude-to-limit-student-financial-aid-lawsuit-alleges-11641829659>; *Nat'l Collegiate Athl. Ass'n v. Alston*, 594 U.S. ___ (2021) (finding NCAA's limits on compensation to student athletes violated antitrust laws); *Consent Decree Settles Charge of Conspiracy to Restrain Price Competition On Financial Aid Against Major Universities*, U.S. DEP'T OF JUSTICE (May 22, 1991), https://www.justice.gov/archive/atr/public/press_releases/1991/325032.pdf.

7. See Ariel Katz, *Making Sense of Nonsense: Intellectual Property, Antitrust, and Market Power*, 49 ARIZ. L. REV. 837, 853–60 (2007); Christina Bohannon & Herbert Hovenkamp, *IP and Antitrust: Reformation and Harm*, 51 B.C. L. REV. 905, 923–26 (2010); Mark A. Lemley & Mark P. McKenna, *Owning Mark(et)s*, 109 MICH. L. REV. 137, 187–89 (2010).

8. One illustrative example is the safe harbor provisions of the Digital Millennium Copyright Act (DMCA), codified at 17 U.S.C. § 512. These rules generally immunize internet intermediaries from being sued for carrying copyright-infringing content if they respond to notices of claimed infringement from content owners. See Matthew Sag, *Internet Safe Harbors and the Transformation of Copyright Law*, 93 NOTRE DAME L. REV. 499, 502–05 (2017).

any of them.⁹ Innovators must thus tolerate legal rules that are imperfect fits for their particularized needs.

And yet, tantalizingly, special interests have occasionally succeeded in obtaining customized treatment in the form of regulation designed for—if not by—their members, without countervailing provisions that benefit other industries or actors.¹⁰ This Article analyzes the three existing case studies of major specialized IP rule sets from the past fifty years in detail,¹¹ both as separate examples and as a broader phenomenon in governance.¹² It finds that the great surprise and irony is that these three customized IP systems have been a massive disappointment to the interest groups who successfully lobbied for them. The puzzle is why, when given free rein to design the rules that govern them, interest groups have done such a poor job in seizing that advantage.

These three extant case studies cover semiconductors, digital audio taping, and boat hulls. No customized intellectual property system has borne fruit for its intended beneficiaries. Semiconductor chip makers have abandoned

Intermediaries and content owners both hate these provisions, but nonetheless have managed to maintain economic viability under them. See REGISTER OF COPYRIGHTS, SECTION 512 OF TITLE 17 77–82 (May 2020), <https://www.copyright.gov/policy/section512/section-512-full-report.pdf>; Jennifer M. Urban, Joe Karaganis, & Brianna L. Schofield, *Notice and Takedown in Everyday Practice* (Mar. 24, 2017), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2755628. The two interest groups clashed during drafting of the legislation; the rough justice of the DMCA safe harbor provisions was the result. See Christopher A. Cotropia & James Gibson, *Convergence and Conflation in Online Copyright*, 105 IOWA L. REV. 1027, 1036–38 (2020).

9. See Glynn S. Lunney, Jr., *Copyright and the 1%*, 23 STAN. TECH. L. REV. 1, 10–12, 69–70 (2020); Abraham Bell & Gideon Parchomovsky, *Reinventing Copyright and Patent*, 113 MICH. L. REV. 231 (2014); Shyamkrishna Balganesh, *The Pragmatic Incrementalism of Common Law Intellectual Property*, 63 VAND. L. REV. 1543 (2010); Michael W. Carroll, *One Size Does Not Fit All: A Framework for Tailoring Intellectual Property Rights*, 70 OHIO ST. L.J. 1361, 1364 (2009) (describing the “problem of ‘uniformity cost’—the social cost attributable to the lack of fit between our innovation goals and the blunt means of one-size-fits-all patents and copyrights”); Michael W. Carroll, *Patent Injunctions and the Problem of Uniformity Cost*, 13 MICH. TELECOMM. TECH. L. REV. 421 (2007); Michael W. Carroll, *One for All: The Problem of Uniformity Cost in Intellectual Property Law*, 55 AM. U.L. REV. 845, 846–48 (2006); Glynn S. Lunney, Jr., *Patent Law, the Federal Circuit, and the Supreme Court: A Quiet Revolution*, 11 SUP. CT. ECON. REV. 1 (2004).

10. See William N. Eskridge, Jr., *Politics Without Romance: Implications of Public Choice Theory for Statutory Interpretation*, 74 VA. L. REV. 275, 285–89 (1988).

11. See *infra* Part II for an explanation of the methodology for identifying these three (and only these three) IP examples.

12. See Rachel Sachs, *The New Model of Interest Group Representation in Patent Law*, 16 YALE J.L. & TECH. 344, 346 (2014) (stating “consumers thus far seem relatively powerless to prevent the congressional enactment of various protectionist measures in intellectual property” and that commentators “have ascribed this result to the stranglehold the relevant interest groups have over the legislative process.”). While several other customized IP systems have been mooted, these three case studies are the only large-scale ones enacted in the past half-century.

specialized protections: the last registered work under the Semiconductor Chip Protection Act of 1984 (SCPA) was in 2019,¹³ and from 2008 to 2012, just over a thousand such registrations occurred, against a backdrop total of 2.3 million copyright registrations.¹⁴ The Audio Home Recording Act of 1992 (AHRA), enacted after years of music industry lobbying over the perceived threat of digital audio-taping technology, became irrelevant almost immediately.¹⁵ There have been few suits for AHRA infringement, and not one has succeeded.¹⁶ Boatmakers have not bothered to register a configuration under the Vessel Hull Design Protection Act of 1998 (VHDPA) since 2013,¹⁷ and there has been precisely one VHDPA infringement case tried to a decision.¹⁸ Dreams realized have led to bitter disappointment. This Article explores why, using a combination of historical data, legal analysis, and empirical evidence, and assesses what can be learned from the paradox of customized IP regimes that utterly fail their designers and intended beneficiaries.¹⁹

This Article brings together two scholarly debates. The first is within IP: should IP doctrines be tailored by industry, or comprise rules of general application? General rules reduce complexity and transaction costs, but at the cost of overprotection in some areas and underprotection in others.²⁰ Patent law is the best example of a generalized IP regime as most of its rules apply without regard to the technology or industry at issue.²¹ Tailored regimes can maximize output and minimize social costs via different rules for different actors, though with the risks of ever-proliferating regulation and strategic

13. LED driver chip (ORG6611), Reg. No. MW0000019773 (2019).

14. See Dotan Oliar, Nathaniel Patison, & K. Ross Powell, *Copyright Registrations: Who, What, When, Where, and Why*, 92 TEX. L. REV. 2211, 2224 (2014). These data likely overstate the relative level of semiconductor mask work registrations, since registration is a pre-requisite to obtain rights in a mask work, while rights in other copyrighted works inhere immediately upon fixation. Compare 17 U.S.C. § 908(a) with 17 U.S.C. § 102(a).

15. See Zachary Williams, *Hometaping in the Twenty-First Century: Updating the Audio Home Recording Act to Address Emerging Technologies*, 36 AIPLA Q.J. 77, 94 (2008).

16. See *infra* notes 258, 277.

17. See *Vessel Design Registration*, U.S. COPYRIGHT OFFICE, <https://www.copyright.gov/vessels/list/>.

18. *Maverick Boat Co., Inc. v. Am. Marine Holdings, Inc.*, 418 F.3d 1186 (11th Cir. 2005).

19. A note on terminology: this Article uses the terms “regime,” “system,” and “rule set” interchangeably to avoid the tedium of repetition. See *infra* Part II on definitions.

20. See Alan Devlin, *Patent Law’s Parsimony Principle*, 25 BERKELEY TECH. L.J. 1693, 1694–95 (2010); Carroll, *supra* note 9, at 1389–90.

21. See Carroll, *supra* note 9, at 1389–90.

behavior.²² Copyright law is largely a tailored system, with special provisions for everything from cable television²³ to architecture²⁴ to libraries.²⁵ Scholars hotly debate the relative benefits, demerits, and political viability of these two types of IP systems.²⁶ This Article is the first to identify *customized* regimes, which are an important variant of tailored systems. Whereas tailored regimes try to maximize overall societal interests, customized systems seek to maximize one particular group's interests, although they are often cloaked in rhetoric about general welfare.²⁷ Thus, customized IP regimes are ones where special interests control the tailoring of the rules, resulting in systems that deliberately bias the distribution of benefits.

The second debate is within public choice. It is axiomatic that interest groups seek to influence government to regulate or abstain from regulating. Elected officials generally want to retain their positions, and interest group support can help them to do so.²⁸ The quid pro quo for that support is advancing policy positions that benefit these groups. IP regimes are generally seen as strongly driven by public choice considerations.²⁹ Public choice scholarship often focuses on how to constrain the bilateral self-interest of the regulators and the regulated to prevent undue advantage obtained through interventions such as harnessing political opposition from other stakeholders, logrolling, and mandating sunset provisions. On first inspection, customized IP regimes look like both a failure of such countermeasures and, consequently, a prime opportunity for special interests to extract outsized monopoly rents. The puzzle is why, when public choice interventions have not been effective, interest groups are so unsuccessful in writing their own specialized IP rules

22. See, e.g., Miriam Marcowitz-Bitton, Yotam Kaplan, & Maayan Perel, *Recoupment Patent*, 98 N.C. L. REV. 481 (2020) (advocating tailoring patent duration based upon differential levels of investment by innovators); Shyamkrishna Balganesh, *Foreseeability and Copyright Incentives*, 122 HARV. L. REV. 1569, 1626–27 (2009) (arguing for foreseeability as tailoring mechanism); Carroll, *supra* note 9, at 1425 (pointing out that “[i]f tailored rights result in significantly differential treatment of works . . . parties would have an incentive to characterize works in a less protected category as works belonging to a category with greater protection”); Dan L. Burk & Mark A. Lemley, *Policy Levers in Patent Law*, 89 VA. L. REV. 1575 (2003) (arguing that applying policy levers encourages innovation in different life sciences and technology industries).

23. See 17 U.S.C. § 111.

24. See 17 U.S.C. § 120.

25. See 17 U.S.C. § 108.

26. See generally *supra* notes 9, 12, 22.

27. See Carroll, *supra* note 9, at 1386–87 (discussing capture).

28. See Robert D. Tollison, *Public Choice and Legislation*, 74 VA. L. REV. 339, 341–44 (1988).

29. See JESSICA LITMAN, *DIGITAL COPYRIGHT* (2001); Jessica D. Litman, *Copyright Compromise and Legislative History*, 72 CORNELL L. REV. 857 (1987); Sachs, *supra* note 12.

when given the opportunity. Surprisingly, the promised land turns out to be barren.

This Article concludes that there are two principal reasons that customized IP regimes so often disappoint their aspirants. First, the interest groups campaigning for these specialized systems resemble fractals. Within every seemingly united, homogenous coalition is a set of smaller, squabbling parties who seek to advance their own gains even at the risk of failure for the larger enterprise.³⁰ Often, these fracture lines occur at the boundary between copyists and creators. In the same industry, some firms tend to innovate, others duplicate, and some do both. These interests tend to conflict, forcing coalitions to choose between narrower, more politically feasible rules and broader ones that offer greater pecuniary advantages. Interest groups are also no better at predicting economic and technological change than any other observer despite their expertise and private information.³¹ They tend to encase the business models of the moment in regulation, making these rules brittle and ill-equipped to adapt to inevitable changes. It is a temptation that is perhaps impossible to resist; the current architecture suits its inhabitants, and innovation is likely to be disruptive.

The normative conclusion flowing from these findings is surprising if not shocking: there is less to be feared from customized IP regulation than one might expect because internal structural weaknesses are often its undoing. This may hold true beyond IP, extending to other areas where coalitions are unexpectedly diverse and regulating technology is a tough trick to perform.³² History's lessons are difficult to learn: the drafters of the VHDPA (covering boat hulls) in 1998 were well aware of the failings of both the SCPA (semiconductors) and AHRA (digital audio tapes), but still could not build a better system.

30. See Shubha Ghosh, *Decoding and Recoding Natural Monopoly, Deregulation, and Intellectual Property*, 2008 U. ILL. L. REV. 1125, 1181–82 (discussing how “how actual regulatory systems fail because of political compromises.”).

31. This is contrary to the conventional wisdom about industry, which is that it possesses superior information about creating incentives for innovation. See Gregory N. Mandel, *Institutional Fracture in Intellectual Property Law: The Supreme Court Versus Congress*, 102 MINN. L. REV. 803, 871 (2017).

32. See Bryan Casey & Mark A. Lemley, *You Might Be A Robot*, 105 CORNELL L. REV. 287, 327–28 (2020) (noting “[t]here’s no shortage of laws doomed to irrelevance because they tried to predict and regulate the way technology would develop.”); *id.* at 328 n. 222 (citing examples). Gregory A. Elinson documents how the two major American political parties have internal conflicts that may offer surprising benefits as, effectively, institutional constraints. Gregory A. Elinson, *Intraparty Conflict and the Separation of Powers*, 25 U. PA. J. CON. L. (forthcoming 2023), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3751638.

This finding leaves open the question, though, of whether this outcome results almost inevitably when interest groups pursue customized regulation, or whether it occurs only because of opposing actors' constant vigilance in the political constellation.³³ Failure may not be inevitable. The answer to this question hinges deeply on whether one believes that society would benefit if some industries had customized IP systems or thinks such bespoke rules would be detrimental. Helpfully, there have been recent proposals to enact customized IP regimes in artificial intelligence, weather data, privacy, fashion, and traditional knowledge. Debates over such rules—especially if they are eventually enacted—could help test this Article's conclusions about the risks of customized IP systems. Additionally, the diversity of this Article's three case studies offers lessons for both proponents and opponents of such regimes.

This Article makes three contributions to scholarly literature. To begin, it is the first to identify and analyze customized IP regimes as an archetype. It also provides a set of case studies valuable to IP scholars and those who study the legislative process and public choice theory.³⁴ Second, it identifies risks associated with the tailored approach to IP. Even if one concludes that tailoring is preferable to generalized systems, the path to that end is fraught. Interest groups may hijack the legislative process and write their own rules, ending in a universally suboptimal outcome. Special interests derive no real benefit, the public gains no more output, and policymakers waste time and resources.³⁵ Finally, and most provocatively, this Article posits that customized IP regimes cause far fewer problems than one might predict. This finding, although initially reassuring, also raises questions of why the effects are not worse and under what conditions this outcome is generalizable.

33. Another important question is whether interest groups have more success when they concentrate on procedural reforms rather than substantive ones. As Representative John Dingell once said, "I'll let you write the substance . . . you let me write the procedure, and I'll screw you every time." See John Feehery, *Lessons Learned from John Dingell*, HILL (Feb. 11, 2019), <https://thehill.com/opinion/campaign/429509-feeherly-lessons-learned-from-john-dingell/>. I thank Alan Trammell for this point and productive discussion of several examples.

34. In doing so, this Article is in good company at least. See Brett Frischmann & Mark P. McKenna, *Comparative Analysis of Innovation Failures and Institutions in Context*, 57 HOUS. L. REV. 313, 330 (2019) (noting "the best approach may be to pursue a series of micro-level studies in order to develop the knowledge base for analysis at the meso-or macro-levels"); Jessica Litman, *Copyright Legislation and Technological Change*, 68 OR. L. REV. 275, 277 n. 8 (1989) (stating "[i]nstead of addressing the theoretical legislative process literature directly, I describe an actual legislative process.").

35. Cf. Carroll, *supra* note 9, at 1365 (noting "the historical concentration of innovative and creative production in certain industries has given these industries certain forms of influence with public officials that must be acknowledged when fashioning policy.").

The Article proceeds as follows. The next Part is definitional; it explains what each part of “customized IP regime” means and why that matters, then briefly describes how public choice theory explains much of the configuration of extant IP systems. Then, the Article explores three major case studies of customized IP regimes: the Semiconductor Chip Protection Act of 1984, the Audio Home Recording Act of 1992, and the Vessel Hull Design Protection Act of 1998. It lays out their doctrinal features, explores their genesis, and explains their failures. The next Part draws the threads from these examples together into two themes—the fractures within interest groups, and the difficulties of managing technological and industrial change. It also assesses their implications for four areas where customized IP regimes have been proposed. The last Part concludes.

II. INTELLECTUAL PROPERTY AND PUBLIC CHOICE

This Article concentrates upon what it terms “customized IP regimes.” Each part of that moniker deserves explication.

A. REGIMES

Regimes are rule sets or systems that purport to be relatively complete in themselves, not subparts of or exceptions to a larger IP framework.³⁶ A regime provides a full-fledged system of governance—here, for particular types of information goods. For example, a vessel’s hull configuration could be protected with utility patents, design patents, copyright, trade dress, and the VHDP, if not more.³⁷ Each of these rule sets is internally complete and offers varying entitlements of different duration. A regime is also comprehensive, in that it governs the IP considerations of an industry of some appreciable size—versus, for example, the extension of the term for a single patent for one patent owner.³⁸

36. See *supra* note 19.

37. See Benjamin Patton, *No wake zone: VHDP makes no splash 20 years later*, BOATING INDUS. (May 8, 2019), <https://boatingindustry.com/blogs/2019/05/08/no-wake-zone-vhdp-makes-no-splash-20-years-later/>; Mark Alan Thurmon, *The Rise and Fall of Trademark Law’s Functionality Doctrine*, 56 FLA. L. REV. 243, 338–40 (2004) (discussing difficulty in trademark law of distinguishing unprotected utilitarian features from protectable aesthetic ones); cf. Commentary, *Copyright Act of 1976 — Useful Articles — Star Athletica, L.L.C. v. Varsity Brands, Inc.*, 131 HARV. L. REV. 363 (Nov. 4, 2017) (describing expansion of copyright-eligible subject matter to include some useful articles); Ferrari S.p.A. *Esercizio Fabbriche Automobili Corse v. Roberts Motor Co.*, 739 F. Supp. 1138 (E.D. Tenn. 1990) (trade dress).

38. See, e.g., Pub. L. No. 95-168, 91 Stat. 1349 (95th Cong., 1977) (extending by fourteen years a design patent covering the insignia of the United Daughters of the Confederacy); Pub. L. No. 100-418, 102 Stat. 1569 (100th Cong., 1988) (extending patent on drug Lopid if manufacturer successfully submitted application for expanded indications and usage).

The relevant distinction is between a full-fledged rule set and industry or subject matter-specific variances in a rule set. For example, the inventor of a medical activity may obtain a utility patent for that innovation. However, if they do, their rights are more limited than those with patents in other fields in one important respect: a medical practitioner, or related health care entity, will not be liable for infringement such as making, using, selling, or offering to sell that medical activity.³⁹ This exception to liability is plainly specific to the medical industry, which lobbied strongly and successfully for its adoption.⁴⁰ But the exemption is not a complete system for regulating IP rights over medical activities. Rather, it is a tweak to the generalized rules of utility patents.⁴¹

There are unquestionably individual provisions of broader regimes that benefit a single interest group and are difficult to defend on principled grounds. For example, copyright law's baseline rule is that the author of a work initially owns copyright in it.⁴² There is an important exception, though: works made for hire.⁴³ Works made for hire are created by employees or contracted parties, yet copyright vests initially in the employer or contracting party.⁴⁴ These exceptions to the normal rules for copyright ownership are plainly the result of special pleading by interest groups aiming to circumvent entitlements that authors normally enjoy.⁴⁵ Works made for hire constitute a customized

39. 35 U.S.C. § 287(c). This description omits importation since it is not clear how one could import a medical activity. See 35 U.S.C. § 271(a) (listing conduct that infringes a patent).

40. See Cynthia M. Ho, *Patents, Patients, and Public Policy: An Incomplete Intersection at 35 U.S.C. § 287(c)*, 33 U.C. DAVIS L. REV. 601, 606–07 (2000); Jonas Anderson, *Nonexcludable Surgical Method Patents*, 61 WM. & MARY L. REV. 637, 655–68 (2020).

41. Tweaks are often hotly contested by competing interest groups. See Sepehr Shahshahani, *The Nirvana Fallacy in Fair Use Reform*, 16 MINN. J.L. SCI. & TECH. 273, 296–304 (2015) (describing vociferous debate over Fairness in Music Licensing Act between music interests and restaurant interests).

42. 17 U.S.C. § 201(a). Determining who qualifies as an “author” is predictably challenging. See *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 61 (1884) (internal citations omitted); Ryan Vacca, *Work Made for Hire—Analyzing the Multifactor Balancing Test*, 42 FLA. ST. L. REV. 197 (2014).

43. 17 U.S.C. § 201(b).

44. *Id.*

45. See, e.g., 17 U.S.C. § 203(a) (excluding works made for hire from termination rights). The bitter fight over the brief addition of sound recordings as an eligible category of works made for hire illustrates both the stakes and the political controversy of this tweak. See Mary LaFrance, *Authorship and Termination Rights in Sound Recordings*, 75 S. CAL. L. REV. 375, 375–76 (2002); Eric Boehlert, *Four Little Words*, SALON (Aug. 28, 2000), https://www.salon.com/2000/08/28/work_for_hire/; *Rule Reversal: Blame It on the RIAA*, WIRED (Aug. 10, 2000), <https://www.wired.com/2000/08/rule-reversal-blame-it-on-riaa/>.

provision, but do not sweep broadly enough for a customized *regime*: they mostly function according to the usual copyright rules.⁴⁶

A word on methodology is in order. This Article explores the SCPA, AHRA, and VHDPA because they appear to be the only examples of major customized IP regimes enacted in at least the last fifty years, if not longer.⁴⁷ There are examples of much smaller customized regimes. For example, only the United States Olympic and Paralympic Committee,⁴⁸ a federally chartered non-profit corporation,⁴⁹ can use certain terms for specified commercial purposes,⁵⁰ including the Committee's name and symbol; the International Olympic Committee and International Paralympic Committee symbols; and the words "Olympic," "Olympiad," and "Pan-American," among others.⁵¹ This set of provisions, which confers nearly exclusive trademark-like rights upon a single corporation,⁵² was sufficiently controversial to draw (but survive) a First Amendment challenge from the organizers of the Gay Olympics.⁵³ Similar provisions exist for organizations such as the Boy Scouts⁵⁴ and Girl

46. For other exceptions, see 17 U.S.C. §§ 302(c) (duration); 17 U.S.C. §§ 106A (moral rights); and 17 U.S.C. § 101 (excluding works made for hire from Section 106A).

47. I used two techniques to verify this claim. First, I checked several prominent intellectual property law textbooks to search for IP systems that meet this Article's criteria. The books list plenty of tweaks, but only these three examples of genuine customized regimes. Second, several research assistants and I searched the Congress.gov database for IP-related legislation enacted into law from 1971 (the 92nd Congressional session) to 2022 (the 117th Congressional session). We classified legislation as potentially IP-related if it contained one of ten keywords: intellectual property, trademark, copyright, patent, trade secret, industrial design, infringement, Title 17, Title 35, or Title 15. This generated 1229 results. We checked approximately 35% (34.9%) of these results to see if any instantiated a system that qualified as a customized IP regime. None did. *See* Appendix A (describing methodology). Thus, the Article's claim that the SCPA, AHRA, and VHDPA are the only significant regimes to be enacted in the past fifty years appears to be accurate.

48. *See* 36 U.S.C. § 220501(b)(7).

49. 36 U.S.C. § 220502(a).

50. The Committee can file civil litigation against a person who, without authorization, "uses for the purpose of trade, to induce the sale of any goods or services, or to promote any theatrical exhibition, athletic performance, or competition" the Committee's name or logo, or any of the specified words in a way "tending to cause confusion or mistake, to deceive, or to falsely suggest a connection" with the Committee or its activities. 36 U.S.C. §§ 220506(c)(1)-(3). It can similarly bring suit for use of marks, trade names, signs, symbols, or insignia falsely representing association with or authorization by the Committee or its international equivalents. 36 U.S.C. § 220506(c)(4).

51. 36 U.S.C. § 220506(a).

52. *S.F. Arts & Athletics, Inc. v. U.S. Olympic Comm.*, 483 U.S. 522, 542-48 (1987) (holding that the USOC is not a government entity even though it was established by a Congressionally-enacted charter).

53. *Id.* at 531-41.

54. 36 U.S.C. § 30905.

Scouts,⁵⁵ Little League baseball,⁵⁶ and the National Tropical Botanical Garden.⁵⁷ The Red Cross has exclusive rights to its name and insignia backed by criminal penalties.⁵⁸ These provisions are troubling, and ought to be constitutionally suspect,⁵⁹ but they are relatively minor in scope: they effectively grant the recipient entities unassailable trademark rights, which could be obtained to almost the same effect through standard trademark provisions such as infringement actions,⁶⁰ incontestability,⁶¹ and dilution enforcement.⁶² Moreover, the passage of such legislation is likely easier for the same reason that its ultimate effects are harder to measure: most of these entities have few competitors, and those competitors typically lack power as interest groups in the political contests over these micro-regimes.

B. INTELLECTUAL PROPERTY

Next, the regime at issue must be an intellectual property one. Defining “intellectual property” is a fraught exercise; this Article describes IP as a set of state-conferred, primarily exclusive rights over information.⁶³ IP systems commonly specify eligible subject matter, mechanisms to obtain protection, rights, infringement, remedies, and so forth. Many other regimes indirectly

55. 36 U.S.C. § 80305.

56. 36 U.S.C. § 130506.

57. 36 U.S.C. § 153506.

58. 18 U.S.C. § 706.

59. See Sonia K. Katyal, *Trademark Intersectionality*, 57 UCLA L. REV. 1601, 1656–59 (2010); Robert N. Kravitz, *Trademarks, Speech, and the Gay Olympics Case*, 69 B.U. L. REV. 131, 160–66 (1989).

60. See 15 U.S.C. § 1114(1) (registered marks); 15 U.S.C. § 1125(a)(1) (unregistered marks); see generally David S. Welkowitz, *Reexamining Trademark Dilution*, 44 VAND. L. REV. 531, 569 (1991) (noting “[i]n trademark infringement cases . . . strength often is measured by secondary meaning.”).

61. See Rebecca Tushnet, *Registering Disagreement: Registration in Modern American Trademark Law*, 130 HARV. L. REV. 867, 902–06 (2017).

62. See Leah Chan Grinvald, *Shaming Trademark Bullies*, 2011 WIS. L. REV. 625, 639–40.

63. Pithy definitions are surprisingly difficult to find. For one useful, slightly extended example, see Justin Hughes, *The Philosophy of Intellectual Property*, 77 GEO. L.J. 287, 291–96 (1988).

govern IP, such as tax,⁶⁴ tort,⁶⁵ or criminal law.⁶⁶ These regimes may shape innovation as much or more than IP laws, but they are not IP rules.

C. CUSTOMIZED

To complete the definition's triumvirate, "customized" indicates that a regime is not just subject matter-specific, or industry-specific, but also largely dictated by the affected industry or interest group. This definition seems to imply a difficult hypothetical comparison with how the system would have operated without interest group intervention.⁶⁷ Fortunately, there are telling indicators of customized regimes. First, IP laws are rarely crafted in secrecy. Interest groups ask for what they want.⁶⁸ Even when a mole inserts an industry-specific handout in the dead of night, someone notices with relative alacrity.⁶⁹ Second, there is virtually always a generalized IP regime as a backdrop for comparison: it is the alternative with which an interest group is dissatisfied. Third, the process of crafting legislation is illuminating. Enactment of a customized regime often requires public negotiation among affected interests. Plus, on the purely bureaucratic side, Congress prefers to keep the U.S. Code tidy; new customized regimes should go into new chapters rather than being stuffed into existing ones.⁷⁰

64. See Xuan-Thao Nguyen & Jeffrey A. Maine, *The History of Intellectual Property Taxation: Promoting Innovation and Other Intellectual Property Goals*, 64 SMU L. REV. 795 (2011).

65. For example, a patented method for causing a vegetarian burger to look like a meat one might create liability for unfair competition if consumers were deceived. See U.S. Patent No. 5,571,545; Jason Tidd, *Kansas Governor Signs Law Requiring Disclaimers on Veggie Burgers, Plant-Based Meat Labels*, TOPEKA CAPITAL-JOURNAL (May 5, 2022), <https://www.cjonline.com/story/business/agricultural/2022/05/05/kansas-fake-meat-label-law-targets-plant-based-alternatives/9663063002/>.

66. See *Whistler Corp. v. Autotronics, Inc.*, 14 U.S.P.Q. 2d (BNA) 1885, 1886 (N.D. Tex. 1988); VA. CODE ANN. § 46.2-1079 (2022) (banning use of radar detectors).

67. See Jeffrey Rosen, *Class Legislation, Public Choice, and the Structural Constitution*, 21 HARV. J.L. & PUB. POL'Y 181, 182–90 (1997).

68. See Derek E. Bambauer, *Paths or Fences: Patents, Copyrights, and the Constitution*, 104 IOWA L. REV. 1017, 1037 (2019); Julie Zerbo, *Protecting Fashion Designs: Not Only "What" But "Who?"*, 6 AM. U. BUS. L. REV. 595 (2017) (advocating for customized fashion design protection).

69. See LaFrance, *supra* note 45 (describing covert insertion in unrelated bill of provision designating sound recordings as works made for hire by Senate staffer who shortly thereafter was hired by the Recording Industry Association of America).

70. Despite their substantive disagreements, witnesses testifying about the draft SCPA bill agreed it should be codified in a separate chapter of Title 17, apart from the rest of the Copyright Act. *Copyright Protection for Semiconductor Chips: Hearing on H.R. 1028 Before the Subcomm. on Cts., C.L. & the Admin. of Just. of the H. Comm. on the Judiciary*, 98th Cong. 54 (1983) [hereinafter *1983 SCPA Hearing*] (prepared remarks of Rep. Norman Mineta, Representative from California).

This Article also employs the term “customized” to highlight its contribution to the ongoing scholarly debate over whether IP regimes ought to be general-purpose or tailored by industry.⁷¹ Generalized regimes contain few and ideally zero provisions that differentiate by industry or subject matter. By contrast, tailored regimes try to contour protection more precisely to each sort of information good to minimize the social costs of IP. Yet this debate makes a critical assumption: that the legislative process constrains rent-seeking by any one interest group.⁷² For broader systems of IP law, such as copyright and patent, that assumption is generally defensible.⁷³ For example, the America Invents Act of 2011 did not alter how patent infringement damages are calculated due to insoluble divisions among interest groups—here, between information technology firms and pharmaceutical ones.⁷⁴ Changes that would have benefited technology patent holders were blocked because they would have harmed biotech ones.⁷⁵ This political dialectic keeps most generalized IP systems relatively balanced among competing interests.

However, this Article challenges the standard assumption about interest group-imposed constraints in more fine-grained IP systems. Customized schemes in industries with significant economic impact (and, concomitantly, important political influence) can enable meaningful rent-seeking by interest groups.⁷⁶ The three case studies analyzed here are ones that affect comparatively large industries. While there are customized IP regimes with smaller scope, they are less troubling because of their lesser economic impact and reduced potential for social cost from excessive rents. For example, federal

71. See *supra* notes 9, 12, 22.

72. See Litman, *supra* notes 29, 34 (describing copyright law as based on compromises among interest groups).

73. See Ghosh, *supra* note 30, at 1180 (discussing the “the broad areas of intellectual property that have not been the product of capture and reflect genuine debates.”).

74. See Susanne Hollinger, *The America Invents Act—Overview and Implications*, 3 ACS MED. CHEM. LETTERS 174, 174 n.3 (Mar. 8, 2012), doi: 10.1021/ml3000337; Joe Matal, *A Guide to the Legislative History of the America Invents Act: Part I of II*, 21 FED. CIR. B.J. 435, 445 (2012); Robin Feldman & W. Nicholson Price II, *Patent Trolling: Why Bio & Pharmaceuticals Are At Risk*, 17 STAN. TECH. L. REV. 773, 776 (2014).

75. See Mandel, *supra* note 31, at 860–61; David W. Opperbeck, *Patent Damages Reform and the Shape of Patent Law*, 89 B.U.L. REV. 127 (2009). Even within one industry, firms may switch roles, seeking to enforce patent rights at one point and defending against infringement claims at another. See Mandel, *supra* note 31, at 839–40.

76. The recreational boating industry seems to have political influence greater than its economic impact, perhaps because it is concentrated in the political swing state of Florida. See Bradley J. Olson, *The Amendments to the Vessel Hull Design Protection Act of 1998: A New Tool for the Boating Industry*, 38 J. MAR. L. & COM. 177, 178, 178 n. 5 (2007).

law provides the Girl Scouts,⁷⁷ Little League baseball,⁷⁸ and the National Tropical Botanical Garden⁷⁹ with exclusive rights over their names and brands. Even if normatively troubling, these tiny, customized regimes are minor nuisances. These are little giveaways by government—easier for special interests to obtain but less problematic in social cost.

An industry-specific regime can be a customized one, but it need not be; Congress is capable of tailoring rules that balance competing interests. For example, both the Plant Protection Act of 1930⁸⁰ (PPA) and the Plant Variety Protection Act of 1970⁸¹ (PVPA) are tailored regimes, operating as alternatives to standard utility patents for plants, but neither is a customized one.⁸² In each case, Congress was concerned that extant patent law excluded plants, and acted to confer protection over them that is nearly identical to that available to other inventions, under similar requirements, via the wider Patent Act.⁸³

D. PRIVATE BENEFICIARIES

One final definitional point: the Article considers only customized IP regimes that confer rights upon private parties. There are—perhaps unexpectedly—regimes that create exclusive IP entitlements for the federal government. For example, from 1974 to 2021, *federal criminal law* prohibited anyone without authorization from knowingly and for profit reproducing, using, or manufacturing the character, name, or slogan of the U.S. Forest Service mascot Woodsy Owl.⁸⁴ Such instances of self-dealing by the federal government are outside the realm of public choice issues because no interest group is likely to lobby Congress for exclusive governmental control over IP.

E. PUBLIC CHOICE

The public choice aspect of the Article deserves brief explanation. Public choice approaches to regulation import economic insights into political theory: lawmakers, like everyone else, respond to incentives, and are particularly

77. 36 U.S.C. § 80305.

78. 36 U.S.C. § 130506.

79. 36 U.S.C. § 153506.

80. Pub. L. No. 71-245, 46 Stat. 376, 376 (71st Congress 1930) (codified at 35 U.S.C. §§ 161–164); see Max Stul Oppenheimer, *The “Reasonable Plant” Test: When Progress Outruns the Constitution*, 9 MINN. J.L. SCI. & TECH. 417, 418 (2008).

81. Pub. L. No. 91-577, 82 Stat. 1542, (codified at 7 U.S.C. § 2321).

82. See *J.E.M. Ag. Supply v. Pioneer Hi-Bred Int’l*, 534 U.S. 124, 132 (2001).

83. See *Imazio Nursery, Inc. v. Greenhouses*, 69 F.3d 1560, 1563 (Fed. Cir. 1995).

84. Pub. L. No. 93-318, 88 STAT. 244, 244–45 (93rd Congress 1974), *codified at* 18 U.S.C. § 711a, *repealed by* Pub. L. No. 116–260, div. O, title X, § 1002(6), 134 STAT. 2155 (116th Congress, Dec. 27, 2020).

motivated to ensure that they remain in office through re-election.⁸⁵ Nearly all voters—their constituents—take little notice of regulatory efforts⁸⁶ aside from high-profile issues such as abortion.⁸⁷ Collective action problems rule the day: voters can largely ignore legislative debates because any effects upon them are relatively minimal and because they can depend upon specialized interest groups to put in the work.⁸⁸ These interest groups are the protagonists in the public choice narrative. They have a sufficiently concentrated interest in specific issues to invest in efforts to persuade lawmakers to adopt their position and to rally others to their cause.⁸⁹

From a public choice perspective, IP questions are not special at all: they are simply one more way that a particular set of interests can obtain an advantage through legislation.⁹⁰ However, IP legislation is accepted as driven principally, if not exclusively, by interest groups.⁹¹ IP regimes have important public choice implications for at least two reasons. First, at base, IP laws involve the conferral of government-granted monopolies over valuable information, often for a significant period of time.⁹² Vessel hull design registrations create exclusivity for ten years; utility patents do so for twenty; copyright entitlements generally last for the life of the author plus seventy more years; trademarks can last for as long as human commerce does. Second, IP issues often create a clash of titans. Patent law issues can pit major

85. See William N. Eskridge Jr. & Philip P. Frickey, *Legislation Scholarship and Pedagogy in the Post-Legal Process Era*, 48 U. PITT. L. REV. 691, 704 (1987) (noting “public choice jurisprudence starts with the assumption that people will behave in their rational self-interest.”); Daniel A. Farber & Philip P. Frickey, *The Jurisprudence of Public Choice*, 65 TEX. L. REV. 873, 900–01 (1987).

86. See Michael D. Gilbert, *Single Subject Rules and the Legislative Process*, 67 U. PITT. L. REV. 803, 844–45 (2006).

87. See, e.g., Corinna Barrett Lain, *Upside-Down Judicial Review*, 101 GEO. L.J. 113, 155 (2012) (describing legislative avoidance of abortion legislation, since the “issue was too hot for the political process to handle, and they knew it.”).

88. See Timur Kuran & Cass R. Sunstein, *Availability Cascades and Risk Regulation*, 51 STAN. L. REV. 683, 704 (1999).

89. See Jerry L. Mashaw, *The Economics of Politics and the Understanding of Public Law*, 65 CHI.-KENT L. REV. 123, 127 (1989) (stating “law is to be understood as a set of ‘deals’ among those self-interested actors who have the positions and resources to deflect public power to the pursuit of their private ends.”).

90. See Ghosh, *supra* note 30, at 1179–81.

91. See Mandel, *supra* note 31, 865–68; Litman, *supra* note 29, 72 CORNELL L. REV. at 869, 878. Interestingly, IP legislation is rarely partisan in political or ideological terms; interest groups are happy to support legislators from both major parties so long as those officials advance the groups’ interests. See Mandel, *supra* note 31, at 838–39.

92. See, e.g., John E. Lopatka & William H. Page, *Monopolization, Innovation, and Consumer Welfare*, 69 GEO. WASH. L. REV. 367, 394 (2001).

pharmaceutical firms against their generic competitors.⁹³ Trademark law may involve a contest between fashion designers and retail chains.⁹⁴ Copyright law can put information technology giants on opposing sides.⁹⁵ Most voters care nothing for these contests. But interest groups with money at stake may well decide that the game is worth the candle, and back candidates who will advance their interests.⁹⁶ The close involvement of industry groups in shaping IP legislation that will benefit their interests is thus unsurprising.

Broad, general-purpose IP systems embody the compromises produced by clashing interest groups that public choice theory analyzes as typifying the legislative process. Copyright law is best explained as Congressional reification of bargains arrived at privately by the different interest groups involved, from musicians to librarians.⁹⁷ The shift from a first-to-invent priority system to a first-to-file (or publicly disclose) one under the America Invents Act (AIA) was made possible because patent interest groups saw the change as either non-threatening or beneficial.⁹⁸ When competing interests clash, change to general-purpose IP regimes becomes impracticable. The AIA did not include proposed reforms to damages calculations because the information technology and biotechnology industries could not agree.⁹⁹ Similarly, public choice theory neatly accounts for a puzzling difference between patent and copyright reform: Congress has proved willing to extend copyright terms in an ongoing fashion, but has not done so for patents.¹⁰⁰ Renewed copyrights benefit relevant interest groups almost uniformly,¹⁰¹ while patent interests face mixed prospects: they would benefit from longer terms as patent owners, but face greater liability as defendants.¹⁰² Thus, in most contexts, IP legislation is kept

93. See *Novartis Pharms. Corp. v. Accord Healthcare*, 39 F.4th 1013 (Fed. Cir. 2022), https://cafc.uscourts.gov/opinions-orders/21-1070.OPINION.6-21-2022_1967294.pdf.

94. See *Wal-Mart Stores v. Samara Bros., Inc.*, 529 U.S. 205 (2000).

95. See *Google LLC v. Oracle Am., Inc.*, 593 U.S. __ (2021).

96. See *Caperton v. A.T. Massey Coal Co., Inc.*, 556 U.S. 868 (2009) (requiring recusal of West Virginia Supreme Court justice in case involving coal company that donated \$3 million to his campaign).

97. See Litman, *supra* note 29.

98. See Mandel, *supra* note 31, at 834–35.

99. See *supra* notes 74–75.

100. See Dennis S. Karjala, *Distinguishing Patent and Copyright Subject Matter*, 35 CONN. L. REV. 439, 464 (2003) (searching for a policy rationale for the disparity).

101. See Eli Dourado & Alex Tabarok, *Public choice perspectives on intellectual property*, 163 PUB. CHOICE 129, 134 (2015).

102. See Karjala, *supra* note 100, at 464 n.95 (citing private communication from Mark A. Lemley that “patent owners are often also potential patent infringers and thus find themselves as both plaintiff and defendant at one time or another in patent litigation.”).

in some rough balance from a public choice perspective by the clash of interest groups.¹⁰³

However, customized IP regimes appear to embody the worst-case scenario of public choice theory: rules written by and for a unified interest group, unchecked by competing parties. The puzzle this Article explores is why the resulting systems have been so ineffective for their advocates.

F. EFFECTIVENESS

This Article contends that the three customized IP regimes it analyzes have been ineffective, thus raising the question of how to assess the efficacy of legislation—a challenging problem.¹⁰⁴ Some legislation is readily analyzed: for example, regulation intended to expand the number of children covered by health insurance can be evaluated based on the number of additional minors insured, controlling for other factors.¹⁰⁵ IP laws, however, operate indirectly by providing property rights rather than funding. This makes gauging effectiveness harder since it requires determining what outputs are considered valuable and then evaluating the causal connection between IP rights and that output.¹⁰⁶ Moreover, the public rationale for enacting an IP regime may be different than the true legislative purpose (if such a thing exists), the goals of the interest groups pressing for the bill, or both.¹⁰⁷ With those caveats, there are four plausible gauges for effectiveness of a customized IP regime: (1) impact on innovation, (2) transition between technologies and business models, (3) capture of private rents, and (4) interest group unity.

First, generating innovation is the standard utilitarian justification for IP rights.¹⁰⁸ The rationale behind customized regimes is that without the new set of rights, the affected industry will produce less innovation. A corollary is that

103. *But see* William F. Shughart II & Diana W. Thomas, *Intellectual Property Rights, Public Choice, Networks, and the New Age of Informal IP Regimes*, 23 S. CT. ECON. REV. 169, 188–89 (2015).

104. *See* Christopher Robert & Richard Zeckhauser, *The Methodology of Normative Policy Analysis*, 30 J. POL'Y ANALYSIS & MGMT. 613 (2011); HOW CAN GOVERNMENTS LEVERAGE POLICY EVALUATION TO IMPROVE EVIDENCE INFORMED POLICY MAKING?, OECD (2020), <https://www.oecd.org/gov/policy-evaluation-comparative-study-highlights.pdf>.

105. *See* Janet L. Dolgin, *Class Competition and American Health Care: Debating the State Children's Health Insurance Program*, 70 LA. L. REV. 683, 703–16 (2010).

106. This is a utilitarian approach to efficacy. There are other rationales for instantiating IP rights. *See* William W. Fisher, *Theories of Intellectual Property*, in NEW ESSAYS IN THE LEGAL AND POLITICAL THEORY OF PROPERTY 168 (Stephen Munzer, ed., 2001).

107. *See* Daniel A. Farber & Philip P. Frickey, *Legislative Intent and Public Choice*, 74 VA. L. REV. 423, 426–29 (1988).

108. *See* Michael J. Burstein, *Rules for Patents*, 52 WM. & MARY L. REV. 1747, 1750–51 (2011).

existing IP options will not suffice to attain the desired level of innovation, and that the proposed regime will fill gaps. For a regime to be effective in spurring innovation, the affected industries must avail themselves of it. Thus, data such as the number of registrations and lawsuits are proxies for this criterion.

A second criterion is efficacy in managing an industry's transition between technologies and business models.¹⁰⁹ Here, the customized IP regime is a stopgap intended to cushion dependence upon a soon-to-be-replaced technology or business model. The new technology might not require any IP protection or might be amenable to standard forms of IP rights. Utilization of the customized regime is less telling here because usage decreases with time and adaptation. However, to be effective, the customized regime must occur during a transition, and must help the industry to cope with that shift.

The third criterion is whether the customized IP regime enables an interest group to capture significant monopoly rents.¹¹⁰ Efficacy depends on whether that group earns more from the change relative to the status quo. Utilization is relevant to capturing private benefits unless low levels of protection confer outsized gains.

The last criterion evaluates the use of a customized regime by interest groups in wholly instrumental fashion: to create unity among subgroups with disparate goals and motivations.¹¹¹ IP rights are thus a means, not an end. This is the most nebulous of the four criteria and the most difficult for which to draw definite conclusions.

The next Part explicates three case studies of customized IP regimes. It proceeds in chronological order because history matters: each regime's evolution has a gravitational effect on future ones.¹¹²

109. See Peter S. Menell, *Can Our Current Conception of Copyright Law Survive the Internet Age*, 46 N.Y.L. SCH. L. REV. 63, 164–77 (2002).

110. See David Fagundes, *Efficient Copyright Infringement*, 98 IOWA L. REV. 1791, 1799–800 (2013); Sarah K. Harding, *Perpetual Property*, 61 FLA. L. REV. 285, 315–16 (2009).

111. See Roderick M. Hills Jr. & David Schleicher, *Building Coalitions Out of Thin Air: Transferable Development Rights and “Constituency Effects” in Land Use Law*, 12 J. LEG. ANALYSIS 79, 108–10 (2020).

112. See, e.g., Hearings Before the Subcomm. On Courts and Intellectual Property of the House Comm. On the Judiciary, 105th Cong. 3–24 (1997) [hereinafter *1997 VHDP Hearing*] (statement and testimony of Professor William T. Fryer III, reflecting on proposed vessel hull legislation in light of SCPA and previous proposed industrial design legislation).

III. THE ABCS OF CUSTOMIZED IP REGIMES: CASE STUDIES OF AUDIO, BOATS, AND CHIPS

This Part explores three case studies of customized IP regimes; namely, for semiconductors (SCPA), digital audio tapes (AHRA), and boat hulls (VHDPA). It summarizes the substantive provisions of each Act, and then describes the lobbying and legislative discourse that led to its adoption. Finally, it explores and explains why each Act failed to deliver for its proponents. Each customized regime suffered from similar flaws: an inescapable tension between political viability and economic impact, and vulnerability to innovation that upended the industry technologies and business models that were encoded in the statutes.

A. SEMICONDUCTOR CHIP PROTECTION ACT OF 1984

1. *How the SCPA Functions*

The SCPA responded to the putative existential threat to the nascent semiconductor industry—and the growing number of economic sectors dependent upon it—by conferring protection upon any mask work¹¹³ fixed¹¹⁴ in a semiconductor chip product¹¹⁵ with the authority of the work’s owner.¹¹⁶ However, mask works are not eligible if they are not original;¹¹⁷ if they are standard designs in the semiconductor industry, or combinations of such designs that lack originality;¹¹⁸ or if the work constitutes an idea, procedure, process, discovery, or other subject matter traditionally ineligible for copyright protection.¹¹⁹ Protection lasts for up to ten years if the mask work owner registers the work with the Copyright Office within two years of first commercially exploiting it.¹²⁰ Registration is a prerequisite to commencing an infringement suit.¹²¹ A mask work’s owner holds the exclusive right to reproduce the work, to import or distribute a semiconductor chip product embodying it, and to induce or knowingly cause someone else to engage in

113. 17 U.S.C. §§ 901(a)(1) (conferring protection); 901(a)(2) (defining “mask work”).

114. 17 U.S.C. § 901(a)(3) (defining “fixed”); *cf.* 17 U.S.C. § 101 (defining “fixed” for broader Copyright Act).

115. 17 U.S.C. §§ 902(a)(1); 901(a)(1) (defining “semiconductor chip product”).

116. 17 U.S.C. §§ 902(a)(1); 901(a)(6) (defining owner of mask work).

117. 17 U.S.C. § 902(b)(1).

118. 17 U.S.C. § 902(b)(2).

119. 17 U.S.C. § 902(c); *cf.* 17 U.S.C. § 102(b) (excluding similar subject matter); *Baker v. Selden*, 101 U.S. 99, 102 (1879) (holding a “claim to an invention or discovery of an art or manufacture . . . can only be secured by a patent.”).

120. 17 U.S.C. § 904; *see* 17 U.S.C. § 908.

121. 17 U.S.C. § 910(b)(1).

such reproduction, importation, or distribution.¹²² Remedies mirror those of the Copyright Act, with one significant enhancement: the plaintiff can elect statutory damages of up to \$250,000 per mask work infringed.¹²³

The SCPA contains significant defenses and limitations to liability, however. As this Part will subsequently explain, these provisions narrowing the scope of the SCPA's rights are simultaneously vital to its political success and fatal to its efficacy. First, the legislation immunizes the near-ubiquitous practice of reverse engineering chips to determine the mask works needed to create them.¹²⁴ Nominally, the exemption for reverse engineering is limited to reproduction "for the purpose of teaching, analyzing, or evaluating the concepts or techniques embodied in the mask work or the circuitry, logic flow, or organization of [its] components."¹²⁵ However, anyone who engages in such dissection is immune if they incorporate the results into an original mask work made to be distributed.¹²⁶ These provisions offer more certain protection than the case-by-case assessment required by fair use although, like fair use, they were intended to codify industry norms.¹²⁷ Second, the SCPA includes a first sale doctrine: the owner of an authorized semiconductor chip product can use, distribute, import, or otherwise dispose of it without further permission.¹²⁸ Lastly, the legislation includes a small but important variant on property law's bona fide purchaser for value rule:¹²⁹ innocent purchasers¹³⁰ of infringing semiconductor chip products are not liable for importation or distribution prior to receiving notice that the products contain a protected mask work.¹³¹ For products purchased before but imported or distributed after receiving such notice, the innocent purchaser's liability is limited to a reasonable per-

122. 17 U.S.C. § 905. These entitlements are smaller than those applying to copyrighted works. *See* 17 U.S.C. §§ 106, 106A, 602.

123. *Compare* 17 U.S.C. § 911(c), *with* 17 U.S.C. § 504(c)(2) (creating maximum statutory damage award of \$150,000, and only for willful infringement).

124. 17 U.S.C. § 906(a). Fair use typically excuses such reverse engineering from liability. *See* 17 U.S.C. § 107 (fair use); *see, e.g.*, *Sega Enters., Ltd. v. Accolade, Inc.*, 977 F.2d 1510, 1514 (9th Cir. 1992) (disassembling object code to access unprotected elements is fair use).

125. 17 U.S.C. § 906(a)(1).

126. 17 U.S.C. § 906(a)(2).

127. *See* *Campbell v. Acuff-Rose Music*, 510 U.S. 569, 576–77 (1994); 1983 SCPA Hearing, *supra* note 70, at 27–28, 34 (Dunlap statement); John G. Rauch, *The Realities of Our Times: The Semiconductor Chip Protection Act of 1984 and the Evolution of the Semiconductor Industry*, 3 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 403, 432 (1993).

128. 17 U.S.C. § 906(b).

129. *See* Shyamkrishna Balganes, *Copyright and Good Faith Purchasers*, 104 CALIF. L. REV. 269, 271–74 (2016) (describing rule and Copyright Act's deliberate deviation from it, apart from SCPA).

130. Defined at 17 U.S.C. § 901(a)(7).

131. 17 U.S.C. § 907(a)(1).

unit royalty.¹³² And, further following property doctrine, the innocent purchaser's immunity runs with the chip: it protects anyone who directly or indirectly buys an infringing product from such a purchaser.¹³³ The SCPA thus departs from copyright law's usual strict liability approach to direct infringement¹³⁴ by adding a scienter requirement and from its standard approach to injunctive relief¹³⁵ by imposing only liability rule-style relief¹³⁶ when the requisite mental state is lacking. While these limitations do not completely defang the Act, they clearly lessen its bite.

2. *The Genesis of the SCPA*

In 1984, "Congress created the first significant intellectual property right in nearly one hundred years" by passing the Semiconductor Chip Protection Act (SCPA).¹³⁷ The chair of the relevant House committee described the need for it in stark terms: performing research and development for a new chip cost millions of dollars, but copying it could be done in a few months for orders of magnitude less expense.¹³⁸ The consequence for semiconductor firms, whose social and economic role was unquestioned, was that "innovation, the lifeblood of industry, is jeopardized."¹³⁹ Congress responded with relative alacrity. Over six years, it debated legislation, first grounded in the Copyright Act and then as a customized regime.¹⁴⁰ After complex parliamentary maneuvers, Congress passed the SCPA, and President Ronald Reagan signed it.¹⁴¹ The SCPA was viewed as a major advance, not only as protection for a vital source of innovation,¹⁴² but also as a model for specialized regimes for other complex technologies such as computer software.¹⁴³

The SCPA's genesis was a play in two acts. IP protection for semiconductor chips was seriously considered in 1979, in far simpler form: the legislation would have added one sentence to the definition of pictorial,

132. 17 U.S.C. §§ 907(a)(2), (d).

133. 17 U.S.C. § 907(c).

134. See Balganesch, *supra* note 129, at 273.

135. See 17 U.S.C. § 502(a); *eBay v. MercExchange*, 547 U.S. 388, 391–92 (2006).

136. See Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089, 1092 (1972).

137. Robert W. Kastenmeier & Michael J. Remington, *The Semiconductor Chip Protection Act of 1984: A Swamp or Firm Ground?*, 70 MINN. L. REV. 417, 419 (1985).

138. *Id.* at 437–38.

139. *Id.* at 432, 438.

140. *Id.* at 425–30.

141. *Id.* at 428–30.

142. *Id.* at 431–32; see Pamela Samuelson & Suzanne Scotchmer, *The Law and Economics of Reverse Engineering*, 111 YALE L.J. 1575, 1596–98 (2002).

143. See Pamela Samuelson, *Creating a New Kind of Intellectual Property: Applying the Lessons of the Chip Law to Computer Programs*, 70 MINN. L. REV. 471 (1986).

graphical, and sculptural works in the Copyright Act to include the masks used to imprint patterns on chips and the patterns themselves.¹⁴⁴ It made no other semiconductor-specific adjustments and placed chip protection firmly within the skein of copyright. The linguistic parsimony of the proposal largely explains its undoing. Hearings on the bill took place in Santa Clara, California, then the heart of the semiconductor industry. The lineup of witnesses was led off by a representative of the Copyright Office, who evinced a distinct lack of enthusiasm.¹⁴⁵ The next set of witnesses were from Intel (including Andy Grove, its president and the representative of the American Electronics Association) and academia; they were largely enthusiastic about the proposal, but—importantly—disagreed on the economic and moral implications of copying chips, particularly via reverse engineering.¹⁴⁶

The last group of witnesses came as a surprise:¹⁴⁷ they were late additions to the hearing, evidently due to administrative complications.¹⁴⁸ They also were not entirely welcome, since they had come to bury the bill, not praise it. These firms, including National Semiconductor, Texas Instruments, and Fairchild Camera & Instrument Corporation, were deeply concerned about the bill's potential effects on reverse engineering of chips, including whether the practice would qualify as fair use.¹⁴⁹ As several witnesses noted, the American semiconductor industry was a diverse group of firms: reverse engineering enabled some companies to compete more effectively, while others wanted to prohibit the practice to safeguard their innovations.

There were also industry-specific business practices that divided firms. Many contracts for semiconductors mandated the chips be available from both a primary supplier and a “second source” supplier, who could step in if the primary manufacturer faltered.¹⁵⁰ Firms likely to be primary suppliers preferred stronger IP protection and opposed reverse engineering. Ones likely to be relegated to backup status as “second source” suppliers preferred cheaper

144. 1979 SCPA Hearing, *supra* note 1.

145. *Id.* at 7–11 (testimony of Jon Baumgarten, General Counsel, U.S. Copyright Office).

146. *Id.* at 22–50; *id.* at 28 (disagreement over “[w]hether that [copying] is a reputable practice or not.”).

147. 1983 SCPA Hearing, *supra* note 70, at 7 (statement of Rep. Norman Mineta, who noted that “last time when there was what we thought was united support for the legislation . . . everyone was surprised at a company at that point that expressed opposition to the bill.”).

148. 1979 SCPA Hearing, *supra* note 1, at 62.

149. *Id.* at 50–62, 77–79. John Finch, a vice president at National Semiconductor, stated that “[t]o my knowledge at this time we are not doing that [copying competitor’s chips].” *Id.* at 69. Shortly thereafter, Andy Grove of Intel introduced photographs of Intel’s 8000-bit programmable reload memory chip—and of National Semiconductor’s duplicate of it. *Id.* at 72.

150. *Id.* at 52.

copying and supported making reverse engineering expressly lawful. Without legislation that blessed reverse engineering, entities employing it would have to rely on uncertain, expensive, and context-specific defenses such as fair use.¹⁵¹

The split on reverse engineering demonstrates an important point about the semiconductor community as an interest group. The industry was not monolithic; rather, it was a mixture of copyists and creators (and firms that were both) whose interests in IP protection diverged at the pressure point of reverse engineering. This heterogeneity of views almost certainly explains why the Semiconductor Industry Association (SIA), a broad-based trade group, decided not to take a position on the proposal in 1979.¹⁵² The deadlock among the different semiconductor entities sapped political support for the bill, which died in committee.¹⁵³

By 1983, the industry had unified to support the SCPA.¹⁵⁴ This time, every member of SIA's board of directors signed a letter backing the legislation—including the president of National Semiconductor, who had been in the opposition ranks four years earlier.¹⁵⁵ Those four years had wrought important changes in semiconductors—microprocessors had become much more complex, and non-U.S. firms had gained substantial shares in some chip markets—but the major change was in the substance of the legislation.¹⁵⁶ The original bill's simple copyright scheme had become a complex, customized system for protecting industrial design.¹⁵⁷ Framing semiconductor protections as outside standard copyright was useful from a public choice perspective: it diminished opposition from external stakeholders such as the Association of American Publishers, which sought to isolate these provisions from those affecting literary works—and hence from the economic interests of its members.¹⁵⁸ Chipmakers, who were principally copyists, were mollified by other alterations. The duration of protection for a covered mask work had shrunk from seventy-five years to ten.¹⁵⁹ The threat to reverse engineering was mitigated not only by an express exemption from liability, but also by overtly

151. *Id.* at 54 (Finch statement), 57 (statement of James Early, Director, Fairchild Camera & Instrument Corp.), 78 (statement of Texas Instruments).

152. *Id.* at 73.

153. 1983 SCPA Hearing, *supra* note 70, at 2, 68.

154. *Id.* at 80 (statement of Intel counsel Dunlap).

155. *Id.* at 81.

156. *Id.* at 82–83 (discussion with Dunlap).

157. *Id.* at 43.

158. *Id.* at 102–06 (statement of Jon A. Baumgarten, Copyright Counsel, Association of American Publishers).

159. *See* 17 U.S.C. § 904(b); Samuelson, *supra* note 143, at 492–94.

authorizing commercial exploitation of its results.¹⁶⁰ Innocent purchasers—those without notice that a semiconductor chip product contained a protected mask work—were absolved of liability, along with their consumers.¹⁶¹ This clearly narrowed liability, both relative to the original proposal and to broader copyright law, and mitigated the concerns of distributors of items containing chips.¹⁶²

The troublesome questions of distinguishing outright copying from reverse engineering and of “second source” supply were waved away: witnesses assured the House subcommittee that legitimate reverse engineering left a “very big paper trail that cannot reasonably be fabricated.”¹⁶³ In contrast, the “pirate has no such papers, for the pirate does none of this work.”¹⁶⁴ Legitimate reverse engineering would also result in a new version of the original chip, “functionally equivalent . . . but [with] different visual patterns on it.”¹⁶⁵ Even with second source production, where the second supplier wanted a chip “so fungible with the first chip from a production standpoint that it would not make any difference which one was placed into the equipment for which the chip is targeted,” leading to “similarities in layout and appearance,” it was nonetheless “reasonably easy to tell the difference between a slavish copy and a reverse engineering job.”¹⁶⁶ These confident statements turned out to be completely wrong; the existence or lack of a paper trail provided no indicator of whether a firm had engaged in protected reverse engineering or prohibited copying.¹⁶⁷ Politically, the industry was trying to elude a problem it had previously identified as Sisyphean by arguing that they had, in fact, found a way to balance the rock at the top of the hill, between reverse engineering on one side and infringement on the other.

Over time, the semiconductor industry altered the substance of its proposed legislation to solidify a coalition in favor of it. As described below, however, these changes sapped the SCPA of its vitality, giving the industry a Pyrrhic victory.

3. *Why the SCPA Failed*

Overall, it is difficult to assess the SCPA as anything other than a failure. Semiconductor manufacturers submitted few registrations for their designs,

160. 17 U.S.C. § 906(a); see Rauch *supra* note 127, at 437.

161. 17 U.S.C. § 907.

162. 1983 SCPA Hearing, *supra* note 70, at 175.

163. *Id.* at 36 (quoting Intel’s corporate counsel).

164. *Id.* at 37 (quoting letter from Intel Senior Vice President Leslie Vadasz).

165. *Id.* at 27–28 (statement of Intel’s corporate counsel).

166. *Id.* at 146 (statement of Intel senior vice president).

167. See Rauch, *supra* note 127, at 435–36.

and there are but two final decisions of SCPA-based claims in litigation. The first case, *Brooktree Corp. v. Advanced Micro Devices* (better known as AMD), dealt with alleged infringement by AMD of two mask works registered in 1987 and 1988.¹⁶⁸ AMD unsuccessfully argued the accused chips resulted from lawful reverse engineering, but the jury rejected that defense and the Federal Circuit affirmed the jury's decision.¹⁶⁹ The case's extensive jousting over the SCPA and reverse engineering was largely superfluous: AMD was also found liable for willfully infringing three Brooktree patents,¹⁷⁰ and the parties agreed that the SCPA damages violation overlapped entirely with the patent ones.¹⁷¹ The second case, *Altera Corp. v. Clear Logic Inc.*, was also a successful action for SCPA infringement, and resulted in damages of more than \$36 million.¹⁷² In 2005, with only *Brooktree* as persuasive guidance, the Ninth Circuit grappled with the copyright-like question of defining the pertinent level of abstraction to analyze whether the accused chip was substantially similar to the protected one.¹⁷³ The court held that only "ideas that are physically expressed in the mask work" could be protected under the SCPA.¹⁷⁴ It affirmed that Clear Logic had infringed Altera's mask works.¹⁷⁵

Although there was no SCPA litigation after 2005, the Act continued to draw registrations for mask works for a time, although both the absolute and relative (to all copyright registrations issued) numbers are tiny. A study of all copyright registrations from 2008 to 2012, totaling over 2.3 million, found only 1026 mask work registrations, or roughly .04% of the overall number.¹⁷⁶ Even this figure diminished rapidly. The last reported mask work registration was in 2019.¹⁷⁷ In 2018, there were fifty-two registrations.¹⁷⁸ In 2017, there were

168. 977 F.2d 1555, 1563 (Fed. Cir. 1992).

169. *Id.* at 1565–70. The *Brooktree* decision has been criticized based on the extensive evidence AMD presented regarding reverse engineering. *See* Rauch, *supra* note 127, at 436–37.

170. *Brooktree*, 977 F.2d at 1561, 1570, 1581.

171. *Id.* at 1578. If anything, the SCPA liability presented less risk on damages than patent infringement, since the SCPA has no enhanced damages while the Patent Act authorizes up to treble damages for willful infringement. *See id.* at 1581; 35 U.S.C. § 284.

172. 424 F.3d 1079, 1083 (9th Cir. 2005).

173. *Id.* at 1084–86.

174. *Id.* at 1086.

175. *Id.* at 1081–82.

176. Olliar, Pattison, & Powell, *supra* note 14, at 2224.

177. LED driver chip (ORG6611), Reg. No. MW0000019773 (2019).

178. Search performed on Public Catalog of U.S. Copyright Office using command keyword "MW?" (July 15, 2022).

three.¹⁷⁹ 2016 had seventy-six.¹⁸⁰ 2015 had thirty-seven.¹⁸¹ While the absolute figures are noisy, they are also minuscule.

There are three interrelated reasons for the SCPA's obsolescence. The first is that technological progress was kind to chipmakers, but not the legislation. Gordon Moore's famous prediction in 1965 that the number of transistors in an integrated circuit of a given size doubles every two years (which he renewed in 1975) proved correct.¹⁸² Moore foresaw a chip capable of 65,000 transistors by 1975.¹⁸³ By comparison, in 2021 IBM debuted a semiconductor chip with two-process ("2nm") transistors (the industry standard was then seven-process, or "7nm"), giving it a chip with fifty billion transistors.¹⁸⁴ At that density, there is no benefit either to piracy or to reverse engineering—both are slower and more expensive than simply designing one's own semiconductor layout. And, the increasing customization of chip to product means that copying, even if economically feasible, would not be much help to a competitor.¹⁸⁵ This pattern is a remarkable reversal of the usual relationship between technology and IP, which is that technological advances make copying cheaper.¹⁸⁶ Changes in IP rights often seek to counteract this trend. Here, technological progress made copying harder because the underlying innovation became more complex.¹⁸⁷ This argues against the need for customized IP protection for semiconductors: the SCPA generated social costs for little if any benefit in increased output.

The second reason was resilience in production and design—an underdiscussed factor in the scholarly literature on the SCPA that bears on the rate of innovation in semiconductors at least in the late 1970s.¹⁸⁸ Exclusive rights over a design could affirmatively disadvantage a semiconductor producer because many procurement contracts (including government ones)

179. *Id.*

180. *Id.*

181. *Id.*

182. See Gordon E. Moore, *Cramming More Components onto Integrated Circuits*, 86 PROCEEDINGS OF THE IEEE 82, 82 (1998).

183. *Id.*

184. Michael Irving, *IBM's New 2-Nm Chips Have Transistors Smaller Than a Strand Of DNA*, NEW ATLAS (May 6, 2021), <https://newatlas.com/computers/ibm-2-nm-chips-transistors/>; IEEE, INTERNATIONAL ROADMAP FOR DEVICES AND SYSTEMS 7 (2021), https://irds.ieee.org/images/files/pdf/2021/2021IRDS_MM.pdf.

185. See *How Technology Made a Copyright Law Obsolete*, JDSUPRA (Sept. 14, 2018), <https://www.jdsupra.com/legalnews/how-technology-made-a-copyright-law-75048/>.

186. See Mark A. Lemley, *IP In a World Without Scarcity*, 90 N.Y.U. L. REV. 460, 461–65 (2015).

187. See Rauch, *supra* note 127, at 428–29.

188. 1979 SCPA Hearing, *supra* note 1, at 52 (quoting January 1977 FTC staff report on importance of second sourcing and "rapid copying").

required that a chip be available from multiple sources, a practice known as “second sourcing.”¹⁸⁹ As Texas Instruments noted during the 1979 hearings, “OEM’s (original equipment manufacturers) and the Department of Defense generally refuse to design SC [semiconductor] products into their equipment unless there are multiple sources.”¹⁹⁰ The reason for the hedge is obvious: if the primary supplier encounters difficulties, the downstream consumer, such as the Department of Defense, has a fallback option.¹⁹¹ The path to independence lay through unauthorized copying, and in particular reverse engineering, that enabled each vendor to build out its own production lines.¹⁹²

The last and most important reason the SCPA failed derives from the history of its creation. The industry unity described above, in the face of the “specter of formidable foreign competition,”¹⁹³ was achieved at the price of efficacy. Narrowing semiconductor chip protections to exclude reverse engineering and immunize innocent infringement brought copyists and creators together, but by focusing protection on the process—decompiling a mask work and then reproducing it in chip form—rather than the product, the SCPA failed to address the innovation already occurring in 1983. The industry succeeded in passing a bill whose protections were limited from the start and quickly became worthless.

B. AUDIO HOME RECORDING ACT (AHRA) OF 1992

1. *How the AHRA Functions*

The basic technological rules of the AHRA seem straightforward: it prohibits the importation,¹⁹⁴ manufacture, or distribution of a digital audio

189. *Id.* at 51 (Finch testimony citing FTC study).

190. *Id.* at 78 (statement of George Heilmeier, Vice President, Texas Instruments).

191. *Id.* at 52 (noting industry requirements for “identity of form, fit and function between the original article and the second sourced article.”).

192. Technological advances in chip complexity and specialization pose major challenges for this type of resilience requirement. Intel, for example, bundles 47 different chips together as a single technology. Don Clark, *The Huge Endeavor to Produce a Tiny Microchip*, N.Y. TIMES (Apr. 8, 2022), <https://www.nytimes.com/2022/04/08/technology/intel-chip-shortage.html>. The COVID-19 outbreak demonstrated the fragility of chip supply lines. See Ana Swanson & Catie Edmondson, *Commerce Dept. Survey Uncovers ‘Alarming’ Chip Shortages*, N.Y. TIMES (Jan. 25, 2022), <https://www.nytimes.com/2022/01/25/business/economy/chips-semiconductors-shortage.html>.

193. 1983 SCPA Hearing, *supra* note 70, at 440 (quoting John Craig Oxman, *Intellectual Property Protection and Integrated Circuit Masks*, 29 JURIMETRICS 165 (1987)).

194. Importation is listed first in the set of prohibited conduct, which may indicate the chief concern of the AHRA. Compare 17 U.S.C. §§ 106 (listing exclusive rights of copyright owner) and 602(a) (1) (listing importation without copyright owner’s authorization as separate category of distribution right under § 106).

recording device¹⁹⁵ or digital audio interface device¹⁹⁶ that does not implement specified mechanisms for preventing serial copying.¹⁹⁷ The principal mechanism contemplated by the AHRA is the Serial Copy Management System (SCMS),¹⁹⁸ although the legislation also makes room for functionally equivalent systems¹⁹⁹ or ones certified by the Department of Commerce as prohibiting unauthorized serial copying.²⁰⁰ The goal of the SCMS is to prevent digital audio recorders from “recording ‘second-generation’ digital copies from ‘first-generation’ digital copies containing audio material over which copyright has been asserted via SCMS.”²⁰¹ Congress helpfully supplied a lengthy technical reference document describing the specifications for implementing SCMS, which was otherwise undefined in the legislation.²⁰² To prevent workarounds, the AHRA bans the importation, manufacture, or distribution of a device, or the offering of a service, or the performance of a service, with the primary purpose or effect of circumventing the SCMS or its equivalent.²⁰³

The financial side of the AHRA is complex, although complexity may have been a necessary evil.²⁰⁴ After all, earlier versions of the bill had been torpedoed because songwriters and music publishers were left out of the revenue stream.²⁰⁵ The Act creates royalty payments to music interests from duties levied upon digital audio recording devices or digital audio recording media²⁰⁶ distributed in the United States.²⁰⁷ Formally, the payments were imposed on both imported and domestically manufactured devices and media; informally, all concerned were clear that the target was Japanese firms.²⁰⁸ Initial

195. See 17 U.S.C. § 1001(3).

196. See 17 U.S.C. § 1001(2).

197. See 17 U.S.C. § 1002(a).

198. 17 U.S.C. § 1002(a)(1).

199. 17 U.S.C. § 1002(a)(2).

200. 17 U.S.C. § 1002(a)(3).

201. *Technical Reference Document for the Audio Home Recording Act of 1991*, 138 CONG. REC. 9029, 9043 (1992).

202. *Id.*

203. 17 U.S.C. § 1002(c).

204. See 17 U.S.C. §§ 1006, 1007.

205. In theory, royalties compensated all parties with an interest in sound recordings or musical works for the harm caused by first-generation copying permitted under the AHRA. See 17 U.S.C. § 1008; Hearings Before the Subcomm. on Intellectual Property and Judicial Administration of the House Comm. on the Judiciary, 102nd Cong. 66 (1992) [hereinafter 1992 AHRA Hearing] (statement of Michael Kirk, Assistant Commissioner for External Affairs, U.S. Patent and Trademark Office).

206. See 17 U.S.C. § 1001(4).

207. 17 U.S.C. § 1003(a).

208. See 1992 AHRA Hearing, *supra* note 205, at 68 (describing the “producers of recording equipment (predominantly Japanese)” in Manbeck statement).

distributors must file notices, along with quarterly and annual accounting statements, with the Register of Copyrights.²⁰⁹ For devices, the levy is 2%²¹⁰ of the transfer price,²¹¹ subject to statutory maxima, with flexibility for Copyright Royalty Judges (CRJs) to increase those upper bounds.²¹² For media, the duty is 3%.²¹³ To obtain their share of accumulated royalties, interested copyright parties²¹⁴ file claims with the CRJs in January or February to cover the preceding year.²¹⁵ These parties include anyone whose musical work or sound recording was distributed or disseminated via transmission.²¹⁶ Overall, royalties are divided into two tranches: one-third goes to the Musical Works Fund, and two-thirds to the Sound Recordings Fund.²¹⁷ The AHRA carefully subdivides each fund and encourages voluntary agreements among interested copyright parties on distributions.²¹⁸ It also provides a set of remedies for infringement that largely track the broader Copyright Act's provisions,²¹⁹ and puts in place administrative procedures for determining, in advance, whether a digital audio recording device or digital audio interface device would be required to implement protections against serial copying or to make royalty payments.²²⁰

The AHRA creates two legal safe harbors. The first protects entities that manufacture, import, or distribute devices or media compliant with the Act's provisions.²²¹ This, of course, was the manufacturers' half of the SCMS bargain. DAT providers or vendors gained a shield against contributory infringement or other copyright claims if they implemented authorized

209. 17 U.S.C. §§ 1003(b)–(c).

210. 17 U.S.C. § 1004(a)(1).

211. *Id.*

212. 17 U.S.C. § 1004(a)(3); *see* 17 U.S.C. § 801(b)(1) (authorizing Section 1004 determinations). Copyright Royalty Judges are three administrative judges appointed by the Librarian of Congress. 17 U.S.C. § 801(a).

213. 17 U.S.C. § 1004(b).

214. *See* 17 U.S.C. § 1001(7). The definition carefully includes the various copyright interests affected, or potentially affected, by copying of sound recordings. *See id.*; *see* 1992 House AHRA Hearing at 68–69.

215. 17 U.S.C. § 1007(a)(1).

216. 17 U.S.C. § 1006(a)(1); *see* Gary S. Lutzker, Note, *Dat's All Folks: Cahn v. Sony and the Audio Home Recording Act of 1991 – Merrie Melodies or Looney Tunes?*, 11 CARDOZO ARTS & ENTMT'L J. 145, 173–74 (internal citations omitted).

217. 17 U.S.C. § 1006(b).

218. 17 U.S.C. §§ 1006(b)(1) (Sound Recordings Fund); 1006(b)(2)(B) (Musical Works Fund).

219. 17 U.S.C. § 1009; *compare* 17 U.S.C. §§ 502–505 (civil remedies) *with* 506 (criminal).

220. 17 U.S.C. § 1010.

221. 17 U.S.C. § 1008.

measures against serial copying.²²² The second safe harbor immunizes consumers who engage in non-commercial use of such devices or media to make digital or analog musical recordings.²²³ The consumer safe harbor had the salutary effects of legalizing ubiquitous conduct that the music industry could not realistically prevent, along with conferring at least some benefit to those who indirectly pay the levies funding the AHRA's royalty system.²²⁴

The AHRA looked like a certain success story—a reasoned compromise among a diverse set of interests.²²⁵ Each major interest group had been placated, if not satisfied, by the law's creation of a technological middle ground and of a revenue fund split among the players.²²⁶ Government estimates projected \$188 million in royalties from that pool in the first two years after the statute's enactment.²²⁷ All parties gained greater legal certainty and thereby likely avoided litigation costs of the sort that Sony incurred.²²⁸ The strong consensus from observers was that the legislation was “a historic compromise, and predicted that great benefits to both the public and to industry would flow from it.”²²⁹ The AHRA's provisions were lauded as a model that could be adapted to address similar copyright infringement issues, such as unauthorized duplication of personal computer software by consumers.²³⁰ The Act seemed to have a bright future.

2. *The Genesis of the AHRA*

The Audio Home Recording Act, passed in 1992 after years of legal and political combat between the music industry and the home entertainment equipment industry, sought to manage the transition from an analog world of music to a digital one. It failed, setting the stage for MP3 files, Napster, and the peer-to-peer wars.

222. See 1992 House AHRA Hearing at 1.

223. 17 U.S.C. § 1008.

224. 1992 House AHRA Hearing at 1–2.

225. See, e.g., Monica Zhang, Note, “Fair Compensation” in the Digital Age: Realigning the Audio Home Recording Act, 38 HASTINGS COMM. & ENTMT'L J. 145, 147–48 (2016).

226. See Peter S. Menell & David Nimmer, *Legal Realism in Action: Indirect Copyright Liability's Continuing Tort Framework and Sony's De Facto Demise*, 55 UCLA L. REV. 143, 162–63 (2007); Lutzker, *supra* note 216, at 180–81.

227. See Christine C. Carlisle, Comment, *The Audio Home Recording Act of 1992*, 1 J. INTELL. PROP. L. 335, 337 (1994).

228. See Ben Depoorter, *Technology and Uncertainty: The Shaping Effect on Copyright Law*, 157 U. PA. L. REV. 1831, 1846–49 (2009) (describing effects of legal uncertainty in copyright).

229. Lutzker, *supra* note 216, at 186.

230. See David M. Hornik, Recent Development, *Combating Software Piracy: The Softlifting Solution*, 7 HARV. J.L. & TECH. 377, 406 (1994).

The 1980s found the music industry in a state of anxiety about unauthorized copying. Sometimes, the claims were hyperbolic: the industry warned that the advent of “copyright killer machines”²³¹—dual-cassette tape recorders—placed its creative endeavors at risk.²³² However, music executives could not provide any evidence of actual harm,²³³ and Congress (fortified by the lobbying of the consumer electronics industry) declined to ban audio taping equipment or levy a tax upon it that would go to music labels.²³⁴ The industry survived.

However, change was on the horizon: the coming transition from analog to digital music, along with shifts in copyright law protecting consumer copying, seemed poised to disrupt how music was recorded and consumed. The compact disc (CD) debuted in 1982. For consumers, it was initially a read-only medium, but one that offered considerable advantages over analog: greater storage capacity, a more durable medium, and the ability to hold information such as a song’s title and length internally rather than on liner notes or a label. Equipment makers slowly began experimenting with creating machines capable of writing or recording music to CDs, not merely playing them. In 1984, in *Sony Corp. of America v. Universal City Studios*, the U.S. Supreme Court narrowly found that non-commercial home recording of copyrighted television broadcasts for the purpose of time-shifting constituted fair use.²³⁵ Private home taping of copyrighted music similarly seemed likely to be exempt from liability.

The music industry recognized the potential threat driven by the digital and fair use revolutions. Nascent digital audio tape (DAT) technology seemed to embody their worst fears: unlike CDs at the time, DATs were a read-write medium, and while they still employed magnetic tape to store data, they could do so at a much greater density than standard cassettes (and even, with some DAT formats, CDs), enabling consumers to enjoy higher-quality recordings. DATs had already been in use for professional creation and duplication of

231. Menell & Nimmer, *supra* note 226, at 189 (quoting the president of the Recording Industry Association of America).

232. *Id.* at 188–89 (quoting Alan Greenspan, then chief economic consultant to the music industry).

233. *See id.* at 160–61.

234. Congress did pass legislation partially exempting sound recordings from copyright’s first sale doctrine. *See* Record Rental Amendment of 1984, Pub. L. No. 98-450, 98 STAT. 1727 (Oct. 4, 1984) (codified at 17 U.S.C. §§ 109, 115); Ryan G. Vacca, *Expanding Preferential Treatment Under the Record Rental Amendment Beyond the Music Industry*, 11 LEWIS & CLARK L. REV. 605, 612–13 (2007)

235. *Sony Corp. of Am. v. Universal City Studios*, 464 U.S. 417 (1984); *see* Jessica Litman, *The Story of Sony v. Universal Studios: Mary Poppins Meets the Boston Strangler*, in INTELLECTUAL PROPERTY STORIES 358 (Jane C. Ginsburg & Rochelle C. Dreyfuss, eds., 2006 ed.).

sound recordings, but subsequently emerged as a viable option for ordinary users in the mid-1980s when Sony announced plans to introduce consumer-oriented DAT products.²³⁶ Having consumers with the capability to produce a large number of high-quality duplicates of sound recordings scared the industry, which turned its sights on DAT equipment.

At first, the music industry employed informal tactics: threats of litigation, lobbying for bans on the importation of DAT machines, political pressure framed around trade deficits with Japan (where the initial DAT equipment was produced), and a simple refusal to release albums in the new format.²³⁷ The industry's rhetoric about trade had more than a tinge of racism and nativism. In this, they followed the lead of the motion picture industry, whose chief lobbyist, Jack Valenti, had long deployed blatantly anti-Japanese tropes to serve his clients' ends.²³⁸

DAT manufacturers initially declined to import the new equipment over concerns about political optics and some worries about litigation, although the 1984 *Sony* decision by the U.S. Supreme Court provided a significant bulwark against any real liability risk. The battle over the digital-to-audio transition was truly joined when a lyricist and several music publishers filed suit against Sony, claiming that the manufacture and distribution of DAT equipment constituted contributory infringement.²³⁹ Their legal claims were weak, but Sony settled quickly, agreeing to impose technological controls on its DAT equipment to prevent consumers from making copies of copies of sound recordings (although first-generation copies were permitted) and to support the codification of this arrangement in the Copyright Act. Sony's approach has mystified commentators, particularly given the company's previous success before the Supreme Court on nearly identical copyright issues. The key development, though, was Sony's acquisition of CBS Records, a major music label, in 1987.²⁴⁰ The purchase meant that Sony now had an interest in both sides, as content creator and also equipment manufacturer.

The *Sony* settlement with the lyricist and music publishers provided the framework for larger resolution of the technological and economic issues that DAT equipment and the digital transition raised. Importantly, the settlement also solidified the music industry's stance opposing unrestricted DAT

236. Lutzker, *supra* note 216 at 172.

237. See Bill D. Herman, *A Political History of DRM and Related Copyright Debates, 1987-2012*, 14 YALE J.L. & TECH. 162, 170–71 (2012).

238. See WILLIAM PATRY, MORAL PANICS AND THE COPYRIGHT WARS 146–48 (2009).

239. *Cahn v. Sony Corp.*, No. 90 Civ. 4537 (S.D.N.Y. July 11, 1991).

240. See Peter S. Menell, *Envisioning Copyright Law's Digital Future*, 46 N.Y.L. SCH. L. REV. 63, 130–31 (2003); Carlisle, *supra* note 227, at 350–51.

technology. The legislation that evolved into the AHRA required time-consuming and complex coalition building. The first major initiative would have limited the ability of end users to make copies of pre-recorded music via a set of technological controls permitting first-generation copying (from an original authorized recording) but not second-generation (from a copy).²⁴¹ The record labels and audio equipment manufacturers were content with this bargain: consumers wanted access to DAT products that manufacturers sought to introduce. The labels were canny enough to recognize that unauthorized home taping generated sales of their albums.²⁴² At least sometimes, consumers were happy to buy after being able to try a new artist or album. As one AHRA critic memorably put it, “the music industry likes a little piracy, but not too much.”²⁴³ Indeed, despite repeated, vivid descriptions of the dramatic harms²⁴⁴ that home taping inflicted,²⁴⁵ the music industry was generally content to live with first-generation copying, especially since some advocacy groups claimed that nearly all home taping was of exactly that sort.²⁴⁶ In addition, formats like DAT were technologically less demanding for the labels, since they did not need to capture as much data to produce high-quality sound.²⁴⁷

241. See Lutzker, *supra* note 216, at 173–74.

242. A 1989 study by the U.S. Office of Technology Assessment [hereinafter 1989 OTA Study] “found that about one-quarter of pre-recorded music purchases were made after the consumer first heard the artist or recording on a home-made tape.” 1992 House AHRA Hearing at 100 (written statement of Frank Beacham).

243. 1992 House AHRA Hearing at 100 (written statement of Frank Beacham).

244. Industry representatives relied principally on three empirical claims. First, that unauthorized home taping copied over one billion pieces of music each year. 1992 House AHRA Hearing at 88 (statement of Jason Berman, President, Recording Industry Association of America (citing 1989 OTA Study)). Second, such copying deprived the music industry of, at minimum, \$1 billion annually. 1992 House AHRA Hearing at 88; see 1992 House AHRA Hearing at 88 at 112 (letter from Berman to Rep. Cardiss Collins, Mar. 17, 1992 (citing figures of \$1.5–1.9 billion)). Third, this taping displaced one-third of legitimate sales of pre-recorded music. See 1992 Senate AHRA Hearing at 114 (Berman statement). More objective sources, such as the U.S. Patent and Trademark Office, questioned these assertions, noting that the USPTO did not possess any empirical data on the effects of private copying and that industry had not revealed any. See 1992 House AHRA Hearing at 128 (written statement of Harry Manbeck, Jr., Assistant Secretary of Commerce and Commissioner of Patents and Trademarks).

245. See 1992 House AHRA Hearing at 88 (Berman statement); *id.* at 112 (letter from Berman to Rep. Cardiss Collins, Mar. 17, 1992); 1992 Senate AHRA Hearing at 114 (Berman statement); *but see* 1992 House AHRA Hearing at 128 (Manbeck written statement).

246. See 1992 House AHRA Hearing at 117 (written statement of Gary Shapiro, Group Vice President, Electronic Industries Association, and Chairman, Home Recording Rights Coalition (adding that “[c]opying from copies is an infrequent exception” to this pattern)).

247. See *id.* at 81 (written statement of John Roach, Chairman, Tandy Corp.).

This alliance left out two groups, one politically potent, the other weak as a lobbying force but vital as an economic one. The first group comprised songwriter interests; performing rights organizations that operated on their behalf; and music publishers who distributed print versions of the relevant compositions.²⁴⁸ Their position was straightforward: technological measures preventing consumers from making copies of copies might protect record label interests but would not address the lost revenue to songwriters from first-generation piracy. After the litigation between Sony and songwriters settled, the music and audio equipment representatives returned to negotiations, this time with songwriters included, and produced a compromise that added a royalty system to the technological precautions. Thus mollified, songwriters joined in the chorus of support for the bills that became the AHRA.

Consumers were left out of the AHRA negotiations, partly because it proved impossible to settle upon a suitable representative for their interests, and partly because they were unlikely to be pleased by the draft legislation. It would, after all, constrain home taping at least somewhat, without a clear offsetting benefit. For the former point, Congress theoretically represents citizen interests, including on IP policy.²⁴⁹ However, this is the point of public choice theory: only a few dedicated audiophiles or activists might be expected to champion the cause of their peers, while the various industry groups had a sufficient pecuniary interest to invest in organizing and lobbying. In the 1992 hearings on the AHRA draft, consumer interests were represented (at least partially) by two witnesses: a freelance journalist, in both the House and Senate hearings,²⁵⁰ and an MIT researcher in the Senate one.²⁵¹ Both faced skeptical questioning from the senators or representatives in attendance, who were dubious about any arguments that might undercut the carefully negotiated bargain now supported by a seemingly unified set of affected industries.²⁵²

For the latter point, a 1988 survey by the U.S. Office of Technology Assessment showed that consumers were strongly opposed to changes in copyright law that either limited their ability to engage in (unauthorized) reproduction of content or that imposed fees upon them, such as via a royalty

248. *See id.* at 69 (Manbeck statement).

249. *See* Litman, *supra* note 34, at 314 (noting that the “public, of course, does have a designated representative; acting as that representative is Congress’ job description”).

250. *See* 1992 House AHRA Hearing at 96–100 (Beacham statement).

251. *See* 1992 Senate AHRA Hearing at 127–54 (statement of Philip Greenspun); *id.* at 155–59 (Beacham statement). Although the Home Recording Rights Coalition purported to advance consumer interests, it did so instrumentally to advocate for equipment manufacturers.

252. *See id.* at 160–64; 1992 House AHRA Hearing at 100–06; *id.* at 68 (listing entities supporting the AHRA).

scheme.²⁵³ The AHRA, as described below, imposed levies upon digital audio recorders and media that were virtually certain to be paid by consumers through higher retail prices, although the Recording Industry Association of America (RIAA, which represented music labels) repeatedly dissembled on this point.²⁵⁴ Industry representatives and legislators alike pointed to two purported advantages of the AHRA for consumers. First, it expressly immunized consumers from liability for non-commercial private copying of sound recordings, whether digital or analog.²⁵⁵ Second, the provisions protecting equipment manufacturers from liability for contributory infringement would enable electronics firms to produce and distribute next-generation audio technology to consumers, who could enjoy its purportedly superior sound, random access capabilities, and greater storage. This latter point proved to be a minimal benefit at best. Consumers simply ignored DATs and their kin in favor of continued loyalty to audiocassettes, a transition to compact discs, and, before long, the shift to music shared over (then) high-speed computer networks in the form of MP3 files. The AHRA planned for an audiophile party that, ultimately, few attended. It did, however, help set the stage for the much more dangerous phenomenon of file sharing networks.

At first blush, though, the AHRA seemed to have something for everyone, setting the stage for the transition to digital taping of sound recordings.

3. *Why the AHRA Failed*

And yet, the AHRA flopped because DATs failed to attract consumers. In 2012, the royalty fund distributed just \$5.5 million to 200,000 claimants. The two principal reasons for the Act's striking lack of success are illustrative.

The first reason for the AHRA's failure is that the law addressed only systems involving digital cassettes such as DATs. The music industry had regretfully surrendered on analog copying, and did not anticipate the technological and social shift from specialized equipment for creating, distributing, and listening to music (such as DATs or single-purpose CD players) to general-purpose computers equipped with CD drives that could record to blank compact discs.²⁵⁶ The lack of technological foresight is

253. *See id.* at 106 (statement of Rep. Collins).

254. *See id.* at 111 (Berman statement). "Lied" might be more accurate. Although the royalties imposed by the legislation were not high in absolute terms, they were universal. *See* 1992 Senate AHRA Hearing at 105 (question by Rep. Collins, "[a]ssuming that the entire royalty is passed on to consumers"); *id.* at 2 (noting consumer "burdens [from] having to indirectly pay royalties.").

255. 17 U.S.C. § 1008.

256. *See* Herman, *supra* note 237; Depoorter, *supra* note 228, at 1840.

understandable: experts famously doubted personal computers, laptops, cell phones, and the internet, among other products and services.²⁵⁷

The music industry also failed to understand its customers—a mistake they would repeat with the advents of the MP3 player²⁵⁸ (which was, ironically, attacked as violating the AHRA) and streaming services.²⁵⁹ As Terry Fisher explains in his book *Promises to Keep*, the creation and consumption of music has always been a social practice.²⁶⁰ A cogent modern example is the mixtape (now, perhaps, superseded by the streaming playlist). Sharing one's musical preferences with another person, or offering a curated selection of songs to them, is a profound form of social connection.²⁶¹ While the AHRA eventually and grudgingly offered consumers some capability to engage in this practice, so long as the starting material was an authorized phonorecord, the music industry spent the better part of a decade fighting a pitched battle against DAT technologies with any copying capacity whatsoever. The delay pushed consumers to other, already available digital media. And while the statute immunized non-commercial creation or duplication of a musical work, it did not protect the subsequent distribution of a mixtape DAT.²⁶² One could lawfully make a DAT of love songs for a summer crush, but sending it to them might trigger copyright liability. For a period, then, consumers did not have a lawful option for interacting with digital music in the manner they had become accustomed to with analog music.

Soon, though, music consumers found a digital option for duplicating and sharing sound recordings, one produced by an interest group that outgunned even Hollywood: the personal computer, equipped with a CD drive capable of both reading and writing data. When compact discs debuted, personal computers were increasingly ubiquitous in homes, but storage devices such as

257. See, e.g., David Emery, *Did Paul Krugman Say the Internet's Effect on the World Economy Would Be 'No Greater Than the Fax Machine's'?*, SNOPE (June 7, 2018), <https://www.snopes.com/fact-check/paul-krugman-internets-effect-economy/>; Will Oremus, *Forty Years Ago Today, Snarky Tech Journalists Made Fun of the First Cellphone*, SLATE (Apr. 3, 2013), <https://slate.com/technology/2013/04/cellphones-40th-birthday-skeptics-made-fun-of-first-mobile-phone.html>.

258. *Recording Indus. Ass'n of Am. v. Diamond Multimedia Sys.*, 180 F.3d 1072 (9th Cir. 1999).

259. See *Flo & Eddie, Inc. v. Sirius XM Radio*, 9 F.4th 1167 (9th Cir. 2021).

260. See generally WILLIAM W. FISHER III, *PROMISES TO KEEP* (2006).

261. See Nicholas Suzor, *Access, Progress, and Fairness: Rethinking Exclusivity in Copyright*, 15 VAND. J. ENTMT & TECH. L. 297, 317–18 (2013); Andee Tagle, *The Enduring Romance of Mixtapes*, ATLANTIC (Feb. 13, 2023), <https://www.theatlantic.com/family/archive/2023/02/mixtape-valentines-day-gift/673018/>.

262. See 17 U.S.C. § 1008.

hard drives were small, slow, and expensive.²⁶³ Each of these challenges diminished rapidly as manufacturers packed more sectors into drives that spun faster and featured more heads for reading and writing data. Facing the PC as a consumer music device, the music industry was confronted with at least two disadvantages. The first disadvantage was that both compact discs and hard drives were significantly more durable and reliable than the magnetic tape in DATs; record labels could not count on consumers having to replace music stored on them with any regularity.²⁶⁴

The second and much weightier disadvantage was that PCs involved a largely new set of interest groups, from manufacturers to operating system developers to gamers.²⁶⁵ Some, such as software producers, had overlapping interests with the music industry, since they too feared unconstrained copying of their works. But others did not, and the computer industry already wielded enough political power in the early 1990s to block the AHRA from treading on its products.²⁶⁶ For example, the Act's definition of the term "digital musical recording" expressly excludes "a material object . . . in which one or more computer programs are fixed."²⁶⁷ Similarly, the term "digital audio recording medium" does not include "any material object . . . that is primarily marketed and most commonly used by consumers . . . for the purpose of making copies of nonmusical literary works, including computer programs or data bases."²⁶⁸ And the term "digital audio recording device" covered machines or devices "the digital recording function of which is designed or marketed for the primary purpose of . . . making a digital audio copied recording for private use."²⁶⁹ With PCs, of course, digital recording was but one of many purposes. These definitional limitations protected a portable digital music player, and by extension computer hardware and software firms, in the only major litigation over the AHRA.²⁷⁰

When the music industry sued to block distribution of the first popular portable MP3 player, the Diamond Rio, the Ninth Circuit was candid about

263. See *Amazing Facts and Figures About the Evolution of Hard Disk Drives*, SOLARWINDS PINGDOM (July 10, 2019), <https://www.pingdom.com/blog/amazing-facts-and-figures-about-the-evolution-of-hard-disk-drives/>.

264. See generally Frank Beacham, *Archivists Warn: Don't Depend on Digital Tape*, MINIDISC.ORG, http://www.minidisc.org/dat_archiving.html (last accessed Feb. 2, 2024).

265. See Hornik, *supra* note 230, at 173–74.

266. See 17 U.S.C. § 1002(a) (limiting imposition of copying controls to digital audio recording devices and digital audio interface devices); § 1001.

267. 17 U.S.C. § 1001(5)(B)(ii).

268. 17 U.S.C. § 1001(4)(B)(ii).

269. 17 U.S.C. § 1001(3).

270. *Recording Indus. Ass'n of Am. v. Diamond Multimedia Sys.*, 180 F.3d 1072 (9th Cir. 1999).

the implications of the statutory language described above. It agreed with the district court's observation that

the exemption of hard drives from the definition of digital music recording, and the exemption of computers generally from the Act's ambit, "would effectively eviscerate the [Act]" because "any recording device could evade [] regulation simply by passing the music through a computer and ensuring that the MP3 file resided momentarily on the hard drive."²⁷¹

"While this may be true," the appellate court observed, "the Act seems to have been expressly designed to create this loophole."²⁷² Indeed: the loophole was the price of the computer industry's acquiescence to the AHRA.

The second reason for the AHRA's failure was that the seemingly monolithic music industry was far less unified in reality. The complexity of copyright interests in sound recordings and of business practices in the industry created subtle but important fracture points. Resolution of the Sony lawsuit brought songwriter interests on board, but at the price of further delay in access to DATs and higher costs to consumers. The pause was long enough for computers to displace specialized audio home equipment, and for consumers to learn to copy CDs and then rip the songs on them to MP3 files, which could be shared on the nascent Information Superhighway of the internet.

The DAT has been consigned to the ash heap of history, and the AHRA has fared little better. The music industry has rarely litigated using the statute, and when it has, the purpose has usually been to re-fight old battles over copying sound recordings by claiming that a new technology fails to comply with the AHRA. These claims have not worked. The best-known case, as mentioned above, was the RIAA's suit over the Diamond Rio MP3 player, one of the first and most popular portable music players that led to the iPod and, in time, to nearly all mobile phones offering this capability.²⁷³ The RIAA's claim rested ultimately on whether a computer hard drive, from which the Diamond Rio copied sound recordings via a cable, qualified as a "digital music recording" under the statute.²⁷⁴ On appeal, the Ninth Circuit held that it did not, since the term expressly excluded material objects in which a computer program was fixed.²⁷⁵ And, the Rio was not liable because it was incapable of

271. *Id.* at 1078 (internal citation omitted).

272. *Id.*

273. *Recording Indus. Ass'n of Am. v. Diamond Multimedia Sys.*, 180 F.3d 1072 (9th Cir. 1999).

274. *Id.* at 1076–79.

275. *Id.*

indirectly reproducing a digital music recording from a transmission—it could only copy such a recording from a file stored on a hard drive.²⁷⁶ As such, the Diamond Rio did not fall within the AHRA’s ambit and hence did not have to include a copy control system.

Subsequent lawsuits against automobile manufacturers and their suppliers based on car models containing software capable of copying music from a CD to an in-car hard drive also failed.²⁷⁷ The statute has appeared briefly in other litigation: Napster²⁷⁸ and Aimster²⁷⁹ unsuccessfully attempted to defend themselves from the blizzard of copyright claims that ultimately drove the companies out of the market based on users’ ability to make non-commercial recordings under the statute; a manufacturer of karaoke machines could not avoid liability for displaying lyrics on a video screen while the machine played the relevant song on the theory that Congress, if it were to revisit the AHRA, would immunize this conduct;²⁸⁰ and XM Satellite Radio was not liable under the statute for distributing digital audio recording devices, but that immunity did not extend to other allegedly infringing conduct.²⁸¹

The AHRA has been tested relatively rarely because it is almost completely irrelevant to the current state of copyright technology. The music industry won unanimous support at the cost of technological obsolescence.

C. VESSEL HULL DESIGN PROTECTION ACT OF 1998

1. *How the VHDPDA Functions*

The VHDPDA protects original²⁸² designs of useful articles that make the article attractive or distinctive in appearance to the relevant public.²⁸³ That language makes the Act seem broader than it actually is: useful articles are limited to “a vessel²⁸⁴ hull . . .²⁸⁵ or deck,²⁸⁶ including a plug²⁸⁷ or mold,”²⁸⁸

276. *Id.* at 1079–81.

277. *Alliance of Artists & Recording Cos. v. DENSO Int’l Am.*, 947 F.3d 849 (D.C. Cir. 2020); *Alliance of Artists & Recording Cos. v. GM Co.*, 162 F. Supp. 3d 8 (D.D.C. 2016).

278. *A&M Records, Inc. v. Napster, Inc.*, 239 F.3d 1004, 1024–25 (9th Cir. 2001).

279. *In re Aimster Copyright Litigation*, 252 F. Supp. 2d 634, 648–49 (N.D. Ill. 2002); *aff’d*, 334 F.3d 643 (7th Cir. 2003).

280. *ABKCO Music, Inc. v. Stellar Records, Inc.*, 96 F.3d 60 (2d Cir. 1996).

281. *Atl. Recording Corp. v. XM Satellite Radio, Inc.*, 81 U.S.P.Q. 2d (BNA) 1407 (S.D.N.Y. 2007).

282. *See* 17 U.S.C. § 1301(b)(1).

283. 17 U.S.C. § 1301(a)(1).

284. *See* 17 U.S.C. § 1301(b)(3).

285. *See* 17 U.S.C. § 1301(b)(4).

286. *See id.*

287. *See* 17 U.S.C. § 1301(b)(5).

288. *See id.*

along with articles that are normally part of useful articles.²⁸⁹ Combinations of hull and deck are also eligible.²⁹⁰ The Act specifically denies protection to designs that lack originality; that are staple or commonplace; that differ from staple or commonplace designs “only in insignificant details or in elements which are variants commonly used”; that are solely utilitarian; or that were made public by the designer or owner more than two years before registration.²⁹¹ The VHDPA has a provision similar to the derivative works right in the broader Copyright Act: it protects designs that are “a substantial revision, adaptation, or rearrangement” of otherwise excluded material, such as a long-public design.²⁹² Issuance of a design patent terminates VHDPA protection.²⁹³

The design owner must submit an application for registration²⁹⁴ and must affirm that the design has been fixed in a useful article.²⁹⁵ Applications must include drawings or other pictorial representations both adequate to show the design and suitable for reproduction.²⁹⁶ Protection lasts for ten years²⁹⁷ from when the design is first made public²⁹⁸ or the publication of the corresponding registration, whichever is earlier.²⁹⁹ The Copyright Office must publish lists and indexes of designs, and cancellations of designs,³⁰⁰ and may publish the drawings or pictorial representations included in the applications.³⁰¹ In any case, the Office must maintain a file of drawings and pictorial representations available to the public.³⁰²

289. 17 U.S.C. § 1301(b)(2).

290. 17 U.S.C. § 1301(a)(2).

291. 17 U.S.C. § 1302(3).

292. 17 U.S.C. § 1303; *see* 17 U.S.C. § 1302(5) (implementing two-year bar). The only case implementing the VHDPA, *Maverick Boat Company v. American Marine Holdings*, took a relatively stringent view of what qualifies as a “substantial revision.” 418 F.3d 1186, 1191 (Fed. Cir. 2005). The Federal Circuit held that changes to a design were corrections of a mistake and thus simply made the original design function as intended. *Maverick Boat Company*, 416 F.3d at 1191; *see* *Maverick Boat Co. v. Am. Marine Holdings*, 70 U.S.P.Q. 2d 1493, 1499 (S.D. Fla. 2004).

293. 17 U.S.C. § 1329. Common law rights, trademark rights, and rights against unfair competition are unaffected by the VHDPA. 17 U.S.C. § 1330.

294. 17 U.S.C. § 1310(c).

295. 17 U.S.C. § 1310(d)(5).

296. 17 U.S.C. § 1310(h).

297. 17 U.S.C. § 1305(a).

298. *See* 17 U.S.C. § 1311.

299. 17 U.S.C. § 1304.

300. *See* 17 U.S.C. § 1313(a).

301. 17 U.S.C. § 1315(a).

302. 17 U.S.C. § 1315(b).

In addition to registration, the VHDPA implements another copyright-style formality—notice. Useful articles embodying the protected design must be marked with a designation indicating protection, along with either the year protection began and the owner’s name, or the registration number.³⁰³ Notice matters under the VHDPA. If it is omitted, the design owner cannot recover damages from an infringer unless the infringer had received written notice of protection.³⁰⁴ In addition, if a defendant began activity that would otherwise infringe but for lack of notice, and the design owner then provides notice, injunctive relief is barred unless the owner reimburses the defendant for reasonable expenditures or contractual obligations incurred before notice was received.³⁰⁵

The owner of a protected design has exclusive rights to “make, have made, or import, for sale or for use in trade, any useful article embodying that design,” and to “sell or distribute for sale or for use in trade” such articles.³⁰⁶ Anyone who engages in that conduct without authorization infringes those rights.³⁰⁷ Infringement is determined by whether the accused article is substantially similar to the protected article.³⁰⁸

However, infringement under the VHDPA is significantly limited. The Act has a knowledge requirement: infringement requires that the defendant have knowledge that the design is protected and that the accused article copied it.³⁰⁹ Sellers and distributors of infringing articles who did not make or import the article infringe only under two conditions.³¹⁰ First, the seller or distributor induced or acted in collusion with the manufacturer to make the article, or with an importer to import it.³¹¹ Merely purchasing such an article, or ordering a purchase, in the ordinary course of business does not qualify as inducement or collusion.³¹² Second, the seller or distributor refused, upon request of the design owner, to make a prompt, full disclosure of the article’s source, and that

303. 17 U.S.C. § 1306(a); *compare* 17 U.S.C. § 401(a) (permissive marking of visually perceptible copies).

304. 17 U.S.C. §§ 1307(a)–(b).

305. *Id.* at § 1307(b).

306. 17 U.S.C. § 1308.

307. 17 U.S.C. § 1309(a). The VHDPA limits an “infringing article” to exclude “an illustration or picture of a protected design in an advertisement, book, periodical, newspaper, photograph, broadcast, motion picture, or similar medium.” 17 U.S.C. § 1309(e).

308. 17 U.S.C. § 1309(e); *see* *Maverick Boat Co. v. Am. Marine Holdings*, 418 F.3d 1186, 1192.

309. 17 U.S.C. § 1309(c).

310. 17 U.S.C. § 1309(b).

311. 17 U.S.C. § 1309(b)(1).

312. *Id.*

person orders or reorders the article after receiving notice by registered or certified mail of the protected design.³¹³

Similarly, someone who incorporates into their product an infringing article acquired from others in the ordinary course of business, or who makes or processes the infringing article for another without knowledge of the protected design's embodiment in the article, is not liable unless they engaged in inducement or collusion as described above.³¹⁴ Reverse engineering via reproduction is permitted, although "solely for the purpose of teaching, analyzing, or evaluating the appearance, concepts, or techniques embodied in the design, or the function of the useful article embodying the design."³¹⁵ Finally, anyone who brings an infringement action knowing that the design's registration "was obtained by a false or fraudulent representation materially affecting the rights under this chapter" can be liable for up to \$10,000 along with costs and attorney's fees.³¹⁶

Remedies for infringement are similar to those of the larger Copyright Act, with a few notable exceptions. Injunctive relief is available,³¹⁷ but sellers or distributors who suffer damage due to an injunction wrongfully obtained have a cause of action against the plaintiff.³¹⁸ The plaintiff can recover compensatory damages³¹⁹ or the infringer's profits;³²⁰ the court can also increase damages to a maximum of \$50,000 or \$1 per copy, whichever is greater.³²¹

2. *The Genesis of the VHDP*

Few things motivate interest groups more than adverse Supreme Court decisions.³²²

In 1989, the U.S. Supreme Court unanimously invalidated a Florida statute prohibiting the use of direct molding to duplicate and sell any vessel hull or other component manufactured by another without written permission.³²³

313. 17 U.S.C. § 1309(b)(2).

314. 17 U.S.C. § 1309(d).

315. 17 U.S.C. § 1309(g).

316. 17 U.S.C. § 1325.

317. 17 U.S.C. § 1322(a).

318. 17 U.S.C. § 1322(b).

319. 17 U.S.C. § 1323(a).

320. 17 U.S.C. § 1323(b).

321. 17 U.S.C. § 1323(a).

322. See Sepehr Shahshahani, *The Role of Courts in Technology Policy*, 61 J. LAW & ECON. 37, 38 (2018) (describing a "multiperiod game in which the policy set by the Court in the first period is subject to revision by Congress, which is lobbied by interest groups.").

323. *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141 (1989). The law also forbade knowingly selling an infringing hull or component. Fla. Stat. § 559.94(2).

Florida enacted the legislation to protect the original manufacturers and designers of boat hulls that, while potentially innovative, were unpatented.³²⁴ Direct molding is an “efficient and inexpensive” method of duplicating such hulls.³²⁵ Essentially, a competitor uses the vessel’s hull to create a mold that replicates the hull with all of its features. The Florida legislature viewed this technique, known as “splashing” the hull, as an unfair method of competition.³²⁶ Its regulatory scheme offered broader entitlements than even patent law in key respects: its duration of protection was unlimited, and it covered all boat hulls known or unknown, new or ancient.³²⁷ Thus, a vessel designer could obtain exclusivity through Florida’s laws for a hull for which a patent application had been rejected, or one for which a patent had been granted but the term expired. The Supreme Court found that this *sui generis* state IP regime conflicted with federal patent law and, thus, had to yield.³²⁸

The boating industry perceived the consequences of the ruling as an existential threat. Congress responded, albeit slowly, with the VHDPA of 1998.³²⁹ It did so in response to boating industry fears that alternative means of protection, such as utility or design patents, were either too stringent or too slow to safeguard innovation.³³⁰ There can be no doubt the VHDPA was targeted at a single interest group: as one witness stated during Congressional hearings, “it’s focused, it’s narrow, it’s directed to industry.”³³¹ The challenge, as with all customized IP regimes, was “to decide whether the boat industry people can make their case and keep the bill limited and focused.”³³² The VHDPA needed to be strong and broad enough to be effective, but narrow and focused enough to maintain a coalition and minimize opposition.³³³

The Copyright Office offered lukewarm support for the VHDPA. It was concerned that the Act would protect functional aspects of a hull without undergoing the examination process of utility patents.³³⁴

324. *See* *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 515 So. 2d 220 (Fla. 1987).

325. *Id.* at 223.

326. *Id.*

327. *See* Fla. Stat. § 559.94 (repealed).

328. *Bonito Boats*, 489 U.S. at 141.

329. *See* H.R. REP. 105-436, at 15–20 (1998).

330. *See* Hearings Before the Subcomm. on Courts and Intellectual Property of the House Comm. on the Judiciary, 105th Cong. 6 (1997) [hereinafter 1997 House VHDPA Hearing] (statement of Professor William T. Fryer III).

331. *Id.* at 4; *see* Samuelson & Scotchmer, *supra* note 142, at 1593.

332. *Id.*

333. *See* Liza Vertinsky, *Comparing Alternative Institutional Paths to Patent Reform*, 61 ALA. L. REV. 501, 523–24 (2010).

334. 1997 House VHDPA Hearing, *supra* note 330, at 19.

By contrast, industry representatives underscored their need for Congress to fill the gap caused by the Supreme Court's decision. When *Bonito Boats* was decided in 1989, the National Marine Manufacturers Association (NMMA), which represented firms generating 80% of U.S. recreational boat production, had convinced eleven states to ban hull splashing.³³⁵ Those protections were now gone. The president of Zodiac of North America, maker of the famous rigid inflatable boats, stated that the creation of a plug to mold a hull typically cost at least \$100,000 and consumed a year.³³⁶ A competitor who splashed the hull could duplicate the plug in two weeks for \$5000.³³⁷ Copying, according to Zodiac, presented not merely unfair competition issues, but safety risks as well, since the copyist might not properly adapt other design elements that complemented the hull.³³⁸ Zodiac openly invoked the specter of foreigners cheating American boatmakers of justly earned profits: "all our copied competition . . . comes from developing countries, Asian countries, South American countries, who copy my designs and come back here and compete with us."³³⁹ A lawyer for Bayliner Marine Corporation blamed hull splashing for a lack of innovation in recent years, stating that copying was so common that he readily detected it at industry trade shows.³⁴⁰ The low barriers to entry in the boatmaking field made copying an attractive proposition, he claimed.³⁴¹ He was confident that legitimate designers could readily detect copying—just as was claimed during the SCPA hearings, Bayliner's counsel stated that copyists lacked the paper trail that creators inevitably produced.³⁴² The VHDPA, he claimed, would also protect small firms and individual innovators, who otherwise might have to leave the industry in the wake of uncontrolled copying.³⁴³

Despite the apparently unified support of the American boatmaking industry, passage of the VHDPA was a close thing.³⁴⁴ The bill faced rough sailing in the Senate, which raised two objections: first, that the House had failed to consult them; and second, that industrial design legislation had proven

335. *Id.* at 31–32 (statement of Mick Blackistone, Vice President, Government Relations, NMMA).

336. *Id.* at 28 (statement of J.J. Marie, President, Zodiac of North America).

337. *Id.*

338. *Id.* at 30.

339. *Id.*

340. *Id.* at 33–40 (statement of Donald Cramer, Corporate Counsel, Bayliner Marine Corp.).

341. *Id.* at 39.

342. *Id.* at 36.

343. *Id.* at 40.

344. See David Nimmer, *Appreciating Legislative History: The Sweet and Sour Spots of the DMCA's Commentary*, 23 CARDOZO L. REV. 909, 928 (2002).

to be fraught territory.³⁴⁵ Senator John Ashcroft of Missouri complained that “no one from the House Committee on the Judiciary said a word on the floor about why this change to current law is necessary At best, it is a dubious idea that was attached without discussion or consideration.”³⁴⁶ Senator Orrin Hatch of Utah, the chair of the Senate Judiciary Committee, objected to the Act, but was willing to accede to its passage if it was sharply limited in duration as an experiment in industrial design regulation.³⁴⁷ The Senate grudgingly agreed to adopt the VHDPA as part of the Digital Millennium Copyright Act, but only with a sunset clause terminating the hull design regime after two years.³⁴⁸ The boating industry, undeterred, arranged the following year to have a provision styled as a “technical amendment” added to an omnibus bill that removed the sunset clause.³⁴⁹ The temporary experiment was here to stay.

The VHDPA underwent several more revisions. The most important, in 2008, changed eligible subject matter protected to allow protection of a vessel’s hull, its deck, or both.³⁵⁰ This sought to address complaints that copyists could duplicate a boat hull without liability if they made sufficient modifications to the deck or superstructure that there was no substantial similarity to the overall original design.³⁵¹ It effectively broadened the Act by allowing claimants to protect smaller aspects of a vessel’s design than the original version did.

The VHDPA’s path to implementation was easier than that of the SCPA or AHRA, partly because there was little overt opposition from within the boatmaking industry, but mostly because Congress’ IP agenda was full, with both the DMCA and a proposed database protection bill on its docket.³⁵² The relatively easy path to enactment, however, masked compromises in the bill that maintained solidarity at the price of efficacy.

345. The first industrial design bill was introduced in 1914. 1997 House VHDPA Hearing, *supra* note 330, at 17.

346. 144 CONG. REC. S9935, 9937 (daily ed. Sept. 3, 1998) (statement of Sen. Ashcroft).

347. 144 CONG. REC. S11887, 11889 (daily ed. Oct. 8, 1998) (statement of Sen. Hatch).

348. *See* Nimmer, *supra* note 344, at 928.

349. *Id.* at 931; *see* § 5005, S.1948 (enacted by Consolidated FY2000 Appropriations bill, § 1000(a), Pub. L. 106–113, 113 Stat. 1501 (1999)).

350. Vessel Hull Design Protection Amendments of 2008, §§ 1(b), (d), Pub. L. No. 110-434, 122 Stat. 4972 (2008) (amending 17 U.S.C. §§ 1301(a) and 1301(b) year).

351. *See* 154 CONG. REC. H6740-6741 (daily ed. July 22, 2008) (statements of Rep. Scott and Rep. Coble); *Maverick Boat Co. v. Am. Marine Holdings*, 70 U.S.P.Q. 2d (BNA) 1493, 1500 (S.D. Fla. 2004) (finding no substantial similarity between plaintiff registrant’s design and defendant’s design, “particularly where the protected design includes the deck of the vessel.”).

352. *See* 1997 House VHDPA Hearing, *supra* note 330, at 1 (statement of Rep. Coble).

3. *Why the VHDP A Failed*

The VHDP A is almost certainly a failure as a statute. Since its enactment in October 1998, the Copyright Office has received a total of 538 registrations for hull designs, or an average of twenty-three per year.³⁵³ Recent trends may be more indicative: there has not been a registration since February 2013. The VHDP A has generated scant litigation: only one case has been decided in federal court. Although a single data point is hardly predictive, this case did not cut towards greater deployment of the Act, since the plaintiff design registrant failed to prove infringement, had its design canceled, and had attorney's fees awarded against it.³⁵⁴ The VHDP A's history as customized IP legislation is short and ineffective for two reasons: (1) the boating industry incorrectly concluded that its greatest risk was from insufficient IP protection, and (2) the internal divisions between copyists and creators among boating manufacturers.

The VHDP A displays the same internal divide between copyists and creators seen with the other two customized regimes, although in the boating industry, the creators were better organized and commanded the support of the leading industry trade association (the NMMA). The limited evidence available demonstrates that the dividing line between innovators and pirates was choppy at best. The sole infringement suit filed under the Act pitted two major domestic boatmakers against one another,³⁵⁵ the defendant had purchased one of plaintiff's boats to study while deciding whether to produce a competing model.³⁵⁶ Although the plaintiff provided expert testimony that the defendant had copied its hull,³⁵⁷ the district court found the two designs not substantially similar³⁵⁸ and the Federal Circuit affirmed.³⁵⁹ Similarly, the single pre-VHDP A state court case about hull splashing was between two

353. See Patton, *supra* note 37.

354. *Maverick Boat Co. v. Am. Marine Holdings*, 418 F.3d 1186 (11th Cir. 2005). The case matched two large boating firms, so the result seems more likely tied to the Eleventh Circuit's substantive views of the VHDP A than to any deficiency on the part of Maverick's counsel. See Reagan Haynes, *Malibu Acquires Maverick Boat Group*, TRADE ONLY TODAY (Dec. 21, 2021), <https://www.tradeonlytoday.com/manufacturers/malibu-acquires-maverick-boat-group>; *Maverick Boat Group on course for major expansion in Fort Pierce, Florida*, BUS. J. (June 15, 2021), <https://www.bizjournals.com/bizjournals/partner-insights/2021/06/15/maverick-boat-group-on-course-for-major-expansion.html>.

355. *Maverick Boat Co. v. Am. Marine Holdings*, 418 F.3d 1186 (Fed. Cir. 2005).

356. *Maverick Boat Co. v. Am. Marine Holdings*, 70 U.S.P.Q. 2d (BNA) 1493, 1496 (S.D. Fla. 2004).

357. *Id.* at 1496–98.

358. *Id.* at 1500.

359. *Maverick Boat Co.*, 418 F.3d at 1186.

small but similarly-sized boatmakers,³⁶⁰ as was the case leading to the Supreme Court's *Bonito Boats* decision.³⁶¹ The two sides could not be neatly characterized as giants against garage firms either. The NMMA represented the 370 boat manufacturers who produced 80% of the recreational boats built in the United States,³⁶² but low barriers to entry in the industry meant that there were at least 4000 registered manufacturers in the country.³⁶³ Zodiac's president strongly implied that these smaller "garage operations, with absolutely no R&D" were responsible for the industry's problems with copying of designs.³⁶⁴ However, the litigation record, while sparse, is composed of disputes between peers. It also shows leading firms as both copyists and creators.

The potential for established firms to land on both sides of the copyist-creator divide is a convincing explanation for why the VHDPA incorporates significant limitations on liability: for sellers and distributors,³⁶⁵ for acting without knowledge that a design was protected and copied,³⁶⁶ and for copying for reverse engineering purposes.³⁶⁷ The Act also provides that a seller or distributor suffering damage from an injunction wrongfully obtained can sue the registrant who obtained the injunction for damages, including lost profits and loss of goodwill; punitive damages are available in cases of bad faith, along with attorney's fees.³⁶⁸ In part, those provisions may reflect Congressional experience with the SCPA, which had similar limitations.³⁶⁹ But it also suggests that the industry coalition supporting the VHDPA, including its limitations, did so at least in part because its firms were a mixture of innovators and imitators.

The VHDPA's liability scheme, like the prior two regimes, was designed in large part to protect American boatmakers against the specter of foreign pirates. As a political matter, this configuration is unsurprising: domestic boating interests participated extensively in the drafting of the VHDPA, while

360. *Summerford Racing, Inc. v. Shadow Boat, Inc.*, 1986 Tenn. App. LEXIS 3438 (Tenn. Ct. App. 1986).

361. Both firms also went out of business during the economic downturn in the late 1980s and early 1990s. See *1989 Thunder Craft Boats Values, Specs and Prices*, J.D. POWER, <https://www.nadaguides.com/Boats/1989/Thunder-Craft-Boats>; Suzy Hagstrom, *Boat Makers Flail Amid Sinking Sales*, ORLANDO SENTINEL (May 24, 1992), <https://www.orlandosentinel.com/news/os-xpm-1992-05-25-9205231057-story.html>.

362. 1997 VHDPA Hearing at 32.

363. *Id.* at 39.

364. *Id.*

365. 17 U.S.C. § 1309(b).

366. 17 U.S.C. § 1309(c).

367. 17 U.S.C. § 1309(g).

368. 17 U.S.C. § 1322(b).

369. See 1997 VHDPA Hearing at 4–5, 8 (Fryer testimony).

foreign ones did not.³⁷⁰ And, the Act's focus on controlling imports acted as a mechanism for holding together the coalition that supported it. Dealers vending U.S.-made boats embodying a protected design would be immune, while those importing foreign-made ones would not. For sellers and distributors, the mere purchase of an infringing item did not constitute infringement, as long as they did not manufacture or import the article. Indeed, one witness for a domestic manufacturer expounded an example of copying that involved "someone who has become a major competitor who imports boats from the Orient."³⁷¹ Xenophobia was a rhetorical tool that was reified in the resulting legislation.

The boating industry also sought to shore up its business model against the wrong risk. The Supreme Court's decision in *Bonito Boats* in 1989 appeared to open the door for copyists to use plug molding to duplicate innovative hulls produced by their competitors. Under the conventional economic logic of IP, the cost of a boat should fall on average, since copyists could avoid the overhead incurred by original designers and since firms responsible for the new hulls would have to slash prices to compete with knockoffs.³⁷² All else equal, when goods become cheaper, consumers purchase more of them.

But that is not what happened. Unlike in sectors such as recorded music, unauthorized copies are not created or distributed costlessly: recreational boats are still expensive to build even if one can free ride on a competitor's design. The U.S. Bureau of Transportation Statistics published data showing that recreational boat sales in the wake of the *Bonito Boats* decision fell by almost 10% from 1990 to 1991.³⁷³ Sales increased from 1991 to 1992, and by 1993 had reached roughly the same level as in 1990.³⁷⁴ Sales decreased in 1997 and 1998, but increased again in 1999, the year after the VHDP's passage.³⁷⁵ The number of boats sold exploded in 2001, increasing by 53% year over year, even though increased IP protection should have allowed innovative manufacturers to raise prices.³⁷⁶ In 2008—the year that Congress passed the amendments to the VHDP to increase its scope of protection and thus potency—

370. 1997 VHDP Hearing at 27–41.

371. *Id.* at 38 (statement by President of Zodiac of North America.)

372. See Wendy J. Gordon, *An Inquiry into the Merits of Copyright: The Challenges of Consistency, Consent, and Encouragement Theory*, 41 STAN. L. REV. 1343, 1433–34 (1989).

373. Figure 9—U.S. Recreational Boat Sales, BUR. OF TRANSPORTATION STATS. (Nov. 19, 2012), https://www.bts.gov/archive/publications/by_the_numbers/maritime_trade_and_transportation/figure_09.

374. *Id.*

375. *Id.*

376. *Id.*

manufacturers sold 704,820 boats; the following year, they sold 572,500.³⁷⁷ This data does not directly measure the level of copying by direct molding process after the passage of the VHDPA or its amendments, and it cannot reveal any information about the level of innovation in the boating industry. However, sales consistently moved in the opposite direction from what one would expect based on the economics of unauthorized copying.

Moreover, there was a shadow factor lurking in the background in 1990 that almost certainly explains the decline in sales that year, and it is unrelated to IP. That year, Congress introduced a 10% luxury tax on goods that included boats with prices greater than \$100,000.³⁷⁸ Luxury boat makers cut operations and prices.³⁷⁹ The NMMA claimed the tax caused the loss of 19,000 jobs, and then-Representative Olympia Snowe of Maine stated that luxury boat sales had fallen 86% year over year.³⁸⁰ However, during hearings on the VHDPA, a representative from the leading boatmaker trade group admitted that there was no way to differentiate the effects of the luxury tax from the practice of hull splashing.³⁸¹ The luxury tax was repealed on all goods except automobiles in 1993;³⁸² from 1993 to 1994, boat sales increased from approximately the same level as in 1990 (498,775) to 576,200, and in 1995, they went up again, to 663,760.³⁸³ Correlation is not causation, but the trend is at least suggestive.

Overall, the recreational boating industry is a relatively static field, at least in terms of the number of registered vessels in the United States.³⁸⁴ In 1990, there were nearly eleven million registered recreational boats in America; in 1998, there were 12.5 million; in 2008, 12.7 million; and in 2020, 11.8 million.³⁸⁵ The presence, or absence, of boat-specific IP rules does not, at first glance, appear to have a significant effect on the number of boats sold or in

377. *Id.*; see Pub. L. No. 110-434, 122 STAT. 4972 (110th Congress 2008).

378. See Linda M. Harrington, *Luxury Tax on Boats Sinks Jobs*, U.S. Revenue, Critics Say, CHICAGO TRIBUNE (June 12, 1991), <https://www.chicagotribune.com/news/ct-xpm-1991-06-13-9102220626-story.html>.

379. See Agis Salpukas, *Falling Tax Would Lift All Yachts*, N.Y. TIMES (Feb. 7, 1992), <https://www.nytimes.com/1992/02/07/business/falling-tax-would-lift-all-yachts.html>.

380. *Id.*

381. 1997 House VHDPA Hearing, *supra* note 330, at 32 (Blackistone statement).

382. See *Good Riddance to the Luxury Tax*, WALL ST. J. (Jan. 6, 2013), <https://www.wsj.com/articles/SB1041807729976794664>.

383. See *Figure 9—U.S. Recreational Boat Sales*, *supra* note 373.

384. See, e.g., Matthew Chambers & Mindy Liu, *Figure 8—U.S. Recreational Boat Registrations, 1990–2010*, *Maritime Trade and Transportation by the Numbers*, BUR. OF TRANSPORTATION STATS. (Mar. 7, 2013), https://www.bts.gov/archive/publications/by_the_numbers/maritime_trade_and_transportation/index.

385. *Table 1-11, Number of U.S. Aircraft, Vehicles, Vessels, and Other Conveyances*, BUR. OF TRANSPORTATION STATS. (Mar. 7, 2013), <https://www.bts.gov/content/number-us-aircraft-vehicles-vessels-and-other-conveyances> (boating data as of Aug. 20, 2021).

circulation. As a 2003 joint report of the Copyright Office and U.S. Patent and Trademark Office (USPTO) on the VHDPA found, “no evidence was adduced regarding the extent of copying, or ‘hull splashing,’ in the marine industry either before or after the passage of the VHDPA.”³⁸⁶

Overall, the pattern of sales and lack of litigation suggest that the VHDPA was not effective in addressing infringement, probably because infringement was not as widespread as the industry claimed. Even before the 1989 *Bonito Boats* decision invalidated state laws banning use of the direct molding process to copy a competitor’s item, firms rarely brought such claims in court, despite some success in the few suits adjudicated.³⁸⁷ Twelve states had such laws, beginning with California in 1978.³⁸⁸ Three cases were tried to decision in state court, one in California (over a jewelry design³⁸⁹ and over a juicer,³⁹⁰ with the designer winning in both) and one in Tennessee (over a boat, where the designer lost).³⁹¹ Seven cases reached the decision stage in federal courts.³⁹² Plaintiff designers were victorious in three; the competing defendant won one; and three cases were procedural in nature.

The record after the VHDPA’s passage is, at best, inconclusive about the Act’s efficacy. The 2003 report by the Copyright Office and USPTO noted that it was difficult to determine whether the Act had any real effect in deterring infringement.³⁹³ Representatives from boat manufacturers claimed success in issuing cease and desist letters to alleged violators.³⁹⁴ They also claimed that the legislation increased innovation in their industry, although one

386. THE VESSEL HULL DESIGN PROTECTION ACT: OVERVIEW AND ANALYSIS 20 (Nov. 2003), <https://www.copyright.gov/reports/vhdpa-report.pdf>.

387. See David W. Carstens, *Preemption of Direct Molding Statutes: Bonito Boats v. Thunder Craft Boats*, 3 HARV. J.L. & TECH. 167, 174–78 (1990); but see 1997 House VHDPA Hearing, *supra* note 330, at 32 (stating 11 states had such laws).

388. Carstens, *supra* note 387, at 175, n. 43.

389. Gladstone v. Hillel, 250 Cal. Rptr. 372 (Cal. Ct. App. 1988).

390. There is no published opinion for this California Superior Court decision, but it is described in the federal court decision between the same parties. Metro Kane Imps., Inc. v. Rowoco, Inc., 618 F. Supp. 273, 277 (S.D.N.Y. 1985).

391. Summerford Racing, Inc. v. Shadow Boat, Inc., 1986 Tenn. App. LEXIS 3438 (Tenn. Ct. App. 1986).

392. See Ferrari S.p.A. Esercizio Fabbriche Automobili Corse v. Roberts Motor Co., 739 F. Supp. 1138; Ferrari S.p.A. Esercizio Fabbriche Automobili E Corse v. McBurnie Coachcraft Inc., 10 U.S.P.Q.2d (BNA) 1278 (S.D. Cal. 1988); JTG of Nashville v. Rhythm Band, 693 F. Supp. 623 (M.D. Tenn. 1988); Brahma, Inc. v. Joe Yeargain, Inc., 665 F. Supp. 1447 (N.D. Cal. 1987); Power Controls Corp. v. Hybrinetics, 806 F.2d 234 (Fed. Cir. 1986); Interpart Corp. v. Imos Italia, 777 F.2d 678 (Fed. Cir. 1985); Metro Kane Imps. v. Rowoco, Inc., 618 F. Supp. 273.

393. THE VESSEL HULL DESIGN PROTECTION ACT: OVERVIEW AND ANALYSIS 9–10 (Nov. 2003), <https://www.copyright.gov/reports/vhdpa-report.pdf>.

394. *Id.* at 10.

argued that the impact was minimal since the VHDPA's effectiveness in diminishing infringement remained in doubt,³⁹⁵ and another said the Act "does [not] have an impact on our already strong desire to create new and exciting products for [our] customers."³⁹⁶ Strikingly, though, the manufacturers touting innovation could not point to price increases enabled by these advances, and indeed proffered no information to enable price comparisons between boats with registered versus unregistered designs.³⁹⁷ This accords with the 1997 testimony by a boatmaker representative before Congress that copyists often charged *more*, not less, than the original designer's boat.³⁹⁸ That price premium contradicts the standard logic of IP protection, which is that the copyist charges less, and indeed a different representative at the hearing claimed that "competitors can copy a design and hull and then undersell the originating company which must charge more for its boat because it must amortize" research and development costs.³⁹⁹ Industry witnesses at a hearing on the efficacy of the VHDPA "could not provide any specific examples of designs that would not have been created and introduced to the public but for the protection of the Act."⁴⁰⁰ As a follow-on, representatives from the boatmakers "were specifically asked to provide any such information during the reply stage, but none was proffered."⁴⁰¹ There is no evidence to support the contention that the VHDPA was needed to protect boating innovation.

Ironically, boating interests also claimed that the VHDPA could lead to *increased* piracy. When asked why the industry had not submitted more registrations (only 156 at the time of the hearing), a representative for the NMMA stated that manufacturers "fear[ed] that publication of designs 'would only encourage copying by unscrupulous competitors,'" and that "publication of the complete drawings or photographs on the [Copyright] Office's official web site would lead to copying by foreign manufacturers."⁴⁰² But the rationale for the VHDPA was that copying was *already* cheap and easy: purchase a competitor's hull, splash it, and duplicate their design at a fraction of its cost.⁴⁰³ Indeed, witnesses at the VHDPA hearings joked about the ease of detecting

395. *Id.* at 11–12.

396. *Id.* at 13.

397. *Id.*

398. 1997 House VHDPA Hearing, *supra* note 330, at 38 (statement of corporate counsel for Bayliner Marine Corp.)

399. *Id.* at 29–30 (statement of President of Zodiac North America).

400. THE VESSEL HULL DESIGN PROTECTION ACT: OVERVIEW AND ANALYSIS, *supra* note 386, at 12.

401. *Id.*

402. *Id.* at 11.

403. 1997 House VHDPA Hearing, *supra* note 330, at 28, 30 (statement of president of Zodiac of North America).

copying by competitors—one manufacturer awarded a small prize to the staff member who found the most knockoffs at the leading industry trade show.⁴⁰⁴ If detection were easy, then there would be no reason to avoid using the VHDPA. And if duplication with access to a hull, but not to design documents, were difficult, then the VHDPA would be unnecessary, since boatmakers could protect themselves using trade secret law.⁴⁰⁵

Moreover, the Copyright Office stated during the hearings on the VHDPA that the notice provided by the registration system was in the public interest, since it enabled competitors to avoid infringing others' designs.⁴⁰⁶ The 2003 report also noted there was no evidence in the record of any harm derived from copying based upon registration information, including by foreign manufacturers.⁴⁰⁷ One manufacturer argued that registration should require a designer to specify precisely the features claimed to be protected to reduce "wasted time dealing with frivolous claims throughout the industry."⁴⁰⁸ And witnesses at the hearing who were not members of the boating industry supported the requirement to publish registrations, including on the internet.⁴⁰⁹ The evidence suggests that the industry had mixed feelings about both the Act and the problem it purported to address.

The VHDPA, like its predecessor customized regimes, proved ineffective. The next Part explores common themes across all three systems.

IV. THEMES AND BREAKING POINTS

This Article's three case studies have three points of commonality: (1) the ineffectiveness of their rules for the groups that pressed for them; (2) the precarious, fractal-like nature of the interest groups pressing for them; and (3) the perilous precision with which their IP regimes sought to entrench the technological and economic backdrop of the relevant industry.⁴¹⁰ The first two similarities complicated lobbying efforts and weakened the substance of changes that were eventually enacted. These patterns run counter to the concerns public choice theory holds about the potential for interest groups to engage in rent-seeking via legislation. The third demonstrates the difficulty of

404. *Id.* at 33 (statement of Donald Cramer, Corporate Counsel, Bayliner Marine Corp.).

405. *See* Samuelson & Scotchmer, *supra* note 142, at 1585–90.

406. 1997 VHDPA Hearing at 24 (statement of Marybeth Peters, Register of Copyrights).

407. THE VESSEL HULL DESIGN PROTECTION ACT: OVERVIEW AND ANALYSIS, *supra* note 386, at 21.

408. *Id.* at 15.

409. *Id.* at 18.

410. *See* 1992 Senate AHRA Hearing at 206 (statement of Professor Jessica Litman that "it usually turns out to be folly to try to legislate technology.").

managing innovation even for incumbent entities with expertise and private information.⁴¹¹ This Part explores each theme.

A. INEFFECTIVENESS

Earlier, this Article defined effectiveness using one or more of four criteria: (1) effects on innovation, (2) transition between technologies and business models, (3) capture of private rents, and (4) interest group unity. This subpart evaluates the three regimes under each criterion.

First, there is little evidence of positive effects on innovation from the regimes. For the SCPA and VHDPA, rights accrue only upon registration, so the number of registrations is a useful proxy for industry reliance upon the regime to protect innovation. The AHRA does not require registration; it enables copyright owners to pursue infringement claims against equipment producers and distributors who do not conform to the Act's requirements. The scant number of AHRA suits, their lack of success, and marketplace rejection of DATs all suggest that it, too, fails here.

Second, for the transition criterion, only the SCPA has any claim to efficacy, and it is tenuous. The SCPA was based upon 1970s chip technology, when copying was a threat because chips were relatively large-scale and simple.⁴¹² Even in the early 1980s, chips were sufficiently complex and advanced that copying was not a viable mechanism economically to duplicate a chip.⁴¹³ Indeed, witnesses described technological and financial barriers to copying in hearings in 1979.⁴¹⁴ By contrast, neither the AHRA nor the VHDPA can claim effectiveness under this criterion. For the music industry, the relevant transition—to digital audio tapes—flopped. And the transition to digital music overall created a serious threat to the industry's existing business models from peer-to-peer file sharing.⁴¹⁵ At best, the AHRA was irrelevant to that transition; at worst, it accelerated the problem by shifting consumer demand away from a relatively controlled medium—the DAT—to ones with no technological constraints, in the forms of CDs and MP3 files. The VHDPA fails simply because neither boatmaking technology nor business models have

411. See CLAYTON CHRISTENSEN, *THE INNOVATOR'S DILEMMA* (2011).

412. See Steven P. Kasch, *The Semiconductor Chip Protection Act: Past, Present, and Future*, 7 HIGH TECH. L.J. 71, 96–97 (1992).

413. See *id.* at 95 (stating that copying was not feasible as a strategy at least by 1992, and perhaps as early as 1979).

414. *Id.* at 97.

415. See Alejandro Zentner, *Measuring the Effect of File Sharing on Music Purchases*, 49 J.L. & ECON. 63 (2006); but see Felix Oberholzer-Gee & Koleman Strumpf, *File Sharing and Copyright*, 10 INNOVATION POL'Y & ECON. 19 (2010).

changed in any significant way since its adoption.⁴¹⁶ Some firms exited via insolvency, but boats and how consumers purchase them are largely unchanged from when *Bonito Boats* was decided. Overall, under this criterion, only the SCPA has any claim to success, and that claim is weak.

Third, in assessing efficacy in extracting rents for interest groups, only the SCPA has a plausible claim, and that hangs by a thread. While the threat to use new IP rights might, in theory, enable an industry to extract gains from other parties, the dearth of litigation testing the three systems implies that any such threats were hollow. The SCPA has the best claim to providing a credible threat, but it rests on merely two cases, one of which also relied on patent law. Neither the VHDPA nor the AHRA generated any substantial body of litigation, nor was that litigation successful. That, in combination with the lack of utilization of these two systems, suggests that they were not a source of leverage for industry.

Finally, in terms of unity, all three interest groups were unified about the customized regime itself by the time it was enacted, but it is unclear whether that consensus extended beyond IP matters or lasted beyond the signing of the legislation. Moreover, any broader or longer-lived harmony might result from other factors, such as mergers (as with Sony and CBS Records) or specialization (as with chipmakers). At minimum, the music industry splintered with the advent of digital music services such as iTunes, ringtones, and Webcasting.⁴¹⁷ With semiconductors, Intel ruthlessly squeezed out competitors to dominate the personal computer industry, but was later overtaken in mobile devices by AMD and other firms that specialized in relatively lower-powered chips.⁴¹⁸ With boatmakers, relatively minor innovation undercut unity even at the time of the VHDPA's passage. In 1998, the year the bill was enacted, divisions over the then-exploding market in personal watercraft such as jetskis led the chairman of major boatmaker Genmar to resign from the NMMA, announcing he would not return until personal watercraft makers were expelled from the trade association.⁴¹⁹ In recent years, unity has likely increased, but only due to consolidation in the industry. In short, while it is difficult to arrive at definitive results under the

416. See Michael Verdon, *40 Years of Ups and Downs*, SOUNDINGS TRADE ONLY (June 1, 2019), <https://www.tradeonlytoday.com/industry-news/40-years-of-ups-and-downs>.

417. See *U.S. v. ASCAP*, 627 F.3d 64 (2d Cir. 2010); *Bonneville Int'l v. Peters*, 347 F.3d 485 (3rd Cir. 2003); Jeff Leeds, *Universal in dispute With Apple Over iTunes*, N.Y. TIMES (July 2, 2007), <https://www.nytimes.com/2007/07/02/business/media/02universal.html>.

418. See CHRIS MILLER, *CHIP WAR* 235–40 (2002).

419. Verdon, *supra* note 416.

unity criterion, there is significant evidence to doubt that the three customized regimes notably increased consensus.

On all four criteria, the SCPA, AHRA, and VHDPA plainly appear to be ineffective.

B. THE EVER-DISSOLVING INTEREST GROUP

Interest groups tend to be fragile because they are coalitions of smaller groups whose interests sometimes coincide and sometimes diverge. This has two important effects. First, entities excluded from the coalition and ones who leave it can often block legislative change, including by non-legislative means. Recall that in the run up to the AHRA, songwriters and music publishers were initially excluded from negotiations between equipment manufacturers and the record labels. They responded by suing to block introduction of the technology that was the subject of these discussions: the DAT recorder. The lesson that the songwriters and publishers taught the labels is that no industry is an island: every group reveals itself, fractal-like, to be comprised of a set of subgroups with their own agendas. This creates a definitional problem for theories of public choice and interest group lobbying; determining what constitutes a “group” is a fraught process.

The AHRA also demonstrates the Goldilocks problem that any putative set of interests faces *ex ante*: to maximize lobbying power and minimize political opposition, the group or coalition must be broad enough to prevent objections or defections from fellow travelers but narrow enough that its proposal is not vitiated or defeated altogether by other, less related interests. The music industry’s initial unmitigated opposition to the DAT failed because its coalition was too narrow—it excluded some standard music interests in writers and publishers. Broadening this grouping by bringing these other parties inside the tent (literally, in the case of Sony’s purchase of CBS Records) weakened the force of the resulting legislation but enabled it to be enacted. And the AHRA ultimately failed in part because the music industry had to appease the nascent but rising personal computer industry. Hardware and software firms lobbied successfully to have PCs, software, hard drives, and the like excluded from the AHRA’s regulatory aegis.⁴²⁰ When computers began to supplant specialized home stereo equipment, the AHRA rapidly became a dead letter.⁴²¹

420. *See* Recording Indus. Ass’n of Am. v. Diamond Multimedia Sys., 180 F.3d 1072 (9th Cir. 1999).

421. A few skeptics predicted this shift, including MIT researcher Philip Greenspun. *See* Lutzker, *supra* note 216, at 184–85. The AHRA’s failure may be more consequential than it

The second effect of interest group fragility is on the legislative output of lobbying: the customized IP regime needs to be broad enough to advance the shared goals of the group's members but narrow enough to avoid issues that could fracture the alliance and draw opposition from outsiders. The SCPA had to permit copying of chip designs via reverse engineering to overcome opposition from semiconductor firms that played a "second source" role. The AHRA had to adopt a royalty system that would increase the cost of DAT technology, making it less attractive to consumers, in order to obtain assent from songwriters and music publishers. And the VHDPAs had to largely immunize distributors of infringing vessels from liability to keep them inside the political tent with manufacturers. Each legislative compromise was politically necessary, but each came at a cost in efficacy.

Interest groups are thus caught between the Scylla of political disintegration and the Charybdis of ineffective reform.⁴²² Navigating that course is exceptionally challenging.

C. THE RISKS OF TECHNOLOGY ENTRENCHED IN LEGISLATION

Customized regimes have often foundered on the shoals of excessive specificity in their provisions. Interest groups face a conundrum. They would ideally prefer to maintain flexibility by being less specific about the technology requirements for eligibility or infringement of their creations.⁴²³ But, some specificity is needed to demarcate subject matter eligibility and to differentiate the specialized regime from general-purpose ones. And it is difficult to avoid embedding the structure of the business model driven by an industry's technology into legislation; that is, after all, what proponents understand best.⁴²⁴

The SCPA fell into desuetude because the economics of semiconductors changed radically; it became far cheaper to create than to copy. This made IP-based limits on copying mask works obsolete. The AHRA failed because of the computer revolution, first with PCs and then with mobile devices.

initially appears: the lack of technological controls on CDs and the computer equipment that reading from and writing to the discs contributed to the rise of peer-to-peer file sharing, which genuinely seemed to threaten the music industry. See Herman, *supra* note 237, at 173–74.

422. See *Scylla and Charybdis*, ENCYCLOPEDIA BRITANNICA, <https://www.britannica.com/topic/Scylla-and-Charybdis> (last accessed Feb. 2, 2024).

423. See Herbert Hovenkamp, *Technology, Politics, and Regulated Monopoly: An American Historical Perspective*, 62 TEX. L. REV. 1263, 1267 (1984) (noting "Politics is most important when the economics, technology, or structure of a particular market is unknown or uncertain.").

424. See Stuart Minor Benjamin & Arti K. Rai, *Fixing Innovation Policy: A Structural Perspective*, 77 GEO. WASH. L. REV. 1, 13–14 (2008).

Although the VHDP is the least technologically specific of the three customized regimes, its failure was in part because the industry did not understand its own business risks. Copying was not anywhere near as great a threat as it was portrayed.

These particular lessons from customized IP regimes should translate well to other contexts. The problem of technological specificity is a frequent challenge in the design of regulatory systems. In cybersecurity, for example, rules that required the use of encryption standards approved by the federal government often referenced the Data Encryption Standard (DES).⁴²⁵ DES was first adopted as a Federal Information Processing Standard (FIPS) in 1977 and was reaffirmed as late as 1999 (admittedly only for legacy systems), even though by then DES encryption keys could be broken through brute force attacks in less than a day.⁴²⁶ Systems could thus be compliant with federal standards and yet also be highly insecure. Tech-specific security standards can also prolong the life of otherwise inefficient technologies, which is why most health care offices continue to maintain and use fax machines.⁴²⁷ Under the Security Rule promulgated by the Department of Health and Human Services under authority delegated by the Health Insurance Portability and Accountability Act (HIPAA), sending protected health information, such as a patient's medical condition or social security number, over fax is deemed acceptable so long as the sender takes the minimal precaution of confirming the recipient's fax number.⁴²⁸ E-mail encryption is still challenging to implement as a practical matter; faxes, by contrast, are antiquated but simple.⁴²⁹ A baroque security rule has thus preserved the fax industry.

425. See *Data Encryption Standard*, ENCYCLOPEDIA BRITANNICA, <https://www.britannica.com/topic/Data-Encryption-Standard> (last accessed Feb. 2, 2024)

426. *Record Set in Cracking 56-bit Crypto*, CNET (Jan. 3, 2002), <https://www.cnet.com/personal-finance/crypto/record-set-in-cracking-56-bit-crypto/>.

427. See Rachel Withers, *Why in the World Do Doctor's Offices Still Use Fax Machines?*, SLATE (June 6, 2018), <https://slate.com/technology/2018/06/why-doctors-offices-still-use-fax-machines.html>.

428. *Does the HIPAA Privacy Rule permit a doctor, laboratory, or other health care provider to share patient health information for treatment purposes by fax, e-mail, or over the phone?*, HHS.GOV (July 26, 2013), <https://www.hhs.gov/hipaa/for-professionals/faq/482/does-hipaa-permit-a-doctor-to-share-patient-information-for-treatment-over-the-phone/index.html>.

429. Encrypting e-mail is not required under the Security Rule. However, informal guidance from HHS makes clear that sensitive matters may not be discussed over e-mail without encryption. *Does the HIPAA Privacy Rule permit health care providers to use e-mail to discuss health issues and treatment with their patients?*, HHS.GOV (July 26, 2013), <https://www.hhs.gov/hipaa/for-professionals/faq/570/does-hipaa-permit-health-care-providers-to-use-email-to-discuss-health-issues-with-patients/index.html>.

V. THE COMING STORMS?

The customized IP past is never dead. It's not even past. Thus far, these regimes have an unenviable track record. Yet proposals for new specialized IP systems occur regularly.⁴³⁰ This Part explores some proposed candidates for new customized rule sets and shows how they face the same challenges as the three case study regimes.

The history of customized IP regimes offers important lessons to proponents and opponents alike. For skeptics, the record of failures provides a menu of effective countermeasures. For supporters, enthusiasm for customized IP regimes could use a dose of realism. These systems have not produced meaningful increases in innovation for semiconductors, audio equipment, or boatmaking.

So far, there are four other industries where customized IP regimes have been seriously mooted: weather, traditional knowledge, fashion, and privacy. These efforts can be informed by this Article's insights at the same time they test its conclusions.

A. WEATHER

Weather forecasts are valuable to a wide set of constituencies. Producers of this information have unsurprisingly sought customized IP rights over it. Attempts to create property rights in weather data have focused on the National Weather Service (NWS). The NWS records data on weather, climate, and related topics from U.S. government satellites, data buoys, and other sensors; warns the public about impending weather threats such as hurricanes; and makes predictions—forecasts—about future conditions.⁴³¹ The Service has been a regular target for legislation that would move its data from the public domain to control by private firms. In 1983, the Reagan administration introduced a proposal to sell the weather satellites used by the NWS to private entities; NWS would have had to re-purchase that data to engage in forecasting.⁴³² The idea was pushed by the Communications Satellite Corporation, which saw a potential captive market worth hundreds of millions

430. See, e.g., Haochen Sun, *Redesigning Copyright Protection in the Era of Artificial Intelligence*, 107 IOWA L. REV. 1213 (2022).

431. *The National Weather Service*, <https://www.weather.gov/about/> (last accessed Feb. 2, 2024).

432. See Philip J. Hilt, *Reagan Set to Sell Weather Satellites*, WASH. POST (Mar. 9, 1983), <https://www.washingtonpost.com/archive/politics/1983/03/09/reagan-set-to-sell-weather-satellites/d00477c0-b228-4d44-b20c-23702d5140af/>.

of dollars.⁴³³ The plan created a firestorm of controversy, and the administration eventually abandoned it.⁴³⁴

The prospect of a customized regime returned in 2005 when Senator Rick Santorum introduced a bill that would have required the NWS to continue making its data available to private commercial weather information providers—but would have banned the agency from providing any service that competed with those firms.⁴³⁵ Consumers would have been forced to pay for weather forecasts created from government-collected data that had previously been free.⁴³⁶ The bill did not advance, in part because it was opposed by other powerful interest groups including airline pilots and even some private commercial weather companies.⁴³⁷ Later, the Obama administration issued a rule preventing the NWS from creating weather applications for wireless devices such as tablets or smartphones to inhibit competition with private firms.⁴³⁸ And in 2016, a Congressional representative pushed the National Oceanic and Atmospheric Administration to increase purchases of weather data from private firms to reduce the threat from Chinese hackers and anti-satellite missiles.⁴³⁹

Producers of weather information would dearly love to enjoy exclusivity over it. To date, though, interest group conflicts have stymied these efforts, although the problem of technological lock-in appears manageable for a customized weather IP regime.

B. TRADITIONAL KNOWLEDGE

A perennial candidate for customized IP systems is traditional or indigenous knowledge.⁴⁴⁰ This knowledge includes material such as songs,

433. See Philip J. Hilts, *Reagan Signs Bill to Kill His Plan to Sell Weather Satellites*, WASH. POST (Nov. 29, 1983), <https://www.washingtonpost.com/archive/politics/1983/11/29/reagan-signs-bill-to-kill-his-plan-to-sell-weather-satellites/f48b2491-6126-4ee7-b570-287155c70773/>.

434. *Id.*

435. See Bob King, *Santorum's Weather Crusade*, POLITICO (Jan. 5, 2012), <https://www.politico.com/story/2012/01/7-year-old-attack-on-weather-service-could-cloud-santorums-campaign-071129>; S.786, 109TH CONG. (2005).

436. *Id.*

437. *Id.*

438. *Id.*

439. See Mike Henry, *NOAA and DOD Piloting Commercial Sources of Weather Data*, 55 AM. INST. PHYS. BULLETIN (May 6, 2016), <https://www.aip.org/fyi/2016/noaa-and-dod-piloting-commercial-sources-weather-data>.

440. See Justin Hughes, *Traditional Knowledge, Cultural Expression, and the Siren's Call of Property*, 49 SAN DIEGO L. REV. 1215 (2012); see generally Peter K. Yu, *Cultural Relics, Intellectual Property, and Intangible Heritage*, 81 TEMPLE L. REV. 433 (2008); Srividhya Ragavan, *Protection of*

histories, artwork, medicine, and farming techniques.⁴⁴¹ The motivations for customized regimes to protect this information are more noble than the other examples discussed in this Article: they are almost exclusively concerned with preventing exploitation of such knowledge by non-indigenous actors.⁴⁴²

Nonetheless, they meet this Article's criteria for customized IP regimes, although broadly speaking they tend to be focused on preservation rather than economic exploitation. While agencies such as the Environmental Protection Agency have incorporated IP-like considerations into their policies regarding traditional knowledge, customized legislation has encountered three obstacles.⁴⁴³ The first, and by far the most important, is that thus far the coalition of interests opposed to a customized traditional knowledge regime has possessed more political power than proponents.⁴⁴⁴ Copyists hold far more sway than creators in debates over indigenous knowledge. Here, as with weather, public choice challenges have blocked customized rules. Secondly, core American IP concepts such as authorship or inventorship are an awkward fit for information created and refined by groups, such as Native American tribes, whose exact membership varies over time.⁴⁴⁵ Finally, it is not clear how to protect information that has varied and evolved over long periods of time, especially with the increased concern about a robust public domain among civil society groups in the last several decades.⁴⁴⁶

C. FASHION

Fashion designers have also pursued customized IP rules.⁴⁴⁷ Unsurprisingly, proposed legislation has encountered the same set of

Traditional Knowledge, 2 MINN. INTELL. PROP. REV. 1 (2001); *but see* J. Janewa OseiTutu, *A Sui Generis Regime for Traditional Knowledge: The Cultural Divide in Intellectual Property Law*, 15 MARQ. INTELL. PROP. L. REV. 147 (2011) (raising concerns that a regime may be counterproductive).

441. *See* Angela R. Riley, "Straight Stealing": Towards an Indigenous System of Cultural Property Protection, 80 WASH. L. REV. 69, 76–82 (2005).

442. *See* Trevor G. Reed, *Fair Use as Cultural Appropriation*, 109 CALIF. L. REV. 1373, 1377–79 (2021).

443. *See, e.g.*, U.S. ENV'T PROT. AGENCY, CONSIDERING TRADITIONAL ECOLOGICAL KNOWLEDGE (TEK) DURING THE CLEANUP PROCESS (Jan. 3, 2017), https://www.epa.gov/sites/default/files/2020-10/documents/considering_traditional_ecological_knowledge_tek_during_the_cleanup_process_updated_link.pdf.

444. *See* Riley, *supra* note 441, at 85–86.

445. *See* Christine Haight Farley, *Protecting Folklore of Indigenous Peoples: Is Intellectual Property the Answer?*, 30 CONN. L. REV. 1, 12–40 (1997).

446. *See id.*

447. *See* *Protection for Fashion Design: Statement of the U.S. Copyright Office before the Subcommittee on Courts, the Internet, and Intellectual Property*, House Committee on the Judiciary, 109th Cong. (July 27, 2006), <https://www.copyright.gov/docs/regstat072706.html>.

challenges that other customized regimes have faced.⁴⁴⁸ In particular, designers strongly support a fashion-specific system but retailers do not, leading to political stalemate.⁴⁴⁹ Large distributors, such as clothing outlets and department stores, oppose new rules because they copy successful fashions and sell them comparatively cheaply.⁴⁵⁰ The split between copyists and creators favors the former in fashion. The fashion industry thus faces the same fracture problem that other seemingly monolithic interest groups have demonstrated. And although proponents have adjusted to these political realities by scaling back proposals, such as by reducing the term of protection to only three years, there has been little Congressional enthusiasm for the project in recent years.⁴⁵¹

The technological specificity problem is less severe for proposed fashion design legislation since protection is easily defined, covering headgear, apparel, footwear, and the like. This strength, though, is also a weakness because it expands the range of other interests who might be affected by and therefore oppose the bill. The underlying fashion business model may also be vulnerable to disruptive technological change. The reduced cost of computer-assisted design and drafting (CAD) software and the advent of inexpensive 3-D printing raises the specter of increasingly widespread home copying of fashions. A customized fashion protection regime might deter Walmart, but it will not stop fashion enthusiasts with a bit of technological competence, a 3-D printer, and photographs of the latest designs from the runways in Milan.⁴⁵² Customized fashion rules face difficult challenges in both public choice and innovation terms.

448. See Carroll, *supra* note 9, at 1431 (noting internal divisions within fashion industry have impeded efforts to obtain customized regime).

449. See Christopher A. Cotropia & James Gibson, *The Upside of Intellectual Property's Downside*, 57 UCLA L. REV. 921, 970–71 (2010).

450. See C. Scott Hemphill & Jeannie Suk, *Remix and Cultural Production*, 61 STAN. L. REV. 1227, 1230–31 (2009).

451. The most recent bill was introduced in 2012. Innovative Design Protection Act of 2012, S. 3523, 112TH CONG. (2012). It did not receive a vote.

452. See Susan Scafidi, *F.I.T.: Fashion as Information Technology*, 59 SYRACUSE L. REV. 69, 87 (2008) (noting rapid internet distribution of images of new fashion contributes to piracy).

D. PRIVACY AND PERSONAL DATA

Lastly, a current popular target for customized IP proposals is personal data.⁴⁵³ Legislators have introduced a wide array of draft bills;⁴⁵⁴ scholars have advocated for customized personal data rights regimes; and civil society groups have touted this approach⁴⁵⁵ as a means of mitigating privacy concerns. Support for a customized personal data system stems from at least two sources: pessimism among privacy advocates about the likelihood of adoption of a broad-based federal privacy regime,⁴⁵⁶ and the default American preference for handling allocation of entitlements through market mechanisms such as property rights.⁴⁵⁷ Property rights in personal data seem an odd fit as a candidate for inclusion as a customized IP regime; in theory, these entitlements are available to everyone in the United States, and the general public has never been an interest group with any particular power. Moreover, intermediaries that gather, use, and sell personal data have considerable political power that could block legislation.

A worrisome possibility is that these intermediaries could support IP rights in personal data because it is likely to augment their ability to monetize that data and to exclude competitors.⁴⁵⁸ While some privacy legislation imposes direct regulatory constraints on personal data collection and use, the core of personal data proposals confers IP rights on consumers.⁴⁵⁹ The difficulty is

453. See Steven H. Hazel, *Personal Data as Property*, 70 SYR. L. REV. 1055 (2020); Leon Trakman, Robert Walters, & Bruno Zeller, *Is Privacy and Personal Data Set to Become the New Intellectual Property?*, 50 IIC – INT'L REV. INTELL. PROP. & COMPETITION L. 937 (2019); but see Lothar Determann, *No One Owns Data*, 70 HASTINGS L.J. 1 (2019); Mark A. Lemley, *Private Property*, 52 STAN. L. REV. 1125, 1151–70 (2000). The European Union, for example, has concluded that processing leading to new inferences about a person falls under the EU's General Data Protection Regulation. See Natasha Lomas, *Sensitive Data Ruling by Europe's Top Court Could Force Broad Privacy Reboot*, TECHCRUNCH (Aug. 2, 2022), <https://techcrunch.com/2022/08/02/cjeu-sensitive-data-case/>.

454. See Own Your Own Data Act, S. 806, 116TH CONG. (2019), <https://www.govtrack.us/congress/bills/116/s806>.

455. See Angelique Carson, *US Lawmakers Consider Whether Your Data Should Be a "Property Right,"* IAPP (Oct. 25, 2019), <https://iapp.org/news/a/us-lawmakers-consider-whether-your-data-should-be-a-property-right/>.

456. See Ryan Barwick, *Where privacy regulation stands ahead of 2023*, MKTG. BREW (Dec. 21, 2022), <https://www.marketingbrew.com/stories/2022/12/21/where-privacy-regulation-stands-ahead-of-2023>.

457. See Pamela Samuelson, *Privacy as Intellectual Property*, 52 STAN. L. REV. 1125, 1127–28 (2000).

458. See Cameron F. Kerry & John B. Morris, *Why Data Ownership Is the Wrong Approach to Protecting Privacy*, BROOKINGS (June 26, 2019), <https://www.brookings.edu/blog/techtank/2019/06/26/why-data-ownership-is-the-wrong-approach-to-protecting-privacy/>.

459. See *supra* note 454.

that consumers are quite likely to trade those rights for access to internet platforms such as Facebook and Twitter.⁴⁶⁰ Few users have the time, interest, or expertise to parse the contracts that govern the transfer of rights in personal data.⁴⁶¹ Even if they do examine these agreements it is difficult to value one's own data, particularly if its primary value is generated in combination with data from others.⁴⁶² The likelihood that consumers, as initial rights holders in personal data, will transfer those entitlements to dominant internet intermediaries, effectively makes those dominant platforms the true beneficiaries of a customized regime.⁴⁶³ This shift, combined with the market dominance of five firms as platforms, could lead those companies to support a customized regime that, while seemingly at odds with their financial interests, is actually promoting them.⁴⁶⁴ Ironically, if this possibility were to come to pass, it may create a successful customized IP regime—just not for the interest group for whom it was designed.⁴⁶⁵

Fortunately or not, personal data also demonstrates the challenges discussed in this Article's case studies. Proposals for a customized regime in personal data are bogged down by conflicts among interest groups, including smaller internet firms versus dominant ones, and by the challenges of specifying the relevant technologies, particularly with the advent of inferential data and sophisticated machine learning systems.

E. LOOKING TO THE FUTURE

Relying upon a specialized set of rules, rather than more general IP doctrines, may hinder rather than help developing industries. For example, quantum computing is a hot topic among physicists, computer scientists, and legal academics alike. The technology is in a nascent stage; both its promise and perils are likely overstated. But there are already proposals for a specialized

460. See Kerry & Morris, *supra* note 458.

461. *Id.*

462. *Id.*

463. See Stacy-Ann Elves, *Paying for Privacy and the Personal Data Economy*, 117 COLUM. L. REV. 1369, 1413–19 (2017).

464. See generally Emily Birnbaum, *Big Tech Divided and Conquered to Block Key Bipartisan Bills*, BLOOMBERG NEWS (Dec. 20, 2022), <https://www.bloomberg.com/news/articles/2022-12-20/big-tech-divided-and-conquered-to-block-key-bipartisan-bills> (discussing political power of dominant internet firms).

465. See Jian Jia, Ginger Zhe Jin, & Liad Wagman, *The Short-Run Effects of GDPR on Technology Venture Investment*, NBER WORKING PAPER 25248 (Nov. 2018), <https://www.nber.org/papers/w25248>.

quantum computing IP regime.⁴⁶⁶ While the proponents' motives are plainly laudable,⁴⁶⁷ endorsing a system where "policy makers should treat quantum as something unique and unprecedented"⁴⁶⁸ runs the same set of risks that the SCPA, AHRA, and VHDPA encountered. Moreover, despite the precautionary principle, it is likely too early in quantum computing's development to regulate it effectively.⁴⁶⁹ Imposing a new, customized IP system might well generate rules that are quickly obsolete, or that inadvertently shift technological development in a direction more amenable to capturing monopoly rents and less promising for quantum innovation.⁴⁷⁰

Artificial intelligence (AI) is another area where customized IP rules have recently been proposed, albeit with a reversal of the usual political alignment. AI systems such as large language models require large volumes of training data to perform accurately tasks such as natural language inference.⁴⁷¹ Some of this data is protected by copyright law, and some AI developers or consumers train systems on that data without permission.⁴⁷² Owners of the copyrighted data have commenced litigation over its use in training datasets;⁴⁷³ the principal question, since copying appears unquestioned, is whether liability is excused under the fair use doctrine.⁴⁷⁴ Data owners and commentators concerned about the unauthorized use of information in AI systems have sought to sidestep the uncertainties of fair use with another proposed IP regime: a federal

466. See Mauritz Kop & Mark Brongersma, *Integrating Bespoke IP Regimes for Quantum Technology into National Security Policy*, available at <https://dx.doi.org/10.2139/ssrn.4095763> (Aug. 8, 2021); Mauritz Kop, *Quantum Computing and Intellectual Property Law*, 25 BERK. TECH. L.J. 101 (2021).

467. See Kop, *supra* note 466, at 112–13 (describing concerns about overprotection of IP regimes).

468. See Kop & Brongersma, *supra* note 466.

469. See generally James McKenzie, *When Will Quantum Computers Finally Break Into The Market?*, PHYSICS WORLD (Apr. 3, 2023), <https://physicsworld.com/a/when-will-quantum-computers-finally-break-into-the-market/>.

470. But see Mateo Aboy, Timo Minssen, & Mauritz Kop, *Mapping the Patent Landscape of Quantum Technologies: Patenting Trends, Innovation and Policy Implications*, 53 IIC – INT'L REV. INTEL. PROP. & COMPETITION L. 853 (2022) (suggesting that disclosures from quantum computing patents increasingly create an information commons).

471. See Mark A. Lemley & Bryan Casey, *Fair Learning*, 99 TEX. L. REV. 743, 745–46, 750–54 (2021).

472. See *id.* at 747–49; James Vincent, *The Lawsuit That Could Rewrite the Rules of AI Copyright*, VERGE (Nov. 8, 2022), <https://www.theverge.com/2022/11/8/23446821/microsoft-openai-github-copilot-class-action-lawsuit-ai-copyright-violation-training-data>.

473. See Vincent, *supra* note 472; see Mark A. Lemley, *How Generative Copyright Turns Copyright Upside Down 2*, <https://dx.doi.org/10.2139/ssrn.4517702> (Aug. 4, 2023).

474. See Lemley & Casey, *supra* note 471, at 760–76.

right of publicity,⁴⁷⁵ for which the software company Adobe has coined the term “federal anti-impersonation right.”⁴⁷⁶ A bipartisan group of Senators⁴⁷⁷ has responded with the proposed NO FAKES Act,⁴⁷⁸ which creates an entitlement similar to state rights of publicity against digital replication of one’s persona during their lifetime or for seventy years after their death. The legislation, which remains in draft form, has received a mixed response thus far.⁴⁷⁹

The precise contours of such a federal entitlement are unknown at this point, since there have not even been specific proposals yet.⁴⁸⁰ If a federal right were modeled on various states’ rights of publicity, both statutory and common law, it would cover far more activity than just use in AI training data.⁴⁸¹ However, at present, the federal right of publicity is being discussed almost exclusively in the context of placing limits on AI training data.⁴⁸² Depending on how (and whether) the concept develops, such a federal right

475. See Jennifer E. Rothman, *Federal Right of Publicity Takes Center Stage in Senate Hearing on AI*, ROTHMAN’S ROADMAP TO THE RIGHT OF PUBLICITY (July 27, 2023), https://rightofpublicityroadmap.com/news_commentary/federal-right-of-publicity-takes-center-stage-in-senate-hearing-on-ai/.

476. See Dennis Crouch, *A National Right of Publicity: The Federal Anti-Impersonation Right (FAIR)*, PATENTLY-O (July 19, 2023), <https://patentlyo.com/patent/2023/07/national-publicity-impersonation.html>; Brandon Lyttle, *Adobe Urges Lawmakers To Penalize Individuals Who Use AI To Mimic Other Artist Styles*, NICHE GAMER (July 13, 2023), <https://nichegamer.com/adobe-urges-lawmakers-to-penalize-individuals-who-use-ai-to-mimic-other-artist-styles/>.

477. See NURTURE ORIGINALS, FOSTER ART, AND KEEP ENTERTAINMENT SAFE (NO FAKES) ACT, https://www.coons.senate.gov/imo/media/doc/no_fakes_act_one_pager.pdf (last visited Nov. 27, 2023).

478. See Senate Legislative Counsel, Draft Copy of EHF23968, https://rightofpublicityroadmap.com/wp-content/uploads/2023/10/2023.10.12-no_fakes_act_draft_text-EHF23968.pdf [hereinafter NO FAKES Act of 2023]; see generally *The Right of Publicity in the AI Age*, QUINN EMANUEL (Oct. 2, 2023), <https://www.quinnemanuel.com/the-firm/publications/the-right-of-publicity-in-the-ai-age/>. One admires the circumlocutions necessary to arrive at such a pithy acronym.

479. See Jennifer E. Rothman, *Draft Digital Replica Bill Risks Living Performers’ Rights over AI-Generated Replacements*, ROTHMAN’S ROADMAP TO THE RIGHT OF PUBLICITY (Oct. 20, 2023), https://rightofpublicityroadmap.com/news_commentary/draft-digital-replica-bill-risks-living-performers-rights-over-ai-generated-replacements/; but see Ethan Millman, *New Senate Bill Seeks to Protect Artists from AI Deepfakes*, ROLLING STONE (Oct. 12, 2023), <https://www.rollingstone.com/music/music-news/new-senate-bill-protect-artists-from-ai-deepfakes-1234852744/>.

480. See Rothman, *supra* note 475.

481. See generally Robert Post & Jennifer E. Rothman, *The First Amendment and the Right(s) of Publicity*, 130 YALE L.J. 86 (2020); Stacey L. Dogan & Mark A. Lemley, *What the Right of Publicity Can Learn from Trademark Law*, 58 STAN. L. REV. 1161 (2006); Michael Madow, *Private Ownership of Public Image: Popular Culture and Publicity Rights*, 81 CAL. L. REV. 125 (1993).

482. See Rothman, *supra* note 475.

could form a new type of customized IP regime: one that applies to a specific industry, such as software developers of artificial intelligence systems, but that is designed to hobble rather than bolster that industry. This inverts the typical political arrangement, as the affected industry has little to no effect on the configuration of the new regime. And it switches the risks of this customized IP regime variant; the concern is not that the affected industry will gain too much power or wealth but too little, thereby potentially inhibiting socially beneficial development of AI technologies.⁴⁸³

VI. CONCLUSION

Customized intellectual property regimes have enduring appeal despite their history of failing to deliver anticipated benefits to interest groups. That history suggests that new proposals to craft effective bespoke regimes will prove difficult to accomplish, even when advocates can draw upon popular but distasteful political suspicion of foreign competitors. It is easy for coalitions to break down and for business models to change in ways that are challenging to foresee. This may be both a cautionary tale for the interest groups who want special rules, and a happy one for legislators and larger social interests concerned about the adverse effects of laws that enable rent-seeking.

This pattern also has implications for the debate over the desirability of generalized or tailored intellectual property systems. It illustrates a risk of the tailored approach: capture of the drafting process by interest groups may lead to the instantiation of a customized system rather than a tailored one. And yet, customized IP regimes are not the nightmare of public choice theory because their parasitism is largely ineffective. However, they also fail to achieve the stated goals of tailored systems since they produce little incentive to innovate. Even though interest groups get the rules they asked for, neither they nor the larger public receive the desired benefits. The paradox of customized IP regimes is thus a cautionary tale in the governance of innovation.

483. See Corynne McSherry, *A Broad Federal Publicity Right Is a Risky Answer to Generative AI Problems*, EFF (July 18, 2023), <https://www.eff.org/deeplinks/2023/07/broad-federal-publicity-right-risky-answer-generative-ai-problems>.

VII. APPENDIX A: IP LEGISLATION METHODOLOGY

To assemble the initial list of contenders for IP-relevant legislation, we created a master list of all legislation passed from the 92nd Congress to the 117th Congress that contained related keywords. We searched Congress.gov for one of ten terms: intellectual property, trademark, copyright, patent, trade secret, industrial design, infringement, Title 17, Title 35, or Title 15. Then, we downloaded CSV files of all bills that were passed into legislation during these Congresses. These lists were compiled into one large list by copying and pasting them into one document. Duplicates were removed by sorting all columns by legislation number, then Congress, then title. Nested “if” statements were then used to command Excel to propagate the next column over with either the legislation number, or with a blank cell if the legislation number and congress number were identical to the row above. An example is `=IF(A1=A2,IF(B1=B2,“”,A2),A2)`. This new column could then be copied and pasted into the next column over as plain numbers rather than equations. Then, the Excel sheet was sorted by this new column and all rows with blank cells were identified as duplicates and deleted. This provided a master list of all legislation passed containing one or more of the ten keywords, but that did not reflect which keywords were present in each bill. The master list had the same number of results (1229) as doing a search for all keywords using OR statements in Congress.gov, allowing us to verify our results by using two different methods.⁴⁸⁴

Next, we compared a list of legislation for each individual keyword to the master list. We did this by concatenating the legislation number and congress into one unique cell in both the master list and each keyword list. We then commanded Excel to identify any exact matches in the concatenated lists by filling in the keyword of interest; any rows that had no match were filled with #N/A. This was done using the vlookup function. An example is `=VLOOKUP(G2,‘intellectual property’!E:F,2,FALSE)`. This was done for each keyword. The resulting list was then compared to a list that had been manually compiled for the key terms “intellectual property,” “trademark,” and “copyright” to confirm that the program was working accurately.

Finally, we analyzed whether these laws created customized IP regimes. We checked the text of 34.9% of such laws to assess whether the legislation met this Article’s criteria. We did not find any laws apart from the SCPA, AHRA, and VDHPA that resulted in customized IP regimes of any significant

484. For a complete version of the spreadsheet, see https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4548113.

size (in contrast, for example, to creating rights in the term “National Tropical Botanical Garden”).⁴⁸⁵

485. *See supra* note 47.

TRADEMARK FREE RIDERS

Michael Grynberg[†]

ABSTRACT

Trademark law cares a lot about the concept of “free riding.” Judges prone to moralizing often care more about condemning defendants who use other people’s trademarks than they do about considering the public benefits of the challenged activities. This intuition has left its mark on trademark doctrine. Even adjudicators inclined to utilitarian thinking must nonetheless consider the good or bad faith of trademark defendants as part of basic trademark infringement analysis.

Inquiries of this sort are one-sided. Free-riding stories generally benefit trademark plaintiffs, not defendants. Given the resulting imbalance in the law, many trademark reformers argue that free-riding narratives should lose their power to shape (and distort) doctrine. That’s all well and good, but what if the force of anti-free-riding stories stems not from rational argument but from hardwired human intuitions? What if we’re stuck with them?

If we are, we can at least recognize that trademark holders free ride, too. As it is, trademark precedent lacks a vocabulary for describing plaintiff free riding, which creates important doctrinal gaps. This asymmetry should be corrected. If morality stories are to be a part of trademark law, then they should be applied in a balanced manner. This Article explores the ways that trademark holders free ride on culture, competitors, and consumers; describes how trademark doctrine accounts or fails to account for plaintiff free riding; and offers some suggestions for reform.

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I. INTRODUCTION

Whoever reaps where he did not sow, wrongfully appropriates what belongs to another, and equity will not stay the hand of the rightful owner of the harvest against him.¹

This Article is about the concept of “free riding” in trademark law. In trademark litigation, stories about free riders typically benefit trademark owners.² Judges prone to moralizing fret about defendants who reap without sufficient sowing.³ They worry whether a defendant is free riding on the plaintiff’s trademark’s goodwill⁴ or whether a merchant who creates an attractive mark receives an adequate reward.⁵ All this moralizing has left a mark on trademark doctrine.⁶ Even utilitarian jurists who have no time for

1. *McMillin v. Barclay*, 16 F. Cas. 302, 307 (C.C.W.D. Pa. 1871) (No. 8,902).

2. *See infra* Section II.B.

3. *See, e.g., Janet Travis, Inc. v. Preka Holdings, L.L.C.*, 856 N.W.2d 206, 211 (Mich. Ct. App. 2014) (“Business owners, who invest significant amounts of money and effort to convince consumers to identify their marks with their products and services, needed a remedy against competitors who sought to free ride on this accumulated goodwill by copying or pirating already established marks.”).

4. *See infra* notes 57–59 and accompanying text.

5. RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 17 (AM. L. INST. 1995) (“A manufacturer thus does not forfeit trademark rights simply because prospective purchasers find the design aesthetically pleasing.”); *cf. Qualitex Co. v. Jacobson Prods. Co.*, 514 U.S. 159, 170 (1995) (“That examination should not discourage firms from creating esthetically pleasing mark designs, for it is open to their competitors to do the same.”).

6. *See infra* Section II.B.

sermonizing must consider the good or bad faith of trademark defendants as part of trademark infringement analysis.⁷

These inquiries are one-sided. Free-riding stories either benefit trademark plaintiffs or are neutral.⁸ They rarely *help* defendants.⁹ Given the resulting tilt in case outcomes, many trademark reformers argue that free-riding narratives should lose their power to shape (and distort) trademark law.¹⁰ That's all well and good, but what if the force of anti-free-riding stories stems not from rational argument but hardwired human intuitions? What if we're stuck with them?

This Article takes a fresh look at trademark free-riding stories by considering the flip side of the free-riding coin. If the resonance of free-riding stories cannot be eliminated, they can at least be ameliorated by recognizing a simple truth. *Trademark holders free ride, too.* As it is, the relative silence in trademark precedent about plaintiff free riding leaves critical doctrinal gaps.¹¹ This asymmetry should be corrected. If morality stories are to be a part of trademark law—and this Article accepts them as a fact of life—then they should be applied in a balanced manner.

Part II provides an overview of free riding and its historical use to expand the scope of trademark rights. Part III explores the ways that trademark holders free ride and considers how trademark doctrine accounts—and fails to account—for such efforts. The gaps often appear in situations where

7. See *infra* note 77 and accompanying text.

8. See, e.g., *Fuji Photo Film Co. v. Shinohara Shoji Kabushiki Kaisha*, 754 F.2d 591, 596 (5th Cir. 1985) (“Good faith is not a defense to trademark infringement. The reason for this is clear: if potential purchasers are confused, no amount of good faith can make them less so. Bad faith, however, may, without more, prove infringement.” (citations omitted)); *Pizzeria Uno Corp. v. Temple*, 747 F.2d 1522, 1535 (4th Cir. 1984) (“The intent of the defendant is sometimes a major factor in infringement cases. If there is intent to confuse the buying public, this is strong evidence establishing likelihood of confusion, since one intending to profit from another’s reputation generally attempts to make his signs, advertisements, etc., to resemble the other’s so as deliberately to induce confusion. But if there is good faith belief that a subsequently-adopted mark will not lead to confusion, however, that intent is no defense if a court finds actual or likelihood of confusion.” (citations omitted)).

9. To be sure, questions of good faith can be turned on trademark plaintiffs, but they are not typically questions of free riding. Trademark holder free riding is the subject of Part III.

10. See, e.g., Mark A. Lemley & Mark P. McKenna, *Onning Mark(et)s*, 109 MICH. L. REV. 137, 189 (2010); Robert G. Bone, *Hunting Goodwill: A History of the Concept of Goodwill in Trademark Law*, 86 B.U. L. REV. 547, 621–22 (2006); Michael Grynberg, *Trademark Litigation as Consumer Conflict*, 83 N.Y.U. L. REV. 60, 116–18 (2008); Glynn S. Lunney, Jr., *Trademark Monopolies*, 48 EMORY L.J. 367, 442 (1999); William P. Kratzke, *Normative Economic Analysis of Trademark Law*, 21 MEM. ST. U. L. REV. 199, 212–25 (1991).

11. See *infra* Part III.

adjudicators recognize trademark free riders for what they are but lack doctrinal tools to respond. Part IV offers some suggestions for addressing the resulting imbalances in trademark law.

II. FREE RIDING AND ITS DISCONTENTS

Generally the prior appropriator may enjoin use of an identical name by a subsequent arrival. Normally the latter seeks an unfair advantage, a ‘free ride’ on another’s established good will; he is subjectively guilty and objectively deceptive.¹²

This Part lays some groundwork by defining free riding and suggesting that our intuitions about free riding are innate (or so deeply culturally ingrained as to be functionally innate) and resistant to change. The remainder of this Part discusses how these perceptions shape trademark law, both as a matter of history and contemporary doctrine.

A. DEFINING FREE RIDING

This Article uses the term “free riding” to refer to a lay intuition that a person or entity behaves wrongfully when they benefit from the effort of others without making—in the eye of the beholder—an appropriate contribution to those efforts.¹³ Not every uncompensated benefit triggers the intuition. We do not view, for example, the ordinary consumer surplus that

12. *Laws. Title Ins. Co. v. Laws. Title Ins. Corp.*, 109 F.2d 35, 43 (D.C. Cir. 1939) (footnote omitted).

13. We should also clarify the relationship between free riding and the behavior labeled “rent seeking.” To be sure, it may be seen as a subset of free riding. In this Article, however, I want to distinguish situations in which we would see the free rider/rent seeker as having “done the work,” so to speak, from those in which they have not. This is of course a judgment call. But I take as a premise that there is a difference between the two situations once we are far enough removed from the line. Consider, for example, the situation in the famous *Sony* case. *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417 (1984). There, plaintiffs tried to leverage their copyrights into control over the nascent market for VCRs. This can be seen as rent-seeking behavior, but the copyrights that gave the plaintiffs their ticket to sue reflected actual efforts on the part of the authors of the works. They thus stand on a different moral plane than, say, one bringing a copyright claim against a defendant who engaged in independent creation, drawing on similar public domain materials as the plaintiff used in their work.

In the trademark realm, dilution claims are often criticized as rent seeking, but the mark holder in that situation has actually created a mark with valuable goodwill. This is also true of the classic merchandising situation, as when a sports team seeks control of merchandise using its logo. Yes, the merchandiser is often trying to appropriate value that has in part been created by fans of the mark, but typically the merchandising entity has done something to create value as well.

comes with purchases below one's willingness to pay as free riding.¹⁴ Nor does the intuition reach situations in which the party expending effort has no expectation of compensation, as when one makes a home repair that so beautifies the house as to raise neighborhood property values. Examples like these are excluded not because there is no free riding—from a certain point of view—but because there is no general moral intuition that compensation is appropriate.¹⁵

A lay approach sits near, but is distinct from, two alternatives.

1. *Free Riding, Public Goods, and Intellectual Property*

The first alternative concerns the economic problem of the provision of public goods. How does one secure contributions to the creation of non-excludable benefits?¹⁶ National defense is a classic example. An army protects its nation's borders regardless of whether any individual citizen contributes resources to the effort. This creates the potential for free riding that, in the military example, is typically solved by government provision supported by mandatory taxation.

Property rights are another option. Such rights (or rights akin to them) can incentivize the creation of public goods like those protected by intellectual property rights,¹⁷ as they let creators use rights to exclude as a means to demand payment for their work.¹⁸ In this arid analysis, intellectual property

14. Cf. John F. Duffy, *Intellectual Property Isolationism and the Average Cost Thesis*, 83 TEX. L. REV. 1077, 1084 (2005) (“If I sneak onto a bus without paying, then I could fairly be called a free rider. If I pay the \$1.00 fare demanded by the bus company, I doubt that very many people would call me a free rider even though I valued the trip at \$5.00 and reaped a \$4.00 consumer surplus.”).

15. Compare *id.* at 1084–85, with Mark A. Lemley, *Property, Intellectual Property, and Free Riding*, 83 TEX. L. REV. 1031, 1048–49 (2005).

16. Russell Hardin & Garrett Cullity, *The Free Rider Problem*, STAN. ENCYCLOPEDIA PHIL. (Oct. 13, 2020), <https://plato.stanford.edu/archives/win2020/entries/free-rider/> (“A free rider, most broadly speaking, is someone who receives a benefit without contributing towards the cost of its production. The *free rider problem* is that the efficient production of important collective goods by free agents is jeopardized by the incentive each agent has not to pay for it: if the supply of the good is inadequate, one's own action of paying will not make it adequate; if the supply is adequate, one can receive it without paying.”).

17. IP subject matter has long been recognized as raising a public goods problem. See generally Dane S. Ciolino, *Rethinking the Compatibility of Moral Rights and Fair Use*, 54 WASH. & LEE L. REV. 33, 55 n.111 (1997) (collecting cites).

18. See generally, e.g., WILLIAM M. LANDES & RICHARD A. POSNER, *THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW* (2003). This is aside from the role of property rights as a potential solution to the problem of overconsumption in scarcity situations. In the famous tragic common pasture, property rights will deter overconsumption of the field while providing an incentive to make investments that will improve yield. Garrett Hardin, *The Tragedy of the Commons*, 162 SCI. 1243 (1968).

(IP) rights are a utilitarian solution to a utilitarian problem, and their precise calibration requires balancing incentive effects against the burdens on other creators in making works of their own.¹⁹ And, of course, the property solution coexists with other possibilities for solving the public goods problem, potentially mitigating the need for strong IP rights.²⁰

The U.S. tradition usually looks to incentive stories to explain why we empower creators with IP rights,²¹ but the mix of reasons includes morality. Advocates of strong IP rights often invoke preventing the evils of “free riding” as justification.²² Many scholars disagree and attack the notion of free riding as incoherent and unduly costly to society when taken too seriously.²³ Others defend the concept from these attacks.²⁴ This leads to any number of inconclusive debates, for the anti-free-riding case resonates in a manner that argumentation to the contrary has not (and perhaps cannot) overcome.²⁵ On the other hand, society needs to carry on, and giving maximum control to rightsholders would render progress impossible.²⁶ So we muddle along,

19. See, e.g., Adam Moore & Ken Himma, *Intellectual Property*, STAN. ENCYCLOPEDIA PHIL. § 4.4 (Oct. 10, 2018), <https://plato.stanford.edu/archives/win2018/entries/intellectual-property/>.

20. *Id.* § 3.2.2.

21. U.S. CONST. art. I, § 8, cl. 8 (giving Congress the power to “promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries”).

22. See, e.g., Wendy J. Gordon, *On Owning Information: Intellectual Property and the Restitutionary Impulse*, 78 VA. L. REV. 149, 156 (1992) (“I suspect that this common law trend toward granting new intellectual property rights has been fueled largely by two forces. On the one hand is an intuition of fairness—a norm often linked to natural rights—that one should not ‘reap where another has sown.’” (footnotes omitted)); cf., e.g., *Int’l News Serv. v. Associated Press*, 248 U.S. 215, 239–40 (1918) (misappropriation case concerning “hot news” that observes that the copyist defendant taking facts from published news stories “in appropriating it and selling it as its own is endeavoring to reap where it has not sown, and by disposing of it to newspapers that are competitors of complainant’s members is appropriating to itself the harvest of those who have sown”); Arthur William Barber, *Book Review*, 35 YALE L.J. 520, 521 (1926) (“The first English law of copyright (8 Anne, Ch. 19) was the original charter of liberties for authors, for it initiated a condition in which they became entitled to enjoy the profits from their intellectual labors and able to reap where they had sown.”).

23. See, e.g., Lemley, *supra* note 15, at 1068–69 (“Free riding encompasses both conduct that simply captures consumer surplus or other uncompensated positive externalities and conduct that reduces the return to the intellectual property owner to such an extent that it cannot cover its costs. Only the latter is of concern, and free riding as a concept will not help us to distinguish the two.”).

24. See, e.g., Duffy, *supra* note 14, at 1084–85.

25. See *infra* Section II.A.3.

26. For example, in the copyright realm, the idea-expression dichotomy recognizes the distinction between protecting, say, the film *Rocky* versus locking up the idea of an underdog

balancing between the claims of creators—who themselves build on and benefit from the work of others—and everyone else.

My definition of free riding diverges from the economic analysis in that it focuses on adjudicator intuition rather than any particular external criterion designed to determine the adequacy of contributions or the optimal supply of goods. This is because it is the perception of adjudicators that matters in litigation. Concrete criteria for such judgments are hard to come by in any case. After all, many “wrongful” free riders may well contribute efforts of their own. In the copyright realm, for example, the copyist who rips off a novel might have invested in the means to make and distribute the copies. Most of us, I imagine, would nonetheless call this free riding because it doesn’t account for the work of writing the novel in the first place. We then get harder questions when the infringing work isn’t a one-to-one copy but makes modifications—e.g., a derivative work, a translation, an abridgment, a commentary, a satire, a parody—or is fodder for some different project—e.g., a search engine for literary works. And copyright doctrine makes judgments about which efforts rise above the free-rider label by applying doctrines like fair use²⁷ and the idea-expression dichotomy to sort the infringing from the licit.²⁸

2. *Free Riding and Morality*

For a similar reason, this Article does not engage the normative question of whether “free riding,” in whatever form, is actually “wrong” as a moral matter. Law professor guild rules require me to mention Lockean labor theory here,²⁹ and a rich literature debates the claim that creators of intellectual content should have the right to control non-rival uses regardless of the

fighting against the champion. *Cf.* *Nichols v. Universal Pictures Corp.*, 45 F.2d 119, 121 (2d Cir. 1930) (“Upon any work . . . a great number of patterns of increasing generality will fit equally well, as more and more of the incident is left out. The last may perhaps be no more than the most general statement of what the play is about, and at times might consist only of its title; but there is a point in this series of abstractions where they are no longer protected, since otherwise the playwright could prevent the use of his ‘ideas,’ to which, apart from their expression, his property is never extended.”).

27. 17 U.S.C. § 107.

28. 17 U.S.C. § 102(b).

29. JOHN LOCKE, *TWO TREATISES OF GOVERNMENT* 305–06 (Peter Laslett ed., Cambridge Univ. Press 1988) (1690). For an account applying Locke to the question of the appropriate scope of IP rights, see Wendy J. Gordon, *A Property Right in Self-Expression: Equality and Individualism in the Natural Law of Intellectual Property*, 102 *YALE L.J.* 1533 (1993).

instrumental consequences.³⁰ Likewise, scholars contest what is or is not normatively acceptable free riding.³¹

This Article takes no position on these debates, preferring to take adjudicator intuitions as a given without arguing for any particular view of when free riding is moral or not.³² Instead, the assumption is that the tendency to make judgments about free riders is innate and, therefore, not likely subject to effective argumentation.

3. *Free-Riding Judgments as Human Hardwiring*

The prospect that intuitions about free riding are hardwired appears in the trademark literature as an unwelcome possibility. In their attack on the use of anti-free-riding arguments to justify expanded trademark rights, Mark Lemley and Mark McKenna argue that the power of free-riding stories cannot be justified from either a utilitarian or a normative perspective.³³ They nonetheless acknowledge the possibility that their efforts might not matter if anti-free-riding intuitions are simply an immutable fact of life:

One might perhaps turn to sociobiology: it may be that we are hard-wired with some version of the Golden Rule, and that free riding—*when painted as such*—offends our sense of justice. But if so, our genes are serving us ill.³⁴

One senses their despair at the prospect, but there is also opportunity. If trademark restrictionists can craft arguments that trigger the intuition that the trademark holder is the one who is free riding, then free-riding arguments need not monolithically favor trademark expansion. Part III lays the groundwork for such arguments.

Before getting there, however, it is worth noting that there is some evidence for the descriptive point upsetting Lemley and McKenna—that our anti-free-riding intuitions are both hardwired and resistant to argument. Some researchers trace the instinct against free riding to our evolutionary success as a species.³⁵ On this account, one of humanity's distinguishing features is our

30. Moore & Himma, *supra* note 19, § 3.3.

31. For a summary of some views pertaining to the provision of collective goods, see Hardin & Cullity, *supra* note 16, § 6.

32. I am, however, using my own intuitions—informed by the caselaw discussed in the next Part—as a descriptive proxy for the lay intuition that something is free riding.

33. Lemley & McKenna, *supra* note 10.

34. *Id.* at 184 (emphasis added).

35. John Tooby, Leda Cosmides & Michael E. Price, *Cognitive Adaptations for n-Person Exchange: The Evolutionary Roots of Organizational Behavior*, 27 *MANAGERIAL & DECISION ECON.* 103 (2006); Andrew W. Delton, Leda Cosmides, Marvin Guemo, Theresa E. Robertson &

ability to engage in complex cooperation outside the realm of an immediate family group.³⁶ The potential returns to cooperating groups are superior because they magnify the number of potential actors and the returns to scale beyond what is possible in smaller units of closely related actors.³⁷

Because cooperation also incurs costs, the existence of free riders may complicate the accounting. A free rider may reap the benefits from cooperation without incurring the costs.³⁸ The superior net returns would favor the free rider, leading to the demise of cooperation over the long run as free riders outcompete cooperators and reduce their number until ultimately there is no one left who is inclined to cooperate.³⁹

Securing the superior returns of cooperation requires a mechanism for identifying and screening out the free riders.⁴⁰ A body of scholarship posits that we have evolved the ability to do so as part of our innate cognitive toolkit.⁴¹ On this account, our ability to identify free riders is a distinct skill. We are capable of distinguishing between, say, those who free ride and those who cannot contribute under particular circumstances, but would contribute to collective enterprises when able.⁴²

John Tooby, *The Psychosemantics of Free Riding: Dissecting the Architecture of a Moral Concept*, 102 J. PERSONALITY & SOC. PSYCH. 1252, 1252 (2012) (“The fact that humans routinely engage in collective action raises the hypothesis that our psychological architecture contains evolved specializations that allow us to solve the formidable problems that prevent its evolution in other species.”).

36. Other examples of mass cooperation in nature involve closely related groups, as in the social insects. Delton et al., *supra* note 35, at 1252.

37. *Id.* at 1253.

38. *Id.*

39. *See id.*

40. *Id.* (“To evolve and be stably maintained by natural selection, designs that cause cooperation need to accrue a higher average payoff than designs that cause free riding. When there are repeated interactions, strategies that cooperate conditionally can outperform exploitive strategies by channeling their cooperative efforts towards other cooperators and away from free riders.”).

41. *Id.* at 1254 (“When we say that conditional cooperators must identify free riders, we mean that designs that cause conditional cooperation will not be selected for and maintained in a population unless they identify those with a disposition to free ride. By disposition to free ride, we mean those with a greater tendency to free ride than others, whether because of ontogenetic calibration, heritable genetic variation, or the nature of the current situation.”).

42. *Id.* (“The benefits of repeated mutual cooperation fail to materialize, however, when there are false alarms—that is, when a conditional cooperator is misidentified as a free rider. If Jack incorrectly categorizes Jill as a free rider, he will punish or withdraw cooperation from Jill. Jill is likely to respond by withdrawing cooperation from Jack. Because of this initial false alarm, Jack and Jill thereby miss out on a string of benefits that each could have harvested by cooperating in collective actions with the other.”); *see also* Andrew W. Delton, Max M.

Some research suggests that this capacity is indeed part of the human mental toolbox, as the tendency to punish free riders or withhold effort in their presence has been observed in empirical studies.⁴³ Moreover, it appears to be a sense that is calibrated and attuned to the difference between willful free riding and an involuntary inability to contribute to collective enterprise.⁴⁴ The intuition does not require that one suffer from the conduct of the free rider (that is, one may make the assessment when judging from afar),⁴⁵ and the intuition is susceptible to framing effects.⁴⁶

Similar claims have been made by proponents of “Moral Foundations Theory” (MFT), which posits that the human mind contains frameworks that predispose us to certain kinds of moral judgments.⁴⁷ Though these inclinations can be overcome by reason or circumstance, they bias us to particular moral conclusions in a way that precedes rational analysis.⁴⁸

Krasnow, Leda Cosmides & John Tooby, *Evolution of Direct Reciprocity Under Uncertainty Can Explain Human Generosity in One-Shot Encounters*, 108 PROC. NAT’L ACAD. SCI. 13335, 13335 (2011) (maintaining that “a broad array of experimental and neuroscientific evidence has accumulated over the last two decades supporting the hypothesis that our species’ decision-making architecture includes both cognitive and motivational specializations whose design features are specifically tailored to enable gains through direct reciprocity (e.g., detection of defectors and punitive sentiment toward defectors)”).

43. See Delton et al., *supra* note 35, at 1253 (“Consistent with [the analyses of game theory], empirical studies of human cooperation show that free riding often elicits anger from contributors, many of whom respond by punishing the free rider or by down-regulating their own contributions to the group effort.”).

44. Delton et al., *supra* note 35, at 1267 (discussing experiments indicating that “the mind classifies individuals as free riders only when their behavior indicates they have a psychological design or calibration that causes them to consume benefits while withholding contributions”).

45. Robin P. Cubitt, Michalis Drouvelis, Simon Gächter & Ruslan Kabalin, *Moral Judgments in Social Dilemmas: How Bad Is Free Riding?*, 95 J. PUB. ECON. 253, 254 (2011).

46. *Id.* (“[W]e find a strong framing effect in moral evaluations: other things equal, subjects condemn withdrawing support from the public good less than the corresponding equivalent action of failing to contribute to it.”).

47. On this view:

The mind is divided into parts, like a rider (controlled processes) on an elephant (automatic processes). The rider evolved to serve the elephant.

You can see the rider serving the elephant when people are morally dumbfounded. They have strong gut feelings about what is right and wrong, and they struggle to construct post hoc justifications for those feelings. Even when the servant (reasoning) comes back empty-handed, the master (intuition) doesn’t change his judgment.

JONATHAN HAIDT, *THE RIGHTEOUS MIND: WHY GOOD PEOPLE ARE DIVIDED BY POLITICS AND RELIGION* 49–50 (2012).

48. *Id.* at 27–71 (summarizing evidence).

MFT theorists identify a number of moral senses, called foundations.⁴⁹ One such sense is our capacity to appreciate “Fairness/Cheating.”⁵⁰ As with the tale about the evolution of free riding detection, the story behind it focuses on the advantages of cooperation beyond one’s immediate family group,⁵¹ which summons the need for a mechanism to assess the proportionality of contribution in order to punish free riders when necessary.⁵² Perhaps this smacks too much of evolutionary biological “just so” stories, but even if the tendency is better explained by culture, MFT advocates argue that it has been observed in multiple cultures.⁵³

B. THE ANTI-FREE-RIDER IMPULSE AND TRADEMARK DOCTRINE

No matter its origin, the anti-free-riding intuition is important to trademark doctrine both historically and in modern trademark litigation.

49. Jesse Graham, Jonathan Haidt, Sena Koleva, Matt Motyl, Ravi Iyer, Sean P. Wojcik & Peter H. Ditto, *Moral Foundations Theory: The Pragmatic Validity of Moral Pluralism*, 47 *ADVANCES EXPERIMENTAL SOC. PSYCH.* 55, 67–71 (2013). According to MFT theorists, the list of foundations is subject to ongoing refinement. *Id.* at 57 (“We grant right at the start that our particular list of moral foundations is unlikely to survive the empirical challenges of the next several years with no changes.”).

50. *Id.* at 69–70.

51.

All social animals face recurrent opportunities to engage in non-zero-sum exchanges and relationships. Those whose minds are organized in advance of experience to be highly sensitive to evidence of cheating and cooperation, and to react with emotions that compel them to play “tit for tat” (Trivers, 1971), had an advantage over those who had to figure out their next move using their general intelligence. (See Frank, 1988, on how rational actors can’t easily solve “commitment problems,” but moral emotions can.)

Id. at 69 (citing Robert L. Trivers, *The Evolution of Reciprocal Altruism*, 46 *Q. REV. BIOLOGY* 35 (1971); ROBERT H. FRANK, *PASSIONS WITHIN REASON: THE STRATEGIC ROLE OF THE EMOTIONS* (1988)).

52.

Gossip about fairness, for example, is ubiquitous. From hunter-gatherers (Wiessner, 2005) to Chaldean-Iraqi merchants in Michigan (Henrich and Henrich, 2007) to college roommates sharing a kitchen, people gossip frequently about members of their group who cheat, fail to repay favors, or take more than their share. In fact, Dunbar (1996) reports that one of the principle functions of gossip is to catch cheaters and free-riders within groups.

Id. at 109 (citing Polly Wiessner, *Norm Enforcement Among the Ju/’hoansi Bushmen: A Case of Strong Reciprocity?*, 16 *HUM. NATURE* 115 (2005); NATALIE HENRICH & JOSEPH HENRICH, *WHY HUMANS COOPERATE: A CULTURAL AND EVOLUTIONARY EXPLANATION* (2007); ROBIN DUNBAR, *GROOMING, GOSSIP, AND THE EVOLUTION OF LANGUAGE* (1996)).

53. *See supra* note 52.

1. *Free Riding and Unfair Competition*

Free-riding stories figured prominently in unfair competition law, which forms the basis of a lot of modern trademark law. Unfair competition cared about relative morality,⁵⁴ as wrongful intent could make otherwise acceptable behavior into a tort.⁵⁵ In the pre-Lanham Act divide between trademark and unfair competition law, intent was not an element of trademark infringement but mattered for unfair competition claims.⁵⁶ Unfair competition cases treated the appropriation of a markholder's goodwill as the fundamental wrong (more so than the confusion of consumers) that demanded a remedy.⁵⁷ This concern with the "misappropriation" of goodwill lends itself naturally to the logic of the anti-free-riding impulse.⁵⁸ The drafters of the Lanham Act emphasized it as a fundamental purpose of the statute that would unify federal trademark

54. Mark P. McKenna, *The Normative Foundations of Trademark Law*, 82 NOTRE DAME L. REV. 1839, 1848 (2007) ("'[T]raditional' American trademark law was unapologetically producer-oriented. Trademark law, indeed all of unfair competition law, was designed to promote commercial morality and protect producers from illegitimate attempts to divert their trade."); Bone, *supra* note 10, at 553 ("The notion that trademark law protects goodwill from appropriation is not a modern invention; it has been around in one form or another for more than one hundred years. Thus, blaming judges for applying their own morality instead of following the law oversimplifies the problem.").

55. McKenna, *supra* note 54, at 1862 ("Use of another's trade name . . . may have had an innocent purpose, such as description of the product's characteristics or its geographic origin. As a result, in contrast to trademark infringement plaintiffs, unfair competition claimants had to prove that the defendant intended to pass off its products as those of the plaintiff.").

56. *Id.*

57. Bone, *supra* note 10, at 572–73. Bone writes, "In a 1909 article, Edward Rogers, one of the leading early twentieth century trademark practitioners and commentators, made the point in the clearest possible terms. He first dismissed the notion that trademark infringement and unfair competition were radically separate torts. For Rogers, both were based on the same principle: '[e]ach is a trespass upon business good will.'" *Id.* (citing Edward S. Rogers, *Comments on the Modern Law of Unfair Trade*, 3 ILL. L. REV. 551, 553 (1909)) (footnotes omitted). Free-riding concerns also played a role in the pre-Lanham Act expansion of trademark doctrine to reach conduct in non-identical markets. *Id.* at 593–98.

58.

The logic of the misappropriation argument is deceptively simple: a defendant who attracts consumers by using the plaintiff's mark improperly benefits from the plaintiff's goodwill. It does not matter whether consumers are confused or even whether the defendant's use diverts business from the plaintiff. Nor does it matter whether plaintiff's goodwill is impaired or diminished in any way. It is enough that, in the famous metaphor of *International News Service v. Associated Press*, the defendant "reap[s] where it has not sown." In other words, the wrong, both moral and legal, consists in free riding, that is, benefiting from something of value that another has invested in creating.

Id. at 550–51 (quoting 248 U.S. 215, 239 (1918)).

and unfair competition law.⁵⁹ As the next Section details, free-riding concerns continued to shape doctrine notwithstanding the fact that the statute made “likelihood of confusion” the metric of liability.⁶⁰

This is not to say that free-riding stories explained the totality of trademark law; just that they had a seat near the head of the table. Some opinions debated the importance of preventing free riding, as seen in this 1948 dissent by Judge Frank:

Suppose that a candy merchant made and sold candy called ‘Cadillac.’ No one would think that that candy was made or sponsored by the manufacturer of the Cadillac automobile. Nor would the automobile manufacturer be entitled to an injunction against the candy-maker merely because the latter deliberately chose the name, intending to acquire the advantages accruing to him from the elaborate advertising of the Cadillac. Where, in such a case, the probability of confusion of source is not otherwise proved, evidence of such an intention is irrelevant. In such circumstances, the fact of a ‘free ride’ is immaterial. Judge Wyzanski has referred to the ‘now discredited theory’ of the ‘free ride.’ Indeed, a ‘free ride,’ without more, is in line with the theory of competition.⁶¹

Although critical of free-riding narratives, the passage hints at the asymmetry that makes them so pernicious, as the interest in competition is raised without praise to match the implicit assumption that free riding is wrongful. For many courts, free riding is bad⁶² unless the judges are in the mood to promote competition.⁶³ And even language about the value of

59. In enacting the statute, the Senate Committee on Patents indicated a dual concern with “protect[ing] the public so that it may be confident that, in purchasing a product . . . , it will get the product which it asks for and wants to get” and protecting sellers’ “energy, time, and money in presenting to the public the product . . . from . . . misappropriation by pirates and cheats.” S. REP. NO. 79-1333, at 3 (1946).

60. See *infra* notes 73–140 and accompanying text.

61. Triangle Publ’ns, Inc. v. Rohrllich, 167 F.2d 969, 978 (2d Cir. 1948) (Frank, J., dissenting) (footnotes omitted), *overruled by* Monsanto Chem. Co. v. Perfect Fit Prods. Mfg. Co., 349 F.2d 389 (2d Cir. 1965).

62. Bone, *supra* note 10, at 601 (“While the debate over the merits of broad trademark protection raged in the courts and Congress, the ‘free ride theory’ continued to play a role in some of the broadest trademark decisions, notwithstanding Judge Frank’s claim of its demise.”); *id.* at 601 n.312 (collecting cases); 1 J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 2:4 n.8 (5th ed. 2010) (collecting cases); see, e.g., Mastercrafters Clock & Radio Co. v. Vacheron & Constantin-LeCoultre Watches, Inc., 221 F.2d 464, 466–67 (2d Cir. 1955) (“Plaintiff’s intention thus to reap financial benefits from poaching on the reputation of the Atmos clock is of major importance.”).

63. See, e.g., Kellogg Co. v. Nat’l Biscuit Co., 305 U.S. 111, 122 (1938) (“Sharing in the goodwill of an article . . . is the exercise of a right possessed by all . . .”). See generally 1

trademarks in promoting competition is often inflected with the moral vocabulary of free riding.⁶⁴

This asymmetry means that free-riding stories always lurk as a potential thumb on the scale in favor of trademark plaintiffs unless outweighed by some competing consideration. Consider *Smith v. Chanel*,⁶⁵ a case known for the principle that talking about a trademark holder is not trademark infringement.⁶⁶ The defendant marketed perfume under the promise that it smelled like CHANEL No. 5 but cost less.⁶⁷ The markholder objected, and the district court agreed that the defendant's advertisement "appropriates from plaintiffs, the goodwill, reputation and commercial values inherent in the trademarks which plaintiffs have created over many years from the expenditure of great effort, skill and ability."⁶⁸ In seeking to reap the benefits of the plaintiff's labor, the district court went on, the defendant "is actually attempting to take a free ride on plaintiffs' widespread goodwill and reputation."⁶⁹

The Ninth Circuit reversed but did not quibble with the district judge's moral framing, agreeing that "[d]isapproval of the copyist's opportunism may be an understandable first reaction."⁷⁰ That said, "this initial response to the problem has been curbed in deference to the greater public good.' By taking his 'free ride,' the copyist, albeit unintentionally, serves an important public interest by offering comparable goods at lower prices."⁷¹

MCCARTHY, *supra* note 62, § 2:4 ("Sometimes, what the plaintiff calls "free riding" is no more than a form of fair competition."); *id.* nn.10–11 (collecting examples).

64.

[Trademark] law helps assure a producer that it (and not an imitating competitor) will reap the financial, reputation-related rewards associated with a desirable product. The law thereby "encourage[s] the production of quality products," and simultaneously discourages those who hope to sell inferior products by capitalizing on a consumer's inability quickly to evaluate the quality of an item offered for sale.

Qualitex Co. v. Jacobson Prods. Co., 514 U.S. 159, 164 (1995) (quoting 1 J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 2.01[2] (3d ed. 1994)).

65. *Smith v. Chanel, Inc.*, 402 F.2d 562 (9th Cir. 1968).

66. A principle that the Ninth Circuit today protects with the nominative fair use doctrine. *See, e.g.*, *Toyota Motor Sales, U.S.A., Inc. v. Tabari*, 610 F.3d 1171 (9th Cir. 2010).

67. Later litigation concluded that defendant had, in actuality, misrepresented the equivalence of the products. *Chanel, Inc. v. Smith*, 528 F.2d 284, 285 (9th Cir. 1976).

68. *Smith v. Chanel, Inc.*, 402 F.2d at 568 n.22 (quoting *Chanel, Inc. v. Smith*, No. 45647, 1966 WL 7667, at *3 (N.D. Cal. Nov. 23, 1966)).

69. *Id.*

70. *Id.* at 568.

71. *Id.* (quoting *Am. Safety Table Co. v. Schreiber*, 269 F.2d 255, 272 (2d Cir. 1959)).

Our defendant is thus a free rider but one who has the good fortune of “unintentionally” serving the public interest. On this logic, shouldn’t we condemn Chanel for trying to thwart the free market? Meh. “On the other hand, the trademark owner, perhaps equally without design, sacrifices public to personal interests by seeking immunity from the rigors of competition.”⁷² So, yes, there’s some rent-seeking behavior, but the intent to harm the public is no more assumed than the defendant’s attempt to help. More importantly, there is no potential of denying the claim *because* of the plaintiff’s intent. That is not what aids the defendant, only its unintentional provision of benefits to the public. The only anti-free-rider impulse with the power to matter is the one that stands to help the plaintiff.

2. *Defendant Free Riding in Modern Trademark Doctrine*

Free-riding narratives are a big part of modern trademark doctrine, both in the adjudication of everyday disputes and in expanding the scope of trademark rights. This Section canvasses the ways.

a) Good Faith Assessments

The fundamental inquiry in trademark litigation is whether a likelihood of confusion exists among reasonably prudent consumers.⁷³ Though generally treated as a factual question,⁷⁴ the inquiry is intensely normative, for it requires defining the relevant consumer and what it means for that consumer to exercise “prudence.”⁷⁵ Likewise, courts have to determine what it means for confusion to be “likely.”⁷⁶ All of these choices help draw the line between actionable and non-actionable conduct.

Once these difficulties are resolved, courts must sort out what happens when a consumer—idealized or real—encounters the defendant’s communication. Answering the question does not naturally require addressing the defendant’s state of mind. Courts still care. Every judicial circuit considers the defendant’s good or bad faith as part of the multifactor likelihood-of-

72. *Id.* at 568–69.

73. 4 MCCARTHY, *supra* note 62, § 23:91 (“In determining trademark infringement and unfair competition, everything hinges upon whether there is a likelihood of confusion in the mind of an appreciable number of ‘reasonably prudent’ buyers.”).

74. *Id.* § 23:67.

75. See generally Michael Grynberg, *The Consumer’s Duty of Care in Trademark Law*, in RESEARCH HANDBOOK ON TRADEMARK LAW REFORM 326, 328–34 (Graeme B. Dinwoodie & Mark D. Janis eds., 2021).

76. Neither liability provision of the Lanham Act defines “likelihood of confusion.” See 15 U.S.C. §§ 1114, 1125(a).

confusion test for assessing trademark infringement.⁷⁷ Barton Beebe has found that the good faith factor plays an outsized role in determining whether a likelihood of confusion exists.⁷⁸ In other words, assessments of good or bad faith are a major part of the inquiry of an infringement case, and in many cases, “bad faith” includes free riding off of the plaintiff’s work.⁷⁹

The problem is especially acute for trademark infringement litigation outside the traditional point-of-sale context. Trademark claims may involve, for example, pre-sale confusion (in which any confusion is dispelled before the point of sale),⁸⁰ post-sale confusion (in which the confusion is not of a buyer but of third parties),⁸¹ or confusion of mere association (building off of more relevant concepts of sponsorship).⁸² In these cases, courts will downplay many factors in the multifactor test, potentially negating the value of some of the

77. See 4 MCCARTHY, *supra* note 62, §§ 24:30–43 (listing factors used by various circuits). Sometimes courts say that it is not. *Virgin Enters. Ltd. v. Nawab*, 335 F.3d 141, 151 (2d Cir. 2003) (“A finding that a party acted in bad faith can affect the court’s choice of remedy or can tip the balance where questions are close. It does not bear directly on whether consumers are likely to be confused.”).

78. Barton Beebe, *An Empirical Study of the Multifactor Tests for Trademark Infringement*, 94 CAL. L. REV. 1581, 1628 (2006) (“[A] finding of bad faith intent creates, if not in doctrine, then at least in practice, a nearly un-rebuttable presumption of a likelihood of confusion.”).

79. *Saratoga Vichy Spring Co. v. Lehman*, 491 F. Supp. 141, 153 (N.D.N.Y. 1979), *aff’d*, 625 F.2d 1037 (2d Cir. 1980) (“The essence of bad faith is the adoption of a mark by a junior user for the purpose of obtaining a free ride on the reputation of defendants’ mark.”).

80. Also known as initial interest confusion. See generally Michael Grynberg, *The Road Not Taken: Initial Interest Confusion, Consumer Search Costs, and the Challenge of the Internet*, 28 SEATTLE U. L. REV. 97 (2004).

81. See generally MCCARTHY, *supra* note 62, § 23:7.

82. See, e.g., *Maker’s Mark Distillery, Inc. v. Diageo N. Am., Inc.*, 679 F.3d 410, 419 (6th Cir. 2012) (describing confusion of sponsorship as being “also known as association”).

defendant's evidence.⁸³ This leaves greater space for assessments of good or bad faith to operate.⁸⁴

The “classic” fair use defense provides another doctrinal entry point for free-riding assessments. Trademark doctrine allows the appropriation of descriptive terms as marks (e.g., TASTY brand salads) so long as the term has achieved secondary meaning, indicating that the relevant consuming public sees the term in context as a mark.⁸⁵ Nonetheless, competitors need the ability to use descriptive words in commerce (e.g., “Try an EAGLE salad, so tasty!”). The trademark fair use doctrine helps fill the potential gap by allowing defendants to use trademarked descriptive terms so long as the use is descriptive, not as a mark (“EAGLE salad is tasty,” not “eagle salad is TASTY!”), and, of relevance here, in good faith.⁸⁶

In both cases, the intent inquiry raises questions about the meaning of intent. Intent to confuse? Or intent to copy? If the latter, we open the door to the question of free riding and what kinds are worthy of condemnation.

83. For example, the *Maker's Mark* case involved the defendant's use of a red wax seal on a bottle of tequila that supposedly created a likelihood of confusion with the Maker's Mark bourbon product. Though the bottles had completely differing labels, the fact that the claim involved sponsorship/affiliation negated their impact:

First, testimony in the record indicates that many consumers are unaware of the affiliations between brands of distilled spirits, and that some companies produce multiple types of distilled spirits, which supports the district court's assessment here. Second, the presence of a house mark, as the district court correctly noted, is more significant in a palming off case than in an association case—as the district court reasoned, in an association case “when the two products are related enough . . . one might associate with or sponsor the other and still use their own house mark.”

Id. at 422.

84. *See, e.g.*, *Checkpoint Sys., Inc. v. Check Point Software Techs., Inc.*, 269 F.3d 270, 294–95 (3d Cir. 2001) (“Without initial interest protection, an infringer could use an established mark to create confusion as to a product's source thereby receiving a ‘free ride on the goodwill’ of the established mark.”). *See generally* Grynberg, *supra* note 80 (describing importance of goodwill appropriation and free-riding stories to the development and expansion of initial interest confusion doctrine).

85. *See, e.g.*, 15 U.S.C. §§ 1052(e)–(f); *Abercrombie & Fitch Co. v. Hunting World, Inc.*, 537 F.2d 4, 10 (2d Cir. 1976).

86. 15 U.S.C. § 1115(b)(4) (providing as a defense to claimed infringement of an incontestable mark “[t]hat the use of the name, term, or device charged to be an infringement is a use, otherwise than as a mark, of the party's individual name in his own business, or of the individual name of anyone in privity with such party, or of a term or device which is descriptive of and *used fairly and in good faith* only to describe the goods or services of such party, or their geographic origin”) (emphasis added).

b) Trademark Strength

Trademark litigation’s treatment of the “strength” of the plaintiff’s mark also reflects the anti-free-riding impulse. Like good faith, mark strength is a common factor among the circuits.⁸⁷ Indeed, it is often the first question assessed, even before mark similarity.⁸⁸ The inquiry considers both inherent distinctiveness—with descriptive marks receiving less protection than non-descriptive marks⁸⁹—and acquired distinctiveness—i.e., how well-known a mark is.⁹⁰

Considering the strength of the plaintiff’s mark, all courts make a simple calculation: more strength equals greater protection.⁹¹ That is, the stronger the plaintiff’s mark, the larger the universe of potentially infringing marks. But why?

The first rationale is grounded in policy exogenous to the factual inquiry. Protecting weak marks risks negative spillovers because competitors and other sellers need descriptive terms to communicate.⁹² A plaintiff who uses such a mark, therefore, should have a lesser scope of protection, which will have the salutary effect of incentivizing other sellers to select non-descriptive terms as trademarks.⁹³ To be sure, other doctrines promote the competitive interest in

87. 4 MCCARTHY, *supra* note 62, §§ 24:30–43.

88. *See, e.g.*, Grayson O Co. v. Agadir Int’l LLC, 856 F.3d 307, 314 (4th Cir. 2017) (“The first factor—the strength of [the plaintiff’s] mark—is ‘paramount’ in determining the likelihood of confusion.” (quoting *Pizzeria Uno Corp. v. Temple*, 747 F.2d 1522, 1527 (4th Cir. 1984)). Notably, the seminal *Polaroid* case, *Polaroid Corp. v. Polarad Elecs. Corp.*, 287 F.2d 492, 495 (2d Cir. 1961), likewise listed mark strength first.

89. After placing the mark on the *Abercrombie* spectrum covering descriptive, suggestive, arbitrary, and fanciful marks, courts will sometimes treat suggestive marks as “strong” because they are inherently distinctive and sometimes as weaker, perhaps because the mark in question is close to the descriptive line or perhaps because they are further down the spectrum from fanciful and arbitrary marks. *Compare, e.g.*, *Hasbro, Inc. v. Lanard Toys, Ltd.*, 858 F.2d 70, 73 (2d Cir. 1988) (“Generally, if a term is suggestive it is entitled to trademark protection without proof of secondary meaning and recognition as a strong mark.” (citation omitted)), *with* *Star Indus., Inc. v. Bacardi & Co.*, 412 F.3d 373, 385 (2d Cir. 2005) (“In the absence of any showing of secondary meaning, suggestive marks are at best moderately strong.”), *and* *Pom Wonderful LLC v. Hubbard*, 775 F.3d 1118, 1126 (9th Cir. 2014) (“[S]uggestive marks, although stronger than descriptive or generic marks, are still ‘presumptively weak.’” (citation and internal quotation omitted)).

90. 2 MCCARTHY, *supra* note 62, § 11:73.

91. *Id.* § 11:73 (“All courts agree that ‘stronger’ marks are given ‘stronger’ protection—protection over a wider range of related products and services and variations on visual and aural format.”).

92. *Virgin Enters. Ltd. v. Nawab*, 335 F.3d 141, 147–48 (2d Cir. 2003).

93. As Judge Leval observes:

descriptive terms—for example, the doctrine of classic fair use⁹⁴—but they have uncertain applications and might require litigation expenses to vindicate.

A second rationale addresses likelihood of confusion. When consumers encounter a weak mark, they are less likely to make a source association than when they see a strong one. As Judge Leval argues, a toothpaste customer of the ZzaaqQ brand who sees the same name on another brand will likely assume the same producer is behind them both.⁹⁵ “The more unusual, arbitrary, and fanciful a trade name, the more unlikely it is that two independent entities would have chosen it.”⁹⁶ Not so with descriptive terms, for “every seller of foods has an interest in calling its product ‘delicious.’”⁹⁷ Accordingly, “[c]onsumers who see the word *delicious* used on two or more different food products are less likely to draw the inference that they must all come from the same producer.”⁹⁸

This story has a natural counter. If a mark is strong, shouldn’t it be more *resistant* to confusion? As we are all familiar with McDONALD’S, whether we eat there or not, shouldn’t we be sensitive to deviations like McDOUGAL’S?⁹⁹

I’m not sure which story is true,¹⁰⁰ though I tend to side with the Leval view. In most cases, we would expect the relevant consuming public to include buyers with a range of familiarity with the leading brands. So, while a true McDONALD’S partisan could not make a mistake, their indifferent friend who is asked to get them a burger might.

The trademark right does not protect the exclusive right to an advertising message—only the exclusive right to an identifier, to protect against confusion in the marketplace. Thus, as a matter of policy, the trademark law accords broader protection to marks that serve exclusively as identifiers and lesser protection where a grant of exclusiveness would tend to diminish the access of others to the full range of discourse relating to their goods.

Id. at 147–48.

94. See *supra* note 86 and accompanying text. The classic fair use defense makes it into the Lanham Act at 15 U.S.C. § 1115(b)(4).

95. *Virgin Enters. Ltd. v. Nawab*, 335 F.3d at 148.

96. *Id.*

97. *Id.*

98. *Id.*

99. There are precedents to this effect, but they play little role in today’s trademark doctrine. See Barton Beebe & C. Scott Hemphill, *The Scope of Strong Marks: Should Trademark Law Protect the Strong More Than the Weak?*, 92 N.Y.U. L. REV. 1339, 1342 (2017) (“Today the cases following the alternative model . . . are largely forgotten.”).

100. In any case, now that courts have settled on a story, we might wish to honor the reliance interests of those who have grown up under current interpretations of the multifactor test. See Michael Grynberg, *The Judicial Role in Trademark Law*, 52 B.C. L. REV. 1283, 1304–05 (2011).

But the dog that doesn't bark in the case law is the lack of judicial interest in the question despite the existence of two contrasting yet plausible stories. The near-uniformity of the pro-plaintiff account suggests something more intuitive is at work, and the anti-free-riding impulse is an obvious candidate.¹⁰¹

To return to Judge Leval's hypothetical, a seller who selects DELICIOUS as a mark seems less likely to have done so to free ride on a competitor's goodwill than the seller who chooses ZZAAQQ. There's simply no reason to select something so random *unless* an attempt to free ride (and possibly deceive) is at work.¹⁰² The same can be said for marks that have strong acquired distinctiveness. Why steer close to the line of a mark with KODA-COLA when something like EAGLE is ready and available? For judges, there's something suspicious about the junior user who makes that choice.¹⁰³ As with all plaintiff-side free-riding stories, this move can be critiqued as deviating from the consumer interest,¹⁰⁴ but it nevertheless explains the course of the doctrine.

c) Justifying Trademark's Expansion

Free-riding stories play a large role in expanding the scope of trademark doctrine. Courts may lean on evaluations of good faith in justifying taking infringement actions in new directions.¹⁰⁵ For example, the expansion of initial interest confusion doctrine to the internet around the turn of the century was in large part driven by concerns about free riding on trademark holder goodwill.¹⁰⁶

Anti-free-riding arguments may also form policy justifications for expanding trademark rights, as seen in the development of the "merchandising right." The merchandising right is the use of trademark law to control markets

101. Multiple courts have so indicated. *See* Beebe & Hemphill, *supra* note 99, at 1376–78.

102. Assuming we are talking about simple trademark uses in source-identifying contexts and excluding settings in which other considerations—like artistic expression or commentary—dominate.

103. *See, e.g.,* Virgin Enters. Ltd. v. Nawab, 335 F.3d at 148 ("A mark's fame also gives unscrupulous traders an incentive to seek to create consumer confusion by associating themselves in consumers' minds with a famous mark."). *But see* Barton Beebe & Jeanne C. Fromer, *Are We Running Out of Trademarks? An Empirical Study of Trademark Depletion and Congestion*, 131 HARV. L. REV. 945 (2018).

104. *See, e.g.,* Beebe & Hemphill, *supra* note 99, at 1378–93 (critiquing the free-riding explanation of the heightened protection of strong marks).

105. *See supra* notes 80–84 and accompanying text.

106. For a detailed account, see generally Grynberg, *supra* note 80.

in which trademarks function as goods—e.g., a NEW ENGLAND PATRIOTS jersey—rather than as indicators of source for the goods.¹⁰⁷

Boston Professional Hockey Ass'n v. Dallas Cap & Emblem Manufacturing, Inc. is the foundational opinion on trademark merchandising.¹⁰⁸ The case centered around trademarked sports team logos sold as merchandise.¹⁰⁹ The defendants raised the now-familiar objection to a trademark claim in the merchandising context, arguing that prospective purchasers could not be confused as to source, as no one would expect sports teams to manufacture the logos in such circumstances.¹¹⁰ Accordingly, there was no plausible likelihood of confusion.

The Fifth Circuit disagreed, ruling that trademark law may be used to give the markholders control over the logo merchandising market.¹¹¹ The court acknowledged that extending trademark rights in this manner may “tilt” trademark doctrine towards protecting business interests at the expense of consumer needs.¹¹² The panel nonetheless justified itself by looking to free-rider considerations. In the court’s eyes, sports teams deserve control over the merchandising market in their logos because “the major commercial value of the emblems is derived” from their efforts.¹¹³ Later opinions vindicating the merchandising right likewise invoke anti-free-riding considerations.¹¹⁴ Although heavily criticized by academics, the state of precedent seems generally consistent with everyday moral intuitions.¹¹⁵

107. See, e.g., Stacey L. Dogan & Mark A. Lemley, *The Merchandising Right: Fragile Theory or Fait Accompli?*, 54 EMORY L.J. 461 (2005).

108. 510 F.2d 1004 (5th Cir. 1975).

109. *Bos. Pro. Hockey*, 510 F.2d at 1009 (reciting that defendant “is in the business of making and selling embroidered cloth emblems”).

110. *Id.* at 1010 (“The difficulty with this case stems from the fact that a reproduction of the trademark itself is being sold, unattached to any other goods or services. The statutory and case law of trademarks is oriented toward the use of such marks to sell something other than the mark itself.”).

111. *Id.* at 1011 (“Although our decision here may slightly tilt the trademark laws from the purpose of protecting the public to the protection of the business interests of plaintiffs, we think that the two become so intermeshed when viewed against the backdrop of the common law of unfair competition that both the public and plaintiffs are better served by granting the relief sought by plaintiffs.”).

112. *Id.*

113. *Id.*

114. See *Bos. Athletic Ass'n v. Sullivan*, 867 F.2d 22, 33 (1st Cir. 1989) (likening unauthorized merchandisers to “Rosie Ruiz, a notorious imposter in the 1980 Boston Marathon,” like her “defendants would be given a medal without having run the course”).

115. In studying how consumers perceive merchandising practices, Matthew Kugler found that consumer intuitions about how merchandising markets ought to work largely correspond with the case law. Notably, “there was a strong inclination to believe that sponsorship should be required for most [merchandised] products.” Matthew B. Kugler, *The*

Anti-free-riding considerations also influenced two important statutory expansions of trademark rights. In 1999, Congress passed the Anti-Cybersquatting Consumer Protection Act (ACPA).¹¹⁶ The measure arms trademark holders with the power to control domain names “confusingly similar” to their marks if the domains were registered in “bad faith.”¹¹⁷ As reflected by the title, free-riding concerns suffuse the statute. Congress passed the law to respond to the perceived problem that arbitragers were warehousing valuable domain names to extract rents from trademark holders without putting the domains to good use.¹¹⁸ To the extent the concern is one of consumer search costs—i.e., the prospect that a web searcher looking for, say, Apple Computer’s site might start by typing `apple.com`¹¹⁹—we might expect the market to allocate domain names efficiently. That is, if a so-called cybersquatter secured rights to `apple.com`, we would expect a bargain to be

Materiality of Sponsorship Confusion, 50 U.C. DAVIS L. REV. 1911, 1953 (2017); see generally Michael Grynberg, *Living with the Merchandising Right (or How I Learned to Stop Worrying and Love Free-Riding Stories)*, 25 YALE J.L. & TECH. 1, 16–26 (2023) (discussing how merchandising protection conforms to anti-free-riding intuitions).

116. Anticybersquatting Consumer Protection Act, Pub. L. No. 106-113, § 3001, 113 Stat. 1501A-545, 1501A-545 (1999) (enacted as part of the Consolidated Appropriations Act, Pub. L. No. 106-113, 113 Stat. 1501 (1999)).

117. 15 U.S.C. § 1125(d).

118. STAFF OF S. COMM. ON THE JUDICIARY, THE ANTICYBERSQUATTING CONSUMER PROTECTION ACT, S. REP. NO. 106-140, at 5 (1999) (“Cybersquatters target distinctive marks for a variety of reasons. Some register well-known brand names as Internet domain names in order to extract payment from the rightful owners of the marks, who find their trademarks ‘locked up’ and are forced to pay for the right to engage in electronic commerce under their own brand name Others register well-known marks as domain names and warehouse those marks with the hope of selling them to the highest bidder, whether it be the trademark owner or someone else.”). To be sure, Congress also recited reasons relating to consumer protection. *Id.* at 2 (finding that cybersquatting “results in consumer fraud and public confusion as to the true source or sponsorship of goods and services”).

119. The rise of effective search engines has largely obviated this concern, an observation that has worked its way into some precedent. See, e.g., *Toyota Motor Sales, U.S.A., Inc. v. Tabari*, 610 F.3d 1171, 1178 (9th Cir. 2010) (“When people go shopping online, they don’t start out by typing random URLs containing trademarked words hoping to get a lucky hit. They may start out by typing `trademark.com`, but then they’ll rely on a search engine or word of mouth.”).

struck most of the time.¹²⁰ Critically, however, the moral problem of free riding would remain, leaving work for ACPA to do.¹²¹

Dilution law is another example. Dilution doctrine expands trademark rights beyond the realm of consumer protection by looking beyond the question of likelihood of confusion. The federal dilution statute gives the owners of “famous” marks a cause of action against conduct that “blurs” or “tarnishes” them.¹²² Defenders of this expansion strain mightily to provide consumer-protection rationales for dilution doctrine,¹²³ but the statute is more explicable as an anti-free-riding measure.

First, it applies only to “famous” marks, so only those brands that have achieved nationwide renown—that have “earned” special rights—enjoy a

120. To be sure, this market would face the problem of bilateral monopoly, though it’s worth noting that later developments addressed the issue. First, as discussed *supra* note 119, improving search technology would naturally prioritize the sites of the holders of valuable trademarks to the extent they are the intended target of search. Second, ICANN has opened up the top-level domain name system, so the owners of prominent trademarks are no longer restricted to a limited list of classic top-level domains like .com, .net, .org, etc. See *Frequently Asked Questions: New Generic Top-Level Domain Names*, ICANN, <https://newgtlds.icann.org/en/applicants/global-support/faqs/faqs-en> (last visited Dec. 1, 2023).

121. The statute still leaves room for those who have earned rights to use the term in question to continue to do so. See 15 U.S.C. § 1125(d)(1)(B) (providing courts may consider whether registrant of domain name had “trademark or other intellectual property rights . . . in the domain name”; whether “the domain name consists of the legal name of the person or a name that is otherwise commonly used to identify that person;” and “the person’s prior use, if any, of the domain name in connection with the bona fide offering of any goods or services”).

122. 15 U.S.C. § 1125(c).

123. Judge Posner tried to fit dilution into a search costs story of trademark as follows:

[T]here is concern that consumer search costs will rise if a trademark becomes associated with a variety of unrelated products. Suppose an upscale restaurant calls itself “Tiffany.” There is little danger that the consuming public will think it’s dealing with a branch of the Tiffany jewelry store if it patronizes this restaurant. But when consumers next see the name “Tiffany” they may think about both the restaurant and the jewelry store, and if so the efficacy of the name as an identifier of the store will be diminished. Consumers will have to think harder—incur as it were a higher imagination cost—to recognize the name as the name of the store. So “blurring” is one form of dilution.

Ty Inc. v. Perryman, 306 F.3d 509, 511 (7th Cir. 2002) (citations omitted). Whether this actually happens is harder to prove. See Rebecca Tushnet, *Gone in Sixty Milliseconds: Trademark Law and Cognitive Science*, 86 TEX. L. REV. 507, 546 (2008) (“Given the available evidence, the cognitive model of dilution lacks enough empirical support to justify its adoption as a general theory underlying dilution law. There is still too much we do not know about how consumers process marks in the marketplace. At a minimum, we cannot predict that any particular dilutive use will produce the difficulties posited by the cognitive model.”).

heightened level of protection.¹²⁴ Second, the defendant's conduct in choosing an already-famous mark for their own can be understood as free riding. In his exploration of dilution rationales, Judge Posner imagines a restaurant named "Tiffany," located in Kuala Lumpur, with no connection to the famous jewelry seller.¹²⁵ In this hypothetical, "there is neither blurring nor tarnishment," but "someone is still taking a free ride on the investment of the trademark owner in the trademark."¹²⁶ Utilitarian that he is, Judge Posner sees stopping free riding as promoting the virtue of greater investment.¹²⁷ Other defenders of the dilution cause of action would explicitly situate it as an anti-free-riding measure as a matter of doctrine.¹²⁸

d) Limiting Restrictions to Trademark Scope

Free-riding stories also constrain checks to trademark rights. As previously noted, the classic fair use doctrine explicitly assesses the defendant's "good faith,"¹²⁹ which may include consideration of whether deliberate free riding is at issue.¹³⁰

Desert stories likewise frustrate the use of the functionality doctrine to limit trademark's scope. Functionality has two flavors. The first, utilitarian functionality, prevents trademark holders from claiming features that make their products work.¹³¹ A feature is functional "if it is essential to the use or

124. 15 U.S.C. § 1125(c)(2)(A) (defining a famous mark as one that "is widely recognized by the general consuming public of the United States as a designation of source of the goods or services of the mark's owner").

125. *Ty Inc. v. Perryman*, 306 F.3d at 512.

126. *Id.*

127. He writes:

If appropriation of Tiffany's aura is nevertheless forbidden by an expansive concept of dilution, the benefits of the jewelry store's investment in creating a famous name will be, as economists say, "internalized"—that is, Tiffany will realize the full benefits of the investment rather than sharing those benefits with others—and as a result the amount of investing in creating a prestigious name will rise.

Id.

128. Marlene B. Hanson & W. Casey Walls, *Protecting Trademark Good Will: The Case for a Federal Standard of Misappropriation*, 81 TRADEMARK REP. 480, 493–94 (1991) ("It is unjust to allow a person to be enriched by 'free-riding' on another's efforts. Hence, it is unjust to allow a subsequent user of a trademark to be enriched by misappropriating the trademark message the owner has created and developed." (footnote omitted)).

129. 15 U.S.C. § 1115(b)(4) (defense if "the use of the name, term, or device charged to be an infringement is a use, otherwise than as a mark . . . of a term or device which is descriptive of and used fairly and in good faith only to describe the goods or services of such party, or their geographic origin").

130. *See* 3M Co. v. Mohan, 482 F. App'x 574, 580 (Fed. Cir. 2012).

131. 15 U.S.C. § 1115(b)(8).

purpose of the article or if it affects the cost or quality of the article.”¹³² The Supreme Court has made clear that if a feature meets this test, the existence of alternatives does not matter;¹³³ competitors have a right to use the feature without running afoul of trademark law.¹³⁴ Nonetheless, courts still consider the question of alternatives in making the threshold decision of whether claimed matter is functional.¹³⁵ This suggests a moral judgment—if a defendant could use an alternative to the plaintiff’s design, the implication is that it *should*.¹³⁶

The problem is more acute in the second flavor of functionality—so-called “aesthetic” functionality. Courts struggle with the question of when matter that does not directly implicate a product’s workings is nonetheless functional.¹³⁷ Many courts balk at treating aesthetic functionality as a discrete doctrine.¹³⁸

132. *TrafFix Devices, Inc. v. Mktg. Displays, Inc.*, 532 U.S. 23, 24 (2001) (citations and quotation omitted).

133. To be sure, this can be a complicated inquiry, especially given the difficulty between drawing the line between a functional feature and a functional product. *TrafFix*, 532 U.S. at 34 (suggesting distinction between feature that makes “the device work” and “an arbitrary flourish”). This difficulty is the heart of the distinction in functionality precedent distinguishing between ‘de facto’ and ‘de jure’ functionality. *In re Morton-Norwich Prods., Inc.*, 671 F.2d 1332, 1337 (C.C.P.A. 1982) (“[I]f the designation ‘functional’ is to be utilized to denote the legal consequence, we must speak in terms of de facto functionality and de jure functionality, the former being the use of ‘functional’ in the lay sense, indicating that although the design of a product, a container, or a feature of either is directed to performance of a function, it may be legally recognized as an indication of source. De jure functionality, of course, would be used to indicate the opposite—such a design may not be protected as a trademark.”); *cf. id.* at 1338 (“No doubt, by definition, a dish always functions as a dish and has its utility, but it is the appearance of the dish which is important in a case such as this . . .”).

134. In the *TrafFix* case, the design in question was a dual-spring mechanism that kept roadside signs from blowing down in the wind (as the spring would allow the face of the sign to yield to the wind without tipping over). Given that the springs made the device work, the existence of potential alternatives was irrelevant. “There is no need, furthermore, to engage . . . in speculation about other design possibilities, such as using three or four springs which might serve the same purpose. Here, the functionality of the spring design means that competitors need not explore whether other spring juxtapositions might be used.” *TrafFix*, 532 U.S. at 33–34.

135. 1 MCCARTHY, *supra* note 62, § 7:75.

136. *Cf. Taco Cabana Intern., Inc. v. Two Pesos, Inc.*, 932 F.2d 1113, 1119 (5th Cir. 1991) (“[Plaintiff] Taco Cabana’s particular integration of elements leaves a multitude of alternatives to the upscale Mexican fast-food industry that would not prove confusingly similar to Taco Cabana’s trade dress.”), *aff’d*, 505 U.S. 763 (1992).

137. Though never deciding a case on this basis, the Supreme Court has indicated that the test to be used in “cases of esthetic functionality” is whether protection of the feature would create a “significant non-reputation-related disadvantage” for competitors. *TrafFix*, 532 U.S. at 33.

138. 1 MCCARTHY, *supra* note 62, § 7:80.

Courts sometimes express concern that allowing functionality claims to be applied to aesthetic content would undermine incentives or, worse, “punish” those trademark holders who have invested in attractive designs.¹³⁹ Folded in this concern is the fear that recognizing a functionality defense will open the door to the “naked exploitation” of marks.¹⁴⁰

3. Summary

Trademark law is concerned with fair returns as reflected by the moral intuitions of those adjudicating disputes. A long line of precedent expresses concern that sellers be rewarded for their labors without allowing their efforts to be misappropriated by others. Over time, this concern has been reified into doctrine. Like it or not, trademark law—whatever its consumer-protection purpose—is inextricably bound with anti-free-riding considerations.

Fair enough. But if there is an impulse to free ride lurking in our hearts in need of policing, it is likely widely distributed. Whatever motivates trademark defendants to free ride probably moves plaintiffs, too. If trademark law is to concern itself with free rides, it should do so consistently in order to avoid an unbalanced doctrine.

III. TRADEMARK HOLDERS FREE RIDE, TOO

So let’s turn to the other side of the free riding story—what happens when it is trademark owners who seek to reap where they have not sown? As we will see, this kind of free riding has left an impact—sometimes subtle—on trademark law. Though judges know free riding when they see it, trademark law has not developed a vocabulary to describe the problem to parallel the one applied to trademark defendants. Trademark doctrine lags accordingly.

This Part begins by asking why trademark law lacks a deep story of trademark holder free riding. From there it develops a taxonomy of trademark holder free riding, discussing doctrinal consequences along the way.

139. See *In re DC Comics, Inc.*, 689 F.2d 1042, 1053 (C.C.P.A. 1982) (Nies, J., concurring) (“No principle of trademark law requires the imposition of penalties for originality, creativeness, attractiveness, or uniqueness of one’s product or requires a holding that the name arbitrarily selected to identify the product, or a unique product design of a product, cannot also function as an identification of source.”).

140. *Au-Tomotive Gold, Inc. v. Volkswagen of Am., Inc.*, 457 F.3d 1062, 1064 (9th Cir. 2006) (rejecting functionality defense in case where defendant’s “incorporation of Volkswagen and Audi marks in its key chains and license plates appears to be nothing more than *naked appropriation of the marks*” (emphasis added)).

A. WHY DON'T WE TALK ABOUT PLAINTIFF FREE RIDING?

Why doesn't trademark law have a deep narrative of plaintiff free riding to match the one for defendants? Most fundamentally, the structure of trademark rights seems to rule out a certain kind of free riding by trademark holders because they have to "earn" their rights. Trademark law requires use of a mark to perfect¹⁴¹ and maintain rights.¹⁴² For some observers¹⁴³ these strictures prevent trademark plaintiffs from engaging in conduct paralleling that of so-called patent "trolls"—entities that secure patents of questionable quality and strategically assert them without practicing the "inventions" themselves.¹⁴⁴

This isn't to say that the literature ignores the problem of trademark rent seeking.¹⁴⁵ But the condemnation of the rent seeker is not the same as the one visited on the free rider. In most cases, situations characterized as rent seeking

141. For example, applications to register a mark under 15 U.S.C. § 1051 require either a use of the mark or the filing of an intent-to-use application that is ultimately supported with an actual use in commerce. Likewise, so-called "common law" rights under the Tea Rose doctrine, which are not supported by a registration, are limited to the mark's area of use and reputation. See generally 5 MCCARTHY, *supra* note 62, § 26:2 (outlining doctrine). Likewise, cessation of use results in the loss of trademark rights. 15 U.S.C. § 1127.

142. 15 U.S.C. § 1127 (providing that "[n]onuse for 3 consecutive years shall be prima facie evidence of abandonment"). Moreover, rights cannot be licensed willy nilly; trademark licensors must engage in some form of quality control. See generally 3 MCCARTHY, *supra* note 62, § 18:48. Trademark law likewise prohibits assignments "in gross" of trademarks absent the underlying goodwill. *Id.* § 18:17.

143. Michael S. Mireles, *Trademark Trolls: A Problem in the United States?*, 18 CHAP. L. REV. 815, 816 (2015) ("[T]rademark trolls are not and may not develop as a problem in the United States."). Mireles discusses one example of various checks being used against a trademark holder engaged in trolling activity. *Id.* at 865-67 (discussing *Cent. Mfg., Inc. v. Brett*, 492 F.3d 876 (7th Cir. 2007)); see also Anna B. Folgers, *The Seventh Circuit's Approach to Detering the Trademark Troll: Say Goodbye to Your Registration and Pay the Costs of Litigation*, 3 SEVENTH CIR. REV. 452 (2007), <http://www.kentlaw.edu/7cr/v3-1/folgers.pdf>.

144. See, e.g., Christopher A. Cotropia, Jay P. Kesan & David L. Schwartz, *Unpacking Patent Assertion Entities (PAEs)*, 99 MINN. L. REV. 649, 650-53 (2014) (outlining views of non-practicing entities in patent law). As discussed below, however, there are any number of examples of what we might call "minimally practicing entities," who present issues analogous to those created by so-called patent trolls. See *infra* Section III.D.1.

145. See, e.g., Bone, *supra* note 10, at 619; Lunney, *supra* note 10, at 437; Ralph S. Brown, Jr., *Advertising and the Public Interest: Legal Protection of Trade Symbols*, 57 YALE L.J. 1165, 1182-83 (1948) ("The choice between one highly advertised dentifrice and another is, in important respects, no choice at all. It cannot register a decision to support or reject institutional arrangements which, as has been shown, contribute to monopolistic waste of resources; it cannot reflect a preference to get more or less for one's money, to take an illusion or leave it. It is only a choice between one illusion and another. That advertisers, despite their intramural rivalry, are aware that they stand on common ground, is shown by their united opposition to institutions which enlarge the consumer's alternatives.").

involve trademark holders who “deserve” their rights but push them too far.¹⁴⁶ In other words, they have made investments that merit reward, just perhaps not quite so large as the one they seek. That is, they are not pure free riders. Nonetheless, many of these contexts could be characterized as free riding,¹⁴⁷ and maybe doing so would help courts better appreciate the rent seeking problem.

Likewise, a number of articles detail the problem of “trademark bullying.”¹⁴⁸ Here, the model plaintiffs are not free riders, but rather overly paranoid. They (incorrectly) fear the prospect that a failure to assert trademark rights will result in the loss of a mark.¹⁴⁹ In these cases, the bullying is therefore typically—though not always—motivated by conservative ends rather than a search for monopolistic rents.¹⁵⁰

Another reason for the reluctance to apply the free-rider label may involve the logic of property rights and ex ante allocations. If I take too much from the common pool (be it grass in a pasture or food at a potluck) without contributing much in return, I invite contempt. If, however, I own the pool, that condemnation is blunted, even if my consumption is excessive. After all, it’s mine. Now, maybe I don’t deserve the property rights that allow me to indulge in the first place—or perhaps my chain of title is rooted in a crime—but we don’t usually ask about such things.¹⁵¹

146. Cf. Lemley, *supra* note 15, at 1032 (arguing that “the effort to permit inventors to capture the full social value of their invention—and the rhetoric of free riding in intellectual property more generally—are fundamentally misguided” in part because “the effort to capture such externalities invites rent-seeking”).

147. See *infra* Section III.D.1.

148. See, e.g., Leah Chan Grinvald, *Shaming Trademark Bullies*, 2011 WIS. L. REV. 625, 642 (“This Article defines ‘trademark bullying’ as the enforcement of an unreasonable interpretation by a large corporation of its trademark rights against a small business or individual through the use of intimidation tactics.”).

149. Jessica M. Kiser, *To Bully or Not to Bully: Understanding the Role of Uncertainty in Trademark Enforcement Decisions*, 37 COLUM. J.L. & ARTS 211 (2014) (arguing that “prospect theory explains apparently irrational decision making by trademark bullies”).

150. *Id.* That said, sometimes lawyers know they are overreaching. William T. Gallagher, *Trademark and Copyright Enforcement in the Shadow of IP Law*, 28 SANTA CLARA HIGH TECH. L.J. 453, 485 (2012) (“Even if the interviewed lawyers frequently stressed the need for balance and not making outrageous or over-reaching legal claims, they all admitted that sometimes ‘aggressive’ or ‘bullying’ tactics can be quite effective.”).

151. Thus the famous observation from Blackstone that we prefer not to inquire too deeply into foundational property rights allocations lest we not like what we see. 2 WILLIAM BLACKSTONE, COMMENTARIES ON THE LAWS OF ENGLAND 2 (Simon Stern ed., Oxford Univ. Press 2016) (1765) (“It is well if the mass of mankind will obey the laws when made, without scrutinizing too nicely into the reasons of making them.”).

So it is with trademark rights. Given that they are based on use (that is, they are earned), they enjoy the beneficial assumptions that attend property rights in general, even if the property label is an ill fit.¹⁵² Sure, these rights may be pushed too far, but given the ease with which trademark rights are secured, they are not likely to be rooted in the sort of injustices deep enough to demand reevaluating the system or triggering a reparative impulse.¹⁵³ The stakes in trademark cases are never so stark, and initial allocations of rights are rarely problematic. If someone wants to call their salad brand EAGLE, there is little reason to care absent competing claims to the mark or a reason to think that competitors need to use the term, too.

The problem with trademark rights is that their boundaries—like all IP rights—are less clear than property rights in land defined by a metes-and-bounds deed.¹⁵⁴ They rely more on litigation to determine their precise scope.¹⁵⁵ In these disputes, broad trademark claims are unlikely to automatically trigger our free-riding antennae insofar as they generally rest on uncontroversial initial allocations of rights.

The psychology of trademark's critics may also explain their reluctance to invoke free-riding stories against trademark holders. For those of us looking to curtail overbroad assertions of trademark rights, the anti-free-riding impulse is the enemy. When we bring up the notion of free riding, it is usually to criticize it. We see facile assertions of free riding as antagonistic to broader appeals to the interests of the market or society as a whole.¹⁵⁶ Critics of expansive trademark doctrine thus urge courts to ignore snap intuitions about misappropriation in favor of more nuanced analyses of aggregate social welfare.¹⁵⁷ And, when we lose—assuming *arguendo* that we are right in our

152. *Hanover Star Milling Co. v. Metcalf*, 240 U.S. 403, 414 (1916) (“In short, the trademark is treated as merely a protection for the good will, and not the subject of property except in connection with an existing business.”).

153. Carol Rose, *The Moral Subject of Property*, 48 WM. & MARY L. REV. 1897, 1906–07 (2006) (“[W]e basically follow Blackstone’s advice: we forget about the questionable origins of title [But on occasion] unjust acquisitions may seem so gross as to eat away even the middle ground morality that makes property regimes possible. If you think that all those who succeed are thieves, why not be a thief yourself?” (footnotes omitted)).

154. Michael Grynberg, *Property is a Two-Way Street: Personal Copyright Use and Implied Authorization*, 79 FORDHAM L. REV. 435, 460 (2010).

155. *Id.*

156. *See, e.g., Lemley, supra* note 15, at 1068–69.

157. *See, e.g., Bone, supra* note 10, at 554 (“[J]udges should avoid goodwill misappropriation as a distinct policy rationale. That approach only misdirects trademark law away from what should be its core mission: to ensure the efficient and honest communication of product quality information to consumers.”); *Lemley & McKenna, supra* note 10, at 137 (“A legal claim that a defendant is unjustly benefiting by using a plaintiff’s mark is hollow unless it

empirical and instrumental claims—we throw up our hands in frustration at judges and juries who nonetheless stick with moral intuition.¹⁵⁸ Rinse and repeat enough times, and it is unsurprising if free-riding concerns became coded as an attribute of trademark expansionism, one antithetical to reform.

Be that as it may, if the anti-free-riding intuition is indeed part of our cognitive (or deep cultural) hard wiring,¹⁵⁹ then the tradeleft leaves something on the table by not developing a narrative of trademark holder free riding and its effects on doctrine. The remainder of this Part looks to tell this story.¹⁶⁰

B. FREE RIDING ON CULTURE

Trademarks are part of the backdrop (and background noise) of daily life. We therefore naturally incorporate them into art, commentary, and everyday communications. This ferment creates potential collisions between the Lanham Act and the First Amendment, and trademark doctrine has a variety of mechanisms to mediate the tension.¹⁶¹

is accompanied by a theory of why that benefit should rightly belong to the plaintiff. And unlike real property, or even other types of intellectual property, trademark law has no such theory. The result is that free-riding claims fall back on empty circularity.”)

158. Lemley & McKenna, *supra* note 10, at 184 (acknowledging prospect that “free riding—when painted as such—offends our sense of justice. But if so, our genes are serving us ill”).

159. See *supra* Section II.A.3.

160. I want to note at the outset that I am excluding one arguable form of trademark holder free riding. We might recharacterize infringement suits as a form of free riding whenever a plaintiff victory might compel the parties to enter into licensing agreements. Where such licenses are economically viable for the defendant, the defendant’s efforts will often be the reason, creating potential profit for the trademark holder. So, for example, if the whiskey maker Jack Daniel’s successfully enjoins a dog chew toy that makes fun of its trade dress, then Jack Daniel’s may ultimately allow the toy to remain on the market in exchange for a license fee. Jack Daniel’s Props., Inc. v. VIP Prods. LLC, 599 U.S. 140 (2023). The toymaker will only pay the fee if the toy is successful enough in the marketplace to justify payment. That success will, presumably, rest in large part on the toymaker’s creativity and marketing activities. By extracting a license, Jack Daniel’s is arguably free riding on those efforts.

To a large extent, this is a general argument against the concept of free riding, for it basically states that many free-riding situations are inherently reciprocal. This is fine, but it denies the human impulses that actually play out in the cases. See *supra* Section II.B.

My focus in the following text, therefore, is to avoid situations in which trademark holder free riding is tied solely to an attempt by the defendant to appropriate the plaintiff’s effort. Stated another way, this article is not about battles over the positive externalities of a trademark. Cf., e.g., Eric Goldman, *Brand Spillovers*, 22 HARV. J.L. & TECH. 381 (2009). I am interested in situations in which the trademark holder is seeking to appropriate the product of effort for which its goodwill was not a component part. That said, some of the cases discussed below are capable of being described under either frame.

161. Most notably, the “artistic relevance” test of *Rogers v. Grimaldi*, 875 F.2d 994 (2d Cir. 1989).

The exchange between trademarks and popular culture is bilateral. The ebb and flow of modern life throws off a steady stream of memes, slogans, and catch phrases that enter the everyday vernacular and become part of the common pool of language from which trademark creators draw. Although many of these signifiers have the look and feel of a mark—in that they are both easy to remember and capable of serving as repositories of meaning—they make poor trademarks and should not be appropriated as such.

For example, phrases associated with protests against police brutality—like “I Can’t Breathe” and “Black Lives Matter”—can be used to signify support for and affiliation with specific protests and their social movements.¹⁶² They are, however, inappropriate for trademarks given their use by a mass movement. No individual or organization has the authority to define the meaning of these terms in the same manner that Coca-Cola, Inc. gets to define the soda represented by COCA-COLA. To be sure, the phrases may be used to identify particular organizations within a larger movement,¹⁶³ but the identification of those phrases with that larger movement make them ineffective trademarks.¹⁶⁴ They mean too much to identify and distinguish any particular entity and are more likely to be used by individuals seeking to express themselves—e.g., a “Black Lives Matter” yard sign—than any ordinary trademark.

Unfortunately, trademark law incentivizes the pursuit of salient words as marks. As noted above,¹⁶⁵ trademark law is now used to control the use of marks as merchandise even when the mark is not performing a source-identifying function (e.g., a logoed baseball cap with the BOSTON RED SOX “B” on it). However difficult this is to square with trademark fundamentals, courts are generally comfortable with letting trademark owners profit off of their popular marks.¹⁶⁶

We have already discussed this development from the perspective of free riding, albeit with a particular kind of markholder in mind. In the classic

162. See, e.g., Scott Cacciola, *At Nets’ Game, a Plan for a Simple Statement Is Carried Out to a T*, N.Y. TIMES (Dec. 9, 2014), <http://www.nytimes.com/2014/12/10/sports/basketball/i-cant-breathe-tshirts-in-the-nba-how-jayz-lebron-james-and-others-made-them-happen.html>; Julie Zauzmer Weil, *D.C.’s Black Lives Matter Plaza, Created Overnight, Is Now a Permanent Multimillion-Dollar Concrete Installation*, WASH. POST (Oct. 28, 2021), <https://www.washingtonpost.com/dc-md-va/2021/10/28/black-lives-matter-plaza-dc/>.

163. See, e.g., Nicholas Kulish, *After Raising \$90 Million in 2020, Black Lives Matter Has \$42 Million in Assets*, N.Y. TIMES (May 17, 2022), <https://www.nytimes.com/2022/05/17/business/blm-black-lives-matter-finances.html>.

164. And those using them to identify their organization must assume the risk that they will be confused with other entities making the same choice.

165. See *supra* notes 107–115 and accompanying text.

166. See *id.*

merchandising case, courts have been willing to overlook trademark niceties in order to reward plaintiffs who have developed popular brands and punish those who seek to free ride off of this success in merchandising markets.¹⁶⁷

Things are different, however, when the merchandised mark is born of the opportunistic exploitation of popular culture. Now the primary value of the “mark”—whether traceable to a slogan, meme, or event—is *external* to anything the would-be trademark holder has done. The mark still has potential merchandising value if it can be appropriated, so the free rider pursues trademark rights.

As I have written elsewhere,¹⁶⁸ the mining of popular culture for merchandisable marks places considerable pressure on trademark doctrine. The moral intuitions against free riding remain, but there is no discrete doctrine that implements them. So, adjudicators make use of what they can.

The registration bars of the Lanham Act form one line of defense.¹⁶⁹ An examining attorney need not delve into the metaphysics of whether a particular term or phrase is a “good” mark if there is statutory language that compels its exclusion. In recent years, however, increased First Amendment scrutiny of registration exclusions has struck down the bars to registering disparaging¹⁷⁰ and scandalous¹⁷¹ matter and now threatens the bar to registering marks that evoke individual identity.¹⁷²

In the absence of statutory language, the Patent and Trademark Office (PTO) must rely on vaguer doctrines. This has led to greater use of variations of the “failure to function” principle, the notion that some claimed registrations are for matter that does not perform the trademark function.¹⁷³ The doctrine has been most associated with *how* a mark is used.¹⁷⁴ For example, does the mark appear on a label, where consumers would expect source-

167. *See, e.g.*, *Bos. Pro. Hockey Ass’n v. Dall. Cap & Emblem Mfg., Inc.*, 510 F.2d 1004 (5th Cir. 1975).

168. Grynberg, *supra* note 115, at 51–64.

169. 15 U.S.C. § 1052.

170. *Matal v. Tam*, 582 U.S. 218 (2017) (holding disparagement bar unconstitutional).

171. *Iancu v. Brunetti*, 139 S. Ct. 2294 (2019) (holding bar to registering immoral or scandalous matter unconstitutional).

172. *In re Elster*, 26 F.4th 1328 (Fed. Cir. 2022) (holding section 2(c) bar unconstitutional as applied to TRUMP TOO SMALL), *cert. granted sub nom. Vidal v. Elster*, 143 S.Ct. 2579 (2023) (mem.); *see* Michael Grynberg, *The Trademark Problem of “TRUMP TOO SMALL,”* 46 COLUM. J.L. & ARTS 47 (2022).

173. TMEP § 1202.04 (Nov. 2023) (“Merely informational matter fails to function as a mark to indicate source and thus is not registrable . . .”).

174. *See id.* §§ 904.07(b), 1202.03. *See generally* Alexandra J. Roberts, *Trademark Failure to Function*, 104 IOWA L. REV. 1977, 1989–97 (2019).

identifying information, or is it ornamentation?¹⁷⁵ This allows the PTO to police registration specimens, but the principle is increasingly being used to turn away marks based on their semantic meaning.¹⁷⁶

The PTO's *Trademark Manual of Examining Procedure* partially formalizes semantic failure-to-function analysis by directing examining attorneys to reject matter that is "merely informational."¹⁷⁷ The provision has been used to reject a range of apparent free-riding marks.¹⁷⁸ The PTO has also used failure-to-function language to do the work once done by the disparagement and scandalous bars, and the Trademark Trial and Appeal Board (TTAB) cited the principle in affirming a refusal to register a variant of the most offensive slur in the English language.¹⁷⁹

The increased interest in failure-to-function principles raises interesting questions, as it remains to be seen how the Federal Circuit will respond to increased refusals that are not tied to a specific registration bar found in the Lanham Act. The notoriously pro-IP-rights court may well latch onto

175. TMEP § 1202.03(a) (Nov. 2023) (examining attorneys should "consider the size, location, and dominance of the proposed mark, as applied to the goods, to determine whether ornamental matter serves a trademark function"). The *TMEP* explains that "small, neat, and discrete word or design feature (e.g., small design of animal over pocket or breast portion of shirt) may be likely to create the commercial impression of a trademark, whereas a larger rendition of the same matter emblazoned across the front of a garment (or a tote bag, or the like) may be perceived merely as a decorative or ornamental feature of the goods. However, a small, neat, and discrete word or design feature will not necessarily be perceived as a mark in all cases." *Id.*

176. Lucas Daniel Cuatrecasas, Note, *Failure to Function and Trademark Law's Outermost Bound*, 96 N.Y.U. L. REV. 1312, 1328 (2021) ("[A] mark's semantic meaning and inherent nature have become essential to today's failure-to-function cases."); *id.* at 1326 (charting refusals).

177. TMEP § 1202.04 (Nov. 2023) ("Merely informational matter fails to function as a mark to indicate source and thus is not registrable . . .").

178. This has been true of attempted registration of marks like "I Can't Breathe." See, e.g., Office Action (Official Letter) About Applicant's Trademark Application from U.S. Pat. & Trademark Off. to Catherine L. Crump (Mar. 4, 2015), <https://tsdr.uspto.gov/documentviewer?caseId=sn86479784&docId=OOA20150304094857#docIndex=1&page=1>. The PTO likewise raised the objection against several attempted registrations evoking the COVID-19 pandemic. See Irene Calboli, *Trademarks and the Covid-19 Pandemic: An Empirical Analysis of Trademark Applications Including the Terms "Covid," "Coronavirus," "Quarantine," "Social Distancing," "Six Feet Apart," and "Shelter in Place,"* 54 AKRON L. REV. 401, 459–61 (2020).

179. *In re Snowflake Enters., LLC*, No. 87496454, 2021 WL 2888343 (T.T.A.B. June 24, 2021) (non-precedential).

criticisms of the principle as being inconsistently and unclearly applied from case to case.¹⁸⁰

Whatever the ultimate shape of the failure-to-function doctrine, we should understand the reason for the weight being placed upon it. When it comes to merchandising, the NIKEs, HARVARDs, and NEW ENGLAND PATRIOTS of the world do not present any novel issues.¹⁸¹ Granting them merchandise protection—however inconsistent with a purist view of trademark law’s purpose—comports with everyday moral intuitions. Courts will therefore smooth the edges of doctrine as necessary to do it.¹⁸² The problem comes from the free riders who seek to use the merchandising right to appropriate the byproducts of historical circumstance and popular creativity. The same intuition that normally works in favor of trademark plaintiffs now threatens to oppose trademark rights, but there is no clean doctrinal mechanism for applying it.

This problem is especially acute when the popular culture free rider manages to secure trademark rights and tries to assert them in litigation. For example, in *Packman v. Chicago Tribune Co.*, the owner of the JOY OF SIX mark targeted the *Chicago Tribune*.¹⁸³ The newspaper used the phrase, “joy of six” as a front-page headline the day after the Chicago Bulls won their sixth NBA title of the decade, and then later sold merchandise that reprinted the front-page.¹⁸⁴

The attempt by the trademark holder to appropriate these returns turns the logic of the merchandising right on its head. Insofar as a signifier of the Bulls victory is valuable, whose effort made it so? The players, of course, who won the title. Their effort was complemented by all the work by numerous people and entities behind an NBA season. Next, of course, there’s the *Tribune*, which did the work of putting out a newspaper documenting the event. If we want, we could even add the work of the authors of *The Joy of Sex*,¹⁸⁵ a famous

180. Cuatrecasas, *supra* note 176, at 1316 (“[T]he failure-to-function doctrine is incoherent. Overall, it lacks clarity. On a more granular level, the doctrine rests on inconsistent multifactor tests whose factors the TTAB adds, subtracts, modifies, reconceptualizes, and weighs differently across cases, giving the USPTO little meaningful criteria by which to decide what marks merit registration.”); *see id.* at 1325–54. *But see In re Vox Populi Registry Ltd.*, 25 F.4th 1348, 1351 (Fed. Cir. 2022) (affirming refusal to register .SUCKS and agreeing that “though our court has had limited occasion to address the issue, the source identifier requirement is broader than just whether a proposed mark is generic or descriptive”).

181. At least with regard to whether merchandising rights are granted. The exercise of said rights can be troubling. *See* James Boyle & Jennifer Jenkins, *Mark of the Devil: The University as Brand Bully*, 31 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 391 (2020).

182. *See supra* notes 107–115 and accompanying text.

183. 267 F.3d 628 (7th Cir. 2001).

184. *Id.* at 634.

185. ALEX COMFORT, *THE JOY OF SEX* (1972).

book whose title the “Joy of Six” phrase arguably parodied. We would not be likely to include the trademark holders, who were unlikely to have been the first to use the natural pun.¹⁸⁶ They did, however, appear to engage in strategic promotion of the mark after they secured a registration in the apparent hopes of profiting down the line.¹⁸⁷

Insofar as free riding matters, it was the trademark holder who engaged in the attempt to reap without sowing. This seemed clear to the courts adjudicating the matter, but the case nonetheless presented a doctrinal challenge insofar as the plaintiffs had secured a trademark registration in the phrase.¹⁸⁸ The court thus had to do the litigation work of figuring out a way to dispense with the claim.¹⁸⁹

Summary. Would-be trademark holders often seek to exploit the value created by events and cultural moments to which they’ve made no contribution. These efforts reveal multiple tensions in trademark law. First, the merchandising right—itself a byproduct of assumptions about free riding—pressures trademark doctrine by incentivizing the pursuit of low-quality marks by free riders. Second, trademark law’s eligibility screens are not precisely calibrated to respond to the general problem.¹⁹⁰

C. FREE RIDING ON CUSTOMERS

Branding is an inexact science art endeavor. Marketers cannot see the future, so they may well err in predicting what will succeed with consumers. In many cases, their customers fill the gap, adopting designations for goods and services that work better than what the marketers came up with.

Trademark doctrine allows sellers to appropriate customer creations as marks in a roundabout way. The Lanham Act allows franchisee use of franchisor marks to inure to the benefit of the franchisors.¹⁹¹ Case law extends

186. *Cf.* Packman, 267 F.3d at 634 (“At least eight other newspapers in the United States used the phrase “the joy of six” in their headlines that day.”).

187. The Packmans communicated to Chicago newspapers that they were “[r]ecently granted the registered trademark for “The Joy of Six” slogan” and “encourag[ing them] to employ this catchy tag line in your writings and reports throughout the 1997–98 NBA season as the Bulls shoot for their sixth straight year of stellar success”). *Id.*

188. *See* Grynberg, *supra* note 115, at 52–54.

189. The courts ultimately settled on the classic fair use doctrine, which did the job, but not without requiring a little contortion along the way. *Id.*

190. Attempts to free ride on cultural moments and creativity also raise issues involving the assertion of weak trademarks against defendants. This kind of free riding is discussed in greater detail below. *See infra* Section III.D.

191. 15 U.S.C. § 1055 (“Where a registered mark or a mark sought to be registered is or may be used legitimately by related companies, such use shall inure to the benefit of the

the underlying principle to general customer uses; in other words, a would-be trademark holder might claim the name by which customers refer to its product, in effect a “surrogate public use” that lets trademark holders treat their customers as de facto franchisees.¹⁹²

This is how the University of Wisconsin appropriated the BUCKY BADGER logo, which was not created by the University, and name, despite its unlicensed use for decades by local businesses.¹⁹³ The fact that fans of the school’s sports teams identified the character with the teams was enough to let the school claim the logo for itself.¹⁹⁴ Likewise, although Coca-Cola resisted the usage that shortened its mark to COKE,¹⁹⁵ the usage stuck well enough that the company could claim rights to the shortened term when it wanted to.¹⁹⁶ Another case blessed the NCAA’s use of MARCH MADNESS notwithstanding the senior trademark rights of an Illinois basketball

registrant or applicant for registration, and such use shall not affect the validity of such mark or of its registration, provided such mark is not used in such manner as to deceive the public. If first use of a mark by a person is controlled by the registrant or applicant for registration of the mark with respect to the nature and quality of the goods or services, such first use shall inure to the benefit of the registrant or applicant, as the case may be.”)

192. Graeme B. Dinwoodie & Mark D. Janis, *Use, Intent to Use, and Registration in the United States*, in TRADE MARK USE 313, 317 (Jeremy Phillips & Ilanah Simon eds., 2005).

193. *Univ. Book Store v. Bd. of Regents of the Univ. of Wis. Sys.*, 33 U.S.P.Q.2d 1385, 1393-95 (T.T.A.B. 1994).

194. *Id.* at 1396 (“[I]t is undisputed that, to a significant portion of the relevant public, the subject marks identify applicant as the primary source of its educational and entertainment services and as the secondary source of the apparel imprinted with such marks.”).

195. *Why Coca-Cola Railed Against the Nickname ‘Coke’*, CBC RADIO: UNDER THE INFLUENCE (May 21, 2020), <https://www.cbc.ca/radio/undertheinfluence/why-coca-cola-railed-against-the-nickname-coke-1.5578505> (“In 1913, the company actually created an advertising campaign to dissuade people from using the nickname Coke Coca-Cola kept encouraging the public to ask for a Coca-Cola instead of a Coke for the next 30 years. But the public still insisted on asking for a Coke. The nickname was unstoppable.”).

196. *Coca-Cola Co. v. Busch*, 44 F. Supp. 405, 408 (E.D. Pa. 1942). Another soda maker tried to use the name KOKE-UP. Apropos of the earlier discussion, the court found the defendant to be engaging in an effort to free ride.

From a reading of the testimony one is driven to the conclusion that the defendant with an infinite number of names to choose from, in designating his product, chose the designation ‘Koke-Up’ solely for the purpose of taking advantage of the good will and reputation of the plaintiff’s product, which would enure to his benefit as well as to the deception of the public. One who enters a field already occupied by another as in the instant case, should be careful in the selection of a tradename or trademark, keeping far enough away from the plaintiff’s trade-name or trademark to avoid any possible confusion.

Id. at 410.

tournament.¹⁹⁷ The everyday use by NCAA tournament viewers gave the NCAA use rights.¹⁹⁸ All these cases may be seen as free riding by sellers. Their customers did the initial “work” to create new marks and imbue them with meaning. The trademark holders then appropriated this value for themselves.

As always, saying that someone is free riding should not be taken to mean that the free ride does not enhance social welfare. So it is with surrogate public use. Conforming trademark rights to public understandings and usages is often consistent with trademark policy and the consumer interest. To the extent that a buying class uses a particular mark to identify and distinguish a source of goods or services, the logic of trademark protection counsels allowing them to do so. Doing so is consistent with other parts of trademark law, which generally accommodates the natural evolution of language notwithstanding markholder interests.¹⁹⁹

Requiring sellers to fight the tide and expend resources to shift consumer identification to a different mark would create costs that would be expected to be passed along in higher prices. Moreover, the interim period during which many consumers identify the “wrong” mark as that of the trademark holder would raise consumer search costs as consumers expend resources on unintended beneficiaries. Worse, allowing a third party to take ownership of and exploit the misidentified term would invite misdirected purchases and undermine consumer autonomy.

Surrogate public uses may even blunt some third-party free riding in the merchandising context. In 2008, “Evil Enterprises” sought to register BASEBALLS EVIL EMPIRE, which is, of course, a reference to the odious NEW YORK YANKEES.²⁰⁰ The team filed an opposition, and the TTAB bowed to reality, recognizing that “there is only one EVIL EMPIRE in baseball and it is the New York Yankees.”²⁰¹

While declaring the team the owner of the mark may appear to be overreach, it’s worth noting the effect of the exchange. The would-be

197. Ill. High Sch. Ass’n v. GTE Vantage Inc., 99 F.3d 244 (7th Cir. 1996).

198. *Id.* at 246 (“Most people know what they know about college basketball from the media. If the media call the NCAA tournament “March Madness,” that is what the public will call it, or know it as.”).

199. For example, the doctrine of genericide requires that a markholder lose rights once consumers come to use the mark to identify a product category rather than a particular source. *See* 15 U.S.C. § 1064 (providing that a registration may be cancelled at any time if “the registered mark becomes the generic name for the goods or services, or a portion thereof, for which it is registered”).

200. N.Y. Yankees P’ship v. Evil Enters., Inc., No. 91192764, 2013 WL 1305332 (T.T.A.B. Feb. 8, 2013) (nonprecedential).

201. *Id.* at *6.

registrant was the sort of free rider identified in the last Section.²⁰² The applicant did not create the identification of the Yankees with the “evil empire” of *Star Wars*, nor did it have anything to do with the *Star Wars* franchise for that matter.²⁰³ The connection emerged from the ferment of popular culture (and, of course, the evil of the New York Yankees). For their part, the Yankees did not attempt to register the mark for themselves.²⁰⁴ The principle of surrogate public use thus left more matter outside the federal registration regime than would have otherwise been the case.²⁰⁵

In other ways, however, surrogate public use raises the costs of the merchandising right.²⁰⁶ The fundamental problem of merchandising is the tax it imposes on consumers by creating artificial scarcity for the merchandised mark. To some extent, fandom can avoid this tax by engaging in—or taking advantage of—individual acts of creativity (e.g., making a sign) or collective action (e.g., all fans of the Boston Celtics wearing green to a game). This imposes some measure of market discipline on the monopoly market of authorized merchandise.

If, however, the markholder is able to appropriate these works as part of its merchandising portfolio, an important check is lost.²⁰⁷ Likewise, courts have

202. See *supra* Section III.B. The application was based on intent to use. *N.Y. Yankees P’ship*, 2013 WL 1305332, at *2.

203. The TTAB credited the coinage to then-Boston Red Sox President Larry Lucchino. *Id.*

204. Currently there is no live registration for the mark.

205. To be sure, the TTAB did state that the Yankees have “a protectable trademark right in the term EVIL EMPIRE as used in connection with baseball,” *N.Y. Yankees P’ship*, 2013 WL 1305332, at *6, and nothing is stopping the Yankees from asserting a trademark claim against one using the term—that’d be just like them, evil as they are—but they would do so without the benefit of a trademark registration.

206. Of course, the merchandising right itself can be seen as a problem of free riding on fandom, as the value of merchandised sports team logos rests in part on the effort of fans. For some, the attractiveness of a Red Sox cap stems in no small part from being part of an extended fan base that suffered decades of futility before the team’s fortunes turned around radically in the early twenty-first century. See, e.g., *Sons of Sam Horn*, TAPATALK, <https://www.tapatalk.com/groups/sonsofsamhorn/win-it-for-t1611.html> (last visited Dec. 1, 2023). Participation in “Red Sox Nation” was a fan-paced activity, but one that created value that the team can exploit in merchandise sales. Moreover, trademark holders derive all manner of benefits from customer interactions with their marks. See, e.g., Deborah R. Gerhardt, *Consumer Investment in Trademark*, 88 N.C. L. REV. 427, 455 (2010). All that said, this part does not focus on the claim that the merchandising right is an example of plaintiff free riding with which the law should concern itself. This is because I doubt courts are likely to see this as free riding given the efforts made by the merchandising trademark holder. Recall, of course, that the merchandising right is rooted in the perception that it has been “earned” by the trademark holders. See *supra* notes 107–115 and accompanying text.

207. Cf. *supra* notes 193–194 and accompanying text (discussing BUCKY BADGER).

demonstrated receptiveness to broad brand extensions in the merchandising space, allowing a university to claim not only merchandising rights in a mark, but also team colors.²⁰⁸

Summary. The principle of surrogate public use lets sellers appropriate the byproducts of customer interactions with their goods and services as marks. This is free riding, but in many cases it is free riding that can be harmonized with the consumer interest and the general policy goals of trademark law. That said, it also may exacerbate the costs and tensions of the merchandising right.

D. FREE RIDING ON OTHER SELLERS

The normal trademark story of free riding is that of infringers seeking to appropriate the efforts of trademark holders.²⁰⁹ This account is incomplete, for trademark holders often seek to use their marks to free ride on the efforts of other sellers. These efforts reach both remote actors and direct competitors.

1. “Trolling” Remote Sellers

The classic IP “troll” story comes from patent law. Someone gets a vague, broadly worded patent and lies in wait.²¹⁰ Because the patent should never have been granted, its terms cast a wide net that eventually ensnares an innocent who practices a purportedly covered technology.²¹¹ Our troll then springs up to demand payment. *In terrorem* effects coupled with uncertainty, or simply a desire to avoid the costs of mounting a defense, may produce a favorable settlement despite the weakness of the plaintiff’s claim.²¹²

As discussed above, the troll narrative has limited applicability to trademark law because trademark rights require actual use.²¹³ That said, what

208. See *Bd. of Supervisors for La. State Univ. Agric. & Mech. Coll. v. Smack Apparel Co.*, 550 F.3d 465, 478 (5th Cir. 2008) (“We think this desire by consumers to associate with a particular university supports the conclusion that team colors and logos are, in the minds of the fans and other consumers, source indicators of team-related apparel. By associating the color and other indicia with the university, the fans perceive the university as the source or sponsor of the goods because they want to associate with that source.”).

209. See *supra* Section II.B.

210. The term is, of course, pejorative. See, e.g., *Patent Trolls*, ELEC. FRONTIER FOUND., <https://www.eff.org/issues/resources-patent-troll-victims> (last visited Dec. 1, 2023) (“A patent troll uses patents as legal weapons, instead of actually creating any new products or coming up with new ideas.”).

211. *Id.*

212. Cf. FED. TRADE COMM’N, PATENT ASSERTION ENTITY ACTIVITY: AN FTC STUDY 8 (2016) (“Ninety-three percent of reported Litigation PAE licenses followed a lawsuit against the eventual licensee and 77% were valued at less than the estimated cost of defending a patent lawsuit through the end of discovery—a threshold below which litigation settlements might be considered nuisance value.”).

213. See *supra* notes 141–142 and accompanying text.

counts as sufficient use is often unclear, creating room for conduct that may look like an effort to free ride off of larger entities.

For example, a company might seek to appropriate a mark if there is reason to think a well-capitalized entity also wants it and might pay to get it. Trademark law's *bona fide* use requirement deflects some efforts in this vein, as trademark rights cannot rest on uses "made merely to reserve a right in a mark."²¹⁴

Social Technologies LLC v. Apple, Inc. offers an example of the principle in action.²¹⁵ Apple purchased rights to the MEMOJI mark from a third-party user who was ultimately deemed the first user, but Social Tech challenged Apple's rights²¹⁶ with a use that was ultimately deemed not to be *bona fide*.²¹⁷ Social Tech's emails with its software developer indicated to the court that its claimed use was a strategic effort to bolster its rights in anticipation of litigation with the deep pockets of Apple.²¹⁸

"The lawsuit is coming together nicely . . . [W]e are just waiting for the trademark registration to file the lawsuit and get PAID," "[w]e are lining up all of our information, in preparation for a nice lawsuit against Apple, Inc! We are looking REALLY good. Get your Lamborghini picked out!" and "[i]t's better if we split up the updates, so it looks like we have more of them for the lawsuit."²¹⁹

As the court explained, the "significance of this correspondence is obvious."²²⁰ Their timing and content "leave no doubt" that "Social Tech's intention to develop and release its Memoji application was not a *bona fide* engagement of the mark in commerce, but merely an attempt to reserve its MEMOJI trademark and provide a basis for its lawsuit against Apple."²²¹

Other times, however, trademark law is more open to claims that could be analogized to trolling. To be sure, the analogy is imperfect. In addition to the use requirement, the naked licensing doctrine complicates efforts to license a mark as one would a patent (lest a mark lose its distinctiveness by being

214. 15 U.S.C. § 1127. The *bona fide* use requirement was added to the Lanham Act specifically to address the problem of so-called "token" uses. 1 MCCARTHY, *supra* note 62, § 5:9.

215. 4 F.4th 811 (9th Cir. 2021).

216. *Id.* at 814.

217. 15 U.S.C. § 1127 ("The term 'use in commerce' means the *bona fide* use of a mark in the ordinary course of trade, and not made merely to reserve a right in a mark.").

218. *Soc. Techs.*, 4 F.4th 811 at 820.

219. *Id.* (emphases in original).

220. *Id.*

221. *Id.* at 820–21.

associated with multiple sellers).²²² Finally, in the examples that follow, there's no reason to suggest that the practicing entities made a regular practice of seeking to license their marks. They were going about their business before the litigation opportunity appeared.

But what happens when a small entity learns that a larger seller happens to select a similar mark? This is a problem raised by the reverse confusion doctrine.²²³ In a typical “forward” confusion case, the allegation is that the junior user has a mark that will confuse consumers into thinking that they are purchasing the senior user's product.²²⁴ That is, one who markets KOKE is likely to draw sales from those who want a COKE. In a reverse confusion case, the senior user is a small player who suddenly must face a well-capitalized seller who enters the market with the same or similar mark.²²⁵ Given its size, the upstart can dominate the market and usurp control of the mark's meaning. So suppose EAGLE soda is a small player in the soft drink market, and the Coca-Cola company decides to market EAGLET as a COKE subbrand, backing it with a multi-million-dollar ad campaign. If the campaign is powerful enough, nobody will purchase EAGLET thinking they are getting EAGLE, but some may buy an EAGLE thinking they are purchasing Coca-Cola's EAGLET. Perhaps the senior user gains a sale, but it loses control of the meaning of its mark and the ability to develop goodwill. Worse, consumers may believe that the senior user is trying to knock off the junior user's product when in fact it was first to the marketplace.²²⁶

This is the benign account of why reverse confusion should constitute trademark infringement. There is a potential malign story as well. Perhaps the potential for reverse confusion offers the senior user an opportunity to demand a settlement to stave off an infringement action and reap an unearned benefit. The risk is particularly acute in situations involving a weak plaintiff's mark that has only a limited market overlap with the defendant's. Sure, if the two marks cannot coexist, then push has come to shove. But this is not always the case.

For example, Cleveland's major league baseball team recently renamed itself the CLEVELAND GUARDIANS.²²⁷ Unfortunately for the team, a local

222. 3 MCCARTHY, *supra* note 62, § 18:48.

223. 4 MCCARTHY, *supra* note 62, § 23:10.

224. *Id.*

225. *Id.*

226. *See infra* note 230 and accompanying text.

227. Mark Schwab & Steph Krane, *Indians Announce Decision to Change Team Name to Cleveland Guardians*, 19NEWS (July 23, 2021), <https://www.cleveland19.com/2021/07/23/indians-change-team-name-cleveland-guardians/>.

roller derby franchise was already using the name.²²⁸ The senior user sued, alleging that the baseball team should have known about the plaintiff,²²⁹ and arguing that the roller derby team now faced the adverse misperception that it was counterfeiting the baseball team's mark.²³⁰ That certainly sounds bad, suggesting the benign story of the reverse confusion cause of action.

It's worth noting, however, that the roller derby team also complained about an insultingly low settlement offer from the baseball team.²³¹ To be sure, the plaintiff also argued that it is impossible for the two teams to share the GUARDIANS name.²³² If so, then higher settlement demands are reasonable, for one team must stop use of the name—either via settlement or following litigation defeat, and one's settlement price would reflect the value of the GUARDIANS mark with adjustments for litigation costs and assessments of the prospects of victory. If that's what's going on, then whatever happens, there is only one CLEVELAND GUARDIANS at the end of the day.²³³

That's not what happened. The parties settled for undisclosed terms,²³⁴ and as of this writing, a Google search indicates that both teams are the CLEVELAND GUARDIANS. The ultimate peaceful coexistence suggests

228. *Cleveland Guardians*, <https://www.clevelandguardians.com/> (last visited Dec. 1, 2023).

229. Complaint ¶ 20, *Guardians Roller Derby v. Cleveland Guardians Baseball Co.*, No. 1:21-cv-2035 (N.D. Ohio Oct. 27, 2021) (“[I]t is inconceivable that an organization worth more than \$1B and estimated to have annual revenues of \$290M+ would not at least have performed a Google search for “Cleveland Guardians” before settling on the name, and even a cursory search would have returned Plaintiff’s website (www.clevelandguardians.com) as **the first “hit.”** (emphases in original)).

230. *Id.* ¶ 39 (“[The plaintiff has] experienced logistical problems with merchandise suppliers, some of whom initially refused to fulfill orders for CLEVELAND GUARDIANS merchandise because they believe the Indians hold exclusive rights to the name and thus considered Cleveland Guardians’ official merchandise as akin to counterfeit goods.”).

231. *Id.* ¶ 26 (complaining that “the Indians only offered to pay a nominal amount, likely no more than *fifteen minutes* of annual team revenue” (emphasis in original)).

232. *Id.* at 1.

233. As the complaint asserted was necessary. *Id.* (“Two sports teams in the same city cannot have identical names. Major League Baseball would never permit ‘Chicago Cubs’ lacrosse or ‘New York Yankees’ rugby teams to operate alongside its storied baseball clubs and rightly so. Confusion would otherwise result. Imagine seeing a ‘New York Yankees’ shirt for sale and buying it. Which team did you just support?”).

234. Chris Bengel, *MLB’s Cleveland Guardians Settle Lawsuit with Roller Derby Team of Same Name*, CBS SPORTS (Nov. 16, 2021), <https://www.cbssports.com/mlb/news/mlbs-cleveland-guardians-settle-lawsuit-with-roller-derby-team-of-same-name>; Chelsea Janes, *Cleveland Guardians Back on Track for Opening Day After Settling Lawsuit with Roller Derby Team*, WASH. POST (Nov. 16, 2021), <https://www.washingtonpost.com/sports/2021/11/16/cleveland-guardians-lawsuit/>.

that the litigation had the potential of taking advantage of the deeper pockets and misfortune of the baseball team.

To be clear, I'm neither accusing the roller derby team of bad faith nor suggesting it lacked a legitimate grievance. The outcome nonetheless suggests that no compelling *consumer interest* story lay behind the reverse confusion claim. Rather, the two sides were negotiating over a litigation option held by the roller derby team that is exogenous to consumer interests protected by trademark law.²³⁵ If that's the case—and assuming money changed hands between the teams—then it appears that the roller derby could take a free ride on the baseball team's wealth—from a certain point of view, anyway.²³⁶ Now, we may well like this outcome as a matter of wealth allocation, distaste for the baseball team's conduct during the affair,²³⁷ or some other reason. From a trademark law perspective, however, forced wealth transfers divorced from any consumer protection rationale are problematic.

The CLEVELAND GUARDIANS case outcome at least concerns a reasonably strong mark (under the spectrum of distinctiveness²³⁸) whose protection poses no threats to marketplace competition. The baseball team does not “need” to be the GUARDIANS except insofar as it made investments locking itself onto a course that favored the name. The problem of reverse confusion is considerably more acute when we are dealing with weak marks that are useful to other sellers.

Litigation involving the cloud services provider Dropbox illustrates the problem nicely.²³⁹ The company added a feature to its service that allows users to save hard drive space by selectively deciding which files saved on Dropbox should reside exclusively in the cloud, and which should also be kept up to

235. This is not to say that there was no harm to the roller derby team of sharing a name with the baseball team, but that is distinct from the question whether consumers suffered from the overlap.

236. Star Wars Saga LatinAmerica, *Star Wars: Return of the Jedi - Obi-Wan's revelation.*, YOUTUBE (Jan. 4, 2020), <https://www.youtube.com/watch?v=2nO0uJenOgw>.

237. See Complaint, *supra* note 229, ¶¶ 21–31.

238. Under the commonly used spectrum of distinctiveness, associated with *Abercrombie & Fitch Co. v. Hunting World, Inc.*, 537 F.2d 4 (2d Cir. 1976), a mark may be classified as fanciful (a coined word, like KODAK), arbitrary (a word that does not bear a direct relation to the product, like APPLE computer), suggestive (a word that suggests a quality without describing a product, like PENGUIN freezers or NETFLIX), descriptive (a word that describes the good or service, like THE WEATHER CHANNEL), and finally a generic term, which cannot be a mark because it describes a product category (like “wine” for wine). Fanciful, arbitrary, and suggestive marks are inherently distinctive, and receive protection automatically; descriptive marks require establishing that the relevant consuming public sees the terms as marks. For a popular example of the spectrum of distinctiveness in action, see *Zatarains, Inc. v. Oak Grove Smokehouse, Inc.*, 698 F.2d 786 (5th Cir. 1983).

239. *Ironhawk Techs., Inc. v. Dropbox, Inc.*, 2 F.4th 1150 (9th Cir. 2021).

date on a particular local hard drive.²⁴⁰ The company describes this feature with the name “Smart Sync,” which efficiently and aptly describes its function.²⁴¹ Your files will stay harmonized across different computers (“sync[ed]” up) in a more efficient (one might say “smart[er]”) way than filling your local hard drive with everything in your Dropbox account. Notably, Dropbox does not market the feature as a standalone product. DROPBOX is the mark; “Smart Sync” is the feature available for users of certain paid plans.²⁴²

Unfortunately for Dropbox, SMART SYNC *is* used by Ironhawk Technologies for software using “compression and replication to transfer data efficiently in ‘bandwidth-challenged environments.’”²⁴³ Ironhawk sued for infringement. Although the district court gave Dropbox summary judgment,²⁴⁴ the Ninth Circuit reversed.²⁴⁵ From there, the parties settled with an agreement that allows both parties to continue using the “Smart Sync” terminology.²⁴⁶

Ironhawk v. Dropbox is notable for the issues it raises about trademark quality. The case would be simple had Dropbox marketed its Smart Sync feature under the IRONHAWK mark. That would be an ideal example of the dangers of reverse confusion. A larger defendant would have the power to usurp Ironhawk’s ability to shape the goodwill attaching to the mark. Moreover, IRONHAWK is a conceptually strong trademark,²⁴⁷ meriting broader protection because it is inherently distinctive and poses no threats to competition by being protected. There is no reason why Dropbox—or anyone else in the cloud storage space—needs it for marketing activities.

240. *How to Use Dropbox to Save Hard Drive Space*, DROPBOX (Oct. 27, 2023), <https://help.dropbox.com/installs-integrations/sync-uploads/smart-sync>.

241. *Id.*

242. *Id.* (“This feature is only available to users on Dropbox Plus, Family, Professional, or Business plans.”); *Ironhawk Techs., Inc. v. Dropbox, Inc.*, No. CV 18-01481 DDP (JEMx), 2019 WL 5538831, at *1 (C.D. Cal. Oct. 24, 2019), *rev’d and vacated*, 2 F.4th 1150 (9th Cir. 2021).

243. *Ironhawk*, 2019 WL 5538831, at *1 (quoting record).

244. *Id.* at *7.

245. *Ironhawk*, 2 F.4th at 1169.

246. Blake Brittain, *Dropbox Settles “Smart Sync” Trademark Case Brought by Navy Contractor*, REUTERS (Oct. 29, 2021), <https://www.reuters.com/legal/transactional/dropbox-settles-smart-sync-trademark-case-brought-by-navy-contractor-2021-10-29/>. As of this writing, both companies are still using the term. *Compare Help Center*, DROPBOX, <https://help.dropbox.com/installs-integrations/sync-uploads/smart-sync>, *with Smart.Sync Enterprise Software*, IRONHAWK, <http://ironhawk.com/smartsync-enterprise-software/> (last visited Dec. 1, 2023).

247. 2 MCCARTHY, *supra* note 62, § 11:80.

Not so with SMART SYNC. The mark is conceptually weak, being arguably descriptive²⁴⁸ with little renown. More importantly, it is the kind of term that a number of sellers would find useful to describe product features, as seen by Dropbox's use of—and willingness to fight for—the term and the number of other sellers who use the term either as a mark or to describe their product offerings.²⁴⁹

Nonetheless, the Ninth Circuit allowed Ironhawk's claim to proceed.²⁵⁰ The opinion highlights how reverse confusion claims might enable plaintiff free riding. The court used the reverse confusion frame to negate extensive context that in a normal trademark case would favor the defendant.

Beginning with mark strength,²⁵¹ SMART SYNC is arguably not a mark at all.²⁵² In context it describes what the Ironhawk product does, and even if the mark has enough secondary meaning for protection, the brand is not strong enough for the mark to enjoy robust protection. The court nonetheless said the registration favored Ironhawk given the litigation's procedural posture.²⁵³ More importantly, however, the court concluded that the relevant issue of mark strength concerns not Ironhawk's brand, but *Dropbox's*.²⁵⁴

248. As the district court found. *Ironhawk*, 2019 WL 5538831, at *2–*3 (“The term ‘SmartSync,’ . . . appears to describe at least some of the characteristics of Ironhawk’s product, namely synchronization and ‘intelligent’ transport, compression, and synchronization. Accordingly, Ironhawk’s mark is entitled to no protection. Even if Ironhawk’s Smartsync mark were suggestive rather than descriptive, the mark would still be weak. A suggestive mark is presumptively weak.” (citation and footnotes omitted)).

249. *See, e.g., Carelink SmartSync Device Manager*, MEDTRONIC, https://europe.medtronic.com/xd-en/healthcare-professionals/products/cardiac-rhythm/managing-your-patients/in-clinic-management/smartsync.html?cmpid=PPC:GOOG:SmartSyncAd1:WE_EN_CDS_PartnerInCare-WBS292%7CTX%7CGS_GEN_MAY23 (last updated May 2021); SMARTSYNC, <https://www.smartsync.com/> (last visited Dec. 1, 2023); *Pioneer Smart Sync*, APPLE, <https://apps.apple.com/us/app/pioneer-smart-sync/id1343699460> (last visited Dec. 1, 2023); *What is SmartSync?*, SMARTSYNC, <https://help.shape.io/hc/en-us/articles/10967928969869-What-is-SmartSync-Enabling-SmartSync> (last visited Jan. 21, 2024).

250. *Ironhawk*, 2 F.4th 1150.

251. This factor considers strength in two dimensions: where a mark sits on the spectrum of distinctiveness and how much identification it actually has with the relevant consuming public. *See* 2 MCCARTHY, *supra* note 62, § 11:80.

252. *See supra* notes 248–249 and accompanying text.

253. *Ironhawk*, 2 F.4th at 1162 (“While we agree with the district court that Ironhawk’s mark could be considered descriptive, given the presumption of distinctiveness established by SmartSync’s federal registration, and the elusive nature of the inquiry, a reasonable jury could conclude the mark is suggestive.”).

254. *Id.* at 1162–63 (“Whether descriptive or suggestive, the important question in a reverse confusion case is whether the junior mark is so commercially strong as to overtake the

That suggests that Dropbox is being punished for its success in developing strong goodwill.²⁵⁵ Of course, success of this sort makes them a more tempting target for free-riding efforts. But shouldn't the strength of the DROPBOX mark belie any likelihood of confusion? Enter the mark similarity factor. As noted above, Dropbox did not market Smart Sync as a standalone product, its marketing fell under the DROPBOX brand.²⁵⁶ Shouldn't that negate likelihood of confusion? No, because of the reverse confusion frame, it actually *exacerbates* it.

“While . . . a company’s consistent use of a house mark can reduce the likelihood of confusion, in a reverse confusion case the junior user’s use of a house mark can also *aggravate* confusion by reinforcing the association between the mark and the junior user.”²⁵⁷

Other parts of the opinion—and the dissent in response—raise familiar questions of the appropriate scope of the trademark cause of action, how much should be left to the jury as questions of fact,²⁵⁸ and whether these questions should be resolved normatively.²⁵⁹ At the end of the day, however, whatever harm Dropbox causes to consumers with the “Smart Sync” name persists. The parties settled and both continue to use the term.²⁶⁰ The possible reallocation of wealth (the terms were not disclosed) suggests the ability to put reverse confusion theory to use for free riding.

The dynamic described here is independent of the plaintiff’s intent. Perhaps Ironhawk’s decisionmakers genuinely believed that Dropbox caused

senior mark. Accordingly, we assess the commercial strength of Dropbox’s Smart Sync mark and ask whether it is able to swamp the reputation of Ironhawk’s SmartSync with a much larger advertising campaign.” (cleaned up)).

255. *Id.* at 1163 (“Based on the evidence presented, a reasonable jury could find that Dropbox’s Smart Sync is commercially strong, and when considered against the conceptual strength of Ironhawk’s SmartSync mark, is able to swamp Ironhawk’s reputation with a much larger advertising campaign.”).

256. *See supra* note 242 and accompanying text.

257. *Ironhawk*, 2 F.4th. at 1164.

258. *Compare id.* at 1169 (“[W]e do not conclude that the trier of fact will find the *Sleekcraft* factors in Ironhawk’s favor, or that a likelihood of confusion exists under the totality of the circumstances. That is not our inquiry on summary judgment.”), *with id.* at 1170 (Tashima, J., dissenting) (“[T]he sophistication of potential commercial customers, the expense of the product, and the manner in which Ironhawk markets its product—wholly eliminate any realistic possibility of consumer confusion in this case.”).

259. *See, e.g.*, Michael Grynberg, *More Than IP: Trademark Among the Consumer Information Laws*, 55 WM. & MARY L. REV. 1429, 1459 (2014) (“Defining how careful a consumer is is hard to separate from a policy or normative choice about how careful a consumer should be. Confusion is inevitable. The question is how much of it we need to target or tolerate in service of our conflicting normative and policy goals.”).

260. *See supra* note 246.

them a harm that was rendered acceptable by whatever concession was made in settlement. I have no idea, but the effect—costly litigation that does not reduce the number of users of the mark in question—is the same as if free riding were intended.

To be sure, sometimes reverse confusion cases have record evidence suggestive of an intent to free ride. In *Kelly-Brown v. Winfrey*, for example, the owner of “Own Your Power Communications, Inc.,” a motivational services business, sued several defendants, including Oprah Winfrey, for engaging in a variety of activities built around the phrase “own your power.”²⁶¹

The case raises trademark quality concerns, as the phrase is a category identifier as much as, if not more than, a source indicator for both parties. The plaintiff should not have been able to claim trademark rights in the first instance. “Own your power” functions as an exhortation to self-empowerment, and the clients of both parties would likely see it as such. Because the registration and prior use were there, however, the ensuing litigation had to sort out the question as well as the prospect that Winfrey was engaged in a classic, non-trademark use of the phrase.²⁶² Ultimately, Winfrey prevailed, but not before a lengthy back and forth between the district and circuit courts.²⁶³ The costs incurred likely represented a sizable potential settlement value for the plaintiff, had the parties gone that route.

If the plaintiff had a colorable claim—resting on solid consumer-protection foundations—that could have gone either way, this would be fine. On the other hand, we should be concerned if this were a case of free riding designed to exploit the good fortune of securing a weak mark that a well-capitalized defendant happened to use as advertising copy. So which is it? I have no idea of the plaintiff’s intent, but, as the case progressed to summary judgment filings, the district court felt it appropriate to recite that the plaintiff

261. 717 F.3d 295, 300 (2d Cir. 2013) (“For example, the October 2010 issue of O, the Oprah Magazine (the ‘Magazine’), which was distributed on or about September 13, 2010, prominently featured the words ‘Own Your Power’ on its front cover. Beneath these words were the sub-headings ‘How to Tap Into Your Strength’; ‘Focus Your Energy’; and ‘Let Your Best Self Shine.’”).

262. *Compare Kelly-Brown*, 717 F.3d at 313 (vacating district court’s conclusion that defendants were entitled to dismissal of plaintiff’s claims on fair use grounds), *with Kelly-Brown v. Winfrey*, 95 F. Supp. 3d 350, 363 (S.D.N.Y. 2015) (on remand on summary judgment, finding fair use defense applied in defendants’ favor), *aff’d on other grounds*, 659 F. App’x 55 (2d Cir. 2016).

263. The final disposition of the case came in 2017 after certiorari was denied to *Kelly-Brown v. Winfrey*, 659 F. App’x 55 (2d Cir. 2016) (affirming summary judgment, reached on a variety of grounds, on remand in defendant’s favor). The district court’s initial fair use ruling in defendants’ favor was in 2012. *Kelly-Brown v. Winfrey*, No. 11 CIV. 7875(PAC), 2012 WL 701262, at *3 (S.D.N.Y. Mar. 6, 2012), *aff’d in part, vacated in part*, 717 F.3d 295 (2d Cir. 2013).

sent an email reading: “Oprah is going to be my big sis!!! Can’t wait!!!! Lol. She keeps using my name. I’m gonna be paid!!!! Anything you want is attainable! Own Your Power, Simone.”²⁶⁴

Summary. Although trademark plaintiffs are rarely “trolls” in the sense bandied about in the patent context, the structure of trademark law allows for analogous claims. Reverse confusion cases are particularly open to these suits as a structural matter, regardless of what the actual intent of trademark plaintiffs may be.

2. *Free Riding on Competitors*

Commercial advertising faces an inherent free-rider problem in competitive markets. When a seller touts a good or service it often simultaneously promotes a broader product category. Advertising that urges you to, for example, “Get your greens with an EAGLE salad,” both pushes a brand (EAGLE) and promotes the brand category (salads or health food). The advertising may prompt a consumer to make a category purchase (“you know, I haven’t been eating very well lately. I should really get a salad.”) that does not benefit the advertiser (“Oh, look, HAWK salads!”). Other sellers thus benefit from third-party efforts, creating a free-rider and collective action problem.²⁶⁵

As always with collective action problems, a variety of potential solutions exist. Sellers in various product categories can voluntarily collaborate on efforts at category promotion, leaving the problem of defection to relationships, norms, or other non-legal solutions. At times the state has stepped in, in the form of federal market promotion programs that seek to solve the coordination problem by mandating payments from sellers in a product category that is then used to fund advertising for the product category.²⁶⁶ The “Got Milk” campaign is an example.²⁶⁷ Another possibility is

264. *Kelly-Brown*, 95 F. Supp. 3d at 362.

265. Bradley T. Shapiro, *Positive Spillovers and Free Riding in Advertising of Prescription Pharmaceuticals: The Case of Antidepressants*, 126 J. POL. ECON. 381, 433 (2018) (finding that “television advertising has significant positive spillovers” and that “the spillovers induce a free-riding and internalization problem whereby competitive advertising is significantly lower than the optimal strategy that a cooperative would set if it controlled the entire market”).

266. *About Pork Checkoff*, PORK CHECKOFF, <https://porkcheckoff.org/about/> (last visited Dec. 1, 2023). The National Pork Board commissioned the “Pork: The Other White Meat” campaign. See Jane L. Levere, *The Pork Industry’s ‘Other White Meat’ Campaign Is Taken in New Directions*, N.Y. TIMES (Mar. 4, 2005), <https://www.nytimes.com/2005/03/04/business/media/the-pork-industrys-other-white-meat-campaign-is-taken-in-new.html>.

267. *Cochran v. Veneman*, 359 F.3d 263 (3d Cir. 2004), *cert. granted, judgment vacated sub nom.* *Lovell v. Cochran*, 544 U.S. 1058 (2005), *and cert. granted, judgment vacated sub nom.* *Johanns v. Cochran*, 544 U.S. 1058 (2005). Efforts of this sort have been the subject of First

just to put up with it, realizing that all actors in a brand category will simultaneously promote the category as part of their marketing efforts, so everyone is simultaneously a free rider and free ridee.

The dilemma shapes the incentives of effective marketing. Marketing campaigns need to maximize brand awareness without diverting too much promotional effort to the product category.²⁶⁸ In other words, one must steer clear of generic matter.²⁶⁹ The dilemma extends to non-word marks, for marketers will naturally try to identify and target the range of situations in which associations with a brand may form. Once identified, these “category entry points”²⁷⁰ can be paired with a memorable manifestation of the brand—be it a word mark, logo, packaging, slogan, etc.—appropriate to the task.²⁷¹ The marketing strategy thus builds the mental availability of the brand, so that

Amendment challenge as compelled speech. *See, e.g., id.*; *United States v. United Foods, Inc.*, 533 U.S. 405 (2001).

268. JENNI ROMANIUK & BYRON SHARP, *HOW BRANDS GROW: PART 2* 92 (2d ed. 2022) (“If you choose to build an asset that has low uniqueness, you will have a battle on your hands. Competitors have already made inroads in building their own fame with the asset, which means any use of that asset risks triggering competitors also linked . . .”).

269. *Id.* at 94 (discussing brand assets that have fame for both the seller and its competitors). “These assets are, or are becoming, generic category (for example, red in tomato sauce) or sub-category (for example,) yellow for lemon scent) signals. A cause can be new entrants mirroring the cues of established brands. While it is hard to give up an asset when fame is high, without strong direct branding you risk giving valuable mental real estate to competitors’ brands.” *Id.*

270. *Id.* at 67.

271. *Id.* at 87, 100. Romaniuk gives the example of the building of the McCafé subbrand for premium McDonald’s coffee.

Buyers naturally build links between brands and CEPs as they use a category in different contexts over time. Experiences become established and refreshed in memory, available to be retrieved later on. However, we can use marketing activity to influence and accelerate this process on the brand’s behalf, through building links between brands and CEPs outside of normal buying/using patterns. An example of this is McDonald’s and coffee. Thinking back a decade ago, how long would it have taken you to go to McDonald’s for a decent coffee if there had not been extensive advertising of its McCafé and fancier coffee offerings? You might have passed a McDonald’s in the morning, seen the word McCafé, and noticed the smell of coffee. If you looked in and saw the actual coffee machines, it might have ‘clicked’ that McDonald’s offers ‘good’ coffee (though you probably forgot soon after). Then one day, you might have thought, ‘I’ll grab a coffee at McDonald’s’ on your way to a meeting.

Id. at 68–69.

the brand will be a potential option at the moment of possible purchase.²⁷² In most cases, however, the niche is open to any competitor, spurring the need to create brand assets that are distinct in the mind of the consumer.²⁷³

Interesting free-riding incentives naturally follow. Imagine the invention of a new, unpatented product—call it a widget—for which there is a first mover in the newly created market. Our seller, Eagle Inc., markets the widget under the EAGLE mark. Widgets have a distinct shape, and that shape is memorable enough that some buyers may form memory structures around it.²⁷⁴ Should Eagle, Inc. promote the shape in its advertising? The answer depends on trademark law. If Eagle can claim the design as a mark, it can appropriate the returns of consumer identification with the shape. If it cannot, then promotion of the shape promotes the product category, allowing Eagle's competitors to free ride on Eagle's advertising. A prospective purchaser may form an impression of widgets due to Eagle's advertising ("That looks cool.") and then later see a competitor's widget at a moment that the shape is highly salient ("There's that thing. Let's try it.").

Suppose instead that Eagle successfully claims the widget shape as a mark. To the extent that purchasers see the shape as characteristic of the product category, Eagle may now free ride on the category-promotion marketing of its competitors, at least for those purchasers who use the widget shape as a category identifier.²⁷⁵ Then, suppose Hawk Corp. makes rival widgets but changes their shape to respond to Eagle's successful trademark claim. Hawk's advertising promotes HAWK widgets, but the advertising raises the awareness and salience of the product category generally, adding new purchasers to the pool. A subset of these new purchasers uses the shape of the EAGLE widget to identify the product category. The resulting purchases of EAGLE widgets are the product of a free ride by Eagle on the advertising efforts of Hawk.

To be sure, trademark law contains several safeguards against this kind of thing. First, if product design is at issue, the would-be trademark holder must establish secondary meaning—that consumers see the design as performing a

272. So the effort to build mental availability must be complemented by one promoting the product's physical availability so that a purchase is possible. ROMANIUK & SHARP, *supra* note 268, at 139 ("Building physical availability is about identifying and removing as many speed bumps to purchase as you can, no matter how small. The aim is to make the path between having the brand mentally available and actual purchase as smooth as possible, in order to realise the revenue promise of built mental availability.").

273. *Id.* at 92.

274. *Cf. id.* at 65–67.

275. Eagle can also free ride on competitors in more conventional manners like forcing them to take a license to the design.

source-identifying function.²⁷⁶ This reflects the Supreme Court’s recognition that product features are typically category identifiers rather than source identifiers. As Justice Scalia observed for the Court in *Wal-Mart*:

[W]e think consumer predisposition to equate the feature with the source does not exist. Consumers are aware of the reality that, almost invariably, even the most unusual of product designs—such as a cocktail shaker shaped like a penguin—is intended not to identify the source, but to render the product itself more useful or more appealing.²⁷⁷

The problem is the porous nature of the secondary meaning screen. The maker of the product may well be able to secure recognition of secondary meaning without proffering any survey evidence, as courts often accept circumstantial evidence,²⁷⁸ and the Lanham Act contemplates that mere use may prove secondary meaning.²⁷⁹ And when survey evidence is used, courts do not demand majority consumer recognition.²⁸⁰ Even if they did, in many such cases a substantial minority of consumers still may treat the product shape not as a source identifier, but as a way to mark the category, allowing the markholder to benefit from the category-promotion efforts of its competitors.

Eagle’s trade dress, whether product design or product packaging, might also run afoul of the rule against protecting generic matter, which directly targets attempts to claim category-identifying information as a mark. If enough other industry participants use the design, it may well be deemed ineligible for trademark protection.²⁸¹ But the problem again concerns mixed consumer

276. *Wal-Mart Stores, Inc. v. Samara Bros.*, 529 U.S. 205 (2000).

277. *Id.* at 213.

278. *See, e.g., Viacom Int’l, Inc. v. IJR Cap. Invs., L.L.C.*, 891 F.3d 178, 190 (5th Cir. 2018) (considering the following factors: “(1) length and manner of use of the mark or trade dress, (2) volume of sales, (3) amount and manner of advertising, (4) nature of use of the mark or trade dress in newspapers and magazines, (5) consumer-survey evidence, (6) direct consumer testimony, and (7) the defendant’s intent in copying the [mark]” (internal quotation and citation omitted)).

279. 15 U.S.C. § 1052 (USPTO “may accept as prima facie evidence that the mark has become distinctive, as used on or in connection with the applicant’s goods in commerce, proof of substantially exclusive and continuous use thereof as a mark by the applicant in commerce for the five years before the date on which the claim of distinctiveness is made.”).

280. 6 MCCARTHY, *supra* note 62, § 32:190 (“Generally, figures over 50% are regarded as clearly sufficient. However, figures of 46%[,] 48%, and 37 percent have also been found sufficient.” (footnotes omitted)).

281. *See, e.g., Bimbo Bakeries USA, Inc. v. Sycamore*, 29 F.4th 630, 639 (10th Cir. 2022); *Paddington Corp. v. Attiki Imps. & Distribs., Inc.*, 996 F.2d 577, 583–84 (2d Cir. 1993) (“[P]ackaging lime-flavored soda in green twelve-ounce cans is so common in the soft drink industry that such packaging probably is not inherently distinctive, although without the

classes. Generic status is a binary, either/or state. Its legal framework does not effectively map onto the messiness of life in which some consumers may treat a feature as generic while others do not.²⁸² Indeed, it is possible for a substantial number of consumers to treat a product feature as generic without its becoming *de jure* generic.²⁸³

The same is true of the functionality doctrine, discussed above.²⁸⁴ In particular, the judicial reluctance to entertain defenses of aesthetic functionality²⁸⁵ creates the risk that trademark holders will appropriate designs used by a substantial number of consumers to identify product categories, enabling free rides on the category-promotion activities of their competitors.

The *Louboutin* litigation illustrates the problem. There, the maker of the popular shoe with a red sole contrasting with a black outsole sued the maker of a monochromatic red shoe for infringement.²⁸⁶ *Louboutin* and its competitors all have an incentive to promote the product category of high-fashion shoes.²⁸⁷ The color red can serve both as a signifier of a particular shoe in the market (a LOUBOUTIN when combined with a contrasting black outsole) or an attribute of the product category (red high-fashion shoes).²⁸⁸ This is the problem of incomplete genericism.

The case illustrates, however, another avenue for plaintiff free riding that is more germane to the functionality doctrine. The color red may be a category entry point for marketing red shoes.²⁸⁹ Imagine, for example, a fashion show attended by potential shoe customers. Even if the models are not featuring shoes, they may well be showcasing red clothing or accessories. Each such display may prompt attendees to think about other possibilities for the color,

industry practice green cans would be either suggestive or arbitrary and therefore inherently distinctive.”).

282. Grynberg, *supra* note 10, at 93–94. Though courts sometimes try to mediate the conflict between consumer classes. *Id.* at 94; *Blinded Veterans Ass’n v. Blinded Am. Veterans Found.*, 872 F.2d 1035, 1047–48 (D.C. Cir. 1989) (generic terms must be available, but district court may require measures to avoid confusion); *Bayer Co. v. United Drug Co.*, 272 F. 505, 510 (S.D.N.Y. 1921) (allowing generic use of “aspirin” for sales to the public but not to pharmaceutical professionals).

283. 2 MCCARTHY, *supra* note 62, § 12:6 (“If some people regard the contested designation as a generic name, while others regard it as a mark, the term must be placed either in the ‘generic’ pigeonhole or in the ‘trademark’ category. The result of the primary significance rule is that majority usage controls.”).

284. See *supra* notes 131–140 and accompanying text.

285. See *supra* notes 137–140 and accompanying text.

286. *Christian Louboutin S.A. v. Yves Saint Laurent Am. Holdings, Inc.*, 696 F.3d 206, 211 (2d Cir. 2012).

287. See *supra* notes 281–283 and accompanying text.

288. See *supra* notes 281–283 and accompanying text.

289. On category entry points, see *supra* notes 270–273 and accompanying text.

perhaps including shoes. If all shoemakers are free to use red, then the returns of these displays will be freely appropriable by all sellers in that market. In contrast, if Louboutin had prevailed, the shoemaker would have been able to take more for itself.²⁹⁰

Another way to look at it is to see the color red as functional not just for the shoes that use it, but also their marketing.²⁹¹ Of course that is true of any trademark, but most trademarks don't have the range of proximate uses that lead to the same kind of trademarkholder free riding. Apple the computer maker may enjoy some attenuated benefit from the popularity of apples the fruit, but neither its competitors nor sellers in proximate markets have any incentive to raise the salience of the fruit in their communications with consumers.

To be sure, in *Louboutin* the trademark holder had done work of its own, and we can quibble about the extent to which the defendant is free riding on Louboutin's efforts in creating the famous contrasting brand. The point, however, is that there's a value that Louboutin was attempting to appropriate. The free riding is bilateral.

Summary. Courts appreciate that the doctrines of genericism and functionality preserve and promote competition between sellers. On this view, the gains of competition justify some free riding by trademark defendants. Note that this is not the end of the story. Genericism and functionality also limit the ability of markholders to free ride on the category-promotion activities of their competitors, and courts have overlooked that dimension of those doctrines.

Instead, judges simply see the analysis as balancing the interests of trademark holders—who have created something that merits reward—against the interests of their competitors who may themselves seek to free ride off of that work. Although judges understand the importance of competition in balancing the two, the distaste for the free rider often rears its head in adjudication. In many cases, however, this is error, as judges fail to account for the ways that trademark holders may seek to free ride on category-promoting activities of their rivals. Stated another way, in many trademark disputes, the potential for free riding is reciprocal—there is no “neutral” baseline where no one free rides; some free riding is baked into ordinary market dynamics.

290. As it is, the color is so associated with Louboutin that it already enjoys the ability to free ride on uses of the color red in the fashion world and elsewhere.

291. *Cf.* Mark P. McKenna, *(Dys)Functionality*, 48 HOUS. L. REV. 823, 853 (2011).

E. FREE RIDING ON THE PUBLIC AT LARGE

Finally, trademark holders free ride on the public at large. We've already covered one way in the discussion of merchandisers and popular culture.²⁹² This Section covers a less overt form of free riding, focusing on mental processes that produce unearned mark value for trademark holders. It nonetheless builds on the discussion of the previous Section by focusing on the capability of trademark subject matter to serve the twin purposes of category- and brand-identification.

Trademark rights rest on the ability of buyers to form associations with trademarks.²⁹³ Sometimes these associations are assumed to be more or less automatic, as when a memorable brand name is placed on a product in a prominent position that consumers associate with trademarks.²⁹⁴ Other times—as with descriptive marks or product design²⁹⁵—trademark law assumes the associations are not automatic. In these settings, trademark doctrine requires the establishment of secondary meaning—that is, evidence that the mark actually acquired distinctiveness before it will receive protection.²⁹⁶

In practice, however, establishing secondary meaning is usually not demanding, as discussed above.²⁹⁷ Sometimes it is enough to engage in

292. See *supra* Section III.B.

293. The Lanham Act, for example, defines a trademark based on its ability to “identify and distinguish” goods. 15 U.S.C. § 1127.

294. Thomas R. Lee, Eric D. DeRosia & Glenn L. Christensen, *An Empirical and Consumer Psychology Analysis of Trademark Distinctiveness*, 41 ARIZ. ST. L.J. 1033, 1097–98 (2009) (testing importance of label position using hypothetical WONDERFUL mark for chocolate coconut macaroons).

295. *Wal-Mart Stores, Inc. v. Samara Bros.*, 529 U.S. 205, 213 (2000) (“In the case of product design . . . we think consumer predisposition to equate the feature with the source does not exist. Consumers are aware of the reality that, almost invariably, even the most unusual of product designs—such as a cocktail shaker shaped like a penguin—is intended not to identify the source, but to render the product itself more useful or more appealing.”).

296. *Id.* at 216 (“We hold that, in an action for infringement of unregistered trade dress under § 43(a) of the Lanham Act, a product’s design is distinctive, and therefore protectible, only upon a showing of secondary meaning.”).

297. See *supra* notes 278–280 and accompanying text. 2 MCCARTHY, *supra* note 62, § 15:30 (“The other traditional manner of proving secondary meaning is by circumstantial evidence of the seller’s efforts in advertising the mark throughout a wide group of prospective buyers. Such circumstantial evidence can consist of evidence of the size of the seller, the number of actual sales made, large amounts spent in promotion and advertising, the scope of publicity given the mark, and any similar evidence showing wide exposure of the buyer class to the mark in question.”).

advertising and have a record of sales.²⁹⁸ The belief is that given repeated transactions, the tendency of the human mind to form associations will create an identification between the claimed subject matter and a particular source.

The conventional trademark narrative says this process is good for us, as marks with secondary meaning may lower consumer search costs.²⁹⁹ But consumer variation complicates the question. While some consumers may use a descriptive term as a mark, others may see it as a description. I have written elsewhere that this dynamic may advantage one consumer class at the expense of others, insofar as some consumers may use trademarkable subject matter as a source indicator while others use it for something else.³⁰⁰ Here, I want to suggest that the mental processes used by consumers to make associations is an avenue for free riding by trademark holders.

The problem stems from the capacity of trademark subject matter to signify both brand and brand category.³⁰¹ Consumer mental processes form associations that link the matter with one, the other, or both depending on the circumstances. These associations can provide value to consumers insofar as they benefit from being able to identify and distinguish both product categories and individual brands within them.³⁰² Although this effort may benefit sellers, too, it remains the consumers' effort. Third parties should not free ride on it in a manner that does not serve consumer interests (at least if free riding is something we care about).

So, imagine a company, Eagle, marketing widgets under the EAGLE brand name. The advertising promotes awareness of both the widget product category and the availability of EAGLE widgets for those in the market.

It is not free riding for Eagle to profit from consumer associations with EAGLE. Eagle invested resources in the advertising that created them, and it

298. RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 13 cmt. e (AM. L. INST. 1995) (“Advertising and other promotional efforts resulting in increased public exposure for the designation may also support an inference of secondary meaning.”).

299. *Cf.* *Qualitex Co. v. Jacobson Prods. Co.*, 514 U.S. 159, 163–64 (1995) (arguing that color can be a trademark if it has secondary meaning).

300. *See, e.g.*, Grynberg, *supra* note 10, at 103–07.

301. *See supra* notes 281–283 and accompanying text. This hardly exhausts the universe of dual uses to which trademark law should be attentive. *See, e.g.*, Rochelle Cooper Dreyfuss, *Expressive Genericity: Trademarks as Language in the Pepsi Generation*, 65 NOTRE DAME L. REV. 397, 424 (1990) (“Betty Crocker has replaced Hestia in the public consciousness. Accordingly, it is not surprising that speakers and writers are drawn to those devices that are, by dint of heavy advertising, doubtlessly universally familiar. At the same time, the popularity of marks as expressive vehicles has spawned a new industry, and it is equally unsurprising that those who made these devices so useful have asserted claims on the profits that this industry generates.”).

302. And those outside the potential market for the goods or services branded by the marks will also form usable associations with the terms.

made investments in product quality that attracted both initial and repeat sales.³⁰³ Nor is it free riding to profit off of brand-indifferent consumers who happen to pick an EAGLE widget. Eagle's advertising promoted the product category as a spillover to its advertising of EAGLE widgets, and its competitors will also share in the pool of these brand-indifferent customers in proportion to their market share.³⁰⁴

The problem comes if Eagle were able to gain control over widget signifiers as a trademark, as by, say, obtaining a trademark over the term "widget."³⁰⁵ Now we have the potential for free riding. To be sure, some consumers with a brand preference for EAGLE might use "widget" to identify the product. That is not the free-riding issue. The free-riding problem is with regard to consumers without a brand preference who make a product-category association with the term "widget." That effort enables consumers to realize a surplus as a result of other sellers competing to lower the price of widgets—at least where the term "widget" is generic. To the extent the market for widgets generates a return for sellers, the benefits of selling to consumers without a brand preference are spread among all market participants in proportion to their market share. This should roughly reflect the investment in marketing that the sellers made, as their advertising will spill over to promote the product category.³⁰⁶

But if Eagle can capture the sales of any product labeled "widget," then it will free ride off of the consumers' category association by increasing prices and appropriating the consumer surplus that consumers would have enjoyed were "widget" free for all.³⁰⁷

What does trademark law have to say about the issue? The rule against trademarking generic marks does a lot to limit the problem, but it is important to remember that even for non-generic terms, trademark subject matter may simultaneously perform generic and non-generic functions. This is a particularly tricky problem when we consider non-word marks, for which

303. To be sure, Eagle is still appropriating the fruits of consumer associations, but it has made investments to create them, and consumers in the aggregate benefit from this appropriation in the form of a reduced cognitive load in knowing whether they can rely on the information embodied by the EAGLE mark.

304. See *supra* notes 265–273 and accompanying text.

305. Of course, it cannot because of the genericism doctrine, but hold that thought for now.

306. See *supra* notes 265–273 and accompanying text.

307. To be sure, the returns would not be monopolistic, as some consumers would use other market-category signifiers to allow for market competition. The effect described here still distorts the competitive marketplace, allowing for a supra-competitive return for the markholder.

courts have a less-well developed language for distinguishing category- from brand-identifying content. The landmark *Taco Cabana* case, which establishes that trade dress can be inherently distinctive, illustrates the problem.³⁰⁸

The plaintiff restaurant, Taco Cabana, claimed the following design and decor features as its trade dress:

a festive eating atmosphere having interior dining and patio areas decorated with artifacts, bright colors, paintings and murals. The patio includes interior and exterior areas with the interior patio capable of being sealed off from the outside patio by overhead garage doors. The stepped exterior of the building is a festive and vivid color scheme using top border paint and neon stripes. Bright awnings and umbrellas continue the theme.³⁰⁹

Taco Cabana sued Two Pesos, claiming that its design infringed the Taco Cabana trade dress.³¹⁰ When reading the list of claimed features above, you might have noticed that no specific color is claimed. Trial exhibit pictures of the competing restaurant exteriors show them to be different colors, offering a plausible explanation for the omission.³¹¹

The Supreme Court ruled that trade dress can be inherently distinctive.³¹² That is, one claiming protection in inherently distinctive trade dress (that functions as product packaging and not product design)³¹³ need not establish that consumers actually see the features as performing a trademark function. Among the reasons offered by the Court was the fear that competitors might free ride by appropriating attractive trade dress before a seller could establish secondary meaning.³¹⁴

But the opinion simultaneously opened the door to free riding on consumer associations by trademark holders. Let's consider again the claimed trade dress features:

308. *Two Pesos, Inc. v. Taco Cabana, Inc.*, 505 U.S. 763 (1992).

309. *Id.* at 765 (quoting *Taco Cabana Int'l, Inc. v. Two Pesos, Inc.*, 932 F.2d 1113, 1117 (5th Cir. 1991), *aff'd sub nom.* *Two Pesos, Inc. v. Taco Cabana, Inc.*, 505 U.S. 763 (1992)).

310. *Id.*

311. *Two Pesos v. Cabana*, CORNELL UNIV. L. SCH. SOC. SCI. & L., https://courses2.cit.cornell.edu/sociallaw/student_projects/Tradedresspage2.html (last visited Dec. 1, 2023) (displaying photos of Taco Cabana and Two Pesos from the case exhibits).

312. *Two Pesos*, 505 U.S. at 767.

313. This is a gloss later applied by the *Wal-Mart* case. *See supra* note 277 and accompanying text.

314. *Two Pesos*, 505 U.S. at 775 (“Denying protection for inherently distinctive nonfunctional trade dress until after secondary meaning has been established would allow a competitor, which has not adopted a distinctive trade dress of its own, to appropriate the originator’s dress in other markets and to deter the originator from expanding into and competing in these areas.”).

a festive eating atmosphere having interior dining and patio areas decorated with artifacts, bright colors, paintings and murals. The patio includes interior and exterior areas with the interior patio capable of being sealed off from the outside patio by overhead garage doors. The stepped exterior of the building is a festive and vivid color scheme using top border paint and neon stripes. Bright awnings and umbrellas continue the theme.³¹⁵

These attributes may be typical of any number of restaurants. In particular, they seem characteristic of restaurants appealing to families with small children. This raises the specter of functionality—the principle that functional matter may not be trademarked lest protection interfere with competition.³¹⁶ In this case, however, the jury found that the trade dress was not functional.³¹⁷

Even assuming the jury to be correct, consumers may nonetheless use the disputed design features to identify the kind of restaurant they want to patronize (one with “a festive eating atmosphere having interior dining and patio areas decorated with artifacts, bright colors, paintings and murals” and so forth). It is certainly as plausible that is true as it is that customers use the features to identify Taco Cabana out of the class of restaurants that could satisfy this want. We can say so because the jury found that the Taco Cabana had *not* established secondary meaning with local consumers notwithstanding its purported inherent distinctiveness.³¹⁸ To the extent consumers were using the features to identify a product category, Taco Cabana was seeking to appropriate the value of these associations for itself. If it had its way, consumers relying on the trade dress as a category identifier could only use the protected features to patronize Taco Cabana even if they were actually indifferent to the brand. Once again, this sounds like an argument from the perspective of competition, but it underscores that competition rests on the activities of *consumers* as well as those of *competitors*.³¹⁹

As discussed above, *Wal-Mart* limits *Two Pesos* a bit by holding that product design trade dress can never be inherently distinctive;³²⁰ it must achieve secondary meaning before it can be protected as a mark. This rule mitigates

315. *Id.* at 765 (quoting *Taco Cabana Int'l, Inc. v. Two Pesos, Inc.*, 932 F.2d 1113, 1117 (5th Cir. 1991)).

316. *See supra* notes 131–140 and accompanying text.

317. *Two Pesos*, 505 U.S. at 766.

318. *Id.*

319. The above also likely sounds like an argument that the trade dress was generic, and certainly I am making an argument sounding similar policy notes to those justifying the genericism doctrine. There is, however, a difference between trademark subject matter being generic as a categorical matter, and its being used generically. This distinction is explored in greater detail below. *See infra* notes 332–347 and accompanying text.

320. *Wal-Mart Stores, Inc. v. Samara Bros.*, 529 U.S. 205, 216 (2000).

but by no means resolves the issue of free riding on consumer category associations. Recall that the secondary meaning inquiry is not demanding, and would-be trademark holders may rely on circumstantial evidence to establish its existence.³²¹ Product design may therefore achieve secondary meaning even in situations where a majority of the product's customers use the design as a category and not a source identifier.³²²

Consider *Groeneveld Transport Efficiency, Inc. v. Lubecore International, Inc.*,³²³ which concerned infringement allegations surrounding the trade dress of grease pumps. Notwithstanding *Wal-Mart*, the plaintiff convinced a jury that the design (independent of clearly distinct labeling) had acquired distinctiveness.³²⁴ This sets up the free-riding problem. Assuming arguendo that *some* consumers make primary source identifications with the pictured grease pump, what of those that do not? What of those who simply are customers for generic grease pumps that “look like that”? Had the plaintiff succeeded—and keep in mind it won with the jury³²⁵—it would have exacted unearned sales from these buyers.³²⁶

In *Groeneveld*, the functionality doctrine was the last line of defense against plaintiff free riding off of consumer category-associations, and the defendant prevailed before a divided panel of the Sixth Circuit.³²⁷ The majority concluded that functional considerations shaped the design of the grease pumps, removing it from the realm of protectable subject matter.³²⁸ Nonetheless the functionality doctrine is not attuned to the free-riding problem. The category-

321. See *supra* note 278 and accompanying text.

322. See *supra* note 280 and accompanying text.

323. 730 F.3d 494 (6th Cir. 2013).

324. *Groeneveld Transp. Efficiency, Inc. v. Lubecore Int'l, Inc.*, No. 1:10 CV 702, 2012 WL 1142512, at *1 (N.D. Ohio Apr. 4, 2012), *rev'd*, 730 F.3d 494 (6th Cir. 2013). Images of the grease pumps at issue may be found in *Groeneveld*, 730 F.3d at 501.

325. Along with damages of \$1,225,000.00. *Id.*

326. It is no answer to say that the plaintiff “earned” those sales by creating a product to which consumers made associations unless one takes the radical position that trademark holders have a right to dictate what consumers think and to impose costs on those who thing the “wrong” thing.

327. *Groeneveld*, 730 F.3d at 500.

328. Compare *id.* at 505 (“[A]ll the elements of Groeneveld’s pump are there for some practical benefit or reason . . . Groeneveld has not presented its pump as in any way the equivalent of an automotive tail fin—a purely ornamental feature that contributes no demonstrable benefit to the operation or efficiency of the designed product.” (approvingly quoting magistrate’s opinion in denying preliminary injunction for plaintiff)), *with id.* at 524 (White, J., dissenting) (“The evidence supports a finding that the pump’s overall configuration was designed to look distinctive in the industry rather than due to functional concerns.”). The appellate court also concluded that confusion was unlikely under the circumstances, notwithstanding the jury verdict to the contrary. *Id.* at 518–19.

identification function discussed here is primarily informational and not utilitarian. Information-signaling subject matter will therefore not always be functional in the manner contemplated by the doctrine. Worse, information considerations may undermine a functionality defense. Trademark holders naturally defend against functionality claims by emphasizing how their designs may embody information insofar as they claim that their product's design is source-identifying for some consumers. The further nuance that the design is *also* category-defining may not be on the court's radar screen.³²⁹

The problem is more acute in the realm of so-called "aesthetic functionality," as courts are reluctant to recognize and apply the doctrine in favor of defendants.³³⁰ As noted above, concern about free riding plays a significant role in this reluctance.³³¹ But the potential for trademark holder free riding on consumer category associations is particularly strong in this realm.

To illustrate, let us return to the *Louboutin* case. The earlier discussion considered the importance of the contested subject matter (the red color) as a category signifier due to the activities of *sellers*.³³² Both Louboutin and the defendant YSL may promote the color red as a product attribute as well as a category attribute. But it's worth noting that the color red's salience as a category identifier can also be a bottom-up phenomenon. That is to say, red may be "in" for reasons having nothing to do with a hypothetical Anna-Wintour figure picking a color in a *Devil Wears Prada* meeting room.³³³ Sometimes things just bubble up in pop culture and consumers may then appropriate that subject matter as a tool to minimize search costs for product categories ("There are so many shoes, I want something . . . red.") and not particular brands ("Where can I find a red LOUBOUTIN?").

In *Louboutin*, the plaintiff sought to appropriate this effort for itself. Though it ultimately failed, the Second Circuit balked at using functionality theory to stop it, preferring instead to rely on a "good-for-this-ride-only"

329. For example, the dissent in *Groeneveld* argues that the evidence "supports a finding that the pump's overall configuration was designed to look distinctive in the industry rather than due to functional concerns." *Id.* at 524 (White, J., dissenting). The argument is made to rebut the claim that the design was functional. It does not, grapple with the prospect that that the features are not also generic or have failed to acquire secondary meaning. This is not a criticism of the dissent. Of course, a functionality analysis considers functionality issues, but it shows how concerns of category identification may be lost in the sorting of claims into their doctrinal boxes.

330. See *supra* notes 137–140 and accompanying text.

331. See *supra* notes 139–140 and accompanying text.

332. See *supra* notes 286–291 and accompanying text.

333. See Movieclips, *The Devil Wears Prada (3/5) Movie CLIP - Stuff (2006) HD*, YOUTUBE (Jun 18, 2015), <https://www.youtube.com/watch?v=Ja2fgquYTCg>.

theory of trademark use,³³⁴ which highlights the gap in trademark law for effective responses to this kind of trademark holder free riding.

The problem of free riding on consumer category associations exists even in “easy” cases in which trademark doctrine has no doubt that the subject matter is protectable. To use an example I’ve written about before,³³⁵ consider **TYLENOL**. The mark denotes a particular—likely famous—brand of acetaminophen.³³⁶ Acetaminophen is sold under other brand names, typically as a store pharmacy brand,³³⁷ but the **TYLENOL** mark is strong enough to command a price premium. Some claim this premium is a byproduct of the brand’s reputation for quality,³³⁸ but it is—in my view anyway—more likely the byproduct of consumer inertia fed by attention-conserving shortcuts like the availability heuristic.³³⁹

These heuristics, in turn, form category associations. **TYLENOL** is a brand of pain reliever, yes, but it is also—for many consumers—a category signifier for acetaminophen. The two uses coexist to some extent. My wife can ask me for a “Tylenol” when both of us know that what she wants is an acetaminophen tablet (two if I happen to be rambling about trademark law) without regard to whether it is actually **TYLENOL**.³⁴⁰ But our local Walgreens cannot market its acetaminophen as **TYLENOL**, allowing the brand to free ride on consumer category associations and charge higher prices as a result. Trademark doctrine is fine with this.

The harder questions arise when the sellers of generic drugs seek to use the category-identification features of well-known marks. So it is that the CVS store brand can invite consumers to “compare to the active ingredient of Extra Strength Tylenol.”³⁴¹ Courts generally see nominative uses like these as not

334. *Christian Louboutin S.A. v. Yves Saint Laurent Am. Holdings, Inc.*, 696 F.3d 206, 228 (2d Cir. 2012).

335. Grynberg, *supra* note 10, at 104–07.

336. *Frequently Asked Questions*, **TYLENOL**, <https://www.tylenol.com/safety-dosing/fdq#what-is-the-active-ingredient-in-tylenol-sup-class-d-inline-sup> (last visited Dec. 1, 2023).

337. *See, e.g., CVS Health Extra Strength Acetaminophen Pain Reliever & Fever Reducer 500 MG Caplets*, CVS, <https://www.cvs.com/shop/cvs-health-extra-strength-acetaminophen-pain-reliever-fever-reducer-500-mg-caplets-prodid-686584> (last visited Dec. 1, 2023).

338. William M. Landes & Richard A. Posner, *Trademark Law: An Economic Perspective*, 30 J.L. & ECON. 265, 275 (1987) (“The fact that two goods have the same chemical formula does not make them of equal quality to even the most coolly rational consumer.”).

339. That is, we tend to give greater significance to information that readily comes to mind. *See* Amos Tversky & Daniel Kahneman, *Judgment Under Uncertainty: Heuristics and Biases*, 185 SCI. 1124, 1130 (1974).

340. Though our twelve-year-old, unversed in the ways of generic drugs, would look in our pantry and report back that we don’t have any.

341. *See supra* note 337.

infringing.³⁴² Likewise, comparative advertising reaches not only customers of the compared product, but also takes advantage of the category-identifying attributes of their mark.

In a similar vein, those selling generic versions of brand-name drugs often use aspects of the leading brand's trade dress. Here, too, the effort can be seen as using (and, to be fair, developing and reinforcing) consumer category-identifying associations (e.g., "a pain reliever with a red and white color scheme on the box is the same drug category as TYLENOL"). Though the practice is accepted, the precise doctrine that makes it safe is less clear.³⁴³

The doctrine is less well-settled as to free riding on consumer category associations online. A consumer typing "tylenol" into a search bar may be looking for information about the brand name or about acetaminophen (which is hard to spell).³⁴⁴ For a time, broad assertions of online infringement claims threatened to allow trademark holders to appropriate the latter class of consumer searches for themselves.³⁴⁵ While courts seem to be making peace with the practice,³⁴⁶ one can sometimes detect the held judicial nose,³⁴⁷ and progress is not uniform.³⁴⁸ In many cases, part of the problem is that the defendants look like free riders, but in actuality the free riding is reciprocal.

Though free riding on category associations is free riding, we are far afield of the kinds of activities that formed our distant ancestors' moral wiring. That trademark law lacks a vocabulary to describe it is therefore unsurprising.

Summary. Consumer category associations may not take much effort to form, but the process and its outputs belong to us, not the trademark holders. We should therefore be free to deploy category associations to our own ends. They should not be parasitized to steer us to suboptimal purchases.

Trademark law has a variety of tools that *could* be used to protect our associations from trademark holder free riding, but they are not consistently deployed to this end. This is unsurprising, as these doctrines are not calibrated

342. See, e.g., Michael Grynberg, *Things Are Worse Than We Think: Trademark Defenses in a "Formalist" Age*, 24 BERKELEY TECH. L.J. 897, 956–61 (2009).

343. See 4 MCCARTHY, *supra* note 62, § 23:53; *Conopco, Inc. v. May Dept. Stores Co.*, 46 F.3d 1556, 1568 (Fed. Cir. 1994); *Am. Home Prods. Corp. v. Barr Labs., Inc.*, 656 F. Supp. 1058, 1068 (D.N.J. 1987), *aff'd*, 834 F.2d 368 (3d Cir. 1987).

344. Grynberg, *supra* note 10, at 104–07.

345. *Id.*

346. See, e.g., *Multi Time Mach., Inc. v. Amazon.com, Inc.*, 804 F.3d 930 (9th Cir. 2015).

347. *Toyota Motor Sales, U.S.A., Inc. v. Tabari*, 610 F.3d 1171, 1185–86 (9th Cir. 2010) (Fernandez, J., concurring).

348. See, e.g., *Select Comfort Corp. v. Baxter*, 996 F.3d 925 (8th Cir. 2021); *Adidas Am., Inc. v. Skechers USA, Inc.*, 890 F.3d 747, 756 (9th Cir. 2018).

to the issue, and trademark law lacks a moral vocabulary to even describe the problem.

IV. RECOMMENDATIONS

So, what can be done about all this trademark holder free riding?

Admitting we have a problem. The primary argument of this Article is for recognizing the existence and consequences of trademark holder free riding to trademark law. Judges are people. Like all of us, they have moral instincts that activate when someone seems to be trying to get something for nothing. Trademark law recognizes this instinct in a variety of ways when considering the actions of trademark defendants. Unfortunately, there is no parallel recognition of the flip side of the coin—that those who seek or assert trademark rights might also free ride.³⁴⁹

To be sure, judges still know free riding when they see it, and the above discussion reflects various situations where adjudicators do indeed seek to stop markholder free riding. But they often struggle to find reasons grounded in doctrine.³⁵⁰ Being able to name the problem to be solved is an important step to filling these gaps in the law.

More generally, several doctrinal tweaks to trademark law would limit some trademark free riding.

Acquired distinctiveness should matter more. The first change would be to elevate the importance of acquired trademark distinctiveness. A common theme surrounding trademark holder free riding is the use and abuse of the concept of trademark “strength.”³⁵¹ Trademark law looks at strength from two perspectives. A mark can be “conceptually” strong or weak, based on its placement on the spectrum of distinctiveness.³⁵² Or it can be strong or weak based on how much consumers actually use the mark as a source identifier.³⁵³

The potential for trademark holder free riding is especially acute with marks that qualify for protection as a conceptual matter but are weak from the perspective of acquired distinctiveness. The problem is particularly stark in efforts to free ride off of popular culture in merchandising situations,³⁵⁴ but it

349. Cf. Grynberg, *supra* note 10, at 75 (discussing consequences of unbalanced storylines in trademark law).

350. See Grynberg, *supra* note 115, at 54–60.

351. See *supra* notes 87–104 and 251–257 and accompanying text.

352. See *supra* notes 89, 238.

353. 2 MCCARTHY, *supra* note 62, § 11:73.

354. See *supra* Section III.B.

also appears when trademark plaintiffs seek to free ride off of category-promotion activities of sellers³⁵⁵ and category identification by consumers.³⁵⁶

In many of these cases, the problem with markholder behavior can be said to be one of desert. The markholder seeks a reward incommensurate to its effort. In many such cases, the limited acquired distinctiveness of the mark is an indicium of this mismatch, as when Taco Cabana successfully claimed generic restaurant décor features that lacked actual consumer identification, but were nonetheless deemed inherently distinctive.³⁵⁷

The imbalance can be corrected in part by requiring secondary meaning—proof that the trademark subject matter is actually performing a source-identifying function. The Supreme Court opinion in *Wal-Mart* makes this move by requiring that all product design establish secondary meaning if it is to obtain trademark protection.³⁵⁸ But the principle, and the problem of trademark holder free riding, counsels that trademark doctrine go further. Trademark law should consider requiring *heightened* levels of secondary meaning when trademark subject matter is particularly likely to be the subject of markholder free riding.

Dilution law is an example of this approach. Federal dilution doctrine gives extra rights to “famous” marks by protecting them against uses by defendants that threaten to “blur” or “tarnish” them.³⁵⁹ Their owners may target conduct that is *unlikely* to cause confusion but is nonetheless deemed harmful to their marks.³⁶⁰

Dilution doctrine has long struggled to ground itself in a story remotely resembling the promotion of consumer interests,³⁶¹ and the statute may be most easily understood as an anti-free-riding measure. Once marks have achieved a certain level of fame, the doctrine proclaims that it is simply wrong for any other sellers to bask in the unearned aura of those terms.³⁶²

A famous mark is one that “is widely recognized by the general consuming public of the United States.”³⁶³ This requirement does two kinds of work from an anti-free-riding perspective. First, by requiring fame, dilution law ensures that only marks with substantial acquired distinctiveness—those whose

355. *See supra* Section III.D.

356. *See supra* Section III.E.

357. *See supra* notes 308-319 and accompanying text.

358. *Wal-Mart Stores, Inc. v. Samara Bros.*, 529 U.S. 205 (2000).

359. 15 U.S.C. § 1125(c).

360. *Id.* (providing that dilution cause of action exists “regardless of the presence or absence of actual or likely confusion, of competition, or of actual economic injury”).

361. *See supra* notes 122–128 and accompanying text.

362. *Id.*

363. 15 U.S.C. § 1125(c)(2)(A).

owners have developed the most goodwill—receive the heightened level of protection. Second, the fame requirement identifies a class of marks whose appropriation by third parties is most suspect from an anti-free-riding perspective. When a mark strongly identifies a particular famous brand, the inference that the selection of a similar mark is an attempt to free ride on the mark's reflected glow is strongest.³⁶⁴

None of this is to endorse dilution law, which makes a mockery of trademark law's consumer-protection goals. That said, dilution doctrine's use of fame as a limiting principle offers lessons. Requiring fame, or something like it, has the potential to limit trademark holder free riding and identify situations in which a defendant's use of a mark is more likely to be brand-, rather than category-, identifying.³⁶⁵ Fame is not the only possible step up from simple acquired distinctiveness, and there are examples of courts demanding heightened acquired distinctiveness that is more than secondary meaning, but something less than the fame demanded of dilution protection.³⁶⁶

This is not the only article to suggest increasing the prominence of the acquired distinctiveness inquiry in trademark law.³⁶⁷ Nor is the argument without critics. Jeanne Fromer argues that reformers should resist the move in part because of the disproportionate impact that would be borne by comparatively small sellers.³⁶⁸ Her concern echoes that of the Supreme Court in *Two Pesos*, which warned that requiring secondary meaning for trade dress would have an anti-competitive effect on small businesses that might seek to expand to other markets.³⁶⁹

364. To be sure, there may be other explanations, and the defenses to the dilution cause of action go some way to accommodating uses that reflect the defendant's intent to contribute their own work to the trademark subject matter. 15 U.S.C. § 1125(c)(3) (setting forth exclusions for fair uses, comparative advertising, news reporting and commentary, and noncommercial uses).

365. Which is what effective branding practices call for. ROMANIUK & SHARP, *supra* note 268, at 92.

366. *See, e.g.*, Grupo Gigante SA De CV v. Dallo & Co., 391 F.3d 1088, 1098 (9th Cir. 2004).

367. Jeanne C. Fromer, *Against Secondary Meaning*, 98 NOTRE DAME L. REV. 211, 214 n.16 (2022) (citing examples).

368. *Id.* at 230 (“[M]aking secondary meaning harder to establish to right trademark’s balance would aggravate trademark law’s competitive equity, by creating barriers to entry and competition for less deep-pocketed businesses.”).

369. *Two Pesos, Inc. v. Taco Cabana, Inc.*, 505 U.S. 763, 775 (1992) (“Denying protection for inherently distinctive nonfunctional trade dress until after secondary meaning has been established would allow a competitor, which has not adopted a distinctive trade dress of its own, to appropriate the originator’s dress in other markets and to deter the originator from expanding into and competing in these areas.”).

To my mind, the argument distracts from what should be the central question in secondary meaning cases: is protection of the claimed mark appropriate? Protecting bad marks—whether because they fail to function effectively as marks or because they impede competition—harms consumers, full stop. But if a mark performs the trademark function effectively without imposing costs on consumers, protection is appropriate.³⁷⁰ Whatever our concern for small sellers, trademark law should hesitate before asking consumers to subsidize them.

As for inter-seller equity concerns, trademark law is not the place to address them. Yes, well-capitalized sellers are more likely to develop secondary meaning with the consuming public, but this argument proves too much. Their advantage extends to matters beyond the fate of conceptually weak trademarks. Beyond the ability to buy a lot of advertising, these sellers are also better positioned to put their goods before the consumer for sale (e.g., by securing product placement deals with major distributors). In other words, the mental and physical availability of brands that together drive market share strongly benefit from seller resources regardless of whether they select strong or weak marks.³⁷¹ Even assuming *arguendo* that trademark law should care about all these gaps, playing with the secondary meaning requirement leaves too much undone.

Likewise, large sellers have another powerful head start insofar as their resources enable economies of scale in the production of goods: enabling lower unit costs and the ability to offer lower prices. This is generally an accepted fact of life in competition; should it be a consideration for trademark policy? We are now far afield from the twin goals of “protect[ing] the public so it may be confident that, in purchasing a product . . . it will get the product which it asks for and wants to get” and protecting sellers’ “energy, time, and money in presenting to the public the product . . . from . . . misappropriation by pirates and cheats” that animated the passage of the Lanham Act.³⁷²

370. To be sure, these choices must be made in the aggregate. Protection of a fanciful mark prevents a third party from using it in a manner that might lower search costs for the copyist’s customers. But when a mark is effective at the job of lowering consumer search costs, trademark law assumes that the benefits of protection outweigh such costs. Grynberg, *supra* note 10, at 89–90.

371. ROMANIUK & SHARP, *supra* note 268, at 11 (defining mental availability as “the propensity for the brand to be thought of in buying situations” and physical availability as “how easy the brand is to buy and find”). Though the selection of a weak mark with features that are commonly used in the market will naturally frustrate the development of mental availability. *See id.* at 92; *supra* notes 268–273 and accompanying text.

372. S. REP. NO. 79-1333, at 3 (1946).

In short, if there are redistributivist considerations for reallocating resources from large to small sellers, they are properly addressed by public policies designed to ameliorate that wealth gap, not by incentivizing the selection of bad marks.

What then of the concern, identified by *Two Pesos*, of lurking predatory large sellers ready to pounce on effective non-word marks identified by unsuspecting small sellers?³⁷³ As long as the reverse confusion cause of action exists³⁷⁴—and though the proposal here might weaken the theory, it would not eliminate it—such sellers are playing a dangerous game. More importantly, however, given the incentives of marketers to engage in brand rather than category, promotion, it is the well-capitalized sellers (with marketing departments to complement their legal ones) who are most likely to avoid this problem by focusing on selecting marks that do not require secondary meaning. And, to the extent product design is at issue, that kind of protection should be reserved for unusual cases in any event.

On the flip side, small sellers with compelling buildout strategies that would lead to secondary meaning should be able to secure financing that would both make up for their small size and obviate the need for trademark subsidies. If, by contrast, the intent is to stay small, developing secondary meaning for only a limited area, the concern about larger company “scooping” seems less pronounced.

“*Conceptual distance.*”³⁷⁵ Requiring a greater showing of acquired distinctiveness is one possible solution to the problem presented by marks with limited inherent distinctiveness. We might attack the problem from the other direction and raise the threshold for declaring a mark inherently distinctive.

Doing so would address situations in which a mark is deemed suggestive, and thus inherently distinctive, despite having descriptive properties. Responding to the issue, some have suggested eliminating the category of suggestive marks in order to ensure the availability of useful terms in the marketplace.³⁷⁶ To my mind, it seems likely that courts would balk at denying protection to marks that swim in the arbitrary side of the suggestive pool.

373. *Two Pesos*, 505 U.S. at 775 (“Denying protection for inherently distinctive nonfunctional trade dress until after secondary meaning has been established would allow a competitor . . . to appropriate the originator’s dress in other markets and to deter the originator from expanding into and competing in these areas.”).

374. See *supra* notes 223–226 and accompanying text.

375. Fromer, *supra* note 367, at 250.

376. Jake Linford, *The False Dichotomy Between Suggestive and Descriptive Trademarks*, 76 OHIO ST. L.J. 1367, 1367 (2015) (“A suggestive mark, like a descriptive mark, should be protected only upon a showing that the mark has developed source significance in the minds of consumers.”).

There appears little to be gained by parsing whether SAFARI deserves protection for a web browser, and the selection of words with positive connotations will naturally open the door to possible claims of suggestiveness where no competitive threat is raised. The world can survive the existence of PENGUIN refrigerators.

That still leaves the costs imposed by marks like SMART SYNC.³⁷⁷ Courts should be more sensitive to the dangers of protecting marks on the descriptive side of the suggestive pool, either by demanding more of such marks before they receive protection, or by refusing to give them a broad scope in infringement litigation.³⁷⁸ As Judge Leval recently observed:

Although the suggestive category is higher than the descriptive category because a descriptive association between mark and product is more direct than a suggestive association, it does not necessarily follow that every suggestive mark is stronger than every descriptive mark. If the suggestion conveyed by a suggestive mark conjures up an essential or important aspect of the product, while the description conveyed by a descriptive mark refers to a relatively trivial or insignificant aspect of the product, the particular suggestive mark could be deemed weaker than the descriptive.³⁷⁹

In other cases, the problem is that trademark law does not have an effective vocabulary for marks that are not distinctive, but not because of their placement on the *Abercrombie* spectrum of distinctiveness.³⁸⁰ The new interest in failure-to-function arguments may be spurring development of this vocabulary.³⁸¹ In earlier work, I've suggested that the clarifying principle would be to view trademarks to the maximum extent possible as "empty vessels."³⁸² The more market-relevant content they contain, the less likely they are to function as trademarks.³⁸³ Relevance is not exhausted by description.³⁸⁴

377. See *supra* notes 239–260 and accompanying text.

378. Cf. Fromer, *supra* note 367, at 249–50 (“The primary meaning of a term can be used to gauge protectability by assessing its conceptual relatedness to the goods or services for which it is used. When that relatedness is too high, the term should not be protectable as a trademark.”).

379. *RiseandShine Corp. v. PepsiCo, Inc.*, 41 F.4th 112, 122 (2d Cir. 2022).

380. See *supra* notes 89, 238.

381. See *supra* notes 174–180 and accompanying text.

382. Michael Grynberg, *A Trademark Defense of the Disparagement Bar*, 126 YALE L.J.F. 178, 183–87 (2016), https://www.yalelawjournal.org/pdf/Grynbergfinal_v1ewcdva.pdf.

383. *Id.*

384. As reflected by the PTO’s treatment of informational matter. TMEP § 1202.04 (Nov. 2023) (“Slogans and other terms that are merely informational in nature, or common laudatory phrases or statements that would ordinarily be used in business or in the particular trade or

There are other ways of expressing the same idea. As discussed above, the PTO is making increasing use of failure-to-function analysis in assessing the semantic meaning of marks seeking registration.³⁸⁵ Although the emerging administrative case law has been criticized for its unpredictability,³⁸⁶ it needs breathing space to develop. The most important thing for the courts—in this case various panels of the Federal Circuit—to do is to give trademark examiners and the TTAB room to develop rules and standards to screen terms that fail to perform the trademark function effectively.³⁸⁷

V. CONCLUSION

Trademark law would do well to discard the language of free riding. The question of what promotes the consumer welfare, facilitates the free flow of accurate information throughout society, and preserves values of democracy and free expression is largely independent of the question of whether someone is reaping without sowing. That said, judgments of this sort are nonetheless natural, and they are going to be part of trademark law for the foreseeable future.³⁸⁸ That's life.

Given that, we should ensure that our perspectives are as complete as possible. Trademark law's self-conscious two-sided nature³⁸⁹ means that its consumer protections are often justifiable in terms of promoting seller interests, and vice versa.³⁹⁰ And there is room to argue that trademark doctrine would be better off focusing on one perspective to the exclusion of the

industry, are not registrable.” (quoting *In re Eagle Crest, Inc.*, 96 USPQ 2d 1227, 1229 (T.T.A.B. 2010)).

385. See, e.g., *In re Snowflake Enters.*, No. 87496454, 2021 WL 2888343 (T.T.A.B. June 24, 2021) (non-precedential) (refusing to register slur on failure-to-function grounds); Cuatrecasas, *supra* note 176, at 1328 (“[A] mark’s semantic meaning and inherent nature have become essential to today’s failure-to-function cases.”); *id.* at 1326.

386. Cuatrecasas, *supra* note 176, at 1316 (“[T]he failure-to-function doctrine [as used by the TTAB] is incoherent. Overall, it lacks clarity. On a more granular level, the doctrine rests on inconsistent multifactor tests whose factors the TTAB adds, subtracts, modifies, reconceptualizes, and weighs differently across cases, giving the USPTO little meaningful criteria by which to decide what marks merit registration.”); see *id.* at 1325–54.

387. See *In re Vox Populi Registry Ltd.*, 25 F.4th 1348, 1351 (Fed. Cir. 2022) (affirming refusal to register .SUCKS and agreeing that “though our court has had limited occasion to address the issue, the source identifier requirement is broader than just whether a proposed mark is generic or descriptive”).

388. See *supra* Part II.

389. See *supra* note 372 and accompanying text.

390. See *James Burrough Ltd. v. Sign of Beefeater, Inc.*, 540 F.2d 266, 276 (7th Cir. 1976) (“The trademark laws exist not to ‘protect’ trademarks, but . . . to protect the consuming public from confusion, concomitantly protecting the trademark owner’s right to a non-confused public.”).

other.³⁹¹ But no matter which framework a court uses, it needs to have as complete a view of the inquiry as possible and not allow the selected analysis to obscure the issues at hand.

In earlier work, I argued that trademark law's focus on potentially confused consumers overlooks the consequences of trademark litigation for non-confused consumers who might benefit from challenged activities.³⁹² This Article makes a similar move regarding sellers from the perspective of free riding. If free-riding considerations are to be part of trademark law, then they should be applied to trademark holders as well as those they would sue. Doing so would promote consumer interests and open new arguments for trademark reform.

My argument likely runs counter to two common intuitions of trademark reformers. First, we don't like free-riding stories, as we are often arguing against them.³⁹³ But if those stories are inescapable, developing a more nuanced understanding free riding can ameliorate their biasing effect on trademark law. Little good can come by abandoning the playing field.

Second, the proposal that trademark law make greater use of acquired distinctiveness runs afoul of another moral instinct—we dislike laws that seem to disfavor the “little guy.” But limiting trademark's domain by requiring markholders to show they have “earned” certain markets limits rather than expands trademark rights. To do otherwise leaves consumer-promoting gains on the table and open to appropriation by trademark free riders. Letting such free riding occur does nothing to help small actors. In any case, if we were to see protecting the proverbial “little guy” as an overriding value of trademark law, we consumers and citizens would seem to be first in line.

391. Compare, e.g., Grynberg, *supra* note 10, at 117 (arguing that from a consumer perspective, there is no room “for any protection of goodwill except as a function of protecting consumers), with James T. Caleshu, *Trademarks and the “Free Ride” Doctrine*, 16 STAN. L. REV. 736, 741 (1964) (“The principal benefit of the ‘free ride’ analysis is that it permits courts to examine more directly the major interests involved in trademark infringement cases.”).

392. Grynberg, *supra* note 10.

393. See *supra* note 10.