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ARTICLES

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Wentong Zheng

Creation and Generation Copyright Standards
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Extra-Legal Uses of TM
Clark D. Asay, LaReina Hingson & Stephanie Plamondon

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PREFACE

Our Fall 2024 Issue—Volume 14, Number 1—addresses various questions that our intellectual property systems are currently facing or will soon face.

First, Professor Zheng compares how the U.S., Europe, and China compete to set legal rules on standard-essential patents (SEPs). The article examines these jurisdictions' divergent approaches to three key legal issues relating to SEPs: injunctions, FRAND royalty rates, and abusive licensing, noting that Europe has been the most favorable to SEP innovators while China has been the least. Drawing from the historical jurisdictional competition in maritime law, Zheng challenges the prevailing assumption that jurisdictional competition is socially undesirable and argues instead that it facilitates a "race to the middle" that balances the interests between SEP innovators and implementers.

Second, Professor Friedmann analyzes whether AI-generated work should be eligible for copyright protection. The article notes that the U.S. Copyright Office rejects, while the Beijing Internet Court accepts, AI-generated images—based on an erroneous premise that such works must meet a higher "platonic" standard of copyrightability than traditional works. Friedmann argues that AI-generated content should be excluded from copyright protection, but for the right reason—policy considerations that treat human authors preferably in order to prevent the dilution of human culture.

Third, Professors Clark D. Asay, LaReina Hingson, and Stephanie Plamondon examine the use of the trademark symbol TM outside of its legal function, exploring how these extra-legal uses of the TM symbol offer insights into how ordinary people understand trademarks. Overall, the authors observe that the speakers using the TM symbol in expressive speech had a sophisticated understanding of the linguistic and semantic functions of the symbol. The authors argue that while extra-legal uses pose a risk of diluting the legal significance of the TM symbol, the risks are outweighed by the social benefits that flow from the expressive uses.

Fourth, Professor Glynn S. Lunney, Jr. evaluates the Supreme Court's fair use analysis in *Andy Warhol Foundation v. Goldsmith*. Leading up to the Court's decision in *Goldsmith*, courts had disagreed on the proper scope of transformative fair use, and the *Goldsmith* Court sided with a narrow and restrictive view. Lunney re-examines the Court's interpretive approaches and demonstrates

that none support the Court's reasoning and outcome, and he cautions that courts should apply the holding in *Goldsmith* narrowly.

Fifth, I offer my own note arguing that advancements such as Google Deepmind's Alphafold have brought us closer than ever to the protein folding horizon, beyond which scientists will be able to perfectly predict protein folding and interactions. This will change pharmaceutical genus patent claiming and may allow patentees to adapt to the heightened "full-scope" enablement standard affirmed by the Supreme Court in *Amgen Inc. v. Sanofi*. The note further argues that courts should be ready to respond to maintain the patent balance if the pendulum swings too far in the opposite direction.

Finally, Ben Tauber offers a note examining the *de minimis* doctrine in copyright law, proposing a framework for how the doctrine can be reified and consistently applied by federal courts in copyright infringement cases. Tauber counters the strict liability theory of copyright law, arguing that a broad application of the *de minimis* doctrine safeguards the purpose of copyright law while countering against abuses. The note challenges the holdings of certain circuit courts finding *de minimis* to be a narrow or nonexistent doctrine while emphasizing the special need for inter-circuit consistency in the area of copyright law.

Sincerely,

Alex Lee

Editor-in-Chief

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JURISDICTIONAL COMPETITION ON
STANDARD-ESSENTIAL PATENTS

WENTONG ZHENG*

This Article offers a systematic examination of jurisdictional competition on standard-essential patents (“SEPs”). SEPs are patents essential to technology standards developed by standard-setting organizations (“SSOs”). To reduce potential patent holdup, SSOs generally require SEP holders to commit to licensing SEPs on “fair, reasonable, and nondiscriminatory” (“FRAND”) terms. During the last decade, jurisdictions around the world have been engaged in fierce competition to set the ground rules on FRAND and other requirements for SEP licensing. This Article traces the legal landscape of this jurisdictional competition and examines how three major jurisdictions, the United States, Europe, and China, have developed divergent stances towards the most important legal issues affecting SEP licensing under patent law, contract law, and antitrust law.

This Article further challenges the prevailing scholarly assumption that jurisdictional competition on SEPs is socially undesirable. Drawing upon a historical analogy from maritime law in the post-industrial revolution era, this Article argues that jurisdictional competition on SEPs plays a positive role in facilitating compromises between innovator interests and implementer interests. Viewed in this light, jurisdictional competition on SEPs enhances social welfare by producing a “race to the middle” in which competing societal interests are calibrated and balanced.

* University of Florida Research Foundation Professor & Professor of Law, University of Florida Levin College of Law. I thank Jordan Barry, Annie Bret, Jorge Contreras, Mark Fenster, Cathy Hwang, Mark Lemley, Jonathan Marshfield, Menesh Patel, D. Daniel Sokol, Su Sun, and participants in the University of Florida Internal Faculty Workshop and the 2024 National Business Law Scholars Conference for helpful comments on earlier drafts.

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INTRODUCTION

Jurisdictions compete with one another to set legal rules aimed at achieving desired political, economic, and social outcomes.¹ They compete, among others, on

¹ For general discussions of jurisdictional competition, see Bruce G. Carruthers & Naomi R. Lamoreaux, *Regulatory Races: The Effects of Jurisdictional Competition on Regulatory Standards*, 54 J. ECON. LITERATURE 52, 52 (2016) (surveying the economic literature on jurisdictional competition).

corporate laws that regulate the governance structures of corporations,² securities laws that protect investors from securities frauds,³ environmental laws that guard against environmental pollution,⁴ labor laws that set workers' working conditions,⁵ and tax laws that determine how and where tax revenues are derived.⁶

Since about a decade ago, jurisdictions around the world have been locked in fierce competition for dominance in yet another hotly contested body of law: the laws governing standard-essential patents ("SEPs"), or patents that are essential to technology standards developed by standard setting organizations ("SSOs").⁷ In the modern world, standards are ubiquitous in industries that require the interoperability of devices, such as telecommunication equipment, mobile phones, computers, automotive, smart energy, payment terminals, and medical devices.⁸ When standards incorporate patent-protected technologies, however, the universal access prized by standards come into potential conflicts with the exclusive nature

² See, e.g., William Cary, *Federalism and Corporate Law: Reflections Upon Delaware*, 83 YALE L.J. 663, 664 (1974) (arguing that jurisdictional competition over corporate law fosters a race to the bottom); ROBERTA ROMANO, *THE GENIUS OF AMERICAN CORPORATE LAW* 1 (1993) (referring to jurisdictional competition as the "genius of American corporate law"); Lucian Bebchuk et al., *Does the Evidence Favor State Competition in Corporate Law?*, 90 CALIF. L. REV. 1777, 1777 (2002) (arguing that state competition over corporate charters provides undesirable incentives with respect to important corporate law issues).

³ See, e.g., Paul G. Mahoney, *The Origins of the Blue-Sky Laws: A Test of Competing Hypotheses*, 46 J. L. & ECON. 229, 229 (2003) (tracing the adoption of state securities laws to progressive lobbies as well as small banks facing competition from securities salesmen for depositors' funds).

⁴ See, e.g., Richard L. Revesz, *Rehabilitating Interstate Competition: Rethinking the "Race-to-the-Bottom" Rationale for Federal Environmental Regulation*, 67 N.Y.U. L. REV. 1210, 1210 (1992) ("Perhaps the most widely accepted justification for environmental regulation at the federal level is that it prevents states from competing for industry by offering pollution control standards that are too lax."); David M. Konisky, *Regulatory Competition and Environmental Enforcement: Is There a Race to the Bottom?*, 51 AM. J. POL. SCI. 853, 853 (2007) (presenting evidence that states enforcing federal environmental laws do not respond to competing states in the asymmetric manner suggested by the race to the bottom theory).

⁵ See, e.g., Ronald B. Davies & Krishna Chaitanya Vadlamannati, *A Race to the Bottom in Labor Standards? An Empirical Investigation*, 103 J. DEV. ECON. 1, 1 (2013) (finding that both developed and developing countries compete on labor standards, with competition strongest among developing countries with weak standards).

⁶ See, e.g., OECD, *HARMFUL TAX COMPETITION: AN EMERGING GLOBAL ISSUE* 14 (1998) (arguing that harmful tax competition can distort trade and investment patterns, erode national tax bases and shift part of the tax burden onto less mobile tax bases).

⁷ A patent is essential to a standard if the implementation of the standard requires the use of the patented invention. See *Apple, Inc. v. Motorola Mobility, Inc.*, 886 F. Supp. 2d 1061, 1067 (W.D. Wis. 2012).

⁸ TAMIAMA MADIEGA, EUROPEAN PARLIAMENTARY RSCH. SERV., *STANDARD ESSENTIAL PATENTS REGULATION* 2 (2023), [https://www.europarl.europa.eu/RegData/etudes/BRIE/2023/754578/EPRS_BRI\(2023\)754578_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2023/754578/EPRS_BRI(2023)754578_EN.pdf) [<https://perma.cc/44QD-P2QL>].

of patent rights.⁹ To prevent SEP holders from extracting higher royalties than they otherwise could have obtained without the standards, SSOs generally require that SEP holders commit to licensing SEPs to third parties on “fair, reasonable, and nondiscriminatory” (“FRAND”) terms.¹⁰

SEPs and the concomitant FRAND requirement raise a whole range of legal issues under patent law, contract law, and antitrust law. The exact parameters of these laws have a tremendous impact on how SEP holders and implementers conduct their businesses.¹¹ Jurisdictions around the world compete to set these parameters, leading to what is often dubbed as “FRAND wars.”¹² The most emblematic of this jurisdictional competition are rounds after rounds of anti-suit injunctions, anti-anti-suit injunctions, and even anti-anti-anti-suit injunctions aimed at stymieing judicial proceedings in competing jurisdictions.¹³ But the global FRAND wars are being fought not just on the judicial front. In April 2023, the European Commission upped the ante in the global FRAND wars by proposing a new regulatory framework on SEPs that would have far-reaching implications for the setting of global FRAND royalty rates.¹⁴ Jurisdictional competition on SEPs has also generated warnings by former senior U.S. government officials,¹⁵ a Special 301 Report by the Office of the United States Trade Representative,¹⁶ a complaint

⁹ *Standards and Patents*, WIPO, <https://www.wipo.int/patent-law/en/developments/standards.html> [<https://perma.cc/WU3E-HW9N>] (last visited Sept. 15, 2024).

¹⁰ THOMAS F. COTTER, *PATENT WARS: HOW PATENTS IMPACT OUR DAILY LIVES* 230 (2018).

¹¹ *See infra* Part I.C.

¹² *See, e.g.*, Joseph Kattan, *FRAND Wars and Section 2*, 27 *ANTITRUST* 30 (2013).

¹³ *See* Peter K. Yu, Jorge L. Contreras & Yu Yang, *Transplanting Anti-Suit Injunctions*, 71 *AM. UNIV. L. REV.* 1537, 1578–88 (2022), for discussions of the use of anti-suit injunctions, anti-anti-suit injunctions, and anti-anti-anti-suit injunctions in global SEP litigation. *See also* Jorge L. Contreras, *Anti-Suit Injunctions and Jurisdictional Competition in Global FRAND Litigation: The Case for Judicial Restraint*, 11 *N.Y.U. J. INTELL. PROP. & ENT. L.* 171, 174–81 (2021).

¹⁴ *See Proposal for a Regulation of the European Parliament and of the Council on Standard Essential Patents and Amending Regulation (EU)2017/1001*, COM (2023) 232 final (Apr. 27, 2023) [hereinafter *Proposed EC SEP Regulation*].

¹⁵ *See* Letter from Christine Varney, Former Assistant Att’y Gen., Antitrust Div., U.S. Dep’t of Just., et al., to Ursula von der Leyen, President, Eur. Comm’n, et al. (Apr. 20, 2023), <https://www.documentcloud.org/documents/23785175-2023-04-20-comments-on-european-commission-draft-sepregulation-by-former-us-officials> [<https://perma.cc/WV4K-S8VA>].

¹⁶ *See* OFF. OF THE U.S. TRADE REP., 2021 SPECIAL 301 REPORT 40 (2021) (identifying the use of anti-suit injunctions by Chinese courts as a worrying issue in international trade).

at the World Trade Organization (“WTO”),¹⁷ a bill in the United States Congress studded with outcries by political leaders,¹⁸ and criticisms by scholars.¹⁹

This Article offers the first systematic study of jurisdictional competition on SEPs. Delving under the surface of the global FRAND wars, the Article examines how legal rules in three major jurisdictions—the United States, Europe, and China—differ as to fundamental issues that affect, or even threaten, the basic business models of SEP licensing. The Article identifies three such issues: whether SEP holders are entitled to injunctions against SEP infringement,²⁰ the setting of FRAND royalty rates,²¹ and whether certain licensing practices of SEP holders abuse their dominant market positions.²² The Article reveals a pattern of jurisdictional competition where judicial stances towards SEPs coincide with the alignment of industry interests.²³

This Article further contributes to the scholarly debates on jurisdictional competition on SEPs by exploring its social welfare implications. Scholars have advanced many proposals to curtail jurisdictional competition on SEPs. One proposal suggests that SSOs include an exclusive forum selection clause in their policy documents to reduce forum shopping and jurisdictional competition.²⁴

¹⁷ See Request for Consultations by the European Union, *China—Enforcement of Intellectual Property Rights*, WTO Doc. WT/DS611/1 (Feb. 22, 2022) (alleging that China’s use of anti-suit injunctions SEP litigation restricts intellectual property rights protected under the WTO Agreement on Trade-Related Intellectual Property Rights).

¹⁸ See Defending American Courts Act, S. 3772, 117th Cong. (2022); Press Release, Thom Tillis, Senator, Senate, Tillis, Coons, Cotton, Hirono, and Scott Introduce Bipartisan Bill to Prevent the Chinese Communist Party from Stealing American Intellectual Property (Mar. 10, 2022), <https://www.tillis.senate.gov/2022/3/tillis-coons-cotton-hirono-and-scott-introduce-bipartisan-bill-to-prevent-the-chinese-communist-party-from-stealing-american-intellectual-property> [https://perma.cc/7X5V-HLUK] (in introducing the bill, Senator Thom Tillis characterized China’s use of anti-suit injunctions as “[t]he Chinese Communist Party’s attempt to make Chinese courts the world arbiter of intellectual property”); *Id.* (similarly, Senator Cotton stated that “[w]e should not allow the Chinese Communist Party to use its corrupt courts to excuse the theft of American intellectual property”).

¹⁹ See, e.g., Jonathan M. Barnett, *Antitrust Mercantilism: The Strategic Devaluation of Intellectual Property Rights in Wireless Markets*, 38 BERKELEY TECH. L.J. 259, 259 (2023) (criticizing China’s mercantilist use of antitrust laws in global SEP disputes).

²⁰ See *infra* Part II.A.

²¹ See *infra* Part II.B.

²² See *infra* Part II.C.

²³ See *infra* Part III.B.

²⁴ See King Fung Tsang & Jyh-An Lee, *The Ping-Pong Olympics of Antisuit Injunction in FRAND Litigation*, 28 MICH. TECH. L. REV. 305, 372 (2022).

Other proposals advocate for the setting of FRAND royalty rates not by national courts at all, but by arbitration²⁵ or a global FRAND rate-setting tribunal.²⁶ Yet other proposals argue that national courts should determine FRAND royalty rates only for patents issued in their own jurisdictions.²⁷

All of these proposals explicitly or implicitly assume that jurisdictional competition on SEPs is socially undesirable. This Article challenges this prevailing assumption. Drawing upon jurisdictional competition on carrier liability in maritime law in the late nineteenth century, when clashes between vessel-interests jurisdictions and cargo-interests jurisdictions led to compromises that laid the foundation for the international maritime order in the twentieth century, this Article argues that jurisdictional competition on SEPs plays a similarly positive role in facilitating compromises between innovator interests and implementer interests. Such compromises are imperative for intellectual property rights, which need to incentivize innovation and simultaneously protect public access to technology. Such compromises gain increased importance in the case of SEPs, whose value stems not just from the patents themselves, but also from standardization.²⁸ Jurisdictional competition on SEPs benefits society by producing neither a “race to the top” nor a “race to the bottom,” but a “race to the middle” in which competing societal interests are calibrated and balanced.

The Article proceeds as follows. Part I introduces the industry backgrounds for standards and SEPs and how SEP laws impact the global licensing of SEPs. Part II systematically examines the divergent judicial stances towards SEP injunctions, FRAND rate setting, and abusive licensing practices in three major jurisdictions: the United States, Europe, and China. Part III makes the case for jurisdictional competition on SEPs.

²⁵ See Mark A. Lemley & Carl Shapiro, *A Simple Approach to Setting Reasonable Royalties for Standard-Essential Patents*, 28 BERKELEY TECH. L.J. 1135, 1138 (2013) [hereinafter *A Simple Approach*].

²⁶ See Jorge L. Contreras, *Global Rate Setting: A Solution for Standards-Essential Patents?*, 94 WASH. L. REV. 701, 701 (2019) [hereinafter *Global Rate Setting*].

²⁷ See Contreras, *supra* note 13, at 171 (arguing that national courts should exercise judicial restraints to limit their assessments of FRAND royalty rates only to those applicable in their own jurisdictions); Eli Greenbaum, *No Forum to Rule Them All: Comity and Conflict in Transnational FRAND Disputes*, 94 WASH. L. REV. 1085, 1088 (2019) (arguing that FRAND commitments be modified such that national courts have jurisdiction for FRAND licensing determinations only for patents issued by that territory).

²⁸ See *infra* Part III.C.

I STANDARD-ESSENTIAL PATENTS, FRAND, AND GLOBAL LICENSING

Before delving into the legal treatment of SEPs, a brief introduction to the industry contexts is in order. As explained below, SEPs pose unique challenges for SSOs, courts, and government authorities. How the legal rules on SEPs are crafted has a tremendous impact on the business of SEP licensing.

A. *Standards and Standard-Essential Patents*

A standard is “any set of technical specifications that either provides or is intended to provide a common design for a product or process.”²⁹ Standardization confers enormous benefits on consumers by enabling interoperability and the “network effect.”³⁰ It also benefits the public by promoting competition among producers of standardized products.³¹ In the meantime, producers also benefit from standardization through increased sales volume and first-mover advantages from the adoption of their own technologies by a standard.³²

Standards are everywhere in the modern economy. According to an estimate by the American National Standards Institute, there are more than 10,000 recognized standards in the United States and more than 30,000 recognized standards worldwide.³³ One study found that a modern laptop alone uses 251 distinct technical standards.³⁴ These standards are developed by SSOs, which are “private groups that collaboratively select and adopt uniform technical standards for goods and services.”³⁵ Some of the most important SSOs include the European

²⁹ Mark A. Lemley, *Intellectual Property Rights and Standard-Setting Organizations*, 90 CALIF. L. REV. 1889, 1896 (2002) [hereinafter *IPRs and SSOs*].

³⁰ See Patrick D. Curran, *Standard-Setting Organizations: Patents, Price Fixing, and Per Se Legality*, 70 U. CHI. L. REV. 983, 985–88 (2003). See also Richard H. Stern, *Who Should Own the Benefits of Standardization and the Value It Creates?*, 19 MINN. J.L. SCI. & TECH. 107, 115–16 (2018); Lemley, *IPRs and SSOs*, *supra* note 29, at 1896–97.

³¹ See *Microsoft Corp. v. Motorola, Inc.*, 795 F.3d 1024, 1030 (9th Cir. 2015) (“[Standardization] increases competition by lowering barriers to entry and adds value to manufacturers’ products by encouraging production by other manufacturers of devices compatible with them.”).

³² Stern, *supra* note 30, at 116.

³³ *ANSI Frequently Asked Questions—Standards Basics*, AM. NAT’L STANDARDS INST., <https://www.ansi.org/standards-faqs> [<https://perma.cc/DA66-TP8C>] (last visited Sept. 12, 2024).

³⁴ Brad Biddle et al., *How Many Standards in a Laptop? (and Other Empirical Questions)* (Sept. 10, 2010), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1619440 [<https://perma.cc/B5BT-MVB2>].

³⁵ Curran, *supra* note 30, at 983.

Telecommunications Standards Institute (“ETSI”),³⁶ the Institute of Electrical and Electronic Engineers (“IEEE”),³⁷ and the International Telecommunication Union (“ITU”).³⁸

SSOs generally proceed very cautiously when a standard involves technologies protected by patents. Mark Lemley studied thirty-six SSOs that had written intellectual property policies.³⁹ While most of the SSOs studied permitted members to own intellectual property rights in a standard, two SSOs explicitly prohibited ownership of intellectual property rights by a private party.⁴⁰ Of the thirty-six SSOs studied, twenty four imposed on their members an express or implied obligation to disclose intellectual property rights that they were aware of.⁴¹

When a patent disclosed by a holder is necessary to implement a standard, that is, when it is impossible to implement the standard through an alternative technology, the patent becomes “essential” to the standard—hence the term “standard-essential patents.” The number of declared SEPs worldwide was around 75,000 in 2021, a six-fold increase over the last decade.⁴² While these SEPs represent only two percent of the total number of patents currently in force, they play important roles in certain key industries.⁴³ Ninety percent of the declared SEPs are in telecommunications technology, 5% in computer technology, 2% in audio/visual technology, and the remaining 3% in machinery, measurement, semiconductors, optics or medical technology.⁴⁴

However, not all declared SEPs are truly essential. SSOs’ disclosure policies offer different and inconsistent rules on what patents are essential and thus need to be disclosed, to such an extent that SEPs declared under those policies may not be

³⁶ ETSI, <https://www.etsi.org/> [<https://perma.cc/FK6H-DSV9>] (last visited July 29, 2024).

³⁷ IEEE, <https://www.ieee.org/> [<https://perma.cc/L89V-8CU9>] (last visited July 29, 2024).

³⁸ ITU, <https://www.itu.int/en/Pages/default.aspx> [<https://perma.cc/WF39-ZCJV>] (last visited July 29, 2024).

³⁹ See Lemley, *IPRs and SSOs*, *supra* note 29, at 1904.

⁴⁰ See *id.* at 1905.

⁴¹ See *id.* at 1904.

⁴² *Impact Assessment Report Accompanying the Document Proposal for a Regulation of the European Parliament and of the Council on Standard Essential Patents and Amending Regulation (EU) 2017/1001, SWD (2023) 124 final*, at 8 [hereinafter *EC SEP Proposal Impact Assessment Report*].

⁴³ *Id.*

⁴⁴ *Id.*

essential in the sense that an implementer without a license from the SEP holder necessarily infringes the patent.⁴⁵ As a result, most SSOs' disclosure policies favor overdisclosure of SEPs.⁴⁶ In addition, government enforcement authorities and courts also threaten harsh penalties for non-disclosure of SEPs, adding incentives for patent holders to overdeclare.⁴⁷

Many studies have shown the extent of SEP overdeclaration. One study found that of the patents declared essential to the GSM wireless-communication standard, less than half were actually essential or probably essential.⁴⁸ Another study found that only between 25% and 40% of the patents listed in the ETSI IPR database are in fact essential to the final published standard.⁴⁹ The essentiality rate in the case of 5G is as low as 15%.⁵⁰ Yet another study found that when SEPs are challenged in courts, they fare poorly in terms of being found essential. Mark Lemley and Timothy Simcoe studied a sample of SEPs as compared to a control group of non-SEPs asserted in courts.⁵¹ They found that the infringement win rate of SEPs was 30.7%, not statistically different than the 29.5% infringement win rate of the non-SEP control group.⁵² This result, according to Lemley and Simcoe, indicates that “overdisclosure of SEPs is rampant.”⁵³

B. Patent Holdup and FRAND

When a patent holder asserts an SEP, it may “exploit the market power that may be conferred by the adoption of the standardized technology to demand high

⁴⁵ Cody M. Akins, *Overdeclaration of Standard-Essential Patents*, 98 TEX. L. REV. 579, 583–85. Some SSOs require disclosure of only “technically” essential patents, while some other SSOs also require disclosure of “commercially” essential patents. Some SSOs require disclosure of patents that are essential to optional features of a standard. And SSO policies are inconsistent on whether a patent essential to an underlying standard is considered essential to a standard that builds on the underlying standard. *See id.*

⁴⁶ RUDI BEKKERS & ANDREW UPDEGROVE, A STUDY OF IPR POLICIES AND PRACTICES OF A REPRESENTATIVE GROUP OF STANDARDS SETTING ORGANIZATIONS WORLDWIDE 55 (2012).

⁴⁷ *See Akins, supra* note 45, at 585–86.

⁴⁸ *See id.* at 582.

⁴⁹ *See* GROUP OF EXPERTS ON LICENSING AND VALUATION OF STANDARD ESSENTIAL PATENTS (“SEPs EXPERT GROUP”), CONTRIBUTION TO THE DEBATE ON SEPs 34–35 (2021), <https://ec.europa.eu/docsroom/documents/45217> [<https://perma.cc/C8EJ-ADMJ>].

⁵⁰ *See* Eur. Comm’n, *EC SEP Proposal Impact Assessment Report, supra* note 42, at 19 & n.92.

⁵¹ *See* Mark A. Lemley & Timothy Simcoe, *How Essential Are Standard-Essential Patents?*, 104 CORNELL L. REV. 607, 617 (2019).

⁵² *Id.* at 627.

⁵³ *Id.* at 628.

royalties, based on the threat of enjoining the implementer from using the relevant standard in its products if such royalties are not paid.”⁵⁴ This is often referred to in the legal and economic literatures as “holdup.”⁵⁵ As evidence of patent holdup, a U.S. Federal Trade Commission (“FTC”) commissioner cited two court cases awarding only 1/150 and 1/500 of the royalties sought.⁵⁶

As a response to the perceived holdup problem, many SSOs impose conditions on the use of SEPs. The most common conditions are that SEPs be licensed royalty free or on FRAND terms.⁵⁷ Of the thirty-six SSOs studied by Mark

⁵⁴ SEPS EXPERT GROUP, *supra* note 49, at 28.

⁵⁵ See, e.g., Thomas F. Cotter et al., *Demystifying Patent Holdup*, 76 WASH. & LE L. REV. 1501, 1505 (2019) (presenting a model for evaluating the risks of holdup); Carl Shapiro, *Injunctions, Hold-Up, and Patent Royalties*, 12 AM. L. & ECON. REV. 280, 280 (2010) (presenting a model of royalty negotiations where the hold-up component of the negotiated royalties is greatest for weak patents covering a minor feature of a product with a high margin between price and marginal cost); Joseph Farrell et al., *Standard Setting, Patents, and Hold-Up*, 74 ANTITRUST L.J. 603, 604 (2007) (discussing the risk of holdup in standard setting and techniques for avoiding holdup); Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991, 1991 (2007) (arguing that the threat to obtain a permanent injunction enhances the patent holder’s negotiating power, leading to royalty overcharges and holdup).

⁵⁶ Terrell McSweeney, *Holding the Line on Patent Holdup: Why Antitrust Enforcement Matters* 4 (Mar. 21, 2018), https://www.ftc.gov/system/files/documents/public_statements/1350033/mcsweeney_-_the_reality_of_patent_hold-up_3-21-18.pdf [<https://perma.cc/8ZDN-GKMR>] (citing *Microsoft Corp. v. Motorola, Inc.*, 2013 U.S. Dist. LEXIS 60233, at *303 (W.D. Wash. Apr. 25, 2013), and *Realtek Semiconductor Corp. v. LSI Corp.*, 2014 U.S. Dist. LEXIS 81673, at *23 (N.D. Cal. June 16, 2014)). But scholars have questioned the empirical basis of patent holdup. See, e.g., Alexander Galetovic et al., *An Empirical Examination of Patent Holdup*, 11 J. COMP. L. & ECON. 549, 554 (2015) (finding no empirical support for patent holdup).

⁵⁷ For example, the Intellectual Property Rights Policy of ETSI states:

6. Availability of Licenses

6.1 When an ESSENTIAL IPR relating to a particular STANDARD or TECHNICAL SPECIFICATION is brought to the attention of ETSI, the Director-General of ETSI shall immediately request the owner to give within three months an irrevocable undertaking in writing that it is prepared to grant irrevocable licences on fair, reasonable and non-discriminatory (“FRAND”) terms and conditions under such IPR to at least the following extent:

- MANUFACTURE, including the right to make or have made customized components and sub-systems to the licensee’s own design for use in MANUFACTURE;
- sell, lease, or otherwise dispose of EQUIPMENT so MANUFACTURED;
- repair, use, or operate EQUIPMENT; and
- use METHODS.

The above undertaking may be made subject to the condition that those who seek licences agree to reciprocate.

Lemley, four of them required members to license their SEPs to other members on a royalty-free basis.⁵⁸ Twenty-nine of the thirty-six SSOs required members to license their SEPs on FRAND terms.⁵⁹ SEPs used in certain key standards, such as cellular communication, Wi-Fi, and video/audio compression, are customarily subject to royalty payments and are governed by FRAND.⁶⁰

The number of declared SEPs was estimated to have increased sixfold in the last decade, reaching 75,000 patent families in 2021.⁶¹ These SEPs are owned by approximately 260 companies, with one third of all SEPs being owned by Chinese companies.⁶² The top five SEP holders for the cellular 5G standard, for example, are Huawei, Qualcomm, Samsung, Ericsson, and Nokia.⁶³ The shares of the United States and the European Union in SEPs decreased from 26% to 19% and from 22% to 15% respectively.⁶⁴

On the implementation side, in 2022, there were about 47,500 manufacturing firms worldwide that may implement standards that were subject to a FRAND commitment.⁶⁵ The largest market for FRAND licensing is in mobile phones, which are dominated by Samsung, Apple, and eight Chinese phone makers.⁶⁶

C. *The Impact of SEP Laws on Global Licensing*

The exact parameters of SEP laws have a tremendous impact on the global licensing of SEPs. As detailed below, certain key aspects—and even the basic business models—of SEP licensing depend on what SEP holders and implementers can or cannot do under the legal rules pertaining to SEPs. This Section below highlights three main issues that are crucial to SEP licensing: the ability of SEP holders to seek injunctions, the determination of FRAND royalty rates, and the antitrust liabilities of SEP holders for abusive licensing practices.

⁵⁸ Lemley, *IPRs and SSOs*, *supra* note 29, at 1905.

⁵⁹ *Id.* at 1906.

⁶⁰ Eur. Comm'n, *EC SEP Proposal Impact Assessment Report*, *supra* note 42, at 8–9.

⁶¹ *Id.* at 8.

⁶² *Id.*

⁶³ *5G Patent Ownership Booms: Who is Leading the Pack?*, LEXISNEXIS (Oct. 10, 2023), <https://www.lexisnexisip.com/resources/5g-patent-ownership-booms-who-is-leading-the-pack/> [<https://perma.cc/BY4V-64LE>].

⁶⁴ Eur. Comm'n, *EC SEP Proposal Impact Assessment Report*, *supra* note 42, at 8.

⁶⁵ *Id.* at 11.

⁶⁶ *Id.* at 10.

1. *Injunctions*

One fundamental remedy against the infringement of patent rights is for the patent holder to seek a permanent injunction requiring the infringing party to cease the infringing activities, including the sales of the infringing product.⁶⁷ With an injunction, a patent holder who validates its patents in court acquires the ability to completely shut down the business of the infringing party. This will give patent holders powerful leverage in their licensing negotiations with implementers and will enable them to extract higher royalties than they otherwise could.⁶⁸

Prior to 2006, the general rule in the United States was that “courts will issue permanent injunctions against patent infringement absent exceptional circumstances.”⁶⁹ In *eBay Inc. v. MercExchange, LLC* in 2006, a unanimous U.S. Supreme Court heightened the bar for the issuance of permanent injunctions in patent infringement cases, holding that “[t]he traditional four-factor test applied by courts of equity when considering whether to award permanent injunctive relief to a prevailing plaintiff applies to disputes arising under the Patent Act.”⁷⁰ This rule change was intended to address the situation where the patented invention is only a small component of the infringing product, in which case “legal damages may well be sufficient to compensate for the infringement and an injunction may not serve the public interest.”⁷¹ But even with this rule change, patent holders retain the ability to receive permanent injunctions once they establish irreparable injury, inadequacy of monetary damages, hardship, and public interest.⁷²

However, when patents are essential to a standard, there might be additional obstacles to the issuance of injunctions against patent infringement. SEP holders’ FRAND commitment may constitute a binding contractual obligation to forego

⁶⁷ Carl Shapiro, *Injunctions, Hold-Up, and Patent Royalties*, 12 AM. L. & ECON. REV. 280, 281 (2010).

⁶⁸ *Id.* Shapiro recounts the patent infringement dispute between NTP, Inc. and Research in Motion (“RIM”) as an example of this leverage. After NTP sought an injunction following the jury’s finding of infringement of its patents by RIM, RIM paid \$612.5 million to settle the case. *Id.* This settlement, according to Shapiro, “reflected the strong bargaining position NTP enjoyed by virtue of its threat to shut down Blackberry, not the underlying value of NTP’s patented technology.” *Id.*

⁶⁹ *eBay Inc. v. MercExchange, LLC*, 547 U.S. 388, 391 (2006).

⁷⁰ *Id.* at 388.

⁷¹ *Id.* at 396.

⁷² These are the traditional four factors that courts weigh in deciding whether to grant permanent injunctions. *Id.* at 391.

the remedy of injunctions and to seek FRAND royalties instead.⁷³ Additionally, seeking injunctions may allow SEP holders to reduce the number of competitors implementing the SEP and therefore monopolize the market for the product embodying the SEP.⁷⁴ The extent to which the law limits the right to seek injunctions for SEP holders will have an enormous impact on the negotiations of FRAND licenses.

2. *Royalty Rates*

FRAND requires royalty rates for SEPs to be fair, reasonable, and nondiscriminatory—but how to determine the appropriate levels of royalty rates that are FRAND? Despite demanding a FRAND commitment from SEP holders, SSOs have refrained from specifying the methodologies for determining FRAND royalty rates.⁷⁵ Many SSOs expressly disclaim any role in setting and adjudicating FRAND royalty rates.⁷⁶ In 2015, the IEEE offered broad guidelines on the calculations of FRAND royalty rates in its amended intellectual property policy.⁷⁷ These guidelines, however, received wide criticisms from the United States government and SEP holders for being hostile towards patent rights and innovation.⁷⁸ In 2022, the IEEE issued another update to its intellectual property policy that effectively revoked its 2015 guidelines.⁷⁹

⁷³ See, e.g., Jay P. Kesan & Carol M. Hayes, *FRAND's Forever: Standards, Patent Transfers, and Licensing Commitments*, 89 IND. L.J. 231, 312–13 (2014) (arguing that injunctions should not be available to SEP holders because by making FRAND commitments, SEP holders acknowledge that royalties would provide adequate compensation for the loss of exclusivity).

⁷⁴ See, e.g., Paul H. Saint-Antoine, *IP, Antitrust, and the Limits of First Amendment Immunity: Shouting “Injunction” in a Crowded Courthouse*, 27 ANTITRUST 41, 47 (2013) (arguing that seeking injunctions for SEPs may violate Section 5 of the Federal Trade Commission Act). *But see* Douglas H. Ginsburg et al., *Enjoining Injunctions: The Case Against Antitrust Liability for Standard Essential Patent Holders Who Seek Injunctions*, 14 ANTITRUST SOURCE 1, 1 (2014) (arguing that antitrust law should not impose liabilities on SEP holders’ right to seek injunctions).

⁷⁵ Contreras, *Global Rate Setting*, *supra* note 26, at 705.

⁷⁶ *Id.*

⁷⁷ Benjamin C. Li, *The Global Convergence of FRAND Licensing Practices: Towards “Interoperable” Legal Standards*, 31 BERKELEY TECH. L.J. 429, 462–63 (2016).

⁷⁸ See Manveen Singh, *The 2022 IEEE IPR Policy Changes: Legal and Policy Implications*, 38 BERKELEY TECH. L.J. 445, 451–58 (2023).

⁷⁹ Under the IEEE’s 2022 policy, the smallest saleable patent practicing unit is no longer the preferred base for determining FRAND royalties. The new policy now allows other royalty bases, such as the value of the end-device, in determining FRAND royalties. *Id.* at 459.

Because of the vague meanings of FRAND and the lack of guidance from SSOs, disputes about what royalty rates are FRAND routinely arise between SEP holders and implementers in their licensing negotiations. SEP holders and implementers have frequently resorted to litigation before national courts to determine the appropriate FRAND royalty rates.⁸⁰ Judicial determinations of FRAND royalty rates, however, face many practical difficulties. Most notably, SEP holders are generally not willing to disclose the comparable licensing agreements they enter into with other implementers, making it difficult to determine if the FRAND royalty rates at issue are consistent with FRAND.⁸¹ Not to mention that courts from different jurisdictions differ as to both the methodologies for determining FRAND royalty rates and the FRAND royalty rates thus determined.⁸² The royalty rates that are determined under FRAND have a direct impact on how much SEP holders can charge—and how much implementers have to pay—for SEPs.

3. *Licensing Practices*

Not only do SEP laws affect the rates at which SEPs are licensed, but they have a direct impact on SEP holders' licensing practices. To maximize licensing revenues, SEP holders often make certain strategic choices as to how they structure their licensing transactions. One of these strategic choices concerns the question of whom SEP holders want to license their SEPs to and collect royalties from in the supply chain of manufacturing standard-compliant products.

Technically, all participants in the supply chain of manufacturing standard-compliant products, from upstream component makers to downstream end-device makers, implement SEPs. However, once SEP holders give a license to manufacturers at a particular level of the supply chain, they will no longer be able to extract licenses and collect royalties from downstream manufacturers because of the patent exhaustion doctrine.⁸³ Under the patent exhaustion doctrine, once a patentee has obtained the economic benefit of a patent by selling or

⁸⁰ See *infra* Part II.B for detailed discussions of these competing court cases.

⁸¹ See Contreras, *Global Rate Setting*, *supra* note 26, at 706–07.

⁸² See *infra* Part II.B.

⁸³ See Jorge L. Contreras & Anne Layne-Farrar, *Non-Discrimination and FRAND Commitments*, in 1 THE CAMBRIDGE HANDBOOK OF TECHNICAL STANDARDIZATION LAW: COMPETITION, ANTITRUST AND PATENTS 186, 201 (Jorge Contreras ed., 2018) (“Once a license is granted to any link in the supply chain, the patent holder could be prevented . . . from suing or extracting any royalties from any subsequent downstream purchaser.”).

authorizing the sale of a patented article of merchandise, the patentee's right to control the subsequent use or resale of the patented article is exhausted.⁸⁴ In *Impression Products Inc. v. Lexmark Int'l, Inc.*, the United States Supreme Court reaffirmed the patent exhaustion doctrine as a per se rule that exhausts all patent rights to enforce post-sale restrictions, regardless of whether such restrictions are socially beneficial.⁸⁵ This principle has been recognized across different areas of intellectual property law and across national legal systems.⁸⁶

Because SEP holders can collect royalties from only one level of the supply chain, and because end-devices are more expensive than components, some SEP holders in certain industries have made a strategic choice of granting licenses only to end-device makers. The mobile phone industry is a typical example. Qualcomm, a U.S. company with one of the strongest SEP portfolios in cellular communications technology, had traditionally licensed its SEPs to rival cellular chipset suppliers at a 3% royalty rate since 1999.⁸⁷ But beginning from a certain time, Qualcomm started refusing to license to rival chip suppliers and instead licensed its SEPs to mobile phone manufacturers at a 5% royalty rate of the cell phone price.⁸⁸ Other SEP holders such as Nokia and Ericsson followed Qualcomm's lead and started licensing only end-device manufacturers.⁸⁹ This business model has also been adopted by the automobile industry, where Avanci, a patent pool of 4G, 3G, and 2G SEPs from 51 major SEP holders, had concluded

⁸⁴ See Huang-Chih Sung, *A Critical Review of Current Trends in Licensing Standard Essential Patents from the Perspectives of Patent Law and Supply Chain Management*, 103 J. PAT. & TRADEMARK OFF. SOC'Y 431, 442 (2023).

⁸⁵ See Herbert J. Hovenkamp, *Reasonable Patent Exhaustion*, 35 YALE J. REGUL. 513, 515 (2018). Scholars have argued against this mandatory rule of patent exhaustion. See, e.g., *id.* at 548 (criticizing mandatory patent exhaustion for "fail[ing] to distinguish harmful uses of post-sale restraints from the large number that are beneficial"); Wentong Zheng, *Exhausting Patents*, 63 UCLA L. REV. 122, 122 (2016) (advocating for patent exhaustion as a default-plus rule).

⁸⁶ See Shubha Ghosh, *The Implementation of Exhaustion Policies: Lessons from National Experiences* 4 (Univ. of Wis. Legal Stud. Rsch. Paper Series, Paper No. 1248), <https://ssrn.com/abstract=2390232> [<https://perma.cc/RC3Y-RTBM>].

⁸⁷ See Sung, *supra* note 84, at 445.

⁸⁸ *Id.* Qualcomm refused to license to Intel in 2004 and 2009, MediaTek in 2008, HiSilicon in 2009, NTT DoCoMo in 2011, Samsung in 2011, and VIA in 2012. It also refused to renew licenses for Texas Instruments in 2012, Broadcom in 2014, LGE in 2015, and Samsung in 2009 and 2018. *Id.*

⁸⁹ See Fed. Trade Comm'n v. Qualcomm, 969 F.3d 974, 984 (9th Cir. 2020).

licensing agreements with carmakers that account for 80-85% of cars with 2G technology or higher by September 2022.⁹⁰

SEP holders' refusal to license certain manufacturers based on their position in the supply chain raises serious legal issues. First and foremost, is such refusal a violation of SEP holder's contractual obligation under FRAND to grant a license to any licensee who is willing to enter into a FRAND license? In other words, by choosing to only license end-device manufacturers, do SEP holders violate the nondiscrimination requirement of FRAND?⁹¹ Second, is such refusal a violation of antitrust law that prohibits an SEP holder from acquiring and maintaining its dominant market position through anticompetitive conduct?⁹²

When granting licenses only to end-device manufacturers, SEP holders still need to allow upstream component manufacturers to access their patents, even though that access is not granted through a formal license. Qualcomm accomplishes this task through agreements with chipset manufacturers under which Qualcomm promises not to assert its patents against them but stops

⁹⁰ See Victoria Waldsee & Supantha Mukherjee, *Automakers Tackle Patent Hurdle in Quest for In-Car Tech*, REUTERS (Sept. 21, 2022), <https://www.reuters.com/business/autos-transportation/automakers-tackle-patent-hurdle-quest-in-car-tech-2022-09-21/> [<https://perma.cc/8ASX-6YXV>].

⁹¹ Commentators are split on this question. See Anne Layne-Farrar & Richard J. Stark, *License to All or Access to All? A Law and Economics Assessment of Standard Development Organizations' Licensing Rules*, 88 GEO. WASH. L. REV. 1307, 1335–38 (2020) (arguing that SDO policies do not impose a general obligation on SEP holders to license component manufacturers). *But see* Jorge L. Contreras, *Sometimes FRAND Does Mean License-to-All*, INTELL. ASSET MGMT. (Oct. 10, 2020), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3889813 [<https://perma.cc/86JE-AHLT>] (arguing that the intellectual property policies of many SDOs do impose a License-to-All requirement); Eli Greenbaum, *A Million Unlicensed Pieces: Nondiscrimination Commitments in the Supply Chain*, 2020 UNIV. ILL. L. REV. ONLINE 275, 275 (2020) (arguing that the nondiscrimination prong of FRAND provides no easy framework for analyzing selective licensing of the supply chain).

⁹² The FTC has taken this position in its lawsuit against Qualcomm. See Brief for Appellee at 69, Fed. Trade Comm'n v. Qualcomm, 969 F.3d 974 (9th Cir. 2020) (No. 19-16122) (arguing that an SEP holder may commit an antitrust violation when it “commits to license its rivals on FRAND terms, and then implements a blanket policy of refusing to license those rivals on any terms, with the effect of substantially contributing to the acquisition or maintenance of monopoly power in the relevant market.”). Commentators are split on whether antitrust law requires SEP holders to license manufacturers at all levels of the supply chain. See Sheng Tong, *The “No License, No Chips” Policy: When a Refusal to Deal Becomes Reasonable*, 20 DEPAUL BUS. & COMM. L.J. 29, 32 (2021) (arguing that SEP holders should be subject to an antitrust duty to license component manufacturers without a right to demand royalties from downstream manufacturers). *But see* Layne-Farrar & Stark, *supra* note 91, at 1309 (arguing that antitrust law does not impose an obligation on SEP holders to grant a license to component manufacturers).

short of granting them formal licenses.⁹³ These agreements essentially function as patent-infringement indemnifications and allow chipset manufacturers to practice Qualcomm’s SEPs royalty free.⁹⁴ This licensing model, which grants manufacturers at all levels of the supply chain access to SEPs, but not licenses, is often referred to as “Access to All.”⁹⁵ By contrast, the business model under which all manufacturers in the supply chain are entitled to a license is often referred to as “License to All.”⁹⁶

SEP holders also adopt certain licensing practices aimed at reinforcing their strategy of only licensing end-device manufacturers. Again, Qualcomm is the best example. To ensure that mobile phone manufacturers pay royalties, Qualcomm adopts an innovative “No License, No Chips” policy, “under which Qualcomm refuses to sell modem chips to [end-device manufacturers] that do not take licenses to practice Qualcomm’s SEPs.”⁹⁷ Whether this policy runs afoul of antitrust law is a question that determines the viability of Qualcomm’s Access-to-All licensing model.

II

JURISDICTIONAL COMPETITION ON SEPS

This Part examines the divergent treatment of the most important legal issues pertaining to SEPs in the three most commercially important jurisdictions for SEPs: the United States, Europe, and China. These legal issues include injunctions against SEP infringement, the determinations of FRAND royalty rates, and abusive licensing practices by SEP holders. As detailed below, analysis of these legal issues requires a synthesis of patent law, contract law, and antitrust law.

⁹³ See *Qualcomm*, 969 F.3d at 984.

⁹⁴ *Id.* at 985.

⁹⁵ See, e.g., Layne-Farrar & Stark, *supra* note 91, at 1309.

⁹⁶ *Id.* at 1308. See also Juan Martinez, *FRAND as Access to All Versus License to All*, 14 J. INTELL. PROP. L. & PRAC. 642, 644 (2019).

⁹⁷ *Qualcomm*, 969 F.3d at 985. In addition, in its agreements with chipset suppliers, Qualcomm agrees to not assert its SEPs against them in exchange for them promising not to sell their chips to unlicensed mobile phone manufacturers. *Id.* at 984.

A. Injunctions

Patents confer upon the patent holders the right to exclude others from making, using, or selling the patented invention.⁹⁸ But when patent holders commit to licensing their patents, as is the case under SEP holders' FRAND commitment, do they voluntarily forego this right of exclusion? Jurisdictions around the world have provided different answers to this threshold question.

1. United States

Under U.S. law, courts are generally supportive of patentees' right to seek injunctions against patent infringement.⁹⁹ But U.S. courts have exhibited "hostility" towards injunctions in the FRAND context.¹⁰⁰ As a result, U.S. courts rarely award injunctions to SEP holders.¹⁰¹

In *Apple Inc. v. Motorola, Inc.*, Motorola sought an injunction against Apple for the latter's alleged infringement of its SEPs.¹⁰² The Federal Circuit found that the district court below erred in announcing "a per se rule that injunctions are unavailable for SEPs."¹⁰³ According to the Federal Circuit, injunctions for SEPs should be analyzed using the same framework the Supreme Court laid out in *eBay*.¹⁰⁴ The Federal Circuit acknowledged that "an injunction may be justified where an infringer unilaterally refuses a FRAND royalty or unreasonably delays negotiations to the same effect."¹⁰⁵ Nonetheless, the Federal Circuit held that Motorola was not entitled to an injunction against Apple. Motorola's FRAND

⁹⁸ See, e.g., 35 U.S.C. § 271(a) ("[W]hoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States, or imports into the United States any patented invention during the term of the patent therefor, infringes the patent.").

⁹⁹ See *eBay Inc. v. MercExchange, LLC*, 547 U.S. 388, 391 (2006) ("[C]ourts will issue permanent injunctions against patent infringement absent exceptional circumstances.").

¹⁰⁰ Richard A. Epstein & Kayvan B. Noroozi, *Why Incentives for "Patent Holdout" Threaten to Dismantle FRAND, and Why It Matters*, 32 BERKELEY TECH. L.J. 1381, 1414 (2017).

¹⁰¹ See Thomas F. Cotter & John M. Golden, *Empirical Studies Relating to Patents—Remedies*, in 2 RESEARCH HANDBOOK ON THE ECONOMICS OF INTELLECTUAL PROPERTY LAW 390, 398–403 (Peter Menell et al. eds., 2019). Cf. Colleen V. Chien & Mark Lemley, *Patent Holdup, the ITC, and the Public Interest*, 98 CORNELL L. REV. 1, 2–4 (2012) (showing that the United States International Trade Commission ("ITC"), with its jurisdiction limited to imported products, still routinely awards injunctions, even after *eBay*).

¹⁰² See *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1331 (Fed. Cir. 2014).

¹⁰³ *Id.*

¹⁰⁴ *Id.*

¹⁰⁵ *Id.* at 1332.

commitments, says the Federal Circuit, “strongly suggest that money damages are adequate to fully compensate Motorola for any infringement.”¹⁰⁶ In addition, “Motorola has not demonstrated that Apple’s infringement has caused it irreparable harm” given the large number of industry participants that are already using Motorola’s SEPs.¹⁰⁷ Notably, the Federal Circuit ruled this way despite a dissenting judge’s assertion that there was sufficient evidence that Apple may have been a “hold out,” that is, “an unwilling licensee of an SEP seeking to avoid a license based on the value that the technological advance contributed to the prior art.”¹⁰⁸

U.S. courts’ hostility towards injunctions for SEPs is even more obvious in *Microsoft Corp. v. Motorola, Inc.*¹⁰⁹ Motorola sought an injunction against Microsoft after the two parties could not agree on the FRAND royalty rates for Motorola’s SEPs.¹¹⁰ As in *Apple*, the Ninth Circuit held that Motorola lacked a legitimate fear of irreparable harm because “payment of the [F]RAND rate would eliminate any such harm.”¹¹¹ But the Ninth Circuit went on to declare that “[i]n the absence of a fear of irreparable harm as a motive for seeking an injunction, the jury could have inferred that the real motivation was to induce Microsoft to agree to a license at a higher-than-[F]RAND rate.”¹¹² The Ninth Circuit concluded that there was significant evidence upon which the jury could infer that “the injunctive actions violated Motorola’s good faith and fair dealing obligations.”¹¹³

In addition, through government enforcement actions, U.S. law has imposed additional liabilities on SEP holders that seek injunctions. In 2013, the FTC issued a consent order against Google, finding that Google violated Section 5 of the FTC Act for seeking injunctive reliefs as the holder of SEPs it acquired as part of its

¹⁰⁶ *Id.*

¹⁰⁷ *Id.*

¹⁰⁸ *Id.* at 1333 (Rader, J., dissenting in part). *See, e.g.,* Colleen V. Chien, *Holding Up and Holding Out*, 21 MICH. TELECOMM. & TECH. L. REV. 1, 1 (2014) (arguing that patent hold-out may constitute a more serious problem than patent hold-up).

¹⁰⁹ *See* *Microsoft Corp. v. Motorola, Inc.*, 795 F.3d 1024 (9th Cir. 2015).

¹¹⁰ *Id.* at 1030.

¹¹¹ *Id.* at 1046.

¹¹² *Id.*

¹¹³ *Id.* The Ninth Circuit avoided discussing whether Motorola’s pursuit of injunctive relief violated its FRAND commitment to the SSO, obviating the need to discuss whether such commitment is enforceable as a contract. *See* King Fung Tsang & Jyh-An Lee, *Unfriendly Choice of Law in FRAND*, 59 VA. J. INT’L L. 220, 230–32 (2019), for discussions of the enforceability of the FRAND commitment.

acquisition of Motorola Mobility.¹¹⁴ The FTC reasoned that by renegeing on their promise to license SEPs to willing licensees, Google and Motorola “threaten[ed] to undermine the integrity and efficiency of the standard-setting process.”¹¹⁵ This behavior constitutes both an unfair method of competition and an unfair act or practice under Section 5 of the FTC Act.¹¹⁶

2. *Europe*

In European jurisdictions, injunctions are awarded to SEP holders with much more ease than in the United States. The discussions below focus on how injunctions are dealt with in three jurisdictions in Europe: Germany, the United Kingdom, and the European Union.

Germany. Germany is perhaps the polar opposite of the United States when it comes to judicial stance towards injunctions against patent infringement. Germany’s patent adjudication system has traditionally featured a “nearly automatic” issuance of permanent injunctions after a finding of patent infringement and before any determination of patent validity.¹¹⁷ This makes Germany an ideal venue for SEP holders to seek injunctive reliefs. According to one estimate, Germany accounts for the vast majority of court actions filed in the European Union against SEP implementers.¹¹⁸

German courts have issued some of the highest-profile injunctions against SEP infringement. For example, in *Microsoft Corp. v. Motorola, Inc.*, Microsoft argued in the U.S. District Court for the Western District of Washington that Motorola violated its FRAND commitment by making offers above the FRAND rates in their licensing negotiations.¹¹⁹ Motorola subsequently sued Microsoft

¹¹⁴ See *Motorola Mobility LLC and Google Inc.*, Docket No. C-4410, Decision and Order (F.T.C. July 24, 2013), <https://www.ftc.gov/sites/default/files/documents/cases/2013/07/130724googlemotorolado.pdf> [<https://perma.cc/FNU4-DFFW>].

¹¹⁵ *Motorola Mobility LLC and Google Inc.: Analysis of Proposed Consent Order to Aid Public Comment*, 78 Fed. Reg. 2398, 2400–01 (F.T.C. Jan. 11, 2013).

¹¹⁶ *Id.*

¹¹⁷ See, e.g., THOMAS F. COTTER, *COMPARATIVE PATENT REMEDIES: A LEGAL AND ECONOMIC ANALYSIS* 245–46 (2013).

¹¹⁸ According to the estimate, there are around 44 court cases against SEP implementers filed in Germany per year, around 2 cases in France, and around 1 case in the Netherlands. See Eur. Comm’n, *EC SEP Proposal Impact Assessment Report*, *supra* note 42, at 16.

¹¹⁹ *Microsoft Corp. v. Motorola, Inc.*, 871 F. Supp. 2d 1089, 1094–95 (W.D. Wash. 2012), *aff’d*, 696 F.3d 872 (9th Cir. 2012).

in Germany for infringing its SEPs.¹²⁰ The German court hearing the dispute promptly found infringement and issued an injunction against Microsoft.¹²¹ Other high-profile examples of German SEP injunctions include the ones Nokia obtained in the Mannheim Regional Court against Chinese mobile phone makers Vivo and Oppo, which were forced to exit the German market altogether because of the injunctions.¹²²

In recent years, Germany's automatic injunction regime underwent a quiet shift. In August 2021, the German Parliament approved an amendment to the German Patent Act that precludes injunctive relief if the claim would "lead to disproportionate, unjustified hardship for the infringer or third parties."¹²³ This statutory amendment was intended to codify a 2016 ruling by the German Federal Court of Justice ("BGH") in an infringement case brought by an SEP holder against a car manufacturer.¹²⁴ In that case, the BGH stated that when granting an injunction, courts must take into account proportionality and the interest of both parties.¹²⁵ However, the exception created by the statutory amendment is very narrow in scope¹²⁶ and is paired with increased potential for SEP holders to obtain damages.¹²⁷ Therefore, despite the heightened threshold for injunctions under the amended Patent Act, the German automatic injunction regime is "still alive."¹²⁸

¹²⁰ *Id.* at 1096.

¹²¹ *Id.* at 1103 n.14.

¹²² Florian Mueller, *Smartphone Maker Vivo Exits German Market After Nokia Starts Enforcement of Standard-Essential Patent Injunction*, FOSS PATENTS (June 6, 2023), <http://www.fosspatents.com/2023/06/smartphone-maker-vivo-exits-german.html> [<https://perma.cc/S985-VFJ8>].

¹²³ Patentgesetz [PatG] [Patent Act], Dec. 16, 1980, BGBL I at 1, as amended by Gesetzes vom 30 August 2021 [Act of 30 August 2021], Aug. 30, 2021, BGBL I at 4074, § 139(1) (Ger.), https://www.gesetze-im-internet.de/englisch_patg/englisch_patg.html [<https://perma.cc/G6JD-BYAP>].

¹²⁴ See BGH, May 10, 2016, X ZR 114/13, juris (Ger.), <http://juris.bundesgerichtshof.de/cgi-bin/rechtsprechung/document.py?Gericht=bgh&Art=en&nr=75714&pos=0&anz=1> [<https://perma.cc/2XKX-86AR>].

¹²⁵ See *id.* at 20.

¹²⁶ See Christian Paul et al., *Still Alive: The German "Automatic Injunction" in Patent Infringement Cases Under the New Patent Act*, JONES DAY (May 6, 2022), <https://www.jonesday.com/en/insights/2022/05/still-alive-the-german-automatic-injunction-in-patent-infringement-cases-under-the-new-patent-act> [<https://perma.cc/KB3G-DK7M>].

¹²⁷ See Jonathan M. Barnett & David J. Kappos, *Restoring Deterrence: The Case for Enhanced Damages in a No-Injunction Patent System*, in *5G AND BEYOND: INTELLECTUAL PROPERTY AND COMPETITION POLICY IN THE INTERNET OF THINGS* 129, 150 (Jonathan M. Barnett & Sean M. O'Connor eds., 2024).

¹²⁸ See Paul et al., *supra* note 126.

United Kingdom. Similar to German law, UK law is also friendly to SEP holders when it comes to issuing injunctions against SEP infringement. Under English law, “once a patent owner has established that patent is valid and has been infringed, it is prima facie entitled to prevent further infringement of its property rights by injunction.”¹²⁹ Although patent validity needs to be established before an injunction can be granted—a more stringent requirement than under German law—UK law still provides ample avenues for patent holders to obtain injunctive reliefs.

UK courts have curtailed the ability of patent holders to obtain injunctions in the FRAND context, but only nominally. In the 2020 case of *Unwired Planet Int’l Ltd. v. Huawei Techs. Co.*, the UK Supreme Court affirmed a decision by the UK High Court of Justice (Patents) that awarded SEP holder Unwired Planet an injunction against Huawei unless Huawei enters into a global license at the rates determined by the court.¹³⁰ The UK Supreme Court views an SEP holder’s FRAND commitment as “a contractual derogation from a[n] SEP owner’s right under general law to obtain an injunction to prevent infringement of its patent.”¹³¹ Under this approach, when the FRAND rates determined by a court are too high, or higher than a licensee is willing to accept, the ability of the licensee to avoid the injunction by paying FRAND licensing rates provides only an illusory escape from the dictatorial power of injunctions.¹³²

European Union. The Court of Justice of the European Union (“CJEU”) has also been accommodative of SEP holders’ needs to seek and obtain injunctions. In the landmark case of *Huawei Techs. Co. v. ZTE Corp.*, the CJEU sets out the conditions under which an SEP holder can seek an injunction against a licensee without violating Article 102 of the Treaty on the Functioning of the European Union (“TFEU”), which prohibits a dominant firm from abusing its dominant market position.¹³³ The CJEU first emphasized that the right to bring an action for infringement of intellectual property rights “cannot in itself constitute an abuse

¹²⁹ *Unwired Planet Int’l Ltd. v. Huawei Techs. Co.* [2020] UKSC 37, [3].

¹³⁰ *Id.*

¹³¹ *Id.* [14].

¹³² For discussions of the FRAND rates set by the *Unwired Planet* court, see *infra* notes 166–68 and accompanying text.

¹³³ Case C-170/13, *Huawei Techs. Co. v. ZTE Corp.*, ECLI:EU:C:2015:477, ¶¶ 44–71 (July 16, 2015).

of a dominant position.”¹³⁴ However, the CJEU makes it clear that SEPs are “exceptional circumstances” where seeking an injunction may constitute abusive conduct for purposes of Article 102 of the TFEU.¹³⁵

The CJEU goes on to provide a roadmap that SEP holders can follow to avoid violating Article 102 of the TFEU. According to the CJEU, an SEP holder does not abuse its dominant market position within the meaning of Article 102 of the TFEU by bringing an action for infringement and seeking an injunction, as long as:

Prior to such proceedings, it is thus for the proprietor of the SEP in question, first, to alert the alleged infringer of the infringement complained about by designating that SEP and specifying the way in which it has been infringed.¹³⁶

....

Secondly, after the alleged infringer has expressed its willingness to conclude a licensing agreement on FRAND terms, it is for the proprietor of the SEP to present to that alleged infringer a specific, written offer for a licence on FRAND terms, in accordance with the undertaking given to the standardisation body, specifying, in particular, the amount of the royalty and the way in which that royalty is to be calculated.¹³⁷

....

Should the alleged infringer not accept the offer made to it, it may rely on the abusive nature of an action for a prohibitory injunction or for the recall of products only if it has submitted to the proprietor of the SEP in question, promptly and in writing, a specific counter-offer that corresponds to FRAND terms.¹³⁸

Under these conditions, an SEP holder could obtain an injunction only after it has made a FRAND offer to a licensee. If the licensee rejects the FRAND offer without making a FRAND counteroffer, or if the licensee makes a counteroffer that is not consistent with FRAND, then the SEP holder could proceed to institute an infringement action and seek an injunction without violating Article 102 of the

¹³⁴ *Id.* ¶¶ 46, 51–53.

¹³⁵ *Id.* ¶¶ 47–50.

¹³⁶ *Id.* ¶ 61.

¹³⁷ *Id.* ¶ 63.

¹³⁸ *Id.* ¶ 66.

TFEU. But a licensee could forestall the SEP holder's attempt at an injunction by making a FRAND counteroffer.

Practically speaking, however, any constraints imposed by these conditions on the SEP holder's ability to obtain injunctions will depend on what courts believe a FRAND royalty rate should be. If courts have a tendency of determining very high royalty rates to be FRAND—which is generally the case in European jurisdictions¹³⁹—any relief that a licensee may potentially receive under *Huawei v. ZTE* will only be theoretical. After all, it is precisely the high royalty rates demanded by SEP holders that lead to the failure of licensing negotiations between SEP holders and licensees.

3. *China*

China is among the most hostile jurisdictions to the issuance of injunctions in SEP infringement actions. In one judicial interpretation¹⁴⁰ issued in 2016, China's Supreme People's Court laid out a general rule against such injunctions.¹⁴¹ Article 24 of the judicial interpretation provides that Chinese courts generally do not grant injunction requests from SEP holders when they “deliberately violate” their FRAND commitments in licensing negotiations with SEP implementers, or when SEP implementers do not commit “obvious wrongdoings.”¹⁴² However, when adjudicating courts have a tendency of determining very low royalty rates to be FRAND—which is generally the case in China¹⁴³—it is not too difficult for SEP holders to be considered to “deliberately violate” their FRAND commitments.¹⁴⁴

¹³⁹ See *infra* notes 166–77 and accompanying text.

¹⁴⁰ Judicial interpretations issued by the Supreme People's Court are official sources of law in Chinese law. See Li Wei, *Judicial Interpretation in China*, 5 WILLIAMETTE J. INT'L L. & DISP. RESOL. 1, 1 (1997).

¹⁴¹ See *Zuigao Renmin Fayuan Guanyu Shenli Qinfan Zhuanliquan Jiufen Anjian Yingyong Falu Ruogan Wenti de Jieshi, Fashi* [2016] Yi Hao (最高人民法院关于审理侵犯专利权纠纷案件应用法律若干问题的解释 (二), 法释【2016】1号) [Interpretation on Issues Relating to Application of Law in Adjudicating Patent Infringement Disputes (Part II), Judicial Interpretation No. 1 [2016] (promulgated by the Judicial Comm. Sup. People's Ct., Jan. 25, 2016, effective Apr. 1, 2016, amended Dec. 23, 2020) Sup. People's Ct. Gaz., Mar. 21, 201 (China), <https://www.wipo.int/wipolex/zh/text/588304> [<https://perma.cc/S5YK-SJHN>].

¹⁴² *Id.* art. 24.

¹⁴³ See *infra* note 190 and accompanying text.

¹⁴⁴ There are exceptions to this general pattern. In January 2018, the Shenzhen Intermediate People's Court granted an injunction against Samsung in its SEP disputes with Huawei, finding that Samsung maliciously delayed negotiations and was “at fault” during the negotiations. See Jacob Schindler, *Full Judgment in Huawei v. Samsung Details Why Shenzhen Court Hit Korean Company with SEP Injunction*, IAM (Apr. 3, 2018), <https://www.iam-media.com/article/>

In addition, China's antitrust regulator, the State Administration for Market Regulation ("SAMR"), has proposed to impose potential antitrust liability on SEP holders seeking injunctive relief. In a draft guideline released in June 2023 for public comment, SAMR stated that "SEP holders generally have the legal right to request injunctive relief from courts or relevant government authorities."¹⁴⁵ However, SAMR also noted that "SEP holders might abuse injunctive relief to force standards implementers to accept their, thereby excluding or restricting competition."¹⁴⁶ Therefore, the potential exposure to antitrust liability serves as an additional disincentive for SEP holders to seek injunctions in China.

B. FRAND Royalty Rates

Besides the issuance of injunctions, jurisdictions around the world also differ as to the setting of royalty rates that are considered FRAND. While the concept of FRAND is straightforward in principle, there are significant uncertainties as to what exactly are "fair and reasonable"¹⁴⁷ and "nondiscriminatory."¹⁴⁸ The

full-judgment-in-huawei-v-samsung-details-why-shenzhen-court-hit-korean-company-sep-injunction [https://perma.cc/AU2P-5KGT]. In March 2018, the Beijing High People's Court upheld an injunction granted by a lower court in *Iwncomm v. Sony*. See Slaughter and May, *Beijing High Court Upholds China's First SEP Injunction*, LEXOLOGY (Apr. 11, 2018), <https://www.lexology.com/library/detail.aspx?g=a198e40e-b759-4c6c-aae5-37d46de7e350> [https://perma.cc/MZJ4-PYB9]. But in the SEP litigation that was filed in China since 2018, the plaintiffs were merely asking Chinese courts to determine the FRAND royalty rates for Chinese or global SEPs. See Peter K. Yu, Jorge L. Contreras & Yu Yang, *Transplanting Anti-Suit Injunctions*, 71 AM. UNIV. L. REV. 1537, 1578–87 (2022).

¹⁴⁵ See Guanyu Biaozhun Biyao Zhuanli Lingyu de Fanlongduan Zhinan (Zhengqiu Yijian Gao) (关于标准必要专利领域的反垄断指南 (征求意见稿)) [Guidelines on Antimonopoly Enforcement in the Area of Standard-Essential Patents (Draft for Comment)], STATE ADMIN. FOR MKT. REGUL. (Jun. 30, 2023), <https://www.ccpit.org/a/20230703/20230703g7hm.html> [https://perma.cc/TC2U-XNXD] [hereinafter SAMR Draft SEP Antimonopoly Guidelines].

¹⁴⁶ *Id.*

¹⁴⁷ See, e.g., Dennis W. Carlton & Allan L. Shampine, *An Economic Interpretation of FRAND*, 9 J. COMPETITION L. & ECON. 531, 545 (2013) (arguing that a reasonable royalty under FRAND is the royalty that would have been negotiated *ex ante*); Rebecca Haw Allensworth, *Casting a FRAND Shadow: The Importance of Legally Defining "Fair and Reasonable" and How Microsoft v. Motorola Missed the Mark*, 22 TEX. INTELL. PROP. L.J. 235, 247–50 (2014) (arguing that a patent's pre-standard incremental value over alternatives should be its *ex-post* "fair and reasonable" rate under FRAND); Damien Geradin, *The Meaning of "Fair and Reasonable" in the Context of Third-Party Determination of FRAND Terms*, 21 GEO. MASON L. REV. 919, 925 (2014) (arguing that binding SEP holders' licensee fees to *ex ante* incremental value would create a risk of reverse holdup where by SEP holders would be under-compensated).

¹⁴⁸ See, e.g., Daniel G. Swanson & William J. Baumol, *Reasonable and Nondiscriminatory (RAND) Royalties, Standards Selection, and Control of Market Power*, 73 ANTITRUST L.J. 1, 26–27 (2005) (arguing that the only justification for the nondiscriminatory requirement under FRAND is to prevent foreclosure by

determination of FRAND royalty rates is important for its own sake, as it directly impacts the financial bottom lines of SEP holders and implementers.¹⁴⁹ The FRAND rate determination is also important for purposes of ascertaining whether SEP holders breach their FRAND commitment or violate antitrust laws.¹⁵⁰

Over the years, courts in major jurisdictions have gravitated towards two methods of establishing the FRAND royalty rates: the comparable agreements method and the top-down method.¹⁵¹ The comparable agreements method derives FRAND royalty rates based on the royalty rates of comparable licensing agreements.¹⁵² In practice, however, few licensing agreements are truly comparable as “companies rarely operate in identical conditions.”¹⁵³ In addition, the comparable agreements method assesses royalties for individual SEPs without regard for other SEPs that cover the standard, leading to “royalty stacking” whereby cumulative assessment of royalties results in excessive prices.¹⁵⁴ By contrast, the top-down method avoids royalty-stacking by first assessing the aggregate royalty burden for the entire standard and then apportioning the aggregate royalty burden to a specific SEP holder’s portfolio.¹⁵⁵

a vertically integrated monopolist); Mario Mariniello, *Fair, Reasonable and Non-Discriminatory (FRAND) Terms: A Challenge for Competition Authorities*, 7 J. COMPETITION L. & ECON. 523, 524–25 (2011) (arguing that the nondiscrimination requirement under FRAND only requires the SEP holder to license to all willing licensees but otherwise allows royalty rates to vary); Carlton & Shampine, *supra* note 147, at 533 (advocating for a broader application of the nondiscrimination principle to address patent holdup).

¹⁴⁹ In April 2021, Ericsson’s quarterly income dropped more than 60% due to its prolonged licensing disputes with Samsung. After reaching a settlement with Samsung, Ericsson reported strong growth in licensing revenues in the following quarter. See Wentong Zheng, *Weaponizing Anti-Suit Injunctions in Global FRAND Litigation*, 30 GEO. MASON L. REV. 413, 423 & nn.73–75 (2023).

¹⁵⁰ For example, under *Huawei v. ZTE*, whether an SEP holder violates Article 102 of the TFEU depends in part on whether the licensing offer it makes to the implementer is considered to be FRAND. See Case C-170/13, *Huawei Techs. Co. v. ZTE Corp.*, ECLI:EU:C:2015:477, ¶¶ 61, 63, 66 (describing the obligations the SEP holder and alleged infringer must meet to avoid violating Article 102).

¹⁵¹ See Haris Tsilikas, *Comparable Agreements and the “Top-Down” Approach to FRAND Royalties Determination*, COMPETITION POL’Y INT’L (July 21, 2020), <https://www.pymnts.com/cpi-posts/comparable-agreements-and-the-top-down-approach-to-frand-royalties-determination/> [perma.cc/R8Z8-Z545].

¹⁵² *Id.*

¹⁵³ *Id.* at 4.

¹⁵⁴ Eur. Comm’n, *EC SEP Proposal Impact Assessment Report*, *supra* note 42, at 44.

¹⁵⁵ *Id.* (quoting Jorge L. Contreras, *Aggregated Royalties for Top-Down FRAND Determinations: Revisiting “Joint Negotiation,”* 62 ANTITRUST BULL. 690, 690 (2017)).

Yet major jurisdictions around the world agree on the methods for determining FRAND rates only in broad strokes. They differ on many issues that are crucial to the determination of FRAND rates. As a result, the FRAND royalty rates determined in different jurisdictions are noticeably different from one another. The following analysis outlines the different approaches to FRAND royalty rate setting—as well as the different results—in the United States, Europe, and China.

1. *United States*

U.S. courts have maintained a relatively balanced approach to FRAND rate setting. In *Microsoft Corp. v. Motorola, Inc.*, Judge Robart of the U.S. District Court for the Western District of Washington made an attempt at calculating the FRAND royalty rates in an SEP licensing dispute.¹⁵⁶ Judge Robart took factors used in determining reasonable royalty rates in non-SEP settings and modified them to replicate what an SEP licensor and licensee would have agreed to in a hypothetical negotiation.¹⁵⁷ Included in these modified factors were considerations of how important the SEPs were to the standard and how important the SEPs and standard were to the product.¹⁵⁸ Using these modified factors, along with royalty rates from comparable licensing agreements entered into by both parties, Judge Robart arrived at a FRAND rate and range for each of the disputed SEPs.¹⁵⁹

In another case, *TCL Commc'n. Tech. Holdings, Ltd. v. Telefonaktiebolaget LM Ericsson*, Judge Selna of the U.S. District Court for the Central District of California determined the FRAND royalty rates for Ericsson's cellular 2G, 3G, and 4G SEPs.¹⁶⁰ Following a modified version of the top-down method, Judge Selna determined the aggregate royalties for a given standard and then apportioned the aggregate royalties to Ericsson's portfolios.¹⁶¹ Judge Selna ultimately determined a FRAND rate that was substantially lower than that proposed by Ericsson but

¹⁵⁶ *Microsoft Corp. v. Motorola, Inc.*, No. C10-1823JLR, 2013 WL 2111217, at *1 (W.D. Wash. Apr. 25, 2013).

¹⁵⁷ *Id.* at *3, *16. These factors are referred to as *Georgia-Pacific* factors as they were first developed in *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116 (S.D.N.Y. 1970).

¹⁵⁸ *Id.* at *3.

¹⁵⁹ *Id.* at *3–4.

¹⁶⁰ *TCL Commc'n. Tech. Holdings, Ltd. v. Telefonaktiebolaget LM Ericsson*, No. CV 15-2370 JVS(DFMx), 2017 WL 6611635 (C.D. Cal. Dec. 21, 2017), at *1, *amended and superseded*, 2018 WL 4488286 (C.D. Cal. Sept. 14, 2018), *reversed in part, vacated in part*, 943 F.3d 1360 (Fed. Cir. 2019).

¹⁶¹ *Id.* at *9.

higher than that proposed by TCL.¹⁶² Finally, Judge Selna analyzed royalty rates under comparable licensing agreements and concluded that Ericsson did not violate the nondiscrimination obligation under FRAND.¹⁶³ Judge Selna acknowledged that “[n]o American cases have definitively addressed the non-discrimination requirement.”¹⁶⁴ But he rejected the “hard-edged” approach to nondiscrimination, concluding that “there is no single rate that is necessarily FRAND, and different rates offered to different licensees may well be FRAND given the economics of the specific license.”¹⁶⁵

2. *Europe*

In comparison to the United States, judicial determinations of FRAND royalty rates in Europe are generally tilted in favor of SEP holders. The most notable case law from Europe is the 2017 case of *Unwired Planet v. Huawei*, where Justice Birss of the UK High Court of Justice (Patents) determined the FRAND royalty rates of the wireless 2G, 3G, and 4G SEP portfolio of Unwired Planet, most of which was acquired from Ericsson.¹⁶⁶ Justice Birss used comparable licensing agreements entered into by Ericsson as the starting point and adjusted for differences between Ericsson’s and Unwired Planet’s portfolios.¹⁶⁷ As a cross-check, Justice Birss also conducted a top-down analysis and calculated the FRAND rates for Unwired Planet’s SEP portfolios by multiplying the aggregate royalty burden of a given standard with Unwired Planet’s share of SEPs in the standard.¹⁶⁸

While the UK court in *Unwired Planet* used similar methodologies to those used by the U.S. court in *TCL*, the two courts managed to derive substantially different FRAND rates for Ericsson’s wireless SEP portfolios.¹⁶⁹ For example, the court in *Unwired Planet* calculated a FRAND rate of 0.8% for Ericsson’s 4G SEP

¹⁶² CLEARY GOTTlieb, *TCL v. ERICSSON: LANDMARK JUDGMENT ON FRAND LICENSING* 6 (2018), <https://www.clearygottlieb.com/-/media/files/alert-memos-2018/20180109-tcl-v-ericsson--landmark-judgment-on-frand-licensing.pdf> [<https://perma.cc/YZS8-NPY6>].

¹⁶³ *TCL*, 2017 WL 6611635, at *2, *55.

¹⁶⁴ *Id.* at *55.

¹⁶⁵ *Id.*

¹⁶⁶ See *Unwired Planet Int’l Ltd. v. Huawei Techs. Co.* [2017] EWHC (Pat) 711, [1], *aff’d*, [2020] UKSC 37 (Eng.).

¹⁶⁷ *Id.* [475].

¹⁶⁸ *Id.* [806].

¹⁶⁹ Most of Unwired Planet’s SEP portfolios at issue were acquired from Ericsson. See *id.* [1].

portfolio for a major market,¹⁷⁰ while the court in *TCL* calculated a FRAND rate of 0.45% for Ericsson's 4G SEP portfolio in the United States.¹⁷¹ The difference between the two rates is almost twofold in the SEP holder's favor in *Unwired Planet*.

Also notable is the fact that Justice Birss in *Unwired Planet* determined the FRAND rates of Unwired Planet's *global* SEP portfolios, not just its SEP portfolios in the UK, despite objections from Huawei.¹⁷² Justice Birss observed that both companies operate globally, and concluded that "a licensor and licensee acting reasonably and on a willing basis would agree on a worldwide licence."¹⁷³ Huawei's insistence on a UK-only license, therefore, "is not FRAND."¹⁷⁴ Justice Birss went on to determine the FRAND rates of a global license as the condition of avoiding a UK injunction. Upon appeal, the UK Supreme Court affirmed that UK courts have the power to require an implementer to enter into a global license in order to avoid an injunction for infringement of a UK patent.¹⁷⁵

Finally, Justice Birss also addressed the question of whether the nondiscrimination prong of FRAND imposes a "hard-edged" obligation on SEP holders. Justice Birss first rejected the notion that the FRAND rate varies based on the size or other characteristics of the licensee.¹⁷⁶ However, Justice Birss went on to reject a "hard-edged" approach to nondiscrimination as well. He equated the nondiscrimination requirement under FRAND with the competition law prohibition against discriminatory pricing. According to Birss, different royalty rates charged to different licensees are prohibited only if they "are sufficiently dissimilar to distort competition."¹⁷⁷

¹⁷⁰ *Id.* [464].

¹⁷¹ *TCL Commc'n. Tech. Holdings, Ltd. v. Telefonaktiebolaget LM Ericsson*, No. CV 15-2370 JVS(DFMx), 2017 WL 6611635, at *51 (C.D. Cal. Dec. 21, 2017), *amended and superseded*, 2018 WL 4488286 (C.D. Cal. Sept. 14, 2018), *reversed in part, vacated in part*, 943 F.3d 1360 (Fed. Cir. 2019).

¹⁷² *Unwired Planet* argued that it had the right to insist on a global license, but Huawei was willing to take a license only for Unwired Planet's UK SEPs. See *Unwired Planet Int'l Ltd. v. Huawei Techs. Co.* [2017] EWHC (Pat) 711, [524], *aff'd*, [2020] UKSC 37 (Eng.).

¹⁷³ *Id.* [543].

¹⁷⁴ *Id.* [572].

¹⁷⁵ *Unwired Planet Int'l Ltd. v. Huawei Techs. Co.*, [2020] UKSC 37, [50], [84] (Eng.).

¹⁷⁶ *Unwired Planet*, [2017] EWHC (Pat) 711, [175] (Eng.) ("It would be unfair (and discriminatory) to assess what is and is not FRAND by reference to [the size] and other characteristics of specific licensees.").

¹⁷⁷ *Id.* [501].

In recent years, however, U.K. courts have somewhat shifted their judicial stances on FRAND rate determinations in the direction of being more friendlier to implementers. In March 2023, the U.K. High Court of Justice issued a ruling in *InterDigital v. Levono*, in which the court set a FRAND rate of \$0.175 per unit for InterDigital's 5G SEP portfolio.¹⁷⁸ This rate was much closer to Lenovo's proposal of \$0.16 per unit, and far away from InterDigital's proposed rate of \$0.53 per unit.¹⁷⁹ In December 2023, Tesla filed a lawsuit in the U.K. High Court of Justice against InterDigital and Avanci, claiming that they violated their FRAND obligations and asking the court to make a FRAND rate determination for their SEP portfolios.¹⁸⁰ The fact that Tesla is challenging SEP holders in a U.K. court indicates that U.K. courts are being viewed favorably by implementers as litigation venues. It remains to be seen whether these developments are merely outliers or will form a trend.

On the regulatory front, Europe has also seen significant developments on SEPs and FRAND rate setting. On April 27, 2023, the European Commission published a proposed regulatory framework for SEPs.¹⁸¹ The proposed framework was released after the publication of the EU's intellectual property action plan, which noted "increases in SEP licensing disputes in the automotive sector and the potential for other IoT sectors to become subject of such disputes as they begin using connectivity and other standards."¹⁸² Among other things, the proposed SEP framework would establish a Competence Center within the EU Intellectual Property Office to register SEPs and provide an electronic SEP database, to perform additional checks for the essentiality of SEPs, and to determine the aggregate royalties of standards as well as the FRAND rates for SEPs.¹⁸³ The proposed

¹⁷⁸ See Amy Sandys, *Lenovo "Overall Winner" of UK FRAND Trial as InterDigital Confirms Appeal*, JUVE PATENT (June 29, 2023), <https://www.juve-patent.com/cases/lenovo-overall-winner-of-uk-frand-trial-as-interdigital-confirms-appeal/> [<https://perma.cc/JYJ8-NTPZ>].

¹⁷⁹ *Id.*

¹⁸⁰ *Tesla Tells UK Court It Has Avanci 4G License But Wants Preferential 5G Rate, Estimates Avanci's Coverage at 80%*, IP FRAY (Jan. 3, 2024), <https://ipfray.com/tesla-tells-uk-court-it-has-avanci-4g-license-but-wants-preferential-5g-rate-estimates-avancis-coverage-at-80/> [<https://perma.cc/P9CZ-ASLL>].

¹⁸¹ See Eur. Comm'n, *Proposed EC SEP Regulation*, *supra* note 14.

¹⁸² See *id.* at 2.

¹⁸³ See *id.* at 17–18.

framework represents the first attempt by a regulatory authority to intervene in the SEP licensing process.

The EU's proposed SEP framework is widely perceived to be friendly to SEP implementers at the expense of the interests of SEP holders.¹⁸⁴ Among the parties who submitted comments on the proposal, SEP holders voiced opposition or concerns, while implementers showed strong support.¹⁸⁵ For instance, Nokia, one of the largest wireless communications SEP holders, argued that “there is no empirical evidence to justify the need for regulatory intervention.”¹⁸⁶ By contrary, Apple, one of the largest implementers of wireless communications SEPs, contended that “[m]any criticisms of the Regulation are not grounded in reality.”¹⁸⁷ All of the major automobile manufacturers from around the world, which have recently begun becoming SEP implementers due to the adoption of wireless communications technology in smart automobiles, submitted comments that strongly supported the proposal.¹⁸⁸

¹⁸⁴ Qualcomm, Feedback on Proposal for a Regulation on Standards Essential Patents 2 (Aug. 10, 2023), https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13109-Intellectual-property-new-framework-for-standard-essential-patents/F3434463_en [https://perma.cc/C3CP-ZJWG] (“Because it is so unbalanced, the Proposal is being perceived—regardless of the Commission’s intentions—as the Commission favoring implementers over innovators.”).

¹⁸⁵ See *Feedback and Statistics: Proposal for a Regulation*, EUR. COMM’N (Aug. 10, 2023), https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13109-Intellectual-property-new-framework-for-standard-essential-patents/feedback_en?p_id=32054345 [https://perma.cc/D36D-X9ZM].

¹⁸⁶ Nokia, Nokia Response to “Have Your Say”; Intellectual Property – New Framework for Standard-Essential Patents 8 (Aug. 10, 2023), https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13109-Intellectual-property-new-framework-for-standard-essential-patents/F3434468_en [https://perma.cc/BBZ2-RR97].

¹⁸⁷ Apple Inc., Submission in Response to the European Commission’s Consultation Regarding Its Proposed Regulation on Standard Essential Patents 5 (Aug. 10, 2023), https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13109-Intellectual-property-new-framework-for-standard-essential-patents/F3434446_en [https://perma.cc/W2M5-WGMG].

¹⁸⁸ See, e.g., Alliance for Automotive Innovation, Alliance Automotive Innovation (“Auto Innovators”) Comments on the European Commission’s Proposal for a Regulation of the European Parliament and of the Council on Standard Essential Patents and Amending Regulation (EU) 2017/1001 1–2 (Aug. 10, 2023), https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13109-Intellectual-property-new-framework-for-standard-essential-patents/F3434455_en [https://perma.cc/7ANV-JFXG]; Japan Automobile Manufacturers Association, Inc., Comments and Observations in Respect of the Proposal for a Regulation of the European Parliament and of the Council on Standard Essential Patents and Amending Regulation (EU)2017/1001, 2023/0133(COD)

3. *China*

Compared to courts in Europe, courts in China have taken FRAND rate setting in the other direction. Indeed, “Chinese courts have earned a reputation for setting FRAND royalty rates that are substantially lower than rates determined by courts in other jurisdictions.”¹⁸⁹

In 2013, the Shenzhen Intermediate People’s Court determined a maximum 0.019% FRAND rate for InterDigital’s Chinese 2G/3G/4G SEP portfolio in *Huawei v. InterDigital*.¹⁹⁰ In an article published in an academic journal, the three presiding judges of the InterDigital case explained how this FRAND rate was arrived at.¹⁹¹ According to the article, the Shenzhen court adopted a modified version of the comparable agreements method in calculating the FRAND rate for InterDigital’s SEP portfolio based on, among other factors, the licensing rates InterDigital demanded from Apple and Samsung.¹⁹² The 0.019% FRAND rate determined by the Shenzhen court is “orders of magnitude lower than the single-digit percentage

by the European Commission 2–3 (Aug. 10, 2023), https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13109-Intellectual-property-new-framework-for-standard-essential-patents/F3434416_en [<https://perma.cc/ET9J-2JDZ>]; European Automobile Manufacturers’ Association, ACEA Comments on the European Commission’s Proposal for a Regulation on Standard Essential Patents 3–4 (July 14, 2023), https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13109-Intellectual-property-new-framework-for-standard-essential-patents/F3430593_en [<https://perma.cc/86BK-VDNK>].

¹⁸⁹ Yu et al., *supra* note 13, at 1585.

¹⁹⁰ See InterDigital, Inc., Annual Report (Form 10-K) 30 (Feb. 19, 2015). The Shenzhen court’s judgment in *Huawei v. InterDigital* was not published because the proceeding was subject to a confidentiality order. Mark Cohen, *Huawei/InterDigital Appeal Affirms Shenzhen Lower Court on Standards Essential Patents*, CHINA IPR (Oct. 29, 2013), <https://chinaipr.com/2013/10/29/huaweiinterdigital-appeal-affirms-shenzhen-lower-court-on-standards-essential-patent/> [<https://perma.cc/EVH7-CFNX>].

¹⁹¹ See Ye Ruosi (叶若思), Zhu Jianjun (祝建军) & Chen Wenqun (陈文全), Biaozhun Biyao Zhuanli Shiyong Fei Jiufen Zhong FRAND Guize de Sifa Shiyong—Ping Huawei Gongsi Su Meiguo IDC Gongsi Biaozhun Biyao Zhuanli Shiyong Fei Jiufen (标准必要专利使用费纠纷中FRAND规则的司法适用—评华为公司诉美国IDC公司标准必要专利使用费纠纷) [Judicial Application of FRAND Rules in Disputes Involving Royalties for Standard Essential Patents—Commentary on Huawei v. IDC Essential Patent Royalty Dispute], Dianzi Zhishi Chanquan (电子知识产权) [Elecs. Intell. Prop.], no. 4, 2013, at 54–61 [hereinafter *Judicial Application of FRAND Rules*].

¹⁹² *Id.* at 61.

demands that have been common for holders of large portfolio of patents declared essential to telecommunications standards.”¹⁹³

On appeal, the Guangdong High People’s Court affirmed the Shenzhen court’s FRAND determination.¹⁹⁴ The Guangdong High People’s Court stated that “under basically-same transaction conditions, if an SEP holder charges a lower royalty to a certain licensee while charging a higher royalty to another licensee, the latter will have reasons to believe that it is subject to discriminatory treatment by way of comparison and the SEP holder would violate the commitment to non-discriminatory licenses.”¹⁹⁵ This appears to be an endorsement of a “hard-edged” approach to the nondiscrimination requirement under FRAND, in stark contrast to the UK court’s stance in *Unwired Planet*.¹⁹⁶

In another case, *Huawei Techs. Co. v. Conversant Wireless Ltd.*, the Nanjing Intermediate People’s Court determined the FRAND royalty rates for Conversant’s 2G/3G/4G Chinese SEP portfolios using the top-down method.¹⁹⁷ The Nanjing court first estimated the aggregate royalties for the 2G/3G/4G standards and then apportioned them to Conversant’s Chinese 2G/3G/4G portfolios, after adjusting for the essentiality of Conversant’s SEPs.¹⁹⁸ The Nanjing court determined a zero rate for Conversant’s 2G and 3G SEPs and a 0.00225% rate for Conversant’s 4G SEPs.¹⁹⁹ The royalty rates that Conversant demanded from Huawei, which were

¹⁹³ Leon B. Greenfield, Hartmut Schneider & Joseph J. Mueller, *SEP Enforcement Disputes Beyond the Water’s Edge: A Survey of Recent Non-U.S. Decisions*, 27 ANTITRUST 50, 53 (2013).

¹⁹⁴ See *Huawei Techs. Co. v. InterDigital Commc’n, Inc.*, CLI.C.2449578(EN) (High People’s Ct. of Guangdong Province Oct. 16, 2013) (PKU Law).

¹⁹⁵ *Id.*

¹⁹⁶ In *Unwired Planet*, the UK court shied away from a hard-edged approach to nondiscrimination. See *Unwired Planet Int’l Ltd. v. Huawei Techs. Co.* [2017] EWHC (Pat) 711, [175] (Eng.) (“It would be unfair (and discriminatory) to assess what is and is not FRAND by reference to [the size] and other characteristics of specific licenses.”).

¹⁹⁷ See *Huawei Jishu Youxian Gongsi Deng Su Kanwensen Wuxian Xuke Youxian Gongsi Queren Buqinhai Zhuanliquan ji Biaozhun Biyao Zhaunli Shiyongfei Jiufen An* (华为技术有限公司等诉康文森无线许可有限公司确认不侵害专利权及标准必要专利使用费纠纷案) [*Huawei Techs. Co. v. Conversant Wireless Ltd., A Dispute over Confirmation of Non-Infringement and Standard Essential Patent Royalty Fees*], CLI.C.106538808 (Nanjing Interm. People’s Ct. Sept. 16, 2019) (PKU Law).

¹⁹⁸ *Id.*

¹⁹⁹ *Id.*

determined by a German court to be on FRAND terms,²⁰⁰ were approximately 18.3 times the FRAND rate determined by the Nanjing court.²⁰¹

C. *Abusive Licensing*

Because of the exclusivity and essentiality of SEPs, SEP licensing also implicates antitrust laws, which prohibit dominant firms from abusing their dominant market positions. As discussed below, antitrust laws around the world have adopted different approaches to the treatment of certain controversial licensing practices, such as selective licensing.

1. *United States*

Thanks to the influence of the Chicago school of economics, antitrust laws in the United States have been fairly tolerant of dominant firms' conduct.²⁰² As detailed below, this has certainly been reflected in U.S. courts' stance towards SEP holders' licensing conduct.

In 2019, the District Court for the Northern District of California handed down its decision in the landmark lawsuit filed by the FTC against Qualcomm.²⁰³ The FTC alleged that Qualcomm abused its monopoly power in markets for modem chips through a variety of anticompetitive conducts.²⁰⁴ The court agreed. The court criticized Qualcomm's "No License, No Chips" policy, under which Qualcomm refused to sell modem chips to Original Equipment Manufacturers ("OEMs") unless they signed separate patent license agreements, as anticompetitive.²⁰⁵ By

²⁰⁰ See Landgericht Düsseldorf [LG] [District Court of Düsseldorf] Aug. 27, 2020, 4b O 30/18, ¶¶ 393, 423–24 (Ger.).

²⁰¹ See Huawei Jishu Youxian Gongsi Deng Yu Kangwensen Wuxian Xuke Youxian Gongsi Queren Bu Qin Hai Zhuanli Quan Ji Biaozhun Bi Yao Zhuanli Xuke Jiufen An (华为技术有限公司等与康文森无线许可有限公司确认不侵害专利权及标准必要专利许可纠纷案) [Huawei Techs. Co., Ltd. et al. v. Conversant Wireless Licensing Co., Ltd., A Dispute over Patent Non-infringement and Standard Essential Patent Licensing], 2022 Sup. People's Ct. Gaz. 1 (Sup. People's Ct. 2020) (China), *translated in* Patently-O, <https://patentlyo.com/media/2020/10/Huawei-V.-Conversant-judgment-translated-10-17-2020.pdf> [<https://perma.cc/TCY9-4QBC>].

²⁰² See Robert Pitofsky, *Chicago School and Dominant Firm Behavior*, in *HOW THE CHICAGO SCHOOL OVERSHOT THE MARK: THE EFFECT OF CONSERVATIVE ECONOMIC ANALYSIS ON U.S. ANTITRUST* 107 (2008) ("One of the most remarkable developments in recent years is hostility to section 2 enforcement by conservative scholars and in language in judicial decisions.").

²⁰³ See *Fed. Trade Comm'n v. Qualcomm, Inc.*, 411 F. Supp. 3d 658 (N.D. Cal. 2019).

²⁰⁴ *Id.* at 669.

²⁰⁵ *Id.* at 658.

sustaining “unreasonably high royalty rates,” this policy imposed “an artificial and anticompetitive surcharge on the price of rivals’ modem chips.”²⁰⁶ The court also held that Qualcomm’s refusal to license its SEPs to rival modem chip suppliers “promoted rivals’ exit from the market, prevented rivals’ entry, and delayed or hampered the entry and success of other rivals.”²⁰⁷ According to the court, both Qualcomm’s FRAND commitment and antitrust law required Qualcomm to license its SEPs to rival modem chip suppliers.²⁰⁸

However, the FTC’s victory over Qualcomm was short lived. In 2020, the Ninth Circuit overturned the district court’s decision.²⁰⁹ The Ninth Circuit held that Qualcomm’s refusal to license its SEPs to rival modem chip suppliers did not constitute an illegal “refusal to deal” in accordance with the standard set forth in *Aspen Skiing*, as none of the *Aspen Skiing* factors were present in this case.²¹⁰ But more importantly, Qualcomm’s refusal to license rival chip suppliers did not violate antitrust laws because there was “no evidence that Qualcomm singles out any specific chip supplier for anticompetitive treatment in its SEP-licensing.”²¹¹ The Ninth Circuit further held that even if the district court was correct that Qualcomm’s refusal to license rival chip suppliers violated its FRAND commitment, the FTC had not demonstrated how the alleged breach of the FRAND commitment “impairs the opportunities of rivals.”²¹² Qualcomm’s royalties were “chip-supplier neutral,” the Ninth Circuit emphasized, because “Qualcomm collects them from *all* OEMs that license its patents, not just ‘rivals’ customers.”²¹³ As to Qualcomm’s “No License, No Chips” policy, the Ninth Circuit held that the district court “failed to identify how the policy directly impacted Qualcomm’s competitors or distorted ‘the area of

²⁰⁶ *Id.* at 698.

²⁰⁷ *Id.* at 744.

²⁰⁸ *Id.* at 751–59.

²⁰⁹ *See* Fed. Trade Comm’n v. Qualcomm, 969 F.3d 974, 974 (9th Cir. 2020).

²¹⁰ *See id.* at 993–95 (citing *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585 (1985)). The Ninth Circuit found that Qualcomm switched from licensing to rival modem chip suppliers to licensing to OEMs in response to the Supreme Court’s ruling in *Quanta Comput., Inc. v. LG Elecs., Inc.*, 553 U.S. 617 (2008). Accordingly, Qualcomm’s rationale for changing its licensing practice was not “to sacrifice short-term benefits in order to obtain higher profits in the long run from the exclusion of competition.” *Id.* at 994.

²¹¹ *Id.* at 995.

²¹² *Id.*

²¹³ *Id.* at 996.

effective competition.”²¹⁴ The Ninth Circuit reasoned that because the license requirement applies regardless of whether OEMs choose Qualcomm or a rival chip supplier, the license requirement “by definition does not distort the ‘area of effective competition’ or impact competitors.”²¹⁵ The Ninth Circuit acknowledged that Qualcomm’s “No License, No Chips” policy was designed to maximize Qualcomm’s profits.²¹⁶ But the opportunity to charge monopoly price “is an important element of the free market system and is what attracts business acumen in the first place.”²¹⁷

SEP holders’ selective licensing was contested in another lawsuit in the United States, filed by the U.S. subsidiary of the German automotive electrical and navigation systems supplier Continental against Avanci, a patent pool formed by major SEP holders to license wireless communications SEPs in vertical markets, including the automotive industry.²¹⁸ Continental argued that Avanci refused to license its SEPs to it, but instead only provided non-FRAND licenses to OEMs, which may in turn seek indemnification from Continental.²¹⁹ Continental argued that this refusal to license breached the defendant’s FRAND commitment and constituted an abuse of dominance in violation of Section 2 of the Sherman Act.²²⁰

The U.S. District Court for the Northern District of Texas disagreed. The court held that any injury Continental suffers from not being able to obtain FRAND licenses from Avanci “does not harm its competitive position or its position as a consumer of products used in its devices.”²²¹ Continental suffers an antitrust injury only if OEMs pass on the costs of the non-FRAND licenses to it.²²² Even if Continental has antitrust standing, the court continued, Avanci’s refusal to license its SEPs to Continental does not constitute unlawful monopolization under Section 2 of the Sherman Act.²²³ The court noted that “[a] lawful monopolist’s ‘charging of monopoly prices, is not only not unlawful; it is an important element of the

²¹⁴ *Id.* at 1001 (quoting *Ohio v. Am. Express Co.*, 585 U.S. 529, 543 (2018)).

²¹⁵ *Id.* at 1002.

²¹⁶ *Id.* at 1003.

²¹⁷ *Id.* (quoting *Verizon Commc’ns, Inc. v. L. Offs. of Curtis V. Trinko, LLP*, 540 U.S. 398, 407 (2004)).

²¹⁸ *See Cont’l Auto. Sys., Inc. v. Avanci, LLC*, 485 F. Supp. 3d 712, 722–23 (N.D. Tex. 2020).

²¹⁹ *Id.* at 726.

²²⁰ *See id.* at 732–33.

²²¹ *Id.* at 729.

²²² *Id.* at 729–30.

²²³ *See id.* at 735.

free-market system.”²²⁴ Even if Avanci’s members deliberately deceived SSOs regarding their FRAND intention, “[t]he use of deception simply to obtain higher prices normally has no particular tendency to exclude rivals and thus to diminish competition.”²²⁵ The court thus granted Avanci’s motion to dismiss Continental’s claims under Section 2 of the Sherman Act.²²⁶ On appeal, the Fifth Circuit upheld the district court’s holdings.²²⁷

2. Europe

Similarly, laws in Europe have been fairly accommodative of SEP holders’ licensing conducts. For instance, in *Huawei v. ZTE*, the CJEU provided a roadmap for SEP holders to follow to avoid antitrust liability when seeking injunctions against SEP infringement.²²⁸ In *Unwired Planet*, Justice Birss of the UK High Court of Justice (Patents) set a higher threshold for violations of antitrust law when an SEP holder seeks high licensing fees. According to Justice Birss, Article 102 of the TFEU only condemns excessive pricing.²²⁹ For a royalty rate to be excessive, “it would have to be substantially more than FRAND.”²³⁰ Therefore, “a royalty rate can be at least somewhat higher than the true FRAND rate and still not contrary to competition law.”²³¹

German courts also weighed in on the question of whether certain licensing practices by SEP holders, such as selective licensing, constitute an abuse of dominance. In a series of lawsuits filed by Nokia against German automaker Daimler in German courts in 2019, Nokia alleged that Daimler and its suppliers

²²⁴ *Cont’l Auto. Sys.*, 485 F. Supp. 3d at 734 (quoting *Verizon Commc’ns, Inc. v. L. Offs. of Curtis V. Trinko, LLP*, 540 U.S. 398, 407 (2004)).

²²⁵ *Id.* at 735 (quoting *Rambus Inc. v. Fed. Trade Comm’n*, 522 F.3d 456, 464 (D.C. Cir. 2008)). The court further stated that “[e]ven if such deception had also excluded Defendants’ competitors from being included in the standard, such harms to competitors, rather than to the competitive process itself, are not anticompetitive.” *Id.*

²²⁶ *Id.* The court also granted Avanci’s motion to dismiss Continental’s claims under Section 1 of the Sherman Act. *See id.* at 732.

²²⁷ *See Cont’l Auto. Sys., Inc. v. Avanci LLC*, No. 20-11032, 2022 WL 2205469 (5th Cir. June 21, 2022).

²²⁸ *See supra* text accompanying notes 136–38.

²²⁹ *See Unwired Planet Int’l Ltd. v. Huawei Techs. Co.* [2017] EWHC (Pat) 711, [153] (Eng.).

²³⁰ *Id.*

²³¹ *Id.*

had infringed its wireless 3G/4G SEPs.²³² The Regional Court of Mannheim held that even if an SEP holder has a dominant market position, it has the freedom to select the stage of the supply chain to license its SEPs.²³³ The court found no evidence that using Daimler's end-products as the royalty base in calculating FRAND royalty rates would harm competition.²³⁴ In another decision on the same matter, the Regional Court of Dusseldorf voiced concern that granting Nokia a permanent injunction against Daimler would allow Nokia to abuse its dominant market position.²³⁵ The Dusseldorf court referred the case to the CJEU on the question of whether an SEP holder has the freedom to choose any implementer in the supply chain to grant a FRAND license.²³⁶ However, Nokia and Daimler settled their disputes before the CJEU had an opportunity to opine on the matter.²³⁷

3. *China*

Unlike the United States and Europe, China has been very aggressive in using its antitrust laws to pursue allegedly abusive licensing practices by SEP holders. In 2013, the Shenzhen Intermediate People's Court issued a ruling in an antitrust case filed by China's Huawei against U.S.-based patent assertion entity InterDigital.²³⁸ The Shenzhen court held that:

InterDigital had violated the Chinese Anti-Monopoly Law by (i) making proposals for royalties from Huawei that the court believed were excessive, (ii) tying the licensing of essential patents to the licensing of non-essential patents, (iii) requesting as part of its licensing proposals that Huawei provide a grant-back of certain patent rights to InterDigital and (iv) commencing a USITC action against Huawei while still in discussions with Huawei for a license. Based on these findings, the court

²³² See Mathieu Klos, *Daimler Faces Next Connected Cars Dispute*, JUVE PATENT (Apr. 11, 2019), <https://www.juve-patent.com/news-and-stories/cases/daimler-faces-next-connected-cars-dispute/> [<https://perma.cc/K86E-3DTW>].

²³³ Landgericht Mannheim [LG] [Regional Court of Mannheim] Aug. 18, 2020, 2 O 34/19, ¶ 202 (Ger.).

²³⁴ *Id.* ¶ 205.

²³⁵ Landgericht Düsseldorf [LG] [Regional Court of Dusseldorf] Nov. 26, 2020, 4c O 17/19, ¶ 29 (Ger.), <https://www.wipo.int/wipolex/en/text/591426> [<https://perma.cc/U44Z-69C6>].

²³⁶ Mathieu Klos, *Regional Court Düsseldorf Refers Nokia vs. Daimler Questions to CJEU*, JUVE PATENT (Nov. 26, 2020), <https://www.juve-patent.com/cases/regional-court-dusseldorf-refers-nokia-vs-daimler-questions-to-cjeu/> [<https://perma.cc/BL2P-L452>].

²³⁷ Sung, *supra* note 84, at 453.

²³⁸ See InterDigital, Inc., Annual Report (Form 10-K) 23 (Feb. 24, 2014).

ordered InterDigital to cease the alleged excessive pricing and alleged improper bundling of InterDigital’s Chinese essential and non-essential patents, and to pay Huawei approximately 3.2 million USD in damages related to attorneys fees and other charges²³⁹

Following the Shenzhen court’s *InterDigital* decision, China’s antitrust regulators stepped up their efforts to rein in alleged abusive licensing practices by SEP holders. In 2015, China’s National Development and Reform Commission (“NDRC”) completed its abuse-of-dominance investigation into Qualcomm’s licensing practices.²⁴⁰ NDRC concluded that Qualcomm abused its dominant position in the market for the licensing of wireless SEPs and the market for baseband processors by engaging in anticompetitive conducts, including charging unreasonably high royalty rates, tying licenses of SEPs to licenses of non-SEPs, and conditioning the sale of chips upon purchasers agreeing not to challenge the validity of Qualcomm’s patents.²⁴¹ NDRC imposed a fine of CNY 6 billion yuan, equivalent to 8% of Qualcomm’s sales in China in 2013, and ordered Qualcomm to cease the violations.²⁴²

Both *Huawei v. InterDigital* and NDRC’s enforcement action against Qualcomm make it very clear that under China’s Antimonopoly Law, charging “unreasonably high” royalty rates is a separate antitrust offense. Given Chinese courts’ tendency to determine very low FRAND rates, SEP holders face elevated risks of being held liable under Chinese antitrust laws for demanding high royalty rates. However, both *Huawei v. InterDigital* and the NDRC’s enforcement action against Qualcomm sidestep the core practices by SEP holders—namely, refusing to license component manufacturers and withholding chip supplies unless the customer signs a patent license agreement. Therefore, SEP holders are able to

²³⁹ *Id.*

²⁴⁰ *Guojia Fazhan Gaigewei Dui Gaotong Gongsi Longduan Xingwei Zeling Zhenggai Bing Fakuan 60 Yi Yuan* (国家发展改革委对高通公司垄断行为责令整改并罚款60亿元) [*NDRC Fines Qualcomm 6 Billion Yuan and Order It to Correct Its Monopolistic Conduct*], NAT’L DEV. AND REFORM COMM’N (国家发展和改革委员会) (Feb. 10, 2015), https://www.ndrc.gov.cn/xwdt/xwfb/201502/t20150210_955999.html [<https://perma.cc/XC29-PM7G>].

²⁴¹ *Id.*

²⁴² *Id.*

preserve their core business model in China, although they have to cut royalty rates to comply with China's FRAND requirement.²⁴³

III THE CASE FOR JURISDICTIONAL COMPETITION ON SEPs

What emerges from the foregoing discussions on jurisdictional competition on SEPs is a pattern of different jurisdictions adopting different stances towards SEP licensing and FRAND. Among the major jurisdictions, Europe has been the most friendly to SEP holders. Courts in Europe are more likely to grant injunctions to SEP owners as a matter of rights, less likely to embrace a hard-edged nondiscrimination requirement that mandates similar royalty rates for similarly situated licensees, more likely to determine relatively high royalty rates as FRAND rates, and less likely to impose antitrust liability on SEP owners for demanding high royalty rates or engaging in other allegedly abusive licensing practices. China, by contrast, has been the most hostile to SEP holders. Courts in China do not generally grant injunctions against SEP infringement, have embraced the hard-edged approach to the nondiscrimination requirement under FRAND, and have earned a reputation for setting much lower FRAND royalty rates than in other jurisdictions. Courts and government authorities in China are also more aggressive in using antitrust laws to suppress royalty rates and to police other licensing conducts. The United States sits somewhere in the middle, maintaining a somewhat balanced approach to SEPs. On one hand, U.S. courts have made it very difficult for SEP holders to obtain injunctions against SEP infringement. But on the other hand, U.S. courts have also been wary of efforts to hold SEP holders accountable under antitrust laws for abusive licensing practices.

But is this pattern of jurisdictional competition just random, or is there any logic to it? And does this pattern promote or diminish social welfare? To explore these questions, this Part starts with an analogy from law in another era in world economic history when major jurisdictions were divided in legal battles between

²⁴³ In the case of Qualcomm, NDRC ordered Qualcomm to offer SEP-only licenses for its Chinese patents at specified rates. Under its modified license agreements with Chinese customers, "Qualcomm charges a 5% running royalty rate on sales of handsets that support multiple cellular standards and a 3.5% running royalty rate on sales of LTE-only handsets, although the [Chinese patent license agreement] charges those rates against 65% of the handset price and the rates apply only to handsets made and sold for use in China." Fed. Trade Comm'n v. Qualcomm, Inc., 411 F. Supp. 3d 658, 673 (N.D. Cal. 2019). "Qualcomm was able to avoid more aggressive rate cuts by making a \$150 million contribution to the Chinese government." *Id.*

two industry groups with diametrically opposed interests: maritime law in the post-industrial revolution era. After discussing how the division between vessel-interests jurisdictions and cargo-interests jurisdictions back then coincided with the makeup of industry interests in those jurisdictions, this Part examines how the different judicial stances in the current FRAND wars also coincide with the makeup of industry interests in the global value chain today. Finally, this Part argues that jurisdictional competition on SEPs results in a “race to the middle,” facilitating compromises between protecting innovation and protecting access to technology.

A. *A Historical Analogy from Post-Industrial Revolution Era Maritime Law*

Maritime law in the late nineteenth century provides an example of jurisdictional competition producing a socially desirable outcome.²⁴⁴ In the late nineteenth century, ocean carriers and cargo owners were engaged in fierce legal battles over the allocation of the risk of cargo loss or damage.²⁴⁵ Under general maritime law principles in the early nineteenth century, a carrier, with very limited exceptions, was subject to strict liability and essentially was an “insurer” of goods in its custody.²⁴⁶ By the 1860s, however, shipowners began to use “negligence clauses” in shipping contracts with cargo owners to disown liability, even for their own negligence.²⁴⁷ To what extent these exculpatory clauses were enforceable became an important point of contention among major jurisdictions at the time.

By the late nineteenth century, the United States had emerged as an industrial power, with the expansion of old industries and the emergence of new ones such as petroleum refining, steel manufacturing, and electrical power.²⁴⁸ The United States

²⁴⁴ This is not to suggest that jurisdictional competition in maritime law is always socially beneficial. There are instances in which jurisdictional competition resulted in a “race to the bottom” in maritime law. *See, e.g.,* Jorge L. Contreras, *The New Extraterritoriality: FRAND Royalties, Anti-Suit Injunctions, and the Global Race to the Bottom in Disputes Over Standard-Essential Patents*, 25 B.U. J. SCI. & TECH. L. 251, 280 & n.225 (2019) (noting that countries such as Liberia and Panama created lax legal framework for the registration of vessels, resulting in a “race to the bottom”).

²⁴⁵ *See* Michael F. Sturley, *The History of COGSA and the Hague Rules*, 22 J. MARITIME L. & COM. 1, 4–6 (1991).

²⁴⁶ Under early nineteenth century maritime law, a carrier was strictly liable for cargo loss unless (1) the loss was caused by act of God, act of public enemies, shipper’s fault, or inherent vice of goods, and (2) the carrier’s negligence had not contributed to the loss. *See id.* at 4.

²⁴⁷ *Id.* at 5 n.23.

²⁴⁸ *See U.S. History Primary Source Timeline: Rise of Industrial America, 1876 to 1900*, LIBR. OF CONGRESS, <https://www.loc.gov/classroom-materials/united-states-history-primary-source-timeline/>

could be referred to as a “cargo-interests” jurisdiction because of the dominance of the interests of cargo owners there. But “[t]he establishment and growth of the international economy during the nineteenth century had primarily been a European endeavour.”²⁴⁹ Europe, particularly the United Kingdom, “determined the scale, the scope and the speed of the world maritime industries.”²⁵⁰ By 1900, British owners controlled about half of the ships in the world and almost 55% of the new steamships delivered that year.²⁵¹ The UK, therefore, could be referred to as a “vessel-interests” jurisdiction because of the dominance of the interests of vessel owners there.

It turned out that judicial stances towards exculpatory clauses in shipping contracts closely matched the makeup of industry interests across the Atlantic. In the late nineteenth century, British courts upheld exculpatory clauses, even those that excused carriers’ liability for their own negligence, in the name of freedom of contracts.²⁵² Most European and Commonwealth countries eventually followed suit.²⁵³ By contrast, U.S. courts allowed carriers to limit their liability in many circumstances, but not when they were trying to escape from the consequences of their own negligence or from their failure to provide a seaworthy ship.²⁵⁴ Another cargo-interests jurisdiction, Japan, applied the same rule as in the United States.²⁵⁵

Given the divergence in the substantive-law rules on exculpatory clauses, conflict-of-law rules under which substantive-law rules were chosen to adjudicate carrier liability disputes became crucial to the outcomes of such disputes. Not surprisingly, British and U.S. courts waged fierce jurisdictional battles on carrier liability by manipulating conflict-of-law rules in favor of their constituents. In one extreme case, *Re Missouri Steamship Company*, a British court adopted the

rise-of-industrial-america-1876-1900/overview/ [https://perma.cc/HFB8-D8YQ] (last visited Oct. 4, 2024).

²⁴⁹ Stig Tenold, *The Declining Role of Western Europe in Shipping and Shipbuilding, 1900-2000*, in SHIPPING AND GLOBALIZATION IN THE POST-WAR ERA 9, 11 (Niels P. Petersson et al. eds., 2019).

²⁵⁰ *Id.* at 11.

²⁵¹ *Id.* at 13.

²⁵² Sturley, *supra* note 245, at 5.

²⁵³ *Id.*

²⁵⁴ *Id.* at 5–6.

²⁵⁵ The Japanese Commercial Code invalidated shipping contracts exonerating shipowners “from liability for damages caused by the shipowner himself, or by the willful act or gross negligence of the crew or any other employee, or by the fact that the ship is unseaworthy.” *Id.* at 6 & n.28.

following conflict-of-law rule: “This clause may be invalid under American law and valid under English law. The shipowner must have intended it to be valid; therefore the contract is governed by English law.”²⁵⁶

The “annoyance” caused by this blatantly biased conflict-of-law rule outside of the UK was in part what led the United States to adopt a compromise rule in the Harter Act of 1893.²⁵⁷ Under the compromise rule, a carrier was not allowed to contract out of liability for its own negligence with respect to seaworthiness and cargo care, and in return for that, it was not responsible for negligence in navigation and management of the ship.²⁵⁸ This compromise was later preserved in the Hague Rules and then the Hague-Visby Rules, two international treaties that laid the foundation for international maritime law in the twentieth century.²⁵⁹

B. Interest Alignment in Jurisdictional Competition on SEPs

Fast forward one hundred and twenty years, a very similar interest alignment could be observed in today’s jurisdictional competition on SEPs: The judicial tug-of-war on SEPs is being fought primarily between “innovator-interests” jurisdictions and “implementer-interests” jurisdictions.

By many measures, Europe is an “innovator-interests” jurisdiction, or a jurisdiction where the interests of innovators dominate. Europe is a research and development powerhouse for cellular communications standards, which figure prominently among all technology standards involved in SEP disputes.²⁶⁰ Ericsson and Nokia, based in Sweden and Finland respectively, are among the top five SEP holders for cellular 5G technology.²⁶¹ By contrast, implementer interests are much thinner in Europe. Of the estimated 47,500 manufacturing firms that implement standards subject to FRAND commitments, only 3,800 or eight percent are located in Europe.²⁶²

²⁵⁶ See Francis Reynolds, *The Hague Rules, the Hague-Visby Rules, and the Hamburg Rules*, 7 *MLAANZ J.* 16, 17 (1990).

²⁵⁷ *Id.*

²⁵⁸ *Id.*

²⁵⁹ *Id.* at 17–18.

²⁶⁰ See Kirti Gupta & Chris Borges, *Standard Essential Patents and European Security*, *CTR. FOR STRATEGIC & INT’L STUD.* (Jan. 26, 2024), <https://www.csis.org/analysis/standard-essential-patents-and-european-economic-security> [<https://perma.cc/33PR-38GE>].

²⁶¹ See *supra* note 63.

²⁶² Eur. Comm’n, *EC SEP Proposal Impact Assessment Report*, *supra* note 42, at 11.

However, as SEP disputes are spreading to the automotive industry because of the arrival of connected automobiles, the makeup of industry interest in Europe is undergoing a significant change: A large class of powerful automakers are becoming new SEP implementers.²⁶³ It is at this juncture that the European Commission is proposing a new regulatory framework that would cap SEP royalties by an administratively-determined aggregate royalty amount for a given standard.²⁶⁴ It is also at this juncture that Germany is starting to move away from a regime where injunctions against infringement could be obtained as a matter of rights prior to validity determinations.²⁶⁵ It is worth noting that the 2021 statutory amendment to the German Patent Act, which eliminated automatic injunctive relief if it would cause disproportionate hardship for the infringer or third parties, was prompted by an infringement lawsuit against none other than a car manufacturer.²⁶⁶

Moving to the east, China presents a completely different picture in terms of industry interests. China boasts the largest manufacturing sector in the world, accounting for 31.6% of the global manufacturing output in 2024.²⁶⁷ China's manufacturing sector, however, "is still at the midstream and downstream levels of the global value chain."²⁶⁸ Despite the fact that China's leading companies such as Huawei are becoming innovation powerhouses,²⁶⁹ China by and large is still an implementer-interests jurisdiction. In 2023, implementers of intellectual property

²⁶³ See Tim Pohlmann, *The Role of Standard-Essential Patents for the Auto Industry*, IPWATCHDOG (Sept. 27, 2021), <https://ipwatchdog.com/2021/09/27/role-standard-essential-patents-auto-industry/id=138080/> [<https://perma.cc/GR7A-QY58>].

²⁶⁴ See *supra* notes 181–83 and accompanying text.

²⁶⁵ See Patentgesetz [PatG] [Patent Act], Dec. 16, 1980, BGBl I at 1, as amended by Gesetzes vom 30 August 2021 [Act of 30 August 2021], Aug. 30, 2021, BGBl I at 4074, § 139(1) (Ger.), https://www.gesetze-im-internet.de/englisch_patg/englisch_patg.html [<https://perma.cc/G6JD-BYAP>].

²⁶⁶ See BGH, May 10, 2016, X ZR 114/13, juris (Ger.), <http://juris.bundesgerichtshof.de/cgi-bin/rechtsprechung/document.py?Gericht=bgh&Art=en&nr=75714&pos=0&anz=1> [<https://perma.cc/2XKX-86AR>].

²⁶⁷ See *Top 10 Manufacturing Countries in 2024*, SAFEGUARD GLOB. (Aug. 28, 2024), <https://www.safeguardglobal.com/resources/top-10-manufacturing-countries-in-the-world/> [<https://perma.cc/9GPF-XBM4>].

²⁶⁸ Leilei Cui et al., *Macro Research on the Development of Chinese Strategic Emerging Industries in the New Era*, CSIS INTERPRET: CHINA (Mar. 27, 2020), <https://interpret.csis.org/translations/macro-research-on-the-development-of-chinese-strategic-emerging-industries-in-the-new-era/> [<https://perma.cc/6S4S-QE9R>].

²⁶⁹ Huawei is now the top SEP holder for the cellular 5G standard. See Eur. Comm'n, *EC SEP Proposal Impact Assessment Report*, *supra* note 42, at 9.

rights in China paid \$42.7 billion in royalty and licensing fees to foreign intellectual property owners,²⁷⁰ while intellectual property owners in China received only \$10.9 billion from foreign implementers.²⁷¹ China's more restrictive judicial stances towards SEP holders are entirely consistent with this pattern of industry interests.

By contrast, the United States represents a jurisdiction balanced more or less equally between innovator interests and implementer interests. On one hand, the United States is home to major innovators such as Qualcomm, Apple, Microsoft, IBM, and Google.²⁷² But on the other hand, Apple is also one of the largest implementers of cellular SEPs in the world, accounting for about 15.8% of global smartphone shipments in the first quarter of 2024.²⁷³ Apple also submitted a comment on the European Commission's proposed regulatory framework for SEPs and strongly supported the Commission's efforts.²⁷⁴ This indicates that Apple sees its interests aligned more with those of implementers than with those of innovators. Again, this pattern of industry interests is consistent with U.S. courts adopting a more or less balanced approach to SEP licensing.

It is important to note, however, that the correlation between industry interests and judicial stances does not necessarily indicate a causal relationship. It may not necessarily be the case that in rendering their decisions, courts are consciously bending the law to protect the dominant industry interests in their jurisdictions. Indeed, the causal relationship between the two might point in the opposite direction: It might be because of the pro-innovator (or pro-implementer) judicial stances in a jurisdiction that innovators (or implementers) flourished in that jurisdiction in the first place.²⁷⁵

²⁷⁰ See *Charges for the Use of Intellectual Property, Payments (BoP, Current US\$)*, WBG DATABANK (2023), <https://data.worldbank.org/indicator/BM.GSR.ROYL.CD> [<https://perma.cc/W2SQ-7TLX>].

²⁷¹ See *Charges for the Use of Intellectual Property, Receipts (BoP, Current US\$)*, WBG DATABANK (2023), <https://data.worldbank.org/indicator/BX.GSR.ROYL.CD> [<https://perma.cc/XR75-KCWA>].

²⁷² See DIETER ERNST, CTR. FOR INT'L GOVERNANCE INNOVATION, CHINA'S STANDARD-ESSENTIAL PATENTS CHALLENGE: FROM LATECOME TO (ALMOST) EQUAL PLAYER? 9–10 (2017), <https://www.cigionline.org/static/documents/documents/China's%20Patents%20ChallengeWEB.pdf> [<https://perma.cc/S4J3-YRQD>].

²⁷³ Federica Laricchia, *Market Share of Apple iPhone Smartphone Sales Worldwide 2007-2024*, STATISTICA (Aug. 5, 2024), <https://www.statista.com/statistics/216459/global-market-share-of-apple-iphone/> [<https://perma.cc/UF99-SQTL>].

²⁷⁴ See Apple Inc., *supra* note 187, at 1.

²⁷⁵ Although the empirical evidence on the impact of intellectual property protection on innovation is not uniform, intellectual property rights have been found to have an overall positive effect on innovation. See

It is also important to note that the alignment of industry interests in a particular jurisdiction is constantly in flux and subject to change. The interest alignment could change because of the adoption of patented technologies in a new industry, as in the case of the adoption of wireless connectivity technologies in the automotive industry.²⁷⁶ It is this change that has set in motion a process of transforming Europe from a traditionally innovator-interests jurisdiction to a jurisdiction where implementer-interests are beginning to influence judicial and legislative outcomes. The alignment of industry interests could also change because of changes in the ownership of SEPs. Changes in the ownership of SEPs, in turn, could result from SEP implementers acquiring SEPs through research and development.²⁷⁷ They could also result from SEPs being bought and sold. One important reason why SEP licensing became hotly contested in the last decade was because Patent-Assertion-Entities (“PAEs”) acquired many key SEPs and asserted them against SEP implementers.²⁷⁸

C. Race to the Top, Race to the Bottom—Or Race to the Middle?

The scholarly debates on jurisdictional competition have focused on its social desirability, that is, whether it produces a “race to the top” or a “race to the bottom.”²⁷⁹ As for jurisdictional competition on SEPs, the prevailing assumption is that it is socially undesirable. For example, Jorge Contreras commented that courts competing with one another to set global FRAND royalty rates “may not be in the best interests of the parties or the market.”²⁸⁰ This negative view of the social welfare of jurisdictional competition on SEPs appears to be behind the many proposals to curtail such competition.²⁸¹

Pedro Cunha Neves et al., *The Link Between Intellectual Property Rights, Innovation, and Growth: A Meta-Analysis*, 97 *ECON. MODELLING* 196, 196 (2021).

²⁷⁶ See Eur. Comm’n, *EC SEP Proposal Impact Assessment Report*, *supra* note 42, at 9.

²⁷⁷ For example, for 4G LTE and LTE Advanced standards, Chinese implementers Huawei and ZTE are now the second and third top SEP holders respectively, ahead of Nokia, LG and Samsung. See ERNST, *supra* note 272, at 10.

²⁷⁸ For case studies of PAEs acquiring key SEPs and then asserting them in SEP infringement litigation, see Jorge L. Contreras, *Assertion of Standard Essential Patents by Non-Practicing Entities*, in *PATENT ASSERTION ENTITIES AND COMPETITION POLICY* 50, 51–52 (D. Daniel Sokol ed., 2017).

²⁷⁹ See *supra* notes 1–5 and accompanying text.

²⁸⁰ See Contreras, *supra* note 13, at 182.

²⁸¹ See *supra* notes 24–27 and accompanying text for scholarly proposals on reducing jurisdictional competition on SEPs.

To assess the social welfare of jurisdictional competition on SEPs, it is important to first define the standard under which the assessment is to be made. From whose perspective is judicial competition considered to produce a “race to the top” or a “race to the bottom”? For innovators and implementers, the two groups engaged in SEP licensing battles, a “race to the top” for one group will be a “race to the bottom” for the other. For instance, an ultra-high FRAND royalty rate will be hailed as a “race to the top” by innovators but will be condemned as a “race to the bottom” by implementers, and vice versa. Jonathan Barnett observes that the use of law in China, an implementer-interests jurisdiction, is “mercantilist”— “[T]he legal treatment of SEP licensing and enforcement by regulators and courts in the People’s Republic of China reflects a strategic effort to deploy competition and patent law to reduce input costs for domestic device producers that rely on wireless communications technology held by foreign chip suppliers.”²⁸² But by the same token, the legal treatment of SEP licensing in innovator-interests jurisdictions could also be perceived as a “mercantilist” effort to drive up rewards for SEP holders who rely on licensing revenues from implementers.

The assessment of the social welfare of jurisdictional competition on SEPs, therefore, has to be made from a societal perspective, with the interests of all stakeholders, including those of innovators, implementers, and the public, being weighed against one another. As a general matter, the protection of intellectual property rights needs to balance societal interests in incentivizing innovation and promoting access.²⁸³ On one hand, effective protection of intellectual property rights is instrumental in stimulating innovation and economic growth.²⁸⁴ But on the other hand, overprotection of intellectual property rights hampers public access to technology.²⁸⁵ Such access is important for sustained innovation, which tends to build upon prior advances.²⁸⁶ Public access to technology is also important in its

²⁸² Barnett, *supra* note 19, at 259.

²⁸³ See Matthew J. Higgins & Stuart J.H. Graham, *Balancing Innovation and Access: Patent Challenges Tip the Scales*, 326 SCI. 370, 370 (2009).

²⁸⁴ See Kristina M.L. Aciri, née Lybecker, *Economic Growth and Prosperity Stem from Effective Intellectual Property Rights*, 24 GEO. MASON L. REV. 865, 865 (2017).

²⁸⁵ See Andrew Beckman-Rodau, *The Problem with Intellectual Property Rights: Subject Matter Expansion*, 13 YALE J.L. & TECH. 35, 38 (2010).

²⁸⁶ See *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 146 (1989) (“From their inception, the federal patent laws have embodied a careful balance between the need to promote innovation and the

own right, especially in areas concerning basic human rights such as medicine.²⁸⁷ With broadband internet access—enabled by the most prominent SEPs in cellular and wireless communications technology—becoming a basic necessity in modern society, the public’s interest in access becomes increasingly compelling.²⁸⁸

In addition, given that a significant portion of the value of SEPs comes from standardization, not the patents themselves,²⁸⁹ SEPs give rise to special considerations when it comes to social welfare evaluations. Aside from SEP holders, both implementers and the public are entitled to sharing the value created by standardization.²⁹⁰ This dynamics further points to the need for compromise and moderation in SEP policies.

Viewed in this light, the socially optimal SEP policies have to lie between those demanded by SEP holders and those demanded by implementers. Jurisdictional competition enhances social welfare by producing a “race to the middle,” not in the sense of producing legal rules with mediocre outcomes,²⁹¹

recognition that imitation and refinement through imitation are both necessary to invention itself and the very lifeblood of a competitive economy.”).

²⁸⁷ The most notable example of compromises between the protection of intellectual property rights and the protection of public access to technology is the treatment of pharmaceutical patents under the Trade-Related Agreements on Intellectual Property Rights (“TRIPs”) of the WTO. TRIPs strengthened patent protection for pharmaceuticals in developing countries, but it also led to substantial economic welfare losses and losses in human lives in the AIDs pandemic because of elevated drug prices. *See* Arvind Subramanian, *Medicines, Patents, and TRIPs: Has the Intellectual Property Pact Opened a Pandora’s Box for the Pharmaceuticals Industry?*, in *HEALTH AND DEVELOPMENT: WHY INVESTING IN HEALTH IS CRITICAL FOR ACHIEVING ECONOMIC DEVELOPMENT GOALS* 22, 23 (Jeremy Clift ed., 2004). Eventually, in the Doha Declaration, members of the WTO agreed on “flexibilities” that governments in developing countries could use to address public health needs. *See* World Trade Organization, Ministerial Declaration of 14 November 2001, WTO Doc. WT/MIN(01)/DEC/1, 41 ILM 746 (2002) [hereinafter Doha Declaration].

²⁸⁸ In March 2023, the United Nations High Commissioner for Human Rights told the U.N. Human Rights Council that “it may be time to reinforce universal access to the internet as a human right, not just a privilege.” *It May be Time to Reinforce Universal Access to the Internet as a Human Right, Not Just a Privilege, High Commissioner Tells Human Rights Council*, OFF. OF THE U.N. HIGH COMM’R FOR HUM. RTS. (Mar. 10, 2023), <https://www.ohchr.org/en/news/2023/03/it-may-be-time-reinforce-universal-access-internet-human-right-not-just-privilege-high> [<https://perma.cc/6KEX-EGFT>].

²⁸⁹ *See* Richard H. Stern, *Who Should Own the Benefits of Standardization and the Value It Creates?*, 19 MINN. J.L. SCI. & TECH. 107, 119–21 (2018).

²⁹⁰ *Id.* at 205–42.

²⁹¹ William Magnuson argues that federalism leads to a “race to the middle,” where states “adopt regulations that are similar, or even identical, to the regulations adopted by large numbers of other states.” William Magnuson, *The Race to the Middle*, 95 NOTRE DAME L. REV. 1183, 1183 (2020).

but in the sense of producing a balanced compromise between competing societal interests. Jurisdictional competition achieves this goal by facilitating negotiated solutions to SEP disputes. In terms of FRAND rate setting, for example, court-determined FRAND rates serve as reference points for licensing negotiations between SEP holders and implementers.²⁹² In addition, inconsistent FRAND rates determined by courts in different jurisdictions force SEP holders and implementers to return to the negotiating table, knowing that neither of them would win by litigating in their preferred jurisdiction. Granted, the reasoning of the judicial opinions rendered in jurisdictional battles is often strained, but it often takes outrageous judicial rulings to finally prod parties to settle. In the late nineteenth century, it was the outrageous *Re Missouri Steamship Company* case that led to the compromise between the United States and the United Kingdom on carrier liability.²⁹³ The same dynamic is present today with SEP licensing disputes, whereby SEP holders and implementers are more likely to settle after they both secure favorable judicial rulings in their preferred jurisdictions. The latest example of jurisdictional competition facilitating settlements is the SEP cross-license agreement signed between Nokia and Oppo in January 2024, after the two companies sued each other in Germany, France, the Netherlands, India, China, the UK, and five other countries.²⁹⁴

Finally, litigation in competing jurisdictions is a natural and inevitable component of the complex business relationships between SEP holders and implementers. In essence, FRAND commitments are incomplete contracts.²⁹⁵ Yet incomplete contracts are “a predictable and efficient result given the costs associated with identifying all contingencies that might arise during the life of

²⁹² See *InterDigital Commc'ns, Inc. v. ZTE Corp.*, No. 13-CV-00009-RGA, 2014 WL 2206218, at *3 (D. Del. May 28, 2014) (“All the Court’s determination of a FRAND rate would accomplish would be to give a data point from which the parties could continue negotiations.”).

²⁹³ See *supra* notes 256–58 and accompanying text.

²⁹⁴ See Mathieu Klos, *Settlement Season Continues as Nokia and Oppo End Global Patent Battle*, JUVÉ PATENT (Jan. 24, 2024), <https://www.juve-patent.com/cases/settlement-season-continues-as-nokia-and-oppo-end-global-patent-battle/> [<https://perma.cc/7Q75-KMXA>].

²⁹⁵ See Joshua D. Wright, Comm’r, Fed. Trade Comm’n, Remarks at the Center for the Protection of Intellectual Property Inaugural Academic Conference: The Commercial Function of Patents in Today’s Innovation Economy 3 (Sept. 12, 2013), https://www.ftc.gov/sites/default/files/documents/public_statements/ssos-frand-and-antitrust-lessons-economics-incomplete-contracts/130912cpip.pdf [<https://perma.cc/FMM4-BF85>].

the contractual relationship.”²⁹⁶ As Claire Hill observes, sophisticated parties in complex business transactions have a social norm of resorting to bargaining, not precipitous litigation, to resolve their disputes under incomplete contracts.²⁹⁷ They bargain, however, “in the shadow of the lawsuit.”²⁹⁸ When contract terms are particularly murky, as is the case in FRAND commitments, parties do not suffer reputational costs for pursuing litigation.²⁹⁹ Once a party is no longer in a relationship-preservation mode, “relevant norms will permit a largely commensurate counterattack” by the other party.³⁰⁰ Therefore, litigation in competing jurisdictions becomes the modus operandi of SEP licensing. Granted, such litigation is costly. But from a social point of view, this cost is worthwhile as it results in the widest possible public access to technology at prices acceptable to both SEP holders and implementers. Efforts to reduce jurisdictional competition can only disrupt this socially beneficial price-discovery mechanism.

CONCLUSION

How do jurisdictions compete to set the ground rules for the global licensing of SEPs? This Article offers a systematic study as well as a normative evaluation of such competition. Similar to jurisdictional competition in post-industrial revolution maritime law, jurisdictional competition on SEPs is carried out in manners consistent with the alignment of industry interests in competing jurisdictions. Yet this pattern of jurisdictional competition is not a cause for despair. Instead, jurisdictional competition on SEPs plays a positive role in producing a “race to the middle” that bridges the divides between innovator interests and implementer interests.

²⁹⁶ *Id.*

²⁹⁷ See Claire A. Hill, *Bargaining in the Shadow of the Lawsuit: A Social Norms Theory of Incomplete Contracts*, 34 DEL. J. CORP. L. 191, 197 (2009).

²⁹⁸ *Id.* at 192.

²⁹⁹ *Id.* at 213.

³⁰⁰ *Id.*

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CREATION AND GENERATION COPYRIGHT STANDARDS

DANNY FRIEDMANN*

There is a de facto double standard in copyright eligibility. Despite the insistence of the U.S. Copyright Office (“Office”) that copyright law is applied consistently to all subject matter, in practice the user of AI-generated services needs to meet an unattainably high standard. This includes that the author had a fully formed conception and total control over the creation of the work, beyond time and space, which this author calls the “platonic” ideals of copyright. The authors of traditional works, such as paintings and photos, often do not have to meet this standard.

This article contrasts the Office’s rejections of copyright protection for AI-generated images with the Beijing Internet Court’s approval, highlighting a global debate on copyright eligibility to AI-generated products versus traditional expressive works. The article is the first one that critiques both stances for overlooking creativity’s inherent

* Associate Professor of Law, Dr., Peking University School of Transnational Law, JD Faculty, Shenzhen, China. Contact: dannyfriedmann@stl.pku.edu.cn. I wish to thank the participants of the 7th Annual Texas A&M IP Scholars Roundtable, DFW, Nov. 3–4, 2023 for their insightful comments: Profs. Aman K. Gebru, Timothy T. Hsieh, Robert Hu, Eric E. Johnson, Barbara Lauriat, Jyh-An Lee, Doris E. Long, Timothy J. McFarlin, Michael D. Murray, Lucas S. Osborn, Emma Perot, Zvi S. Rosen, Guy A. Rub, Saurabh Vishnubhakat, and Peter K. Yu; the participants at my presentation at William S. Boyd School of Law at UNLV, Nov. 1, 2023: Marketa Trimble, Mary LeFrance and Nachman Gutowski; the participants of the Inaugural Asian IP Scholars Roundtable, University of Washington School of Law, Seattle, Oct. 13–14, 2023: Profs. Margaret Chon, Artha Dermawan, Taorui Guan, Branislav Hazucha, Tianxiang He, Daryl Lim, Doris Long, Xuan-Thao Nguyen, Srividhya Ragavan and Robert Gomukiewicz; In addition, I would like to thank Profs. Christopher J. Sprigman, Mark E. Feldman, Emanuel V. Towfigh, Ray W. Campbell, Andrew J. Kerr; Gilad Abiri for their advice; former students N. Campbell Hutcheson JR, Sofia Chang Nogueira for their insights; and current students Jiang Rongke and Gou Linwei for their excellent research assistance. Finally, I would like to thank the editors of the NYU Journal of Intellectual Property & Entertainment Law for their superb editing.

unpredictability, authorial spontaneity, and the notion that at some level fine-grained ideas become expressions, and advocates for a policy that counterbalances human and AI contributions to artistic, literary, and musical works. Instead of replacing the “double standard” with a unified standard, this article proposes a dual standard: one for human-created works; and a different one for AI-assisted products. Therefore, it is important that artists disclose the part of the work generated by AI. But equally significant is that providers of generative AI (“gAI”) services make a database of AI-generated products available to the Office, so that it will be able to compare the applications for copyright registration with those products generated by AI, to see whether the human intervention meets the threshold and originality. Until this is possible, there should be a moratorium on the protection of AI-generated products via copyright law or a sui generis right. In turn, and to balance the promotion of innovation and creativity, the Office should make available registered copyrighted works and the metadata of their authors that can be used as training data for AI service providers, so that they have the metadata to compensate these authors. This author recommends preferential treatment to human authors to avert or at least slow down the dilution of human culture.

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REPORTS OF THE AUTHOR’S DEATH MAY BE GREATLY EXAGGERATED.

— Theresa Enos, *Reports of the ‘Author’s’ Death May Be Greatly Exaggerated But the ‘Writer’ Lives On in the Text*, 20 RHETORIC SOC’Y Q. 339 (1990).

ANYONE WHO IS NOT A BEAST AND THEREFORE HAS THE AWARENESS AND DIGNITY OF A HUMAN BEING, THE POOREST HUMAN BEING WHO HAS NEVER RENEGED ON HIS OWN INDIVIDUALITY, WILL FEEL THIS NEED: TO BE ENCHANTED AND TO ENCHANT, TO EXPRESS HIMSELF.

— Carlo Mollino, *Vedere L’architettura*, AGORÀ, Aug. 1946, at 13.

INTRODUCTION

This article reveals for the first time a towering standard of copyright eligibility that the U.S. Copyright Office (“Office”) and the Beijing Internet Court have inadvertently been using in the question whether AI-generated images should get protection under copyright law. Even though the Office insists it uses the same standard, it applies a much more permissive standard for human-authored works.

A. *From “Copyrightable-Causation” to “platonic” Standard*

A reasonable eligibility standard for copyright protection is that a human author translates an idea into a fixed, tangible medium of expression,¹ and so is

¹ 17 U.S.C. § 102. *See* Cmty. for Creative Non-Violence v. Reid, 490 U.S. 730, 737 (1989) (“[T]he author is the party who actually creates the work, that is, the person who translates an idea into a fixed, tangible expression entitled to copyright protection.”). *See* Lindsay v. Wrecked & Abandoned Vessel R.M.S. Titanic, 52 U.S.P.Q.2d 1609 (S.D.N.Y. 1999) (“Generally speaking, the author of a work is the person ‘who actually creates the work, that is, the person who translates an idea into a fixed, tangible expression entitled to

originality;² which means independently created with a modicum of originality.³ However, Professor Shyamkrishna Balganesh argued that an analysis of copyright eligibility is not complete without taking causation of fixation by the author into account; what he calls copyrightable-causation.⁴ After it was proven that a claimant caused a contribution to the work, Balganesh proposes three questions that can disqualify the claimant of copyrightable causation: “Did the claimant have insufficient control over the creative process?; Is the claim disproportionate to the claimant’s contribution?; Will the claim conflate the contributor’s creative choices?”⁵ In other words, Balganesh describes a scenario where the Office or courts cast the net too wide and subsequently let those works escape out of the net that do not deserve to be caught. Phrasing these terms positively: sufficient control, contribution, and choice over the creative process turn out to be part of the “platonic”⁶ prerequisites for copyright eligibility. These “platonic” prerequisites, which emphasize the mental conception and control of the human author over the creative process of a work, have not been applied consistently to traditional works, thereby creating a double standard.⁷ The Office qualified reiterative instructions of prompt-engineers to AI-generated images as merely conveying ideas, the outcome as unpredictable and therefore unprotectable, while the Beijing Internet Court held human intervention by a user of Stable Diffusion as sufficient human intellectual

copyright protection. In the context of film footage and photography, it makes intuitive sense that the ‘author’ of a work is the individual or individuals who took the pictures, i.e., [.] *the photographer.*”) (quoting *Cmt. for Creative Non-Violence*, 490 U.S. at 737).

² 17 U.S.C. § 102. Hacoheh and Elkin-Koren explore the concept of leveraging generative AI to quantify copyright originality, to assist in copyright legal disputes. Uri Y. Hacoheh & Niva Elkin-Koren, *Copyright Regenerated: Harnessing GenAI to Measure Originality and Copyright Scope*, 37 HARV. J.L. & TECH. 555, 608 (2024), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4530717 [<https://perma.cc/FR95-YRBZ>].

³ *Feist Publ’ns, Inc. v. Rural Tele. Serv. Co.*, 499 U.S. 340, 358 (1991).

⁴ In Professor Balganesh’s copyrightable-causation analysis, the first question is: “Would the work not have come into existence but for the claimant’s contribution? Or, was the claimant’s contribution a Necessary Element of a Sufficient Set of conditions that produced the work?” Shyamkrishna Balganesh, *Causing Copyright*, 117 COLUM. L. REV. 1, 71 (2017).

⁵ *Id.*

⁶ The word “platonic” is written in lowercase and between quotation marks to make clear that the historical Plato might not have concurred with the use of the term for an idealistic standard in copyright eligibility.

⁷ See Edward Lee, *Prompting Progress: Authorship in the Age of AI*, 76 FLA. L. REV. 1445, 1445 (2024) (criticizing the imposition of more onerous requirements of authorship on AI-generated products: “sufficient control, avoidance of random elements in the creative process, prediction of the final work ahead of time, and dictation of the specific results”).

achievement and original, thus protectable. Although these institutions came to opposite decisions, they share “platonic” prerequisites for copyrightability, but where they seem to only differ on is whether the process of prompting was creative. Instead of a double standard, this author advocates for a dual standard based on policy considerations: one for human-created works; and one for AI-assisted products.⁸ In addition, the Office needs to make the different standards clear, instead of upholding the pretense that there is one standard for all subject matter.⁹

B. Digital Dignity

There needs to be transparency on both sides of Large Language Models (“LLMs”). On the input (ingestion) side, this author has advocated that the copyrighted works in the Copyright Register be used as training data for LLMs,¹⁰ next to public domain works and Creative Commons-licensed works,¹¹ in addition to factual data. As Jaron Lanier, the “Prime Unifying Scientist” at Microsoft,¹² pointed out, AI does not have to be a blackbox regarding the provenance of the output from the input.¹³ Lanier’s advocacy for data dignity¹⁴ is a useful antidote

⁸ U.S. COPYRIGHT OFF., COMPENDIUM OF U.S. COPYRIGHT OFFICE PRACTICES § 313.2 (3d ed. 2021) (questioning “whether the ‘work’ is basically one of human authorship, with the computer [or other device] merely being an assisting instrument, or whether the traditional elements of authorship in the work (literary, artistic, or musical expression or elements of selection, arrangement, etc.) were actually conceived and executed not by man but by a machine”) (quoting U.S. COPYRIGHT OFF., ANNUAL REPORT OF THE REGISTER OF COPYRIGHT 5 (1966)) [hereinafter COMPENDIUM (Third)].

⁹ 17 U.S.C. § 102(a).

¹⁰ Danny Friedmann, *Copyright as Affirmative Action for Human Authors Until the Singularity*, 73 GRUR INT’L 1, 2 (2024), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4697678 [<https://perma.cc/N6T7-NYM4>].

¹¹ Professor Levendowski calls works in the public domain and Creative Commons-licensed works: low friction-data but biased. Amanda Levendowski, *How Copyright Law Can Fix Artificial Intelligence’s Implicit Bias Problem*, 93 WASH. L. REV. 579, 610–19 (2018).

¹² Jaron Lanier, *Office of the Chief Technical Officer Prime Unifying Scientist (Microsoft’s Octopus)*, MICROSOFT, <https://www.microsoft.com/en-us/research/people/jalani/> [<https://perma.cc/UV9M-AJNY>] (last visited Feb. 23, 2024).

¹³ Connie Loizos, *We All Contribute to AI—Should We Get Paid for That?*, TECHCRUNCH (Apr. 21, 2023), <https://techcrunch.com/2023/04/21/as-ai-eliminates-jobs-a-way-to-keep-people-a-float-financially-thats-not-ubi/> [<https://perma.cc/MBE8-EDHV>].

¹⁴ Lanier & Weyl, *infra* note 30. Catherine Jewell, *Digital Pioneer, Jaron Lanier, on the Dangers of “Free” Online Culture*, WIPO MAG., Apr. 2016, https://www.wipo.int/wipo_magazine/en/2016/02/article_0001.html [<https://perma.cc/3UTA-3S3W>] (asserting that automated translations are mash-ups of real-life

against technological determinism.¹⁵ Provenance could be seen as part of the research agenda of how to make AI explainable (“XAI”). Law by design, a doctrine discussed by Professors Reidenberg, Lessig, and Elkin-Koren¹⁶ could prescribe to include metadata in the training data that could be retrieved in the output, and play a role in the remuneration of the authors/copyright holders in the training data.

U.S.-based generative AI (“gAI”) services have been focusing predominantly on innovation¹⁷ and safety for the users, instead of transparency, let alone provenance. On October 30, 2023, President Biden issued an Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence.¹⁸ It provides soft law measures, such as principles and policy goals, reports, guidelines and best practices to promote a consensus standard for the AI-industry based on self-regulation, also regarding authenticating, labelling, detecting and tracking the provenance of synthetic data.¹⁹ On July 12, 2024, the EU published the final text of the AI Act, listing transparency among the general principles applicable to all AI systems.²⁰ According to Preamble number 27 of the AI Act: “Transparency means that AI systems are developed and used in a way that allows appropriate traceability and explainability, while making humans aware that they communicate or interact with an AI system, as well as duly informing

translations, and that we should be paying the people whose data we are taking to make these translations possible).

¹⁵ Winner indicates that technology does not develop as the sole result of an internal process, molding society unmediated, to fit its patterns, but is part of a legal, social and economic forcefield. See Langdon Winner, *Do Artifacts Have Politics?*, 109 DAEDALUS 121, 122 (1980).

¹⁶ Joel R. Reidenberg, *Lex Informatica: The Formulation of Information Policy Rules Through Technology*, 76 TEX. L. REV. 553, 554–55 (1997–98). LAWRENCE LESSIG, CODE AND OTHER LAWS OF CYBERSPACE 6–8 (1999). Niva Elkin-Koren, *Fair Use by Design*, 64 UCLA L. REV. 1082, 1093–94 (2017).

¹⁷ In the U.S., the Defense Advanced Research Projects Agency (DARPA) “found evidence that explainability can improve performance.” David Gunning et al., *DARPA’s Explainable AI (XAI) Program: A Retrospective*, 2 APPLIED AI LETTERS 1, 8 (2021), <https://doi.org/10.1002/ail2.61> [<https://perma.cc/GXE4-2388>]. See generally *Explainable Artificial Intelligence (XAI) (Archived)*, DARPA, <https://www.darpa.mil/program/explainable-artificial-intelligence>. [<https://perma.cc/TNZ8-HY7C>] (last visited Feb. 23, 2024).

¹⁸ Exec. Order No. 14,110, 88 Fed. Reg. 75191 (Oct. 30, 2023).

¹⁹ *Id.* at 75202–03.

²⁰ Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 Laying Down Harmonised Rules on Artificial Intelligence and Amending Regulations (EC) No 300/2008, (EU) No 167/2013, (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1139 and (EU) 2019/2144 and Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828 (Artificial Intelligence Act), 2024 O.J. (L), <http://data.europa.eu/eli/reg/2024/1689/oj> [<https://perma.cc/3RHA-3YW2>] [hereinafter AI Act].

deployers of the capabilities and limitations of that AI system and affected persons about their rights.”²¹

In 2019, a Chinese Specialist Committee offered eight “Governance Principles” for “Responsible AI,” including fairness and justice, and traceability.²² In 2021, the soft law Ethical Norms for New Generation AI were issued by the National New Generation AI Governance Specialist Committee,²³ stipulating in Art. 12 to enhance security and transparency, and expressed the ambition to “[g]radually achieve verifiability, auditability, supervisability, traceability, predictability, and reliability.”²⁴ In 2023, the Cyberspace Administration of China (“CAC”) drafted the Rules on Generative AI, which stipulate in Art. 4(3) to respect IP; in its mirror provision Art. 4(5) not to infringe IP; and importantly, Art. 7 that gAI service providers will be held responsible for the legality of the sources of the pre-training data. Art. 7(2) explicitly prohibits content that infringes IP rights.²⁵ In China, no lawsuit has been published yet of copyright holders that sued training data scrapers and gatherers, LLM trainers, or AI service providers. The CAC might

²¹ *Id.*

²² *Fashan Fu Zeren De Rengong Zhineng: Xin Yidai Rengong Zhineng Zhili Yuanze Fabu* (发展负责任的人工智能: 新一代人工智能治理原则发布) [*Developing Responsible Artificial Intelligence: Governance Principles for the Next Generation of Artificial Intelligence Release*], MINISTRY OF SCI. AND TECH. OF THE PEOPLE’S REPUBLIC OF CHINA (June 17, 2019), https://www.most.gov.cn/kjbgz/201906/t20190617_147107.html [<https://perma.cc/8MGX-62DM>]. See generally Matt Sheehan, *China’s AI Regulations and How They Get Made*, CARNEGIE ENDOWMENT FOR INT’L PEACE (July 10, 2023), https://carnegieendowment.org/files/202307-Sheehan_Chinese%20AI%20gov.pdf [<https://perma.cc/CA4K-3MAX>] (excellent description of the “policy funnel” of China’s AI governance).

²³ *Xin Yidai Rengong Zhineng Lunli Guifan* (新一代人工智能伦理规范) [Ethical Norms for New Generation Artificial Intelligence] (promulgated by the National New Generation AI Governance Specialist Committee, Sept. 25, 2021, effective Sept. 25, 2021), *translated in* Ctr. for Sec. and Emerging Tech., https://cset.georgetown.edu/wp-content/uploads/t0400_AI_ethical_norms_EN.pdf [<https://perma.cc/SVB3-L9ZS>].

²⁴ *Id.*

²⁵ *Shengcheng Shi Rengong Zhineng Fuwu Guanli Banfa* (Zhengqiu Yijian Gao) (生成式人工智能服务管理办法 (征求意见稿)) [*Measures for the Management of Generative Artificial Intelligence Services (Draft for Comment)*], CYBERSPACE ADMIN. OF CHINA (Apr. 11, 2023), https://www.cac.gov.cn/2023-04/11/c_1682854275475410.htm [<https://perma.cc/EY2H-M5CR>], *translated in* DigiChina, <https://digichina.stanford.edu/work/translation-measures-for-the-management-of-generative-artificial-intelligence-services-draft-for-comment-april-2023/> [<https://perma.cc/KFV5-D9Y4>].

be waiting to see what happens in other jurisdictions, in particular the U.S.,²⁶ before it will advise People's Courts to start docking similar cases.

Thus, this author proposes that the AI service providers can acquire the training data in a way that promotes both innovation and copyright protection, as an alternative to fair use,²⁷ and text-and-data mining as copyright exception.²⁸ Instead, the Office should start registering works and their authors' metadata as training data for LLMs,²⁹ enabling AI service providers to use the metadata and remunerate the authors of the works in the training data.³⁰

On the output side, it is imperative that users disclose the extent to which their works have been generated by AI, ensuring a clear delineation between human creativity and machine-generated content.³¹ The requirement for transparency

²⁶ Edward Lee, *Status of All Copyright Lawsuits v. AI (Feb. 18, 2024)*, CHAT GPT IS EATING THE WORLD (Feb. 18, 2024), <https://chatgptiseatingtheworld.com/2024/02/18/status-of-all-copyright-lawsuits-v-ai-feb-18-2024> [<https://perma.cc/W5S6-LP8Q>].

²⁷ Mark A. Lemley & Bryan Casey, *Fair Learning*, 99 TEX. L. REV. 743, 748 (2021), <https://texaslawreview.org/fair-learning/> [<https://perma.cc/7DG6-6Q3M>].

²⁸ See, e.g., Martin Senftleben, *Generative AI and Author Remuneration*, 54 INT'L REV. INTELL. PROP. & COMPAR. L. 1535, 1544 (2023) (pointing out that the opt-out mechanism of Art. 4(3) of Directive 2019/790 of the European Parliament and of the Council of 17 April 2019 on Copyright and Related Rights in the Digital Single Market and Amending Directives 96/9/EC and 2001/29/EC, 2019 O.J. (L 130) 92 (Directive 2019/790) can serve as a way for copyright holders to license their works for text-and-data mining purposes, as shown in Art. 4(1) Directive 2019/790); Tianxiang He, *Copyright Exceptions Reform and AI Data Analysis in China A Modest Proposal*, in ARTIFICIAL INTELLIGENCE AND INTELLECTUAL PROPERTY 196, 218 (Jyh-An Lee et al. eds., 2021) (holding that transplanting a U.S.-style fair use regime is not opportune in the current geopolitical climate, and proposing an extension of the current semi-open copyright exceptions model of Art. 24 Copyright Law of China with a Japanese-style text-and-data mining exception, to combine flexibility and certainty). See generally Tianxiang He, *Transplanting Fair Use in China? History, Impediments and the Future*, 2 U. ILL. J.L. TECH. & POL'Y 359 (2020); Artha Dermawan, *Text and Data Mining Exceptions in the Development of Generative AI Models: What the EU Member States Could Learn from the Japanese "Nonenjoyment" Purposes?*, 27 J. WORLD INTELL. PROP. 44 (2013).

²⁹ Friedmann, *supra* note 10.

³⁰ Jaron Lanier & E. Glen Weyl, *A Blueprint for a Better Digital Society*, HARV. BUS. REV. (Sept. 26, 2018), <https://hbr.org/2018/09/a-blueprint-for-a-better-digital-society> [<https://perma.cc/UE4V-ZJCM>] (Lanier has been a proponent of "data dignity," of which the transparency of the "provenance" of and control over one's data is an integral part to counter technology's incursions on human rights).

³¹ In his Second Request for copyright registration, Mr. Thaler argued that denying copyright protection for machine-generated works will encourage individuals to "act dishonestly." "Entrance," *infra* note 129, at 3 n.2. The Board was unconvinced, and argued that there are criminal penalties for anyone who "knowingly makes a false representation of a material fact in the application for copyright registration." 17 U.S.C. § 506(e).

should not only rely on the users of AI. Providers of AI-generated services also have a significant responsibility to make the provenance visible and traceable. So far, the emphasis has been on identifying and labeling AI-generated content via visible and invisible watermarks,³² and digital signatures.³³ In addition, providers of gAI services should establish and maintain a comprehensive database of products generated by their AI technologies and make this database accessible to the Office. Such a measure would serve a critical function: it would enable the Office to effectively review and compare copyright registration applications against the backdrop of existing AI-generated products. This comparison is crucial for determining whether the human contribution in an AI-generated product surpasses the threshold of originality—a cornerstone requirement for copyright protection.

C. Provenance of Synthetic Data

In January 2023, OpenAI stated that it could identify AI-generated content.³⁴ But in July 2023, it asserted that it could not distinguish synthetic data from non-synthetic data.³⁵ But on February 13, 2024, the same U.S.-based AI research organization announced that it records sessions if the user does not actively request

³² Tianxiang He, *AI Originality Revisited: Can We Prompt Copyright Over AI-Generated Pictures?*, 73 GRUR INT'L 299, 306 (2024). See also Nick Clegg, *Labeling AI-Generated Images on Facebook, Instagram and Threads*, META (Feb. 6, 2024), <https://about.fb.com/news/2024/02/labeling-ai-generated-images-on-facebook-instagram-and-threads/> [<https://perma.cc/KY9P-PWD2>]; Kyt Dotson, *OpenAI Will Now Add Labels to AI-generated Images Following Meta*, SILICON ANGLE (Feb. 7, 2024), <https://siliconangle.com/2024/02/07/openai-will-now-add-labels-ai-generated-images-following-meta/> [<https://perma.cc/GN7U-EEVB>]. Tiffany Hsu, *Google Joins Effort to Help Spot Content Made With A.I.*, N.Y. TIMES (Feb. 8, 2024), <https://www.nytimes.com/2024/02/08/business/media/google-ai.html> [<https://perma.cc/EG4P-QE7V>].

³³ The Coalition for Content Provenance and Authenticity (C2PA) unifies the Adobe-led Content Authenticity Initiative (CAI) to provide context and history for digital media, with Project Origin, which is a project led by Microsoft and the BBC focusing on disinformation in the digital news ecosystem. *Guiding Principles*, C2PA, <https://c2pa.org/principles> [<https://perma.cc/SMK9-PLBV>] (last visited Oct. 21, 2024).

³⁴ Jan Hendrik Kirchner et al., *New AI Classifier for Indicating AI-written Text*, OPENAI BLOG (Jan. 31, 2023), <https://openai.com/blog/new-ai-classifier-for-indicating-ai-written-text> [<https://perma.cc/9FCS-V3LP>].

³⁵ Emilia David, *OpenAI Can't Tell if Something Was Written by AI After All*, VERGE (July 26, 2023), <https://www.theverge.com/2023/7/25/23807487/openai-ai-generated-low-accuracy> [<https://perma.cc/VLS7-DCCM>]. This author finds the alleged impossibility of OpenAI to distinguish between products generated by ChatGPT and those not generated by ChatGPT not very credible. It is highly conceivable that OpenAI is recording every single generated content, if only to learn these interactions generally and to personalize the results for the users.

to delete these “memories.”³⁶ On August 4, 2024, OpenAI’s updated a blog post on content provenance solutions:³⁷ it announced that OpenAI will launch audiovisual content provenance solutions, and is experimenting with classifiers, watermarking and metadata for synthetic data, and has joined the Coalition for Content Provenance and Authenticity (“C2PA”).³⁸

Blockchain solutions could create a tamper-proof ledger³⁹ of both the metadata of the copyrighted works in the training data and the AI-generated material and distribution.

In the EU, the AI service providers but also users of an AI system that generates or manipulates image, audio or video content that appreciably resembles existing persons, objects, places or other entities or events and would falsely appear to a person to be authentic or truthful (“deep fake”) shall disclose that the content has been artificially generated or manipulated.⁴⁰

In China, Art. 17 of the Provisions on the Administration of Deep Synthesis Internet Information Services stipulates that AI service providers need to add a conspicuous label on generated content.⁴¹

In sum, the U.S. aims to become a leader in AI innovation using laissez-faire market forces;⁴² the EU would like to become a leader in gAI governance and

³⁶ *Memory and New Controls for ChatGPT*, OPENAI (Feb. 13, 2024), <https://openai.com/blog/memory-and-new-controls-for-chatgpt> [<https://perma.cc/L4RF-5U5H>].

³⁷ *Understanding the Source of What We See and Hear Online*, OPENAI (Aug. 4, 2024), <https://openai.com/index/understanding-the-source-of-what-we-see-and-hear-online/> [<https://perma.cc/2SYW-A9ZN>]. See also Deepa Seetharaman & Matt Barnum, *There’s a Tool to Catch Students Cheating With ChatGPT. Open AI Hasn’t Released It.*, WALL ST. J. (Aug. 4, 2024) (for the text watermarking, the tool allegedly slightly changes how tokens are selected, leaving a pattern).

³⁸ C2PA, *supra* note 33.

³⁹ Shubhangi V. Urkude et al., *Anatomy of Blockchain Implementation in Healthcare*, in BLOCKCHAIN TECHNOLOGY: APPLICATIONS AND CHALLENGES 51, 67 (Sandeep Kumar Panda et al. eds., 2021).

⁴⁰ AI Act, *supra* note 20, pmbls. 60, 134 & art. 50(4); Art. 5.1(a) of the AI Act prohibits AI systems to deploy subliminal techniques beyond a person’s consciousness. Neuwirth argues that the wording should be “below” instead of “beyond,” unless paraliminal [beyond a person’s consciousness] techniques are possible. ROSTAM NEUWIRTH, *THE EU ARTIFICIAL INTELLIGENCE ACT REGULATING SUBLIMINAL AI SYSTEMS* 9, 20 (2023).

⁴¹ Provisions on the Administration of Deep Synthesis Internet Information Services (promulgated by the Cyberspace Admin. of China, Nov. 25, 2022), *translated in China Law Translate*, <https://www.chinalawtranslate.com/en/deep-synthesis/> [<https://perma.cc/4RAY-QMFT>].

⁴² Christiaan Hetzner, *Former Google CEO Eric Schmidt Tells Government to Leave A.I. Regulation to Big Tech*, FORTUNE (May 15, 2023), <https://fortune.com/2023/05/15/former-google-ceo-eric->

wants to repeat the Brussels Effect it achieved with the General Data Protection Regulation (“GDPR”), which is the process of externalizing a unilaterally imposed standard (in online privacy) in the EU, made possible because of its market prominence.⁴³ China is planning to become a leader in both innovation and technology.⁴⁴ In 2017, China already revealed its ambition in a strategic regulatory framework for AI,⁴⁵ which stretches forth until 2030.

D. *Letting Go of the Romantic Lens*

In the U.S., China, and in EU member states, copyright protection is automatic upon creation. However, filing for registration is a precondition for enforcing a copyright infringement lawsuit of a domestic work in U.S. courts.⁴⁶ The Office has applied an unattainable high standard to copyright eligibility. Before introducing this “platonic” standard, the article will give a concise overview of the Romantic view on authorship and its critics, and why it is less useful to critique the decisions of the Office and the Beijing Internet Court.

The extant historical view of the Romantic period (1798–1837) only provides coarse contours of an ideal author in relation to his or her work. The Romantic idea is that works are created out of nothing.⁴⁷ The English poet Samuel Taylor Coleridge distinguished between primary, and secondary imagination and fancy.

schmidt-tells-government-to-leave-regulation-of-ai-to-big-tech-openai-chatgpt-bardai-midjourney/
[<https://perma.cc/69HT-FZPM>].

⁴³ ANU BRADFORD, *THE BRUSSELS EFFECT: HOW THE EUROPEAN UNION RULES THE WORLD* xiv (2020).

⁴⁴ Sjoerd Bakker, *AI Regulations May See a Beijing Effect*, FREEDOM LAB (Aug. 4, 2022), <https://www.freedomlab.com/posts/ai-regulations-may-see-a-beijing-effect> [<https://perma.cc/UEF6-PVRR>].

⁴⁵ Guowu Yuan Guanyu Yinfa Xin Yidai Rengong Zhineng Fazhan Guihua de Tongzhi (国务院关于印发新一代人工智能发展规划的通知) [State Council Notice on the Issuance of the New Generation Artificial Intelligence Development Plan] (promulgated by the State Council of the People’s Republic of China, July 20, 2017), https://www.gov.cn/zhengce/content/2017-07/20/content_5211996.htm [<https://perma.cc/PK93-32PY>].

⁴⁶ 17 U.S.C. § 411(a). Registration also makes statutory damages and attorney’s fees possible. 17 U.S.C. § 412. “In 1988, Congress removed foreign works from § 411(a)’s dominion in order to comply with the Berne Convention for the Protection of Literary and Artistic Works’ bar on copyright formalities for such works.” *Fourth Est. Pub. Benefit Corp. v. Wall-Street.com, LLC*, 139 S. Ct. 881, 891 (2019).

⁴⁷ Plato wrote about a benevolent creator-god (also known as “craftsman” [in Greek: “demiurge”]) of the universe who organizes the cosmos and its contents out of pre-existing chaos, shaping the physical world to reflect the eternal, unchanging world of forms. PLATO, *TIMAEUS* (Sue Asscher & David Widger eds., Benjamin Jowett trans., Project Gutenberg eBook 2021) (ebook), <https://www.gutenberg.org/files/1572/1572-h/1572-h.htm> [<https://perma.cc/PET5-PE54>]. See also Richard D. Mohr, *What Plato’s Demiurge Does*, *SOC’Y FOR ANCIENT GREEK PHIL. NEWSL.*, no. 112, Oct. 1983, at 1, 3.

This tripartite division could be interpreted thus: if God created the cosmos as an act of primary imagination (perceived and understood by people), then creative artists are engaged in a finite but almost divine imitation: secondary imagination (transformation that created the world artistically into something original and expressive), while lesser artists “fancifully” shuffle prefabricated elements around.⁴⁸ Contemporary authors of Coleridge, such as Lord Byron dared to break from the traditional epic form in “Don Juan” and used a satirical and irreverent style, in favor of personal expression.⁴⁹ The German poet Friedrich Schiller in “On Bürger’s Poems,” described the true artist as one whose heart and head, imagination and reason have merged.⁵⁰ The Romantic poets reconceptualized the creative process from imitation to genuine originary authorship.⁵¹

The Romantic view on authorship can be characterised by the emphasis on the solitary individual imagination,⁵² often perceived as reserved for geniuses.⁵³

⁴⁸ SAMUEL TAYLOR COLERIDGE, *BIOGRAPHIA LITERARIA* cvii (Adam Roberts ed., 2014), https://www.sas.upenn.edu/~cavitch/pdf-library/Coleridge_Biographia_Literaria.pdf [<https://perma.cc/R9KV-DY3F>].

⁴⁹ LORD BYRON, *DON JUAN* (David Widger ed., Project Gutenberg eBook 2024) (ebook) (1837), <https://www.gutenberg.org/cache/epub/21700/pg21700-images.html> [<https://perma.cc/8DXZ-HSNP>].

⁵⁰ In Romantic theory the “true” artist was one who had escaped the division of labor that characterized modern life generally, and who united “head and heart, shrewdness and ingenuity, reason and imagination in a harmonious alliance,” thus restoring the “whole person” in us. MARTHA WOODMANSEE, *THE AUTHOR, ART, AND THE MARKET: REREADING THE HISTORY OF AESTHETICS* 72 (1993) (translating Friedrich Schiller, *Über Bürgers Gedichte*, *ALLGEMEINE LITERATUR-ZEITUNG*, Jan. 1791).

⁵¹ “Genuine authorship is *originary*,” “it results not in a variation, an imitation, or an adaptation,” “but in an utterly new, unique—in a word, ‘original’—work” “to be the property of its creator” which merits protection. Peter Jaszi & Martha Woodmanse, *Introduction to THE CONSTRUCTION OF AUTHORSHIP: TEXTUAL APPROPRIATION IN LAW AND LITERATURE* 1, 3 (Martha Woodmanse & Peter Jaszi eds., 1994).

⁵² “The coming into being of the notion of ‘author’ constitutes the privileged moment of *individualization* in the history of ideas, knowledge, literature, philosophy, and the sciences.” Michel Foucault, *What is an Author?*, in *TEXTUAL STRATEGIES: PERSPECTIVES IN POST-STRUCTURALIST CRITICISM* 141, 141 (Josué V. Harari ed., 1979).

⁵³ See Martha Woodmansee, *The Genius and the Copyright: Economic and Legal Conditions of the Emergence of the ‘Author’*, 17 *EIGHTEENTH-CENTURY STUD.* 425 (1984) (illustrating the Romantic ideal that the “author-genius,” inspired by the numinous creates something the world has never seen). “Secular prophet with privileged access to experience the numinous and a unique ability to translate that experience for the masses of less gifted consumers.” Jaszi & Woodmanse, *supra* note 51, at 3. Wordsworth’s “The Prelude”, with its personal and innovative approach to poetry, can exemplify the work of a solitary Romantic genius. WILLIAM WORDSWORTH, *THE PRELUDE OR, GROWTH OF A POET’S MIND; AN AUTOBIOGRAPHICAL POEM* (1850), <https://archive.org/details/prelude00unkngoog/page/n9/mode/2up?view=theater> [<https://perma.cc/TB6X-L2N5>].

Where expression of personal experience and emotion was imperative,⁵⁴ nature was used as a source of inspiration,⁵⁵ and creation was often seen as a mystical process. Commentators, such as Professors Boyle,⁵⁶ Jaszi,⁵⁷ Coombe,⁵⁸ Jaszi and Woodmansee,⁵⁹ and Farley,⁶⁰ have lamented the influence that Romanticism would have had on the development of copyright law. This article will break with this tradition and use a more precise “platonic” perspective on copyright eligibility as the framework to compare the respective points of view of the Office and the Beijing Internet Court regarding AI-generated images.

This author is not the first one who has criticized Romanticism as a useful explanatory framework of copyright law. Professor David Lange asserted that the relevant influence on authorship was misattributed to bourgeois Romanticism, which started three centuries before the eighteenth century.⁶¹ “The fact remains that authorizing speech, historically, has been the work of the state—of any state, whether bourgeois or not.”⁶² Also, Lemley did not think the Romantic conception of authorship was a useful framework to compare it with contemporary copyright

⁵⁴ Samuel Taylor Coleridge’s “The Rime of the Ancient Mariner” reflects the personal emotional landscape and vivid imagination, hallmarks of Romanticism. SAMUEL TAYLOR COLERIDGE, *THE POEMS OF SAMUEL TAYLOR COLDRIDGE* 186 (Ernest Hartley Coleridge ed., 1921), <https://archive.org/details/poemsofsamueltay1921cole/page/186/mode/2up> [<https://perma.cc/R6FY-B2YT>].

⁵⁵ John Keats’ “To Autumn” is an example where the author is inspired by nature and imbues it with symbolic meaning. JOHN KEATS, *THE POEMS OF JOHN KEATS* 205 (Ernest De Selincourt ed., 1905), <https://archive.org/details/poemsofjohnkeats00keat/page/205/mode/2up> [<https://perma.cc/2BZG-XHGF>].

⁵⁶ JAMES BOYLE, *SHAMANS, SOFTWARE, AND SPLEENS: LAW AND THE CONSTRUCTION OF THE INFORMATION SOCIETY* 42 (1996). See also James D.A. Boyle, *The Search for an Author: Shakespeare and the Framers*, 37 AM. U. L. REV. 625, 629 (1988).

⁵⁷ Jaszi realized that Romantic conception of “authorship” with its focus on self-expression, personal experiences, exalted notions of the transcendental, are refracted in contemporary copyright law as “images in fun-house mirrors.” Peter Jaszi, *Toward a Theory of Copyright: The Metamorphoses of “Authorship,”* 40 DUKE L.J. 455, 456 (1991).

⁵⁸ Rosemary J. Coombe, *Challenging Paternity: Histories of Copyright*, 6 YALE J.L. & HUMAN. 397, 398 (1994) (pointing out that seemingly transparent terms such as “author” and “work” and the contexts in which they emerged, were complex, contested before they gained legitimacy).

⁵⁹ Martha Woodmansee, *On the Author Effect: Recovering Collectivity*, 10 CARDOZO ARTS & ENT. L.J. 279, 291–92 (1992). Jaszi & Woodmansee, *supra* note 51, at 3.

⁶⁰ See Christine Haight Farley, *The Lingering Effects of Copyright’s Response to the Invention of Photography*, 65 U. PITT. L. REV. 385, 387 (2004) (the author contends that commentators have criticized courts as unwittingly invoking the standard of the Romantic author).

⁶¹ David Lange, *At Play in the Fields of the Word: Copyright and the Construction of Authorship in the Post-Literate Millennium*, 55 L. & CONTEMP. PROBS. 139, 144 (1992).

⁶² *Id.*

law,⁶³ since it was not able to explain why copyright historically provided a limited, qualified protection;⁶⁴ why the universe of copyright continues to expand;⁶⁵ and why moral rights never really caught on in the U.S.⁶⁶ In addition, copyright doctrines such as work for hire, assignment and transfer are inimical to the notion of Romantic authorship.⁶⁷ Boyle argued that due to Romanticism, authors provide insufficient attribution to earlier sources.⁶⁸ In contrast, Lemley held that “initial creators were given far too much control over the work of transformative improvers.”⁶⁹ Litman too held that the notion that every new work is in some sense based on previous works is a truism “invoked, but not examined.”⁷⁰

According to Lemley, copyright is not so much formed by the influence of Romanticism, but instead because of the opposing force field of public and private interests, creators and improvers, and legislators that are trying to balance these interests.⁷¹

This author does not want to impose a more pronounced fine-grained take on authorship due to Romanticism that historically did not exist. In contemporary copyright law, the individual author is still preferred by courts,⁷² not so much for theoretical as for practical reasons since joint authorship often leads to convoluted situations.⁷³ Moreover, some of the most prominent copyright scholars could not

⁶³ Mark A. Lemley, *Romantic Authorship and the Rhetoric of Property*, 75 TEX. L. REV. 873, 876 (1997) (reviewing JAMES BOYLE, *SHAMANS, SOFTWARE, AND SPLEENS: LAW AND THE CONSTRUCTION OF THE INFORMATION SOCIETY* (1996)).

⁶⁴ *Id.* at 880.

⁶⁵ *Id.* at 886–87 (the protection of copyright has been expanding regarding subject matter, duration, and control of the copyright holder).

⁶⁶ The notion of Romantic authorship has failed to persuade decisionmakers in the U.S. to implement moral rights beyond V.A.R.A. *Id.* at 894.

⁶⁷ *Id.* at 886–87.

⁶⁸ BOYLE, *supra* note 56, at 130.

⁶⁹ Lemley, *supra* note 63, at 884. IP rights holders might not only be interested in the return of their investment, but also to exercise content control over subsequent uses of their works. Mark A. Lemley, *The Economics of Improvement in Intellectual Property Law*, 75 TEX. L. REV. 989, 998 (1997).

⁷⁰ Jessica D. Litman, *The Public Domain*, 39 EMORY L.J. 965, 966 (1990).

⁷¹ Lemley, *supra* note 63, at 888.

⁷² Aman K. Gebru, *Communal Authorship*, 58 U. RICH. L. REV. 337, 348–49 (2024).

⁷³ See, e.g., *Childress v. Taylor*, 945 F.2d 500 (2d Cir. 1991); *Thomson v. Larson*, 147 F.3d 195 (2d Cir. 1998) (demonstrate the difficulty for courts to assess contributions by the parties, and whether there was an intention to merge their contributions into an inseparable whole). Once there is joint authorship, it entitles co-authors to equal undivided interests in the whole work, subject to the obligation to account to

agree on the interpretation of joint authorship. On the one hand, Professors Melville Nimmer and David Nimmer held that there needs to be an intention to create a unitary work and some contribution above a minimum level, but each contribution does not have to be an original work.⁷⁴ On the other hand, Professor Paul Goldstein held that “a contribution to a joint work need not be quantitatively or qualitatively equal to the other contributions, so long as it meets the threshold of protectible expression.”⁷⁵ This has led to a split in the Circuit Courts,⁷⁶ that one day may be resolved by the Supreme Court.

In 1884, forty-seven years after the Romantic era, the Supreme Court decided in *Burrow-Giles*, one of the seminal copyright cases, that a photo camera could be an instrument for creative authors.⁷⁷ In 1903, the Supreme Court in *Bleistein* affirmed aesthetic neutrality: that copyright law should not distinguish between a work of genius and a work of a dunce, between high and low art, between emotional and rational content.⁷⁸ The Berne Convention for the Protection of Literary and

the other joint owner for any profits that are made. 17 U.S.C. § 201(a). This can lead to problems regarding decisions, division of royalties and attribution. Balganesch criticized “the law’s treatment of joint authors as equal co-owners, in which each author’s ownership stake or right is equal to the other’s regardless of the precise contribution made to the work, generates the impulse to deny legal creation altogether because of the disproportionality in contribution.” Balganesch, *supra* note 4, at 67; Balganesch, *supra* note 4, at 68 (“The argument that a contributor deserves to be classified as the legal creator (i.e., author) of the work by virtue of her contributions may thus serve as a claim about the virtue of that contribution—independently of whether the classification might enhance overall utility, either in the individual case or over the long term.”). According to LaFrance who analysed the case law that Congress incorporated by reference in the 1976 Act, joint authors are entitled to ownership shares that reflect their respective contributions to the joint work. Mary LaFrance, *Apportioning Authorship*, 71 KAN. L. REV. 209, 210 (2022).

⁷⁴ 1 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 6.07[A][3][a] (2024) (asserting that Congress “elevate[d] intention as the touchstone, without placing any further parsing as to the copyrightable status of each individual component that the parties intended to contribute to the work as a whole”).

⁷⁵ PAUL GOLDSTEIN & P. BERNT HUGENHOLTZ, INTERNATIONAL COPYRIGHT: PRINCIPLES, LAW, AND PRACTICE 249 (2d ed. 2010). *See also* PAUL GOLDSTEIN, GOLDSTEIN ON COPYRIGHT § 4.2.1.2 (3d ed. 2005 & Supp. 2024).

⁷⁶ The Second Circuit in *Childress*, 945 F.2d at 507, and the Ninth Circuit in *Aalmuhammed v. Lee*, 202 F.3d 1227, 1231 (9th Cir. 2000) follow Goldstein’s interpretation, while the Seventh Circuit has followed Nimmer & Nimmer’s view in *Gaiman v. McFarlane*, 360 F.3d 644, 659 (7th Cir. 2004).

⁷⁷ *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 58 (1884).

⁷⁸ *Bleistein v. Donaldson Lithographing Co.*, 188 U.S. 239, 252 (1903) (Holmes, J.) (“It would be a dangerous undertaking for persons trained only to the law to constitute themselves final judges of the worth of pictorial illustrations, outside of the narrowest and most obvious limits.”).

Artistic Works (“Berne Convention”) was signed in 1886,⁷⁹ and the Agreement on Trade-Related Aspects of Intellectual Property Rights (“TRIPS Agreement”),⁸⁰ which incorporated important parts of the Berne Convention,⁸¹ was signed in 1994. Neither treaty provides any definition of author, work, or the exact scope of authorship.

E. “platonic” Conception of Copyright Eligibility

This author is the first who has chosen for a constructed “platonic” view as a more useful theoretical framework to juxtapose the respective U.S. and Chinese allegiances and deviations of this ideal regarding gAI and copyright eligibility, since this “platonic” conception of copyright eligibility did not exist before (except in the platonic sense of course). The historical Plato saw art as mimesis, imitation of reality,⁸² and therefore this author does not want to present him anachronistically. The contemporary view of “platonism” applied on the Theory of Forms is “the view that there exist such things as abstract objects—where an abstract object is an object that does not exist in space or time and which is therefore entirely non-physical and non-mental.”⁸³

The Theory of Forms is one of Plato’s most important philosophical concepts he articulated in particular in “The Republic,” Book VII,⁸⁴ Plato described a dialogue between Socrates and Glaucon. Here Plato let Socrates explain to Glaucon the eminent “allegory of the cave.”⁸⁵ With this allegory Plato posits that the

⁷⁹ Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1886, amended on Sept. 28, 1979, S. TREATY DOC. NO. 99-27 [hereinafter Berne Convention].

⁸⁰ Agreement on Trade Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299, 33 I.L.M. 1197 (1994) [hereinafter TRIPS Agreement].

⁸¹ *Id.* art. 9(1) (Members shall comply with Arts. 1 through 21 of the Berne Convention (1971) and the Appendix thereto).

⁸² Giancarlo F. Frosio, *Reimagining Digital Copyright Through the Power of Imitation: Lessons from Confucius and Plato*, 5 PEKING UNIV. TRANSNAT’L L. REV. 55, 56 (2018).

⁸³ Mark Balaguer, *Platonism in Metaphysics*, in STANFORD ENCYCLOPEDIA OF PHILOSOPHY (Edward N. Zalta ed., 2016), <https://plato.stanford.edu/archives/spr2016/entries/platonism/> [<https://perma.cc/YBY5-WJNH>].

⁸⁴ “[T]he truth would be literally nothing but the shadows of the images.” PLATO, THE REPUBLIC (Sue Asscher & David Widger eds., Benjamin Jowett trans., Project Gutenberg eBook 2021) (ebook), <https://www.gutenberg.org/files/1497/1497-h/1497-h.htm> [<https://perma.cc/KYP6-MAT8>].

⁸⁵ The “allegory of the cave,” describes prisoners, chained to their feet and necks so they cannot look around, in an underground den all their lives. The wall that they faced showed some shadows of things that

material world humans perceive is not reality but merely a shadow or copy of reality. According to Plato, the real world is the world of Forms, eternal, unchangeable, and the true essence of reality.⁸⁶ According to Plato, one cannot learn or create something new. Instead, one can only recollect (*anamnesis*) what the soul already knew; namely the world of Forms.⁸⁷

Professor Jane Ginsburg referred to what she called the “Platonic fact precept,” which are precepts, facts and theories that may have been “suspended in the ether, or lurking in the cave, but they are ‘there’—true, unchangeable, and awaiting discovery by the perceptive or the blessed.”⁸⁸ Fundamentally, the “platonic” view of creation as “re-membering” existing ideal forms,⁸⁹ is a better match with AI systems that generate products based on combining aspects of pre-existing copyrighted works in the training data: creation out of something (*creatio ex materia*) instead of creation out of nothing (*creatio ex nihilo*). This could comport with the prerequisite of originality: independently (remembered) created, with a modicum of creativity.⁹⁰

Observing the decisions of the Office, which rejected the copyrightability of four AI-generated images, and the Beijing Internet Court, which accepted an AI-generated image, it becomes clear that they both applied a “platonic” view on copyright eligibility. Both jurisdictions used the same high standard with opposite effect.⁹¹ However, this article is not criticizing the outcome of the courts, but their reasoning. From a policy perspective, it is entirely reasonable to avoid imposing

were passing in front of a fire behind and above them, i.e., the real world. They see forms in these shadows and describe them as real, instead of the things that cause the shadow. *Id.*

⁸⁶ “That the knowledge at which geometry aims is knowledge of the eternal, and not of aught perishing and transient.” *Id.*

⁸⁷ “Whereas, our argument shows that the power and capacity of learning exists in the soul already; and that just as the eye was unable to turn from darkness to light without the whole body, so too the instrument of knowledge can only by the movement of the whole soul be turned from the world of becoming into that of being, and learn by degrees to endure the sight of being, and of the brightest and best of being, or in other words, of the good.” *Id.*

⁸⁸ Jane Ginsburg, *Sabotaging and Reconstructing History: A Comment on the Scope of Copyright Protection in Works of History after Hoehling v. Universal City Studios*, 29 J. COPYRIGHT SOC’Y U.S.A. 647, 658 (1982).

⁸⁹ Balaguer, *supra* note 83.

⁹⁰ *Feist Publ’ns, Inc. v. Rural Tele. Serv. Co.*, 499 U.S. 340, 340 (1991).

⁹¹ Professor Lee points out that the “bare minimum” copyright standard, selection and arrangement of uncopyrightable elements, is attainable for users of gAI. Lee, *supra* note 7, at 41.

a single copyright standard on both works created by humans and those products generated by AI, opting instead for two distinct standards. This approach would provide preferential treatment to human authors, recognizing their unique creative contributions to human culture.⁹²

F. *Copyright Axioms and Rationales*

What are the contemporary copyright axioms that one must consider? Commentators traditionally categorized the rationale behind copyright protection in copyright nations (often common law countries, including the U.S.) as grounded in utilitarianism, while authors' right nations (often civil law countries, including China and most EU member states) as stemming from natural law.⁹³ However, this division is more nuanced,⁹⁴ and especially since the ongoing harmonization projects of the Berne Convention and TRIPS Agreement, one can observe quite some convergence.⁹⁵ One can argue that the emphasis of the justification of copyright protection in countries with civil law systems was based more on natural law:⁹⁶ an inalienable link between author and work, and an emphasis on the self-determination of the author. The concomitant moral rights include the *droit de divulgation* (right of disclosure), which provides the author the right to decide whether to make the work known to the public or not, and if so, to what extent

⁹² Friedmann, *supra* note 10, at 1.

⁹³ See GOLDSTEIN & HUGENHOLTZ, *supra* note 75, at 5. See also Peter Burger, *The Berne Convention: Its History and Its Key Role in the Future*, 3 J.L. & TECH. 1, 15 (1988) (discussing the “divisive philosophical differences and necessary compromises between natural right countries such as France, which wanted universal protection, and Anglo-American copyright countries such as Great Britain, which preferred to leave most matters to the province of national law”). Benjamin Davidson, *Lost in Translation: Distinguishing between French and Anglo-American Natural Rights in Literary Property, and How Dastar Proves that the Difference Still Matters*, 38 CORNELL INT’L L.J. 583, 620 (2005) (stating that since the Statute of Anne, Anglo-American legislators have been replacing natural law copyright with statutory law, “wherein the author’s incentive to create is balanced against the public’s need for access to the work”).

⁹⁴ GOLDSTEIN & HUGENHOLTZ, *supra* note 75 (pointing out that a natural rights strain arrived in author’s rights countries only in the late nineteenth century, while the utilitarian ideology dominated during the French revolutionary copyright laws; and the Anglo-American copyright history has been imbued with the realization “that the author has a natural right to profit from his creativity and labor”).

⁹⁵ *Id.*

⁹⁶ Borghi points out Kant, Hegel and Fichte as the theorists relevant for copyright doctrine on the continent of Europe, while in the UK, Locke’s theory on labor has been applied to copyright doctrine. Borghi, *infra* note 350, at 9. See also Alfred C. Yen, *The Interdisciplinary Future of Copyright Theory*, in *THE CONSTRUCTION OF AUTHORSHIP: TEXTUAL APPROPRIATION IN LAW AND LITERATURE* 159, 161–62 (Martha Woodmansee & Peter Jaszi eds., 2d ed. 1994).

he wants to divulge his work, and creates a market for licensing. In contrast, the common law countries, including the U.S., justify copyright in a utilitarian way: balancing the private interests of authors to temporarily protect the work and public interests in accessing the work and building upon it. The U.S. for example has a much less pronounced moral rights protection regime, where the second Fair Use factor takes into account whether a work was published or not; and the fourth Fair Use factor takes the possibility of licensing into account.⁹⁷

The “incentive justification of copyright” is enshrined in the Copyright Clause of the U.S. Constitution.⁹⁸ Human authors must be incentivized to create expressive works by rewarding them exclusive rights temporarily.⁹⁹ The goal is to create a “giant warehouse of authorship,”¹⁰⁰ where the focus is, ineluctable due to *Bleistein*’s aesthetic neutrality requirement,¹⁰¹ on quantity, instead of quality.

However, certain axioms of copyright law are universal: that the actual creator of a work is the initial author and owner, except in case of a work for hire.¹⁰² The

⁹⁷ “Just as licensing of derivatives is an important economic incentive to the creation of originals, so too will the right not to license derivatives sometimes act as an incentive to the creation of originals.” *See generally* *Salinger v. Colting*, 641 F. Supp. 2d 250, 268 (S.D.N.Y. 2009).

⁹⁸ U.S. CONST. art. I, § 8, cl. 8.

⁹⁹ *Id.*

¹⁰⁰ Jessica Litman, *Lawful Personal Use*, 85 TEX. L. REV. 1871, 1880 (2007) (pointing out that the giant warehouse of authorship is preoccupied with creation and not with consumption).

¹⁰¹ *Bleistein v. Donaldson Lithographing Co.*, 188 U.S. 239, 251 (1903) (Holmes, J.).

¹⁰² 17 U.S.C. § 201(a), (b). *Cf.* Zhuzuoquan Fa (著作权法) [Copyright Law] (promulgated by the Standing Comm. Nat’l People’s Cong., Sept. 7, 1990, rev’d Nov. 11, 2020, effective June 1, 2021) art. 11, 2021 STANDING COMM. NAT’L PEOPLE’S CONG. GAZ. 348, *translated in* WILMap, <https://wilmap.stanford.edu/node/31101> [<https://perma.cc/7MZB-ZTWR>] [hereinafter China Copyright Law].

economic rights of a copyright are limited,¹⁰³ and after the protection duration expires,¹⁰⁴ the work ascends to the public domain.¹⁰⁵

Works are eligible for copyright protection if they are original expressions.¹⁰⁶ The Dutch authors' rights doctrine that only products that have "own, original character" and "bear the personal stamp of the author" can be protected by copyright,¹⁰⁷ is closer to the "platonic" ideal of a copyrighted work than the Court of Justice of the European Union ("CJEU")'s standard that the work should be the "author's own intellectual creation reflecting his personality."¹⁰⁸ After CJEU's *Eva-Maria Painer*,¹⁰⁹ the member states of the EU, including the Netherlands, must follow this less strict standard.

Contemporary authors' works are arguably influenced by nature and nurture, including the works of other authors, since "we are standing on shoulders of giants,"¹¹⁰ thus, the "independently created" leg of originality is fictitious too.¹¹¹

¹⁰³ In the U.S. the term of copyright duration is 70 years after the death of the author for works created on or after Jan. 1, 1978. 17 U.S.C. § 302(a). In the case of an anonymous work, a pseudonymous work, or a work made for hire, the copyright endures for a term of 95 years from the year of its first publication, or a term of 120 years from the year of its creation, whichever expires first. 17 U.S.C. § 302(a)–(c). *Cf.* China Copyright Law, art. 23 (granting a protection period of 50 years after the death of the author, or in case of work for hire, the protection period of the publication right is 50 years).

¹⁰⁴ 17 U.S.C. § 301(a) (preempting state common law copyright for works within the subject matter of copyright as of Jan. 1, 1978, while preserving perpetual protection for unpublished works created before this date); Copyright Act of 1909, Pub. L. No. 60-349, ch. 320, § 2, 35 Stat. 1075, 1076 (1909) (providing perpetual common law protection for unpublished works); H.R. Rep. No. 94-1476, at 130 (1976).

¹⁰⁵ "Title 17, United States Code, as amended by this Act, does not provide copyright protection for any work that is in the public domain in the United States." Berne Convention Implementation Act of 1988, Pub. L. No. 100-568, § 12, 102 Stat. 2853 (1988). One could see the public domain as a kind of "platonic" heaven where the expressive works "return" after the expiration of the copyright. *See generally* Andrew Gilden, *Life, Death, Public Domain*, 22 GEO. MASON L. REV. 13, 39 (2014).

¹⁰⁶ 17 U.S.C. § 102(a) ("original work of authorship fixed in any tangible medium of expression"). *Cf.* China Copyright Law, art. 3.

¹⁰⁷ "[E]igen, oorspronkelijk karakter en persoonlijk stempel van de maker." HR 30 mei 2008, NJ 2008, 556 m.nt. EJD (Endstra/Uitgeverij Nieuw Amsterdam B.V.) (Neth.), <https://uitspraken.rechtspraak.nl/details?id=ECLI:NL:HR:2008:BC2153> [<https://perma.cc/ZPQ2-RHJ4>].

¹⁰⁸ Case C-145/10, *Eva-Maria Painer v Standard Verlags GmbH and Others*, ECLI:EU:C:2011:798, ¶ 15 (Dec. 1, 2011).

¹⁰⁹ *Id.*

¹¹⁰ This winged statement is attributed to Sir Isaac Newton, who used it in a letter to Robert Hooke in 1675. CHAOMEI CHEN, *MAPPING SCIENTIFIC FRONTIERS: THE QUEST FOR KNOWLEDGE VISUALIZATION* 135–36 (2003).

¹¹¹ Perhaps the exceptions are feral children raised by animals that start doodling for the first time.

In the same vein, one can argue that products generated by AI are not created independently, but generating parts of the evaporated copyrighted works in the training data.¹¹²

Just as the Berne Convention and TRIPS Agreement, both remain silent on the terms “author” and “work,” the phrase “original works of authorship” was also “purposely left undefined” by Congress so that the courts could “incorporate without change the standard of originality established by the courts under the . . . [1909] copyright statute.”¹¹³ According to the Office in “A Recent Entrance to Paradise,” the term is “very broad,” but its scope is not unlimited.¹¹⁴ In “Zarya of the Dawn” and “SURYAST,” the Office refers to the originality standard of *Feist*.¹¹⁵ The Beijing Internet Court held that “[g]enerally, ‘originality’ requires that the work be independently created by the author and embody their unique personal expression.”¹¹⁶

Walter Benjamin sung the swan song of unity of time and place of works of art.¹¹⁷ Mechanical reproduction caused the aura of works to disintegrate since you can, for example, enjoy the Mona Lisa not just in the Louvre, but online as well, and via replicas of the painting at many places and merchandise.

G. *Cutting the Umbilical Cord Between Author and Work*

With the emergence of gAI, it seems that the philosophical underpinnings provided by Poststructuralists and Deconstructionists, such as Jacques Derrida, Michel Foucault, and Roland Barthes, foreshadowed the inherent challenges

¹¹² Professor Sag euphemistically referred to copyrighted works as “grist for the mill” in relation to what he called “copy-reliant technologies,” such as internet search engines, plagiarism software; since they are used in a non-expressive way. Matthew Sag, *Copyright and Copy-Reliant Technology*, 103 Nw. U. L. REV. 1607, 1608, 1622, 1624–31 (2009).

¹¹³ H.R. REP. NO. 94-1476, at 51 (1976).

¹¹⁴ “Entrance,” *infra* note 129, at 52.

¹¹⁵ *Feist Publ’ns, Inc. v. Rural Tele. Serv. Co.*, 499 U.S. 340, 346 (1991).

¹¹⁶ “Spring,” *infra* note 217, at 13–14. Interestingly, the Court attached interest in the views and likes of numerous users on “Little Red book,” “which shows that the picture can be identified as work of originality by the standards of the general public.” *Id.* at 10.

¹¹⁷ Benjamin described what was lost as the “aura” of the work: “One might subsume the eliminated element in the term ‘aura’ and go on to say: that which withers in the age of mechanical reproduction is the aura of the work of art.” WALTER BENJAMIN, *The Work of Art in the Age of Mechanical*, in ILLUMINATIONS 217, 221 (Hannah Arendt ed., Harry Zohn trans., Schocken Books 1969), <https://web.mit.edu/allanmc/www/benjamin.pdf> [<https://perma.cc/HN5S-B8ZZ>].

one can encounter within the ambit of LLMs. Derrida, in works like “Of Grammatology,” critiqued the notion of fixed meanings through his concept of *différance*, arguing that meanings are deferred and differ in context, which implies a fluidity and instability in language that LLMs struggle to encapsulate.¹¹⁸ Roland Barthes, especially in “The Death of the Author,”¹¹⁹ posited that the author’s intended meaning is not the ultimate source of a text’s meaning, emphasizing the role of the reader in creating meaning, interpreting, and criticizing the text. Foucault in “What Is an Author?” held that the author is a function that each reader is creating and does not coincide with the person who wrote the text: the author is a social construct.¹²⁰ “The author is therefore the ideological figure by which one marks the manner in which we fear the proliferation of meaning.”¹²¹

During the unsupervised training of LLMs, the intricate and costly process tends to sever texts from their semantic roots—what might be termed the “decapitation” of semantics from the often-copyrighted works, arguably cutting the umbilical cords of authors and their works in the process. The aspects of a work (text, audio, images, audiovisual, or computer code) are broken up in tokens that are assigned a weight. The relation between these tokens is inferred by a process of unsupervised learning: optimizing, often using variants of gradient descent, to iteratively adjust the weights to minimize the loss function.¹²² After this modern form of “Gematria,”¹²³ patterns and principles of the works are abstracted and can be generalized and applied to new unseen situations. This detachment from original

¹¹⁸ JACQUES DERRIDA, *OF GRAMMATOLOGY* xliii (Gayatra Chakravorty Spivak trans., 1997).

¹¹⁹ ROLAND BARTHES, *The Death of the Author*, in *IMAGE - MUSIC - TEXT* 142, 147–48 (Stephen Heath ed. & trans., 1977).

¹²⁰ TIM SMITH-LAING, *AN ANALYSIS OF MICHEL FOUCAULT’S WHAT IS AN AUTHOR?* 11 (2018).

¹²¹ Michel Foucault, *What Is an Author?*, in *TEXTUAL STRATEGIES: PERSPECTIVES IN POST-STRUCTURALIST CRITICISM* 141, 159 (Josué V. Harari ed., 1979).

¹²² “The most common method for parameter learning in neural networks is the steepest-descent method, in which the gradient of the loss function is used to make parameter updates.” CHARU C. AGGARWAL, *NEURAL NETWORKS AND DEEP LEARNING* 134 (2018). This open source book provides primers on training data, numerical optimization including gradient optimizations. See IAN GOODFELLOW, YOSHUA BENGIO & AARON COURVILLE, *DEEP LEARNING* 80–84 (2016), <https://www.deeplearningbook.org/contents/numerical.html> [https://perma.cc/94HH-KNDW].

¹²³ “Gematria” is assigning a numerical value to a name, word or phrase. It is a method of exegesis used by medieval Kabbalists to derive mystical insights into sacred writings or obtain new interpretations of the texts. DAVID A. COOPER, *GOD IS A VERB: KABBALAH AND THE PRACTICE OF MYSTICAL JUDAISM* 52 (1997).

contexts and the disregard for the interpretive role of human consciousness reveal the limitations of LLMs.

This article is divided in three Parts:

After the Introduction, Part I provides a terse overview of “A Recent Entrance to Paradise,” “Zarya of the Dawn,” “Théâtre D’opéra Spatial,” and “SURYAST,” four decisions by the Office to reject AI-generated images.

Part II gives a concise analysis of “Spring Breeze Brings Tenderness,” an AI-generated image that the Beijing Internet Court held eligible for copyright protection. This case did not fall out of the sky. Therefore, four precursors to the case will be briefly highlighted.

Based on the motivations given in these cases, Part III explores eligibility of copyright through the “platonic” lens and provides a possible framework to try to make the chosen motivations of the Office and the Beijing Internet Court insightful in the face of their respective decisions on AI-generated images. This Part will then focus on the erroneous assumption of the Office that a series of instructions cannot lead to expressive works; and the relevant time dimension of images generated by AI.

Finally, the Conclusion maintains that the Office is rejecting, and the Beijing Internet Court is accepting AI-generated images, both based on false premises. This author will contend that AI-generated images should be rejected from copyright registration and protection, however for the right reason, namely policy considerations to give preferential treatment to human authors. In addition, this Part provides some recommendations that can contribute to prevent or at least slow down the dilution of human culture.

I

COPYRIGHT OFFICE IMPOSES “PLATONIC” STANDARD ON AI-GENERATED IMAGES

The Office takes pride in the experience it has gained to distinguish between copyrightable and non-copyrightable works since 1870.¹²⁴ However,

¹²⁴ Several courts have deferred to the expertise of the U.S. Copyright Office. *See, e.g.*, *Norris Indus., Inc. v. Int’l Tel. & Tel. Corp.*, 696 F.2d 918, 922 (11th Cir. 1983); *Varsity Brands, Inc. v. Star Athletica, LLC*, 799 F.3d 468, 480 (6th Cir. 2015).

gAI brings unprecedented new challenges.¹²⁵ The Office has done extensive consultations¹²⁶ and requested the public to provide comments. On March 16, 2023, it issued the Copyright Registration Guidance for Works Containing AI-Generated Materials.¹²⁷ By December 6, 2023, the Office received approximately 10,370 comments. The irony is that the Office will probably have to use AI to analyze this massive number of comments.

The position of the Office is to exclude AI-generated material that is more than *de minimis* from any application.¹²⁸ The Office's denial to register Stephen Thaler's "A Recent Entrance to Paradise" ("Entrance")¹²⁹ was affirmed by the District Court for the District of Columbia¹³⁰ (see Part I.A); and the Review Board denied the registrations of Kristina Kashtanova's "Zarya of the Dawn" ("Zarya")¹³¹ (see Part I.B); Jason Allen's "Théâtre D'opéra Spatial" ("Spatial")¹³² (see Part I.C); and Ankit Sahni's "SURYAST"¹³³ (see Part I.D) AI-generated images.

A. "A Recent Entrance to Paradise"

Stephen Thaler invented the "Creativity Machine," a gAI that allegedly autonomously generated the image (described by the Office as a "two-dimensional artwork") entitled "A Recent Entrance to Paradise."¹³⁴ Mr. Thaler, as the owner of the "Creativity Machine," asked the Office to register the image as a work-made-

¹²⁵ Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence, 37 C.F.R. § 202 (2023), https://www.copyright.gov/ai/ai_policy_guidance.pdf [<https://perma.cc/6ADC-436N>].

¹²⁶ *Artificial Intelligence Study*, U.S. COPYRIGHT OFF., <https://www.copyright.gov/policy/artificial-intelligence/> [<https://perma.cc/897F-9ETZ>] (last visited Nov. 29, 2024).

¹²⁷ 37 C.F.R. § 202 (2023).

¹²⁸ *Id.*

¹²⁹ Letter from U.S. Copyright Off. Rev. Bd. to Ryan Abbott, Brown, Neri, Smith & Khan, LLP (Feb. 14, 2022), <https://www.copyright.gov/rulings-filings/review-board/docs/a-recent-entrance-to-paradise.pdf> [<https://perma.cc/857Y-F4HN>] [hereinafter "Entrance"].

¹³⁰ Thaler v. Perlmutter, 687 F. Supp. 3d 140, 146 (D.D.C. 2023).

¹³¹ Letter from U.S. Copyright Off. to Van Lindberg, Taylor English Duma LLP (Feb. 21, 2023), <https://www.copyright.gov/docs/zarya-of-the-dawn.pdf> [<https://perma.cc/SD2G-2JSK>] [hereinafter "Zarya"].

¹³² Letter from U.S. Copyright Off. Rev. Bd. to Tamara Pester, Tamara S. Pester, LLC (Sept. 5, 2023), <https://www.copyright.gov/rulings-filings/review-board/docs/Theatre-Dopera-Spatial.pdf> [<https://perma.cc/Y3Y9-LSEV>] [hereinafter "Spatial"].

¹³³ Letter from U.S. Copyright Off. Rev. Bd. to Alex P. Garens, Day Pitney, LLP (Dec. 11, 2023), <https://copyright.gov/rulings-filings/review-board/docs/SURYAST.pdf> [<https://perma.cc/9QBD-ABR4>] [hereinafter "SURYAST"].

¹³⁴ "Entrance," *supra* note 129, at 1–2.

for-hire,¹³⁵ to no avail. Mr. Thaler held that this rejection was unconstitutional and not supported by case law.¹³⁶ However, copyright law only protects “the fruits of intellectual labor,”¹³⁷ that “are founded in the creative powers of the [human] mind.”¹³⁸ The Office will not register works “produced by a machine or mere mechanical process” that operates “without any creative input or intervention from an author” because, under the statute, “a work must be created by a human being.”¹³⁹ The Office also referred to the description in *Burrow-Giles*¹⁴⁰ of copyright as “the exclusive right of a man to the production of his own genius or intellect.”¹⁴¹ The District Court for the District of Columbia affirmed this reasoning.¹⁴²

Mr. Thaler argued that the Copyright Office “is currently relying upon non-binding judicial opinions from the Gilded Age to answer the question of whether [computer-generated works] can be protected.”¹⁴³ The Gilded Age is a term coined by Mark Twain, which refers roughly to the period from 1865 to 1904, between the Reconstruction and the Progressive Era,¹⁴⁴ to criticize, in Thaler’s eyes, the

¹³⁵ *Id.*

¹³⁶ *Id.* at 3.

¹³⁷ The Office invoked the labor theory of John Locke. JOHN LOCKE, *TWO TREATISES ON CIVIL GOVERNMENT* 204 (George Routledge & Sons 1884). See generally Alexander D. Northover, ‘*Enough and as Good*’ in the Intellectual Commons: A Lockean Theory of Copyright and the Merger Doctrine, 65 *EMORY L.J.* 1363 (2016) (applying the Lockean proviso on merger theory).

¹³⁸ *COMPENDIUM* (Third), *supra* note 8, § 306 (quoting Trade-Mark Cases, 100 U.S. 82, 94 (1879)); see also *COMPENDIUM* (Third) § 313.2.

¹³⁹ “Entrance,” *supra* note 129, at 3. Gervais comes to the same conclusion: “that machines that make decisions and cross the autonomy threshold produce public domain material to which no copyright rights attach.” Daniel Gervais, *The Machine as Author*, 105 *IOWA L. REV.* 2053, 2099 (2020). Gervais holds that copyright is meant to promote human creativity, that machines cannot make creative choices and are therefore devoid of originality. *Id.* at 2106.

¹⁴⁰ “Entrance,” *supra* note 129, at 4.

¹⁴¹ *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 58 (1884). Farley, *supra* note 60, at 389 n.10 points to the anecdote that Oscar Wilde was asked by the U.S. Customs whether he had anything to declare, in which he replied: “I have nothing to declare but my genius.”

¹⁴² Judge Beryl A. Howell held that “[h]uman authorship is a bedrock requirement of copyright.” District Court of the District of Columbia affirmed that the Copyright Office appropriately refused to grant copyright registration for a work produced without any human creative input. *Thaler v. Perlmutter*, 687 F. Supp. 3d 140 (D.D.C. 2023).

¹⁴³ “Entrance,” *supra* note 129, at 2.

¹⁴⁴ MARK TWAIN & CHARLES DUDLEY WARNER, *THE GILDED AGE: A TALE OF TODAY IS A NOVEL* (1873) (eBook), <https://www.gutenberg.org/files/3178/old/orig3178-h/main.htm#contents> [<https://perma.cc/CH5H-ZWL7>].

outmoded policy to reject autonomously generated products. Professor Jyh-An Lee makes clear that the U.K. approach to provide protection of the computer-generated work to “the person by whom the arrangements necessary for the creation of the work are undertaken”¹⁴⁵ is problematic, since such work can have many fathers or mothers or can be generated by a derivative computer model in case of open-source software.¹⁴⁶ The programmers, data providers, trainers, and machine operators may all play indispensable roles in the creation of AI-generated works.¹⁴⁷

B. “*Zarya of the Dawn*”

Kristina Kashtanova registered her comic book/graphic novel entitled “*Zarya of the Dawn*” at the Office.¹⁴⁸ On social media she made clear she had used Midjourney, a text-to-image gAI, to generate the images of the album.¹⁴⁹ When the Office learned about this,¹⁵⁰ it replaced the original certificate registration by disclaiming the images of the generated content, but registering the text written by Ms. Kashtanova, since she is “the author of the Work’s text as well as the selection, coordination, and arrangement of the Work’s written and visual elements.”¹⁵¹

The Office described how Midjourney generates images after the text commands “prompts” by the users, and points to the possibility to influence the outcome by adding a URL, changing the aspect ratio, and giving functional directions.¹⁵² The gAI will generate four images, with the possibility to provide a higher resolution or a variety of four new images if the user chooses to select one of the four previous images.¹⁵³

The Office held, based on Midjourney’s information, that it “does not understand grammar, sentence structure, or words like humans,” it instead converts

¹⁴⁵ Copyright, Designs and Patents Act 1988, c. 48, § 9 (UK).

¹⁴⁶ Jyh-An Lee, *Computer-Generated Works Under the CDPA 1988*, in *ARTIFICIAL INTELLIGENCE AND INTELLECTUAL PROPERTY* 177, 194 (Jyh-An Lee, Reto M. Hilty & Kung-Chung Liu eds., 2021).

¹⁴⁷ *Id.*

¹⁴⁸ “*Zarya*,” *supra* note 131.

¹⁴⁹ *Id.* at 2.

¹⁵⁰ “*Zarya*,” *supra* note 131, at 5 n.8. The Office makes clear that it normally does not verify facts of any statements made in an application, COMPENDIUM (Third), *supra* note 8, § 602.4(C), but it can take notice of facts known to the Office or the general public that demonstrate inaccurate or incomplete information, and re-evaluate the application accordingly.

¹⁵¹ *Id.* at 1, 4–5.

¹⁵² *Id.* at 7.

¹⁵³ *Id.*

words and phrases “into smaller pieces, called tokens, that can be compared to its training data and then used to generate an image.”¹⁵⁴ Subsequently, Midjourney commences with “a field of visual noise, like television static, . . . to generate the initial image grids,” followed by an algorithm that refines that static into human-recognizable images.¹⁵⁵ The Office argued that the process to generate an image through the tool is not the same process as that of a human artist, writer, or photographer.¹⁵⁶ Ms. Kashtanova contended that she “guided” the structure and content of each image.¹⁵⁷ Nevertheless, the Office qualified the process and the traditional elements of authorship in the images as not an original work of authorship protectable by copyright.¹⁵⁸ Ms. Kashtanova held that the prompt was the core creative input for the image.¹⁵⁹ She did not claim she created any visual material herself—she used passive voice in describing the final image as “created, developed, refined, and relocated,” and as containing elements from intermediate images “brought together into a cohesive whole.”¹⁶⁰ She obtained the final image as the result of “a process of trial-and-error,” in which she provided “hundreds or thousands of descriptive prompts” to Midjourney until the “hundreds of iterations [created] as perfect a rendition of her vision as possible.”¹⁶¹

Ms. Kashtanova did not have control over the tool via textual prompts, the Office held, but instead Midjourney generated images in an unpredictable way.¹⁶² The distance between her directions and the unpredictable outcome was too big, according to the Office.¹⁶³ It contended she did not act as “the inventive or master mind” of the images,¹⁶⁴ as required in *Burrow-Giles*.¹⁶⁵ The Office attached importance to the difference between Midjourney and computer-based

¹⁵⁴ *Id.*

¹⁵⁵ *Id.* at 7–8.

¹⁵⁶ *Id.* at 8.

¹⁵⁷ *Id.*

¹⁵⁸ *Id.* (“[T]he Office will not register works produced by a machine or mere mechanical process that operates randomly or automatically without any creative input or intervention from a human author.”) (citing COMPENDIUM (Third), *supra* note 8, § 313.2).

¹⁵⁹ “Zarya,” *supra* note 131, at 8.

¹⁶⁰ *Id.*

¹⁶¹ *Id.* at 8.

¹⁶² *Id.* at 9.

¹⁶³ *Id.*

¹⁶⁴ *Id.*

¹⁶⁵ *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 61 (1884).

tools such as Adobe Photoshop.¹⁶⁶ While the results of the first were considered unpredictable in the eyes of the Office, the latter was merely used to modify the outcome in a predictable way.¹⁶⁷ The Office could not definitively conclude that Ms. Kashtanova's editing alterations with Adobe Photoshop were sufficiently creative to be entitled to copyright, since they were allegedly "too minor and imperceptible."¹⁶⁸ The Office made clear that if there were substantive edits, this could lead to copyrightability.¹⁶⁹ The Office described the prompts function closer to suggestions than orders, "similar to the situation of a client who hires an artist to create an image with general directions as to its contents."¹⁷⁰ The Office wrote: "Because Midjourney starts with randomly generated noise that evolves into a final image, there is no guarantee that a particular prompt will generate any particular visual output."¹⁷¹ The Office did not doubt Ms. Kashtanova's efforts,¹⁷² but "sweat of the brow" is not protected as *Feist* affirmed.¹⁷³

After this decision, the Office issued a guide for works containing AI-generated content, which needs to be declared in the application for copyright registration.¹⁷⁴

C. "Théâtre D'opéra Spatial"

Jason Allen used a series of prompts in Midjourney to produce the two-dimensional artwork entitled "Théâtre D'opéra Spatial" ("Spatial"),¹⁷⁵ for which he won the 2022 Colorado State Fair's annual fine art competition.¹⁷⁶ When the Office learned about this, it asked Mr. Allen to provide more information about the process of the production of the image. Mr. Allen stated that he "input numerous

¹⁶⁶ "Zarya," *supra* note 131, at 9.

¹⁶⁷ *Id.* ("[W]hen artists use editing or other assistive tools, they select what visual material to modify, choose which tools to use and what changes to make, and take specific steps to control the final image such that it amounts to the artist's own original mental conception, to which [they] gave visible form.").

¹⁶⁸ *Id.* at 10–11.

¹⁶⁹ *Id.* at 12.

¹⁷⁰ *Id.* at 10.

¹⁷¹ *Id.* at 9–10.

¹⁷² *Id.* at 10.

¹⁷³ *Feist Publ'ns, Inc. v. Rural Tele. Serv. Co.*, 499 U.S. 340, 352–53 (1991).

¹⁷⁴ 37 C.F.R. § 202 (2023).

¹⁷⁵ "Spatial," *supra* note 132.

¹⁷⁶ Sarah Kuta, *Art Made with Artificial Intelligence Wins at State Fair*, SMITHSONIAN MAG. (Sept. 6, 2022), <https://www.smithsonianmag.com/smart-news/artificial-intelligence-art-wins-colorado-state-fair-180980703/> [https://perma.cc/2FZF-3Y45].

revisions and text prompts at least 624 times to arrive at the initial version of the image.”¹⁷⁷ After that, he used Adobe Photoshop to remove flaws and create new visual content,¹⁷⁸ and subsequently used Gigapixel AI to “upscale” the image,¹⁷⁹ increasing its resolution and size.¹⁸⁰ The Office requested that Mr. Allen disclaimed the product generated by Midjourney, which he refused. The Office held that Mr. Allen’s alleged authorship and Midjourney’s generated product was inextricably merged into inseparable contributions.¹⁸¹ According to the Office “the image generated by Midjourney that formed the initial basis for th[e] Work is not an original work of authorship protected by copyright.”¹⁸²

In contrast to “Zarya,”¹⁸³ in the case of “Spatial,” the Office accepted Mr. Allen’s claim that human authored “visual edits” made with Adobe Photoshop contained sufficient original authorship to be registered. The Board of Revision backtracked this a bit, by stating that it did not have sufficient information to determine whether the visual edits were sufficient to be registered on its own.¹⁸⁴ However, Mr. Allen was still unwilling to disclaim the features generated by Midjourney and Gigapixel AI, respectively. The Board of Revision found that the image contains more than a *de minimis* amount of AI-generated content, which must be disclaimed in an application for registration, and thus it rejected to register the image.¹⁸⁵ According to Mr. Allen, the underlying AI-generated image was just the raw material that he transformed by his artistic contributions, and that “the denial of copyright protection for the output of such tools would result in a void of ownership.”¹⁸⁶ Mr. Allen held that “[r]equiring creators to list each tool and the proportion of the work created with the tool would have a burdensome effect if enforced uniformly.”¹⁸⁷

¹⁷⁷ “Spatial,” *supra* note 132, at 2.

¹⁷⁸ *Id.* at 5 (“beautify and adjust various cosmetic details/flaws/artifacts, etc.”).

¹⁷⁹ *Id.* at 5.

¹⁸⁰ *Id.* at 2.

¹⁸¹ *Id.*

¹⁸² *Id.*

¹⁸³ “Zarya,” *supra* note 131.

¹⁸⁴ “Spatial,” *supra* note 132, at 5.

¹⁸⁵ *Id.*

¹⁸⁶ *Id.* at 3.

¹⁸⁷ *Id.*

The Office and the Board assessed whether the image has the required originality, and human authorship; “whether the AI contributions are the result of ‘mechanical reproduction’ or instead of an author’s ‘own original mental conception, to which [the author] gave visible form.’”¹⁸⁸ If all of a work’s “traditional elements of authorship” were produced by a machine, the work lacks human authorship.

Like in *Entrance*, the Office and the Board leaned heavily on Midjourney’s description that “prompts ‘influence’ what the system generates and are ‘interpret[ed]’ by Midjourney and ‘compared to its training data.’”¹⁸⁹ The Office stated that “‘Midjourney does not interpret prompts as specific instructions to create a particular expressive result,’ because ‘Midjourney does not understand grammar, sentence structure, or words like humans.’”¹⁹⁰ The Office believes that Midjourney does not treat text prompts as direct instructions, users may need to attempt hundreds of iterations before landing upon an image they find satisfactory.¹⁹¹ In other words, the distance between the prompts and the outcomes is too big to perceive it as a specific or direct instruction. The Office held that “when an AI technology receives solely a prompt from a human and produces complex written, visual, or musical works in response, the ‘traditional elements of authorship’ are determined and executed by the technology—not the human user.”¹⁹²

Mr. Allen described how he used Midjourney and “input numerous revisions and text prompts at least 624 times.” These prompts iteratively refined the image generated, which he later edited with Adobe Photoshop and upscaled with Gigapix AI.¹⁹³ Mr. Allen started with a “big picture description” prompt that “focus[ed] on the overall subject of the piece.”¹⁹⁴ He then added a second “big picture

¹⁸⁸ *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 60 (1884).

¹⁸⁹ “Spatial,” *supra* note 132, at 6 (quoting *Prompts*, MIDJOURNEY DOCUMENTATION, <https://docs.midjourney.com/docs/prompts> [<https://perma.cc/XJA5-W9LV>] (last visited Oct. 11, 2024)).

¹⁹⁰ *Id.* at 6–7 (quoting “Zarya,” *supra* note 131, at 7).

¹⁹¹ *Id.* at 7.

¹⁹² *Id.* (quoting Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence, 88 Fed. Reg. 16190, 16192 (Mar. 16, 2023)).

¹⁹³ *Id.* at 2 (citing E-mail from Tamara Pester, Tamara S. Pester, LLC, to U.S. Copyright Off. (Sept. 30, 2020)).

¹⁹⁴ *Id.* at 6 (quoting E-mail from Tamara Pester, Tamara S. Pester, LLC, to U.S. Copyright Off. (Sept. 30, 2020)).

description” to the prompt text “as a way of instructing the software that Mr. Allen is combining the two ideas.” Next, he added the “the overall image’s genre and category,” “certain professional artistic terms which direct the tone of the piece,” “how lifelike [Mr. Allen] wanted the piece to appear,” a description of “how colors [should be] used,” a description “to further define the composition,” “terms about what style/era the artwork should depict,” and “a writing technique that Mr. Allen has established from extensive testing” that would make the image “pop.”¹⁹⁵ He then “append[ed the prompt] with various parameters which further instruct[ed] the software how to develop the image,” resulting in a final text prompt that was “executed . . . into Midjourney to complete the process.”¹⁹⁶

In short, prompted by the text instructions of Mr. Allen, the Midjourney generated ever finer grained images, according to Mr. Allen’s artistic expressive wishes, until the image was generated that satisfied Mr. Allen as the final result.

The Board acknowledged that the process of prompting can involve creativity and that the prompts themselves may be sufficiently creative to be protected by copyright as literary works,¹⁹⁷ but not the images that the AI generated after these prompts.¹⁹⁸ Lemley argues that creative prompts or the iterative series of prompts might be eligible for copyright protection, if they are detailed enough.¹⁹⁹

The Office held that the gAI and not Mr. Allen conceived the image.²⁰⁰

D. “SURYAST”

According to Ankit Sahni, Robust Artificially Intelligent Graphics and Art Visualizer (RAGHAV) is an “AI-powered tool,” that uses machine learning to

¹⁹⁵ *Id.* (quoting E-mail from Tamara Pester, Tamara S. Pester, LLC, to U.S. Copyright Off. (Sept. 30, 2020)).

¹⁹⁶ *Id.* (quoting E-mail from Tamara Pester, Tamara S. Pester, LLC, to U.S. Copyright Off. (Sept. 30, 2020)).

¹⁹⁷ Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence, 88 Fed. Reg. 16190, 16192 n.27 (Mar. 16, 2023) (to be codified at 37 C.F.R. pt. 202).

¹⁹⁸ “Spatial,” *supra* note 132, at 7.

¹⁹⁹ Mark A. Lemley, *How Generative AI Turns Copyright Law Upside Down*, 25 COLUM. SCI. & TECH. L. REV. 190, 199–201 (2024), <https://journals.library.columbia.edu/index.php/stlr/article/view/12761/6285> [<https://perma.cc/3ED8-YDFF>]; Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence, 88 Fed. Reg. at 16192 n.27 (pointing out that “prompts may be sufficiently creative to be protected by copyright,” but not the material generated from a copyrightable prompt); “Zarya,” *supra* note 131, at 9 n.16 (suggesting that the prompts that led to “Zarya of the Dawn,” are copyrightable because they are similar to poems, but she did not submit them in the application for copyright registration).

²⁰⁰ “Spatial,” *supra* note 132, at 1.

perform ‘Neural Style Transfer,’ which entails ‘generat[ing] an image with the same “content” as a base image, but with the “style” of [a] chosen picture.’”²⁰¹

Mr. Sahni used RAGHAV to blend his photo he took with an image of Vincent van Gogh’s *The Starry Night* as the style reference and chose a variable value determining the amount of style transfer to create the image “SURYAST” in 2020.²⁰² Mr. Sahni did not modify the image after it was generated.²⁰³

In his application for copyright registration, Mr. Sahni designated himself and RAGHAV as co-authors.²⁰⁴ He called RAGHAV’s contribution “distinct, disparate and independent” from his contribution to the image.²⁰⁵ Mr. Sahni claimed that “‘conceiving, creating and selecting an original [base] image,’ ‘selection of the style image,’ and ‘selecting a specific variable value determining the amount and manner of style transfer’ ‘cumulatively resulted in the [Work], which is the direct outcome of [Mr. Sahni’s] creative expression and contribution.’”²⁰⁶ “As evidence of his creative control, Mr. Sahni claimed his decisions resulted in the image containing 1) ‘a sunset,’ 2) ‘clouds,’ 3) the ‘contours of a building,’ 4) a composition in which ‘the sky accounts for the upper two thirds of the work,’ and 5) ‘a precise and deliberate style of Van Gogh’s [The] Starry Night.’”²⁰⁷ However, the Board of Revision found that the expressive elements of pictorial authorship were not provided by Mr. Sahni. They were the results of three inputs (base, style element, and style transfer value)²⁰⁸ that were too imprecise to have conceived and executed the human authorship.²⁰⁹ The color and position of the elements in the image were generated by RAGHAV. “The Board was not convinced by Mr. Sahni’s description of RAGHAV as ‘an assistive tool’ that works similarly to ‘a camera, digital tablet, or a photo-editing software program.’”²¹⁰ The Office and the Board rejected Mr. Sahni’s application, because his human authorship could

²⁰¹ “SURYAST,” *supra* note 133, at 5 (quoting E-mail from Ankit Sahni to U.S. Copyright Off. (Apr. 14, 2022)).

²⁰² *Id.* at 5–8.

²⁰³ *Id.* at 6.

²⁰⁴ *Id.* at 2.

²⁰⁵ *Id.* (citing E-mail from Ankit Sahni to U.S. Copyright Off. (Apr. 14, 2022)).

²⁰⁶ *Id.* at 7 (quoting E-mail from Ankit Sahni to U.S. Copyright Off. (Apr. 14, 2022)).

²⁰⁷ *Id.* (quoting E-mail from Ankit Sahni to U.S. Copyright Off. (Apr. 14, 2022)).

²⁰⁸ *Id.*

²⁰⁹ *Id.* at 4.

²¹⁰ *Id.* at 8 (quoting E-mail from Ankit Sahni to U.S. Copyright Off. (Apr. 14, 2022)).

not be distinguished or separated from the final work produced by RAGHAV.²¹¹ However, the Office left room for the possibility of registering Mr. Sahni's underlying photograph.²¹²

In the re-evaluation, the Board concluded that the image could not be registered "because the work deposited is a derivative work that does not contain enough original human authorship to support a registration."²¹³

On February 23, 2024, following the rejection by the Office to register SURYAST, the Register of Copyrights and Director of the Office, Ms. Shira Perlmutter, sent a letter to Senators Coons and Tillis, as well as Representatives Issa and Johnson, to update them about the work of the Office so far regarding copyright and gAI. The letter includes an interesting passage and an even more interesting footnote:

"Since the Registration Guidance was issued, the Office's Registration Division has examined hundreds of works that incorporate AI-generated material and has issued registrations to well over 100 so far."

The footnote stated:

"U.S. Copyright Off. Rev. Bd., Decision Affirming Refusal to Register SURYAST 4 n.3 (Dec. 11, 2023), <https://www.copyright.gov/rulings-filings/review-board/docs/SURYAST.pdf>. Other applications have been rejected either because the applicant failed to follow the Office's Registration Guidance or because the work did not contain sufficient human authorship."²¹⁴

²¹¹ *Id.* at 2.

²¹² *Id.* at 8.

²¹³ *Id.* at 2.

²¹⁴ Letter from Shira Perlmutter, Reg. of Copyrights & Dir., U.S. Copyright Off., to Sen. Chris Coons, Sen. Thom Tillis, Rep. Darrell Issa & Rep. Henry C. Johnson (Feb. 23, 2024), <https://copyright.gov/laws/hearings/USCO-Letter-on-AI-and-Copyright-Initiative-Update-Feb-23-2024.pdf?loclr=blogcop> [<https://perma.cc/RBC6-TW6G>].

Thus, the Office registered over 100 “works that incorporate AI-generated material,” but it did not give one example of such a registration,²¹⁵ neither in this letter nor on its website.

II

BEIJING INTERNET COURT ACCEPTED COPYRIGHT AI-GENERATED IMAGE

In November 2023, the trailblazing Beijing Internet Court²¹⁶ decided that an AI-generated image titled “Spring Breeze Brings Tenderness” (“Spring”)²¹⁷ can be protected under copyright law if there is sufficient intellectual achievement, and the work is original based on sufficient human intervention. At first sight, the decision of “Spring”²¹⁸ seems surprising, but the case did not fall out of the sky. There were some instructive precursor cases: the 2018 “Music Fountain” case at the Beijing Intellectual Property Court,²¹⁹ the 2019 “Feilin” case at the Beijing Internet Court,²²⁰ the 2019 “Dreamwriter” case at the Shenzhen Nanshan District Court,²²¹ and the 2020 “Hot Air Balloon” case at the Beijing Internet Court.²²² Finally, this Part will address “Spring” at the Beijing Internet Court.²²³

²¹⁵ Andres Guadamuz, LINKEDIN (Jul. 22, 2024), https://www.linkedin.com/posts/andres-guadamuz_im-participating-in-a-workshop-on-ai-and-activity-7221139807035342848-ApAc?utm_source=share&utm_medium=member_desktop [<https://perma.cc/B8NZ-9HD8>].

²¹⁶ *White Paper on Rule of Law in Cyberspace Governance*, BEIJING INTERNET CT. (May 24, 2019), https://english.bjinternetcourt.gov.cn/2019-05/24/c_167.htm [<https://perma.cc/Y5UJ-7WUL>]; *Jurisdiction*, BEIJING INTERNET CT. (Mar. 25, 2019), https://english.bjinternetcourt.gov.cn/2019-03/25/c_23.htm [<https://perma.cc/7LEW-BX2C>].

²¹⁷ Li Yunkai Su Liu Yuanchun Qin Hai Zuopin Shuming Quan, Xinxi Wangluo Chuanbo Quan Jiufen An (李昉诉刘元春侵害作品署名权、信息网络传播权纠纷案) [Li Yunkai v. Liu Yuanchun, A Dispute over Copyright Infringement of the Right of Authorship and Right of Communication through Information Network], (2023) Jing 0491 Min Chu 11279 Hao (Beijing Internet Ct. Nov. 27, 2023), *translated in* Geo. Wash. Univ. Ctr. for L. & Tech., <https://patentlyo.com/media/2023/12/Li-v-Liu-Beijing-Internet-Court-20231127-with-English-Translation.pdf> [<https://perma.cc/V2EH-39K8>] [hereinafter “Spring”].

²¹⁸ *Id.* See also Tian Lu, *Chinese Court Deems AI-Generated Image Has Copyright – Assessing the Possibly Over-Hasty ‘Spring Breeze’ Case*, IP KAT (Dec. 27, 2023), <https://ipkitten.blogspot.com/2023/12/chinese-court-deems-ai-generated-image.html> [<https://perma.cc/4XK8-9GZG>].

²¹⁹ See *infra* Part II.A.

²²⁰ See *infra* Part II.B.

²²¹ See *infra* Part II.C.

²²² See *infra* Part II.D.

²²³ See *infra* Part II.E.

A. “*Music Fountain*”

On June 26, 2018, the Beijing Intellectual Property Court²²⁴ upheld the decision of the Haidian District People’s Court that an autonomously operated musical fountain which created a combination of expressive water figures, music and light effects provided an aesthetic experience, had originality, and constituted a work according to Art. 2 of the Copyright Law Implementing Regulations in China 2002, making it eligible for copyright protection.²²⁵ The defendants were ordered to pay 90,000 Renminbi (around 12,700 U.S. dollars) in damages and give a public apology to the plaintiff.²²⁶

B. “*Feilin*”

On April 25, 2019, the Beijing Internet Court ruled in *Feilin* that an analysis report, largely produced by Wolters Kluwer’s legal data analysis software, contained sufficient human creativity to warrant copyright protection,²²⁷ despite the defendant’s unauthorized copying, editing, and reposting without attribution.²²⁸ The court clarified that purely AI-generated content is not copyrightable but acknowledged such works may still merit some form of protection.²²⁹ It specified that technical designs, geographical elements, and objective facts in various drawings are not copyrightable.²³⁰ While the plaintiff argued for the originality of the report’s graphics based on beautification efforts, the lack of evidence undermined this claim.²³¹ However, the court recognized parts

²²⁴ “Yinyue Penquan” Zuopin Zhuzuo Quan Qinquan Jiufen An (“音乐喷泉”作品著作权侵权纠纷案) [A Dispute over Infringement of Copyright of “Music Fountain” Works], (2017) Jing 73 Min Zhong 1404 Hao (Beijing Intell. Prop. Ct. June 26, 2018), <https://bjgy.bjcourt.gov.cn/article/detail/2019/04/id/3850563.shtml> [<https://perma.cc/SML4-25UH>] [hereinafter “Music Fountain”].

²²⁵ *Id.*

²²⁶ *Id.*

²²⁷ Beijing Feilin Lushi Shiwu Suo Su Beijing Baidu Wangxun Keji Youxian Gongsi Zhuzuo Quanqin Quan Jiufen An (北京菲林律师事务所诉北京百度网讯科技有限公司著作权侵权纠纷案) [Beijing Feilin Law Firm v. Beijing Baidu Netcom Sci. & Tech. Co., Ltd., A Dispute over Copyright Infringement], (2018) Jing 0491 Min Chu 239 Hao (Beijing Internet Ct. Apr. 25, 2019), *translated in ChinaDaily*, [https://www.chinadaily.com.cn/specials/BeijingInternetCourtCivilJudgment\(2018\)Jing0491MinChuNo.239.pdf](https://www.chinadaily.com.cn/specials/BeijingInternetCourtCivilJudgment(2018)Jing0491MinChuNo.239.pdf) [<https://perma.cc/8PSG-HZZF>] [hereinafter “Feilin”].

²²⁸ *Id.*

²²⁹ *Id.* (“The absence of protection of [the investor’s] rights and interests will be adverse to the communication of the input result.”).

²³⁰ *Id.*

²³¹ *Id.*

of the graphic composition as original due to human contribution, thereby making them eligible for copyright protection.²³²

C. “Dreamwriter”

On December 24, 2019, the Shenzhen Nanshan District Court ruled that an article generated by Tencent’s “Dreamwriter” AI, which was generating half a million articles yearly on finance, weather, and sports since 2015, was copyrightable.²³³ Tencent had published a financial reporting article on the Tencent Securities website, and noted at the end of the article: “This article was automatically written by Tencent’s robot Dreamwriter.”²³⁴ Shanghai Yingxun Technology Company unauthorizedly published the article generated by the Dreamwriter AI on its website the same day, which led to Tencent’s successful copyright infringement lawsuit and a 1,500 Renminbi (around 211 U.S. dollars) damages award against Yingxun.²³⁵ The Court found that the article’s content demonstrated deliberate selection, analysis, and judgement by multiple teams using multiple divisions of labor, with structural coherence and originality, refuting the notion of mere automated creation.²³⁶ Highlighting the plaintiff team’s significant role in shaping the article’s unique expression, the Supreme People’s Court recognized this case as a model case in 2021, affirming its importance at the national level.²³⁷

²³² *Id.*

²³³ Shenzhen Shi Tengxun Jisuanji Xitong Youxian Gongsi Su Shanghai Yingxun Keji Youxian Gongsi Qinhai Zhuzuo Quan Ji Buzhengdang Jingzheng Jiufen An (深圳市腾讯计算机系统有限公司诉上海盈讯科技有限公司侵害著作权及不正当竞争纠纷案) [Shenzhen Tencent Comput. Sys. Co. v. Shanghai Yingxun Tech. Co., A Dispute over Copyright Infringement and Unfair Competition], (2019) Yue 0305 Min Chu 14010 Hao (Shenzhen Nanshan Dist. People’s Ct. Dec. 24, 2019), <https://mp.weixin.qq.com/s/jjv7aYT5wDBIdTVWXV6rdQ> [<https://perma.cc/M7LQ-P8WF>] [hereinafter “Dreamwriter”].

²³⁴ BO ZHOU, ARTIFICIAL INTELLIGENCE AND COPYRIGHT PROTECTION-JUDICIAL PRACTICE IN CHINESE COURT 1 (2020), https://www.wipo.int/export/sites/www/about-ip/en/artificial_intelligence/conversation_ip_ai/pdf/ms_china_1_en.pdf [<https://perma.cc/2C9K-F2FU>].

²³⁵ “Dreamwriter,” *supra* note 233.

²³⁶ *Id.*

²³⁷ Andres Guadamuz, *Chinese Court Declares that AI-Generated Image Has Copyright*, TECHNO LLAMA (Dec. 9, 2023), <https://www.technollama.co.uk/chinese-court-declares-that-ai-generated-image-has-copyright> [<https://perma.cc/X54T-ZMGU>].

D. “Hot Air Balloon”

On April 2, 2020, the Beijing Intellectual Property Court adjudicated another seminal case, *Gao Yang v. Youku*.²³⁸ In this instance, the plaintiff affixed a sports camera to a hot air balloon, initiating an autonomous photographic sequence of earth’s outer surface as the balloon ascended.²³⁹ This process involved the camera capturing video footage from which the plaintiff later extracted specific screenshots for further refinement.²⁴⁰ The Court held that despite the camera operating autonomously beyond human manipulation during its aerial capture phase, there was a discernible level of human intervention prior to launch.²⁴¹ This intervention encompassed decisions regarding the selection of the camera, determination of the shooting angle, choice of video recording mode, and the specification of various photographic parameters such as display format and sensitivity.²⁴² The Court held that these preparatory actions, being deliberately executed in advance, imbued the automatically generated screenshots with the characteristics of photographic works.²⁴³ Consequently, any unauthorized exploitation of these images was deemed to infringe upon the plaintiff’s copyright in said works.

E. “Spring Breeze Brings Tenderness”

On February 24, 2023, Li Yunkai generated some images with “Stable Diffusion Aki 4.2”²⁴⁴ of a young Asian woman. Mr. Li shared the image on “Little

²³⁸ Gao Yang Su Youku Xinxi Jishu (Beijing) Youxian Gongsi Qin Hai Zhuzuo Quan Jiufen An (高阳诉优酷信息技术(北京)有限公司侵害著作权纠纷案) [*Gao Yang v. Youku Info. Tech. (Beijing) Co. Ltd., A Dispute over Copyright Infringement*], (2017) Jing 73 Min Zhong 797 Hao (Beijing Intell. Prop. Ct. Apr. 2, 2020) [hereinafter “Hot Air Balloon”]. See also ZHOU, *supra* note 234, at 4.

²³⁹ “Hot Air Balloon,” *supra* note 238.

²⁴⁰ *Id.*

²⁴¹ *Id.*

²⁴² *Id.*

²⁴³ *Id.*

²⁴⁴ Stable Diffusion, just like Midjourney, DALL-E, ChatGPT and other Western gAI services are all geo-blocked in China but are accessible via a Virtual Private Network (VPN). See Ben Wodecki, *China Cracks Down on ChatGPT Access*, AI BUSINESS (Feb. 24, 2023), <https://aibusiness.com/nlp/china-cracks-down-on-chatgpt-access> [<https://perma.cc/BUS8-R2BY>]. Benj Edwards, *China Bans AI-Generated Media Without Watermarks*, ARS TECHNICA (Dec. 13, 2022), <https://arstechnica.com/information-technology/2022/12/china-bans-ai-generated-media-without-watermarks/> [<https://perma.cc/XT2G-NDY7>]. Operators of gAI services need a license from the Cyber Administration of China. See Josh Ye, *China Approves over 40 AI Models for Public Use in Past Six Months*, REUTERS (Jan. 29, 2024), <https://>

Red Book,”²⁴⁵ a popular content-sharing platform, under the title “Spring Breeze Brings Tenderness,” (“Spring”)²⁴⁶ with the tag “AI image,” in conformance to Art. 17 of the Internet Information Service Deep Synthesis Management Provisions, that prescribes to prominently mark content that is generated by AI.²⁴⁷

Mr. Li discovered that Liu Yuanchun, a blogger, illustrated her blogpost “Love in March, Among Peach Blossoms”²⁴⁸ with the same image on “Baijiahao,”²⁴⁹ a content-sharing platform owned by the internet company Baidu. Before Ms. Liu placed the image with her blogpost, she removed both Mr. Li’s user ID and the “Little Red Book” watermark from the image.²⁵⁰ Subsequently, Mr. Li brought a case at the Beijing Internet Court against Ms. Liu for copyright infringement and the right of dissemination via the internet,²⁵¹ and was awarded 500 Renminbi (around 70 U.S. dollars), 50 Renminbi (around 7 U.S. dollars) in court costs, plus a public apology.²⁵²

Mr. Li contended that he used approximately 20 positive prompts²⁵³ and around 120 negative prompts to generate the image.²⁵⁴ Stability Diffusion, as

www.reuters.com/technology/china-approves-over-40-ai-models-public-use-past-six-months-2024-01-29/ [<https://perma.cc/PL89-HTUB>].

²⁴⁵ XIAO HONG SHU (小红书), <https://www.xiaohongshu.com/explore> [<https://perma.cc/8CB4-VK6Q>] (last visited Nov. 9, 2024).

²⁴⁶ “Spring,” *supra* note 217.

²⁴⁷ Hulianwang Xinxi Fuwu Shendu Hecheng Guanli Guiding (Zhengqiu Yijian Gao) (互联网信息服务深度合成管理规定 (征求意见稿)) [Internet Information Service Deep Synthesis Management Provisions (Draft for Comment)], CYBERSPACE ADMIN. OF CHINA (Jan. 28, 2022), http://www.cac.gov.cn/2022-01/28/c_1644970458520968.htm [<https://perma.cc/MMW7-8AQ3>].

²⁴⁸ “Spring,” *supra* note 217, at 2.

²⁴⁹ BAIJIAHO (百家号), <https://baijiahao.baidu.com> [<https://perma.cc/ZW3U-G5Q9>] (last visited Nov. 9, 2024).

²⁵⁰ “Spring,” *supra* note 217, at 18. *See also* SUBHRAJIT SINHA ROY ET AL., INTELLIGENT COPYRIGHT PROTECTION FOR IMAGES *passim* (2019) (explaining the process of watermark removal).

²⁵¹ Lu, *supra* note 218 (“right of communication to the public on information networks”).

²⁵² “Spring,” *supra* note 217. *See* Lu, *supra* note 218.

²⁵³ Positive prompts: “ultra-photorealistic: 1.3), extremely high quality highdetail RAW color photo, in locations, Japan idol, highly detailed symmetrical attractive face, angular symmetrical face, perfect skin, skin pores, dreamy black eyes, reddish-brown plaits hairs, uniform, long legs, thighhighs, soft focus, (film grain, vivid colors, Film emulation, kodak gold portra 100, 35mm, canon50 f1,2), Lens Flare, Golden Hour, HD, Cinematic, Beautiful Dynamic Lighting.” *For the First Time AI Generated Photo Gets Copyright in China*, HFG (Dec. 5, 2023), <https://www.hfgip.com/news/first-time-ai-generated-photo-gets-copyright-china> [<https://perma.cc/MZH9-4B27>].

²⁵⁴ Negative prompts: “((3d, render, cg, painting, drawing, cartoon, anime, comic:1,2)), bad anatomy, bad hands, text, error, missing fingers, extra digit, fewer digits, cropped, worst quality, signature, watermark,

used by Mr. Li, can generate images based on text but also image prompts.²⁵⁵ It is based on Contrastive Language-Image Pretraining (CLIP)-guided diffusion,²⁵⁶ which are two models that cooperate together. CLIP-guided diffusion makes it possible for training data to be restored²⁵⁷ or for diffused images to be interpolated, mathematically blended, to produce new derivative images.²⁵⁸

The Beijing Internet Court held that Mr. Li, from the conception to the final selection of the image, had made a certain amount of intellectual investment: designing the presentation of characters, selecting prompt words, and arrangements, selecting the order of prompt words, setting relevant parameters, and selecting which image met the expectations, etc.²⁵⁹ This “certain amount

username, blurry, artist name, (long body), bad anatomy, liquid body, malformed, mutated, bad proportions, uncoordinated body, unnatural body, disfigured, ugly, gross proportions, mutation, disfigured, deformed, (mutation), (child:1,2), b&w, fat, extra nipples, minimalistic, nsfw, lowres, bad anatomy, bad hands, text, error, missing fingers, extra digit, fewer digits, cropped, worst quality, low quality, normal quality, jpeg artifacts, signature, watermark, username, blurry, disfigured, kitsch, ugly, oversaturated, grain, low-res, Deformed, disfigured, poorly drawn face, mutation, mutated, extra limb, ugly, poorly drawn hands, missing limb, floating limbs, Disconnected limbs, malformed hands, blur, out of focus, long neck, long body, ugly, disgusting, poorly drawn, childish, mutilated, mangled, old, surreal, text, b&w, monochrome, conjoined twins, multiple heads, extra legs, extra arms, meme, elongated, twisted, fingers, strabismus, heterochromia, closed eyes, blurred, watermark, wedding, group, dark skin, dark-skinned female, tattoos, nude, lowres, bad anatomy, bad hands, text, error, missing fingers, extra digit, fewer digits, cropped, worst quality, low quality, normal quality, jpeg artifacts, signature, watermark, username, blurry.” Mr. Li used the following further steps and prompts: “c) Set the Sampling Step as 33”; “d) Set the Height as 768”; “e) Set the CFG Scale as 9”; “f) Set the Seed as 2692150200”; “g) Set the weight for model ‘land-hanfugirl-v1-5.safetensors’ in ‘Additional-Networks’”; “h) Modify the Seed as 2692150199”; “i) Add several keywords in Prompt: ‘shy, elegant, cute, lust, cool pose, teen, viewing at camera, masterpiece, best quality.’” *Id.*

²⁵⁵ *How Does Stable Diffusion Work?*, STABLE DIFFUSION ART (June 9, 2024), <https://stable-diffusion-art.com/how-stable-diffusion-work/> [<https://perma.cc/AF38-43MQ>]; Alec Radford et al., *CLIP: Connecting Text and Images*, OPENAI (Jan. 5, 2021), <https://openai.com/index/clip/> [<https://perma.cc/2AF2-4QPW>].

²⁵⁶ Initially, the CLIP model is trained on a dataset of images and learns to relate the semantic meaning of images and associated text through an intermediate format called a CLIP embedding. This method starts with an initial image, adds noise to it, and then uses the CLIP model to guide the denoising process based on a text prompt. When a user submits a prompt to the AI image product—either text, image, or a combination—the CLIP model converts this prompt to an embedding. The embedding is then used as conditioning data as the diffusion model progressively generates the image through denoising. The image that emerges at the end of the denoising process is presented to the user as the output. STABLE DIFFUSION ART, *supra* note 255.

²⁵⁷ Nicholas Carlini et al., *Extracting Training Data From Diffusion Models 1* (Jan. 30, 2023) (unpublished manuscript), <https://arxiv.org/pdf/2301.13188.pdf> [<https://perma.cc/B92T-JUCF>].

²⁵⁸ Jonathan Ho et al., *Denoising Diffusion Probabilistic Models 8* (Dec. 16, 2020) (unpublished manuscript), <https://arxiv.org/pdf/2006.11239.pdf> [<https://perma.cc/7XEY-QAZX>].

²⁵⁹ “Spring,” *supra* note 217, at 13.

of intellectual investment” language comes across as a “sweat-of-the-brow” argument, which, in both the U.S. and China, is not a sufficient reason to issue a copyright certificate for a work.²⁶⁰ However, the use of the words “selection and arrangement” places the Court’s argument within the tradition of *Burrow-Giles*.²⁶¹

As mentioned above, Lemley argued that creative prompts or the iterative series of prompts might be eligible for copyright protection, if they are detailed enough.²⁶² This implies that creative prompts can be protected, but not necessarily the outcome of the prompts.

Regarding originality, the Court held that the plaintiff designed the characters, their presentation, and other visual elements through prompts and set the layout and composition of the image through parameters which reflected the plaintiff’s selection and arrangements.²⁶³ The adjustment and modification process “also reflects the Plaintiff’s aesthetic choice and personal judgment.”²⁶⁴ Therefore, the images involved in this case are not achieved mechanically, but rather, according to the Court: “it can be assumed that the disputed image was independently completed by the Plaintiff and reflects [his] personal expression.”²⁶⁵ However, as pointed out above, one can argue that AI-generated images are by definition not independently created: they are based on works in the training data, including copyrighted works. Then again, some scholars believe that copying works for the training data is not really copying in the copyright sense since they are not used and enjoyed by the machine in the training phase in an expressive way,²⁶⁶ but merely in a probabilistic way, or according to other scholars, this is copying in the copyright sense, but justified as fair use.²⁶⁷

²⁶⁰ *Id.* at 12; *Feist Publ’ns, Inc. v. Rural Tele. Serv. Co.*, 499 U.S. 340, 352–53 (1991).

²⁶¹ *Burrow-Giles Lithographic Co. v. Saroni*, 111 U.S. 53, 55, 60 (1884).

²⁶² Lemley, *supra* note 199, at 200–01.

²⁶³ “Spring,” *supra* note 217, at 14.

²⁶⁴ *Id.*

²⁶⁵ *Id.*

²⁶⁶ Oren Bracha, *The Work of Copyright in the Age of Machine Production 1* (Sept. 24, 2023) (unpublished manuscript), <https://ssrn.com/abstract=4581738> [<https://perma.cc/9EVA-2JGJ>].

²⁶⁷ See Mark A. Lemley & Bryan Casey, *Fair Learning*, 99 *TEX. L. REV.* 743, 745 (2021). *But see* Jon Baumgarten, *Former Copyright Office GC Warns Against Blanket Assertions That AI Ingestion of Copyrighted Works ‘Is Fair Use’*, *COPYRIGHT ALL.* (May 23, 2023), <https://copyrightalliance.org/warns-assertions-ai-ingestion-is-fair-use/> [<https://perma.cc/4N9U-5CU7>].

The Court suggested that the aesthetic appeal played a role in the question of whether the image was original: “After the Plaintiff published it on Little Red Book, it has been viewed and liked by numerous users, which shows that the picture can be identified as a work of originality by the standards of the general public.”²⁶⁸ This goes against aesthetic neutrality, a keystone of copyright doctrine around the world since *Bleistein*.²⁶⁹

The defendant could argue that the plaintiff’s input prompts (e.g., “outdoor environment,” “Japanese idol,” “highly detailed, symmetrical, attractive face”) are merely ideas rather than expressions of such ideas.²⁷⁰ However, the Beijing Internet Court held that the images involved in this case are graphic art works with aesthetic significance composed of lines and colors.²⁷¹ The Court stated that “when people use an AI model to generate pictures, there is no question about who is the creator. In essence, it is a process of man using tools to create, that is, it is man who does intellectual investment throughout the creation process, the not [sic] AI model.”²⁷² Relying on the doctrine that humans need incentives for creation, including AI-generated images, the Court stated, “The core purpose of the copyright system is to encourage creation. . . . [A]s long as the AI-generated images can reflect people’s original intellectual investment, they should be recognized as works and protected by the Copyright Law.”²⁷³

The Court’s hearing was broadcast by China Central Television and livestreamed on multiple platforms, attracting over 170,000 viewers.²⁷⁴ During

²⁶⁸ “Spring,” *supra* note 217, at 10.

²⁶⁹ *Bleistein v. Donaldson Lithographing Co.*, 188 U.S. 239, 252 (1903) (Holmes, J.).

²⁷⁰ Keith Kelly, *Computer Love: Beijing Court Finds AI-Generated Image is Copyrightable in Split with United States*, NAT’L L. REV. (Dec. 20, 2023), <https://natlawreview.com/article/computer-love-beijing-court-finds-ai-generated-image-copyrightable-split-united> [<https://perma.cc/G5UP-QPSF>].

²⁷¹ “Spring,” *supra* note 217.

²⁷² *Id.*

²⁷³ *Id.* *But cf.* PAUL GOLDSTEIN, GOLDSTEIN ON COPYRIGHT § 2.2.2 (3d ed. 2005 & Supp. 2024) (“[I]n an environment in which new works can be electronically created virtually at the cost of electricity, creators of computer-generated products will have little incentive to copy the products created by others.”).

²⁷⁴ Du Qiongfang, *Beijing Court Rules First Case of Infringement on a Generative AI Picture*, GLOB. TIMES (Nov. 30, 2023, 9:08 PM), <https://www.globaltimes.cn/page/202311/1302805.shtml> [<https://perma.cc/ZPC2-44TQ>]. A copy of the broadcasted hearing (in Mandarin Chinese) is available online. *See* Dongqingbailuo (冬青白萝), *Tingshen Lubo: Guonei Shouli AI Huihua Banquan Jiufen An* (庭审录播: 国内首例AI绘画版权纠纷案) [*Trial Recording: China’s First AI Painting Copyright Dispute Case*], BILIBILI (Aug. 24, 2023), <https://www.bilibili.com/video/BV1iz4y1T7Q1/> [<https://perma.cc/5QZK-A3XZ>].

the hearing, the plaintiff convinced the Beijing Internet Court that the AI model will generate the same result when the same prompt is repeated.²⁷⁵ In general, gAI produces slightly different results when the same prompt is repeated because of the incorporation of randomness in the processing of AI—for example, some models start with different initial conditions or states each time they are run.²⁷⁶ This evolving nature of AI models contributes to the variability in their outputs, even when the same prompts are used.²⁷⁷ Advanced AI models, particularly those using deep learning, have a high level of complexity with millions of parameters. This can lead to a wide range of potential outputs for the same input.²⁷⁸ Small nuances in outputs from training data change how the model learned to interpret something and can cause variations in output, especially in text-to-image gAI.²⁷⁹ The final output is often generated through a sampling process. The AI model might generate different results depending on resource constraints, such as memory or processing power and the model's configuration, and updates to the model can change the outcome as well.²⁸⁰ In short, temporal and spatial elements of the algorithms will constantly change.

²⁷⁵ See Seagull Song, *China's First Case on Copyrightability of AI-Generated Picture*, KING & WOOD MALLESONS (Dec. 7, 2023), <https://www.kwm.com/cn/en/insights/latest-thinking/china-s-first-case-on-copyrightability-of-ai-generated-picture.html> [<https://perma.cc/N8H8-MHV3>].

²⁷⁶ Jason Brownlee, *Why Do I Get Different Results Each Time in Machine Learning?*, MACH. LEARNING MASTERY (Aug. 27, 2020), <https://machinelearningmastery.com/different-results-each-time-in-machine-learning> [<https://perma.cc/743L-77QK>].

²⁷⁷ *Id.*

²⁷⁸ *What Are Large Language Model Settings: Temperature, Top P And Max Tokens*, NOVITA AI (Apr. 29, 2024), <https://blogs.novita.ai/what-are-large-language-model-settings-temperature-top-p-and-max-tokens/> [<https://perma.cc/7JGV-M9ZS>]. One can argue that diversity in the results is desirable for society. See Michal Shur-Ofry et al., *Growing a Tail: Increasing Output Diversity in Large Language Models 10* (Nov. 5, 2024) (unpublished manuscript), <https://arxiv.org/abs/2411.02989v1> [<https://perma.cc/SY3W-RLFT>] (“A few simple and cheap measures, such as temperature increase and diversity-inducing prompting, can ‘extract’ these contents and significantly improve diversity levels.”).

²⁷⁹ Shervin Minaee et al., *Large Language Models: A Survey 1*, 36 (Feb. 20, 2024) (unpublished manuscript), <https://arxiv.org/pdf/2402.06196v2> [<https://perma.cc/HP4P-W8KT>] (LLMs mainly refer to “transformer-based neural language models that contain tens to hundreds of billions of parameters, which are pretrained on massive text data.” However, “[f]uture LLMs are expected to be multi-modal and handle a variety of data types, such as text, images, and videos, audio, in a unified manner.”).

²⁸⁰ *Id.* at 21.

However, Stable Diffusion has a feature called “seed,” which is a number to initialize the generation.²⁸¹ The seed allows reproducible images to be generated and makes it easier for users to experiment with parameters or prompt variations.²⁸² The image in the “Spring” case was generated from a version of Stable Diffusion that was downloaded onto Mr. Li’s computer.²⁸³ Although the downloaded version is likely more stable than a web-based version of Stable Diffusion, it is perhaps not completely stable due to factors such as the sampling process and the complexity of the algorithm. Although the plaintiff submitted a video to the Court demonstrating the recreation process of the image in question,²⁸⁴ a video recording of the process of generating the image does not prove that the process is replicable. It only proves that Mr. Li generated the image via his computer at a particular point in time with the algorithm in a particular state.

Tianxiang He argued that using existing checkpoints and generation data, as shared on sites such as Civitai, might make the generative process mechanical in nature, potentially contradicting any modicum of creativity,²⁸⁵ in addition to refuting the independently created requirement of originality.

Human intellectual creation contains not just rationality like AI-generated content but also thoughts, emotions and inspiration. According to Yu Wenwen, “[e]ven though the content generated by artificial intelligence has the appearance of human intellectual creation, because its generation process is essentially different from human intellectual creative activities, it is not a ‘work’ within the meaning of the current Copyright Law, and it is difficult to enjoy copyright.”²⁸⁶ However, Yu Wenwen argued that AI-generated content has interests that are closely related to the market for works, and she asserted that one should pay attention to this kind of relationship and adjust Copyright Law accordingly.²⁸⁷ Yu seems to be open to

²⁸¹ See *Guide to Using Seed in Stable Diffusion*, GETIMG.AI, <https://getimg.ai/guides/guide-to-seed-parameter-in-stable-diffusion> [<https://perma.cc/UN7H-VTHY>] (last visited Oct. 11, 2024).

²⁸² *Id.*

²⁸³ See Lu, *supra* note 218.

²⁸⁴ *Id.*

²⁸⁵ He, *supra* note 32, at 301.

²⁸⁶ Yu Wenwen, *Copyright of Artificial Intelligence-Generated Content*, OFF. OF THE CENT. CYBERSPACE AFFS. COMM’N (Aug. 21, 2019), https://web.archive.org/web/20230511195349/http://www.cac.gov.cn/2019-08/21/c_1124902661.htm [<https://perma.cc/88H9-FRM7>].

²⁸⁷ *Id.*

the idea of vesting copyright in the natural person who made the arrangements necessary for the computer-generated content, conforming with Section 9 of the U.K. Copyright, Designs and Patents Act 1988.²⁸⁸

The decision by the Beijing Internet Court to protect an image generated by AI has internationally caused a stir.²⁸⁹ Those hoping for an international AI copyright *acquis* must have felt disappointed by the split between the U.S. and China. A level playing field for all stakeholders in AI and copyright²⁹⁰ seems farther than ever.²⁹¹

III

A “PLATONIC” PERSPECTIVE ON COPYRIGHT ELIGIBILITY

This Part examines the unattainable “platonic” standard of copyright eligibility. The criteria of this standard include:

Part III.A. human intervention in the creative process;

Part III.B. mental conception *ex ante* instead of mechanical reproduction;

Part III.C. control over the creative process according to intention, predictability, and permanence;

²⁸⁸ Copyright, Designs and Patents Act 1988, c. 48, § 9(3) (UK) (“In the case of a literary, dramatic, musical or artistic work which is computer-generated, the author shall be taken to be the person by whom the arrangements necessary for the creation of the work are undertaken.”); *see Lee, supra* note 146, at 186–87 (“Although there is no readily identifiable author that makes the necessary arrangements for the creation, it is clear the CDPA 1988 intends to build a personal relation or causal link between the author and the computer-generated work.”).

²⁸⁹ The Beijing Internet Court’s decision instigated international academic debates on whether convergence of U.S. and China’s copyright systems is replaced by divergence. Professor Yu keeps the option open of a crossvergence (a simultaneous but partial convergence and divergence of copyright standards). *See Peter K. Yu, The Future Path of Artificial Intelligence and Copyright Law in the Asian Pacific*, 96 *COMPUT. & L.* (forthcoming 2024) (manuscript at 10), <https://ssrn.com/abstract=4707592> [<https://perma.cc/E7PY-DDAP>].

²⁹⁰ *See Shira Perlmutter, Participation in the International Copyright System as a Means to Promote the Progress of Science and Useful Arts*, 36 *LOY. L.A. L. REV.* 323, 330 & n.23 (2002) (arguing for the non-discriminatory principle of national treatment, which means treating foreign works as well as domestic works, which urges other countries to match this treatment).

²⁹¹ It is time to update the Berne Convention to the AI era, in the same way the WIPO Internet Treaties (WIPO Copyright Treaty plus WIPO Performances and Phonograms Treaty) updated the Agreement on Trade-Related Aspects of Intellectual Property Rights to the internet era in 1996, and reintroduce formalities and create a level playing field between jurisdictions. *See Friedmann, supra* note 10, at 1; *see, e.g., Yu, supra* note 289, at 4 (observing that there seems to be a global consensus that AI systems cannot be deemed authors under copyright law, yet opinions diverge internationally regarding how much human creativity is required for AI-generated works to qualify for copyright protection).

Part III.D. a direct connection between the author and the work; and

Part III.E. the stipulation that protection applies to the expression of ideas, not the ideas themselves.

These criteria have been applied inconsistently by entities like the Office and the Beijing Internet Court, particularly in cases involving AI-generated images versus traditional human-authored works such as paintings and photographs. It is inevitable that these sub-sections partly overlap.

A. *Human Intervention*

The first question is whether there is any human intervention. The second question is how far should one go back to find an author. The third question is whether the direct human intervention is sufficient for copyright eligibility.

First, is there any human intervention? Legal precedents underscore the necessity of human creativity for copyright eligibility. The *Burrow-Giles* decision of the Supreme Court,²⁹² and the notable *Naruto*²⁹³ and *Urantia*²⁹⁴ cases of the Ninth Circuit, affirm that copyright is reserved for works originating from humans, explicitly excluding non-human entities. For example, British photographer David Slater set up a photo-camera in the hope that one or more crested black macaques he was following in the Tangkoko Reserve on North Sulawesi, Indonesia, would start playing with it, so that photos would be made in the process.²⁹⁵ This transpired; a crested black macaque called Naruto made several pictures, inspecting his teeth and smile in the screen of the camera. The Ninth Circuit held that the monkey cannot register a copyright in the photos it captured with a camera because the Copyright Act refers to an author's "children," "widow," "grandchildren," and "widower,"

²⁹² *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 58 (1884) (The Supreme Court held that copyright was the exclusive right of "a man [who was the originator] to the production of his own genius or intellect").

²⁹³ *Naruto v. Slater*, 888 F.3d 418, 426 (9th Cir. 2018). *Cf.* *Graham v. John Deere Co.*, 383 U.S. 1, 15 (1966) (this patent law case at the Supreme Court repudiated its prior dicta suggesting that the inventive process required a "flash of genius").

²⁹⁴ *Urantia Found. v. Maaherra*, 114 F.3d 955, 957–59 (9th Cir. 1997) (The Ninth Circuit held that a book containing words "'authored' by non-human spiritual beings" can only gain copyright protection if there is "human selection and arrangement of the revelations").

²⁹⁵ See Andres Guadamuz, *Can the Monkey Selfie Case Teach Us Anything About Copyright Law?*, WIPO MAG., Feb. 2018, https://www.wipo.int/wipo_magazine/en/2018/01/article_0007.html [<https://perma.cc/B2R8-DBLM>].

terms that “all imply humanity and necessarily exclude animals.”²⁹⁶ A speciesist interpretation one could argue,²⁹⁷ since the terms “children” and “grandchildren” can be applied to non-human animals as well.

Even though there have been experiments with other non-human animals painting; including chimpanzees, elephants, dogs, and parrots,²⁹⁸ the *Naruto* case affirmed that the Office and the courts are only willing to see human-animals as authors.²⁹⁹ In the same vein, the Seventh Circuit rejected a copyright claim in a “living garden” because “[a]uthorship is an entirely human endeavor” and “a garden owes most of its form and appearance to natural forces.”³⁰⁰ Divine revelation *an sich* is also not copyrightable. In *Urantia*,³⁰¹ the District Court held that “[w]hether *The Urantia Book* is a divine revelation dictated by divine beings is irrelevant to the issue of whether the book is a literary work within the meaning of 17 U.S.C. § 102.”³⁰² In *New Christian Church*, Dr. Helen Schucman claimed to be the scribe of the religious work “A Course in Miracles,” through which Jesus spoke. Dr. Schucman claimed to have been pressed by the Christian prophet himself to obtain a copyright.³⁰³ The Court held that her scribe function was sufficient to be seen as the author of the work.³⁰⁴

According to the Office:

excluded from copyright protection are: a photograph taken by a monkey;
a mural painted by an elephant; a claim based on the appearance of

²⁹⁶ *Naruto*, 888 F.3d at 426.

²⁹⁷ Peter Singer defined speciesism as “a prejudice or attitude of bias in favor of the interests of members of one’s own species and against those of members of other species.” PETER SINGER, *ANIMAL LIBERATION* 6 (2d ed. 1990).

²⁹⁸ Jason Goldman, *Creativity: The Weird and Wonderful Art of Animals*, BBC FUTURE (July 23, 2014), <https://www.bbc.com/future/article/20140723-are-we-the-only-creative-species> [<https://perma.cc/F7E9-N9JG>].

²⁹⁹ *Naruto*, 888 F.3d at 426.

³⁰⁰ *Kelley v. Chi. Park Dist.*, 635 F.3d 290, 304 (7th Cir. 2011).

³⁰¹ *Urantia Found. v. Maaherra*, 895 F. Supp. 1337, 1338 (D. Ariz. 1995).

³⁰² *Id.*

³⁰³ *Penguin Books U.S.A., Inc. v. New Christian Church of Full Endeavor, Ltd.*, No. 96 CIV. 4126 (RWS), 2000 WL 1028634, at *5 (S.D.N.Y. July 25, 2000), *vacated*, 2004 WL 906301 (S.D.N.Y. Apr. 27, 2004) (“None of us was prepared, however, for one particular instruction from Jesus to Helen Schucman, scribe of the Course. He wanted *A Course in Miracles* copyrighted and, she stated emphatically, he was quite adamant about this.”).

³⁰⁴ *Id.* at *14.

actual animal skin; a claim based on driftwood that has been shaped and smoothed by the ocean; a claim based on cut marks, defects, and other qualities found in natural stone; and an application for a song naming the Holy Spirit as the author of the work.³⁰⁵

A gAI service is not human, but as Jaron Lanier argued, it is trained on the data of almost the whole of humanity, and he perceives it as a social collaboration, as a mash-up of real people.³⁰⁶ Indirectly, almost everyone was involved in its creation, and generation of its output. gAI is not fancifully shuffling prefabricated elements around in a Coleridgian fashion, instead it has detached patterns and principles of knowledge during the training process. How, if at all, gAI understands anything is a mystery, even for researchers at this moment.³⁰⁷

The “Entrance”³⁰⁸ case, whereby Stephen Thaler invented the “Creative Machine,” epitomizes an AI that can autonomously generate images.³⁰⁹ Therefore, it lacked the human intervention necessary for copyright eligibility.³¹⁰ In contrast, in the cases of “Zarya”³¹¹ and “Spatial,”³¹² Ms. Kashtanova and Mr. Allen,

³⁰⁵ COMPENDIUM (Third), *supra* note 8, § 313.2.

³⁰⁶ See Jaron Lanier, *There Is No A.I., There Are Ways of Controlling the New Technology—But First We Have to Stop Mythologizing It*, NEW YORKER, Apr. 20, 2023, <https://www.newyorker.com/science/annals-of-artificial-intelligence/there-is-no-ai> [<https://perma.cc/D5RP-QGST>].

³⁰⁷ Richard Shiffrin & Melanie Mitchell, *Probing the Psychology of AI Models*, PNAS (Mar. 1, 2023), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10013777/pdf/pnas.202300963.pdf> [<https://perma.cc/ZRN5-ZXW5>] (asserting that the capabilities of gAI are beyond dispute, but “the mechanisms underlying these systems remain mysterious, even to the researchers who created them”). Perhaps this truly human understanding distinguishes the way human-animals learn from machine learning, at least for the moment. Professor Gaon describes AI as pseudo-human intelligence and suggests to rely on the following technical definition that focuses on the output and not on the degree of “human-like” understanding: “Any artificial systems that perform tasks under varying and unpredictable circumstances, without significant human oversight, or that can learn from their experience and improve their performance.” AVIV H. GAON, *THE FUTURE OF COPYRIGHT IN THE AGE OF ARTIFICIAL INTELLIGENCE* 55–56 (Peter K. Yu ed., 2021).

³⁰⁸ “Entrance,” *supra* note 129.

³⁰⁹ Cf. Bruce Boyden, *Emergent Works*, 39 COLUM. J.L. & ARTS 337, 379 (2016) (describing emergent works as “works of apparently creative expression that arise from the operation of a program but cannot be traced directly to a human source”). This author prefers to use products and generations if there is no direct human involvement over works and creations.

³¹⁰ COMPENDIUM (Third), *supra* note 8, § 313.2. But copyright only protects “the fruits of intellectual labor” that “are founded in the creative powers of the [human] mind.” *Id.* at § 306 (quoting Trade-Mark Cases, 100 U.S. 82, 94 (1879)).

³¹¹ “Zarya,” *supra* note 131, at 6–10.

³¹² The Copyright Office reaffirmed the bedrock requirement of human authorship for copyright protection. “Spatial,” containing AI-generated material, was required to disclose such contributions to ensure

respectively, used Midjourney to generate images by inputting a massive number of prompts, which established their human intervention. This happened to a lesser extent also in the “SURYAST” case where Mr. Sahni used a text-to-image AI named RAGHAV. In the “Spring” case, where Mr. Li used Stable Diffusion, there was sufficient human intervention according to the Beijing Internet Court.

Secondly, how far should we be willing to go back to find an author regarding AI-generated content? Hugenholtz and Quintais interpreted human intervention that could play a role in copyrightability more generously than the Office, the District Court for the District of Columbia, and the Beijing Internet Court. They argued that not only “supervision of the creative process, editing, curation, [and] post-production” could play a role, but so could “the development of the AI software, the gathering and choice of training data, the drawing up of functional specifications.”³¹³

In the same vein, Professor Dirk Visser cast the net very wide regarding the possible scope of human intervention relevant for copyrightability: “result[s] that the robot produces can be dictated by both the designer of the robot, who ‘instructs’ his creativity, as it were, and by the user, whose instructions and commands are expressed in the result.”³¹⁴ However, in the abovementioned cases, whether the human intervention is sufficient depends on how original or creative the conception, execution, and redaction phases are.

There seems to be consensus on the precondition of a human author in all four cases at the Office, the case at the District Court for the District of Columbia, and the recent case at the Beijing Internet Court. In other words, a completely autonomously generated product of AI cannot be protected by copyright, at least at this moment in time.³¹⁵

transparency and maintain the standard that copyright protection extends only to human-created works. “Spatial,” *supra* note 132, at 3, 8.

³¹³ P. Bernt Hugenholtz & João Quintais, *Copyright and Artificial Creation: Does EU Copyright Law Protect AI-Assisted Output?*, 52 INT’L REV. INTELL. PROP. & COMPETITION L. 1190, 1202 (2021), <https://link.springer.com/article/10.1007/s40319-021-01115-0> [<https://perma.cc/E2UQ-WQSG>].

³¹⁴ Dirk Visser, *Robotkunst and Auteursrecht* [Robot Art and Authors’ Right], 7 NEDERLANDS JURISTENBLAD 504, 507 (Feb. 17, 2023), <https://www.ipmc.nl/wp-content/uploads/2023/06/Robotkunst-en-auteursrecht-1.pdf> [<https://perma.cc/TS7D-XGS2>].

³¹⁵ Bo Zhou, the Senior Judge of the IPR Division of the Supreme People’s Court of China leaves open this possibility and contended that “it remains to be seen whether the autonomously generated product of AI can be a work protected by the *Copyright Law*.” ZHOU, *supra* note 234, at 3. “[T]he AI author has not been born

Mr. Sahni's request to make him and the gAI RAGHAV co-authors remains anathema to the Office, even in case Mr. Sahni's input would be sufficiently original and creative. But the Office concluded that that was also not the case, and qualified the work as derivative, containing insufficient original human authorship.

Thirdly, is the direct human intervention sufficient? The World Intellectual Property Organization (WIPO) Secretariat's Revised Statement on IP Policy and AI³¹⁶ delineates between "AI-generated," meaning autonomously produced by AI, and "AI-assisted" products, where AI is used as merely a tool,³¹⁷ highlighting the evolving challenge of proving human intervention as AI technology advances.

In contrast to the Office, the Beijing Internet Court acknowledges AI's role as a tool in human-led creative processes, suggesting a broader interpretation of authorship that includes significant human contribution, namely intelligent achievement, and originality in AI-generated content.³¹⁸ Intelligent achievement seems to point to thresholds of both intelligence and effort. One can argue that neither a value judgment about whether the creation of a work was smart or stupid nor whether a little or a lot of effort was invested should be relevant: both the opposite of aesthetic neutrality,³¹⁹ aesthetic discrimination, and sweat-of-the-brow³²⁰ are anathema to copyright doctrine.

B. Mental Conception or Mechanical Reproduction

Another important "platonic" ideal of copyright eligibility is that the author conceived the complete blueprint of the expressive work in advance of the creative process. In this view, the author is seen as a medium that channels the expressive

yet." Mauritz Kop, *AI & Intellectual Property: Towards an Articulated Public Domain*, 28 TEX. INTELL. PROP. L.J. 297, 304 (2020). The author of this article has advocated for preferential treatment of human authors, with the proviso "at least . . . until . . . the moment of singularity." See Friedmann, *supra* note 10, at 1.

³¹⁶ World Intell. Prop. Org. [WIPO], *WIPO Conversation on Intellectual Property (IP) and Artificial Intelligence (AI)*, ¶ 12, WIPO/IP/AI/2/GE/20/1 REV (May 21, 2020), https://www.wipo.int/edocs/mdocs/mdocs/en/wipo_ip_ai_2_ge_20/wipo_ip_ai_2_ge_20_1_rev.pdf [<https://perma.cc/VNP9-W5PA>].

³¹⁷ *Id.* In "Entrance," since there was an absence of human intervention, the question whether the Creativity Machine was merely used as assistive tool does not have to be answered. "Entrance," *supra* note 129, at 3 (referring to COMPENDIUM (Third), *supra* note 8, § 313.2). In "Zarya," Ms. Kashtanova's lawyer argued that Midjourney served merely as an assistive tool. "Zarya," *supra* note 131, at 3. In "SURYAST," Mr. Sahni argued that RHAGAV is merely an assistive software tool. "SURYAST," *supra* note 133, at 3.

³¹⁸ See "Spring," *supra* note 217, at 15.

³¹⁹ See *Bleistein v. Donaldson Lithographing Co.*, 188 U.S. 239, 252 (1903) (Holmes, J.).

³²⁰ See *Feist Publ'ns, Inc. v. Rural Tele. Serv. Co.*, 499 U.S. 340, 352–53 (1991).

work, so that it is revealed to the author exclusively. This “platonic” view is akin to patent law, where “[t]he inventor must form a definite and permanent idea of the complete and operable invention to establish conception,”³²¹ thus the conception must be done in the mind of the author. However, only a few authors think over the whole work, let it completely crystalize, before they set out to start creating. John Milton, the seventeenth-century English writer went first completely blind and then dictated *Paradise Lost*, his *magnus opus*, line for line to his daughter.³²² But other authors start with a vague idea and incrementally develop the idea in a particular expression of that idea. According to George Saunders, writer of *Lincoln in the Bardo*: “We buy into some version of the intentional fallacy: the notion that art is about having a clear-cut intention and then confidently executing same [*sic*].”³²³ Saunders describes his process much like the process of a prompt engineer using gAI:

I imagine a meter mounted in my forehead, with “P” on this side (“Positive”) and “N” on this side (“Negative”). I try to read what I’ve written uninflectedly, the way a first-time reader might (“without hope and without despair”). Where’s the needle? Accept the result without whining. Then edit, so as to move the needle into the “P” zone. Enact a repetitive, obsessive, iterative application of preference: watch the needle, adjust the prose, watch the needle, adjust the prose (rinse, lather, repeat), through (sometimes) hundreds of drafts. Like a cruise ship slowly turning, the story will start to alter course via those thousands of incremental adjustments.³²⁴

After writing a true sentence, more will follow.³²⁵ Our brains are in the sense of functionality not that different from LLMs: they can be both described

³²¹ MPEP § 2138.04 (9th ed. Rev. 01.2024, Nov. 2024). *See also* *Bosies v. Benedict*, 27 F.3d 539, 543 (Fed. Cir. 1994).

³²² Henry Fuseli, the Swiss painter, depicted “Milton Dictating to His Daughter” in 1793. *See* Henry Fuseli, *Milton Dictating to His Daughter* (illustration), in *Painting and Sculpture of Europe, Gallery 219*, ART INST. CHI. (1793), <https://www.artic.edu/artworks/44739/milton-dictating-to-his-daughter> [<https://perma.cc/L3RR-RYXD>].

³²³ George Saunders, *What Writers Really Do When They Write*, *GUARDIAN* (Mar. 4, 2017), <https://www.theguardian.com/books/2017/mar/04/what-writers-really-do-when-they-write> [<https://perma.cc/9CEP-LM4K>].

³²⁴ *Id.*

³²⁵ ERNEST HEMINGWAY, *A MOVEABLE FEAST* 9 (1964).

as prediction machines.³²⁶ In the same vein as LLMs were trained on enormous amounts of data, including copyrighted works, humans learn, although much more efficiently, and are exposed to enormous amounts of data, including copyrighted works as well.³²⁷

Ross and Copeland pointed out that there is no empirical evidence that human creativity works according to a blueprint.³²⁸ Tim Ingold argued that human creativity is neither mechanistic nor deterministic, but that the author is in dialogue with the material and where serendipity is an integral part of creation.³²⁹ The abstract expressionist painter Jackson Pollock, “interrupting his work, would judge his ‘acts’ very shrewdly and carefully for long periods before going into another ‘act.’ He knew the difference between a good gesture and a bad one. This was his conscious artistry at work, and it makes him a part of the traditional community of painters.”³³⁰

In the “Backseat Conversations” case, the Netherlands’ Supreme Court (*Hoge Raad*) clarified that copyrightability does not require the intention to create a work or make creative choices. The case involved recordings of interrogations of real estate entrepreneur Willem Endstra in a police BMW between May 2003 and January 2004. After Endstra’s assassination on May 17, 2004, Dutch media published the transcripts. The Endstra family’s attempt to ban these publications through summary proceedings was initially unsuccessful, as lower courts deemed the tapes non-copyrightable due to the lack of creative intent. However, on May 30, 2008, the Supreme Court overturned this decision, rejecting the necessity for an

³²⁶ “Theorists propose that the brain constantly generates implicit predictions that guide information processing.” Micha Heilbron et al., *A Hierarchy of Linguistic Predictions During Natural Language Comprehension*, 119 PNAS 1, 1 (2022) <https://www.pnas.org/doi/epdf/10.1073/pnas.2201968119> [<https://perma.cc/6NCA-YS3C>].

³²⁷ A big difference is that humans in most cases have to directly compensate the copyright holders if they buy a book or painting, or indirectly via the libraries and museums they visit.

³²⁸ See Wendy Ross, *Heteroscalar Serendipity and the Importance of Accidents*, in *THE ART OF SERENDIPITY* 77 (Wendy Ross & Samantha Copeland eds., 2022).

³²⁹ “Rather than reading creativity ‘backwards’, from a finished object to an initial intention in the mind of an agent, this entails reading it forwards, in an ongoing generative movement that is at once itinerant, improvisatory and rhythmic.” Tim Ingold, *The Textility of Making*, 34 *CAMB. J. OF ECON.* 91, 91 (2010).

³³⁰ ALLAN KAPROW, *ESSAYS ON THE BLURRING OF ART AND LIFE* 4 (Jeff Kelley ed., 1993).

author's conscious intent to create a work and make creative choices for copyright protection.³³¹

Professor Christine Farley noted that photography was initially heralded as a mechanical science in the nineteenth century,³³² described as “the pencil of nature”³³³ for its ability to mechanically capture scenes. Lange describes photography as a medium which, by definition, merges idea and expression, a notion that challenged its copyrightability.³³⁴

Burrow-Giles recognized photographers as authors of creative works when they engage in “posing . . . selecting and arranging the costume, draperies, and other various accessories in said photograph . . . arranging and disposing the light and shade, suggesting and evoking the desired expression[.]”³³⁵ Yet, mere mechanical reproductions without creative input, such as surveillance footage, satellite images, or direct copies of art,³³⁶ lack copyright protection. Therefore, straightforward photographs of public domain artworks were not considered creative, according to Wojcik.³³⁷ In the same vein, the Tenth Circuit in *Meshwerks v. Toyota*, held that digital three-dimensional models of Toyota vehicles that closely replicated the actual products were not protected.³³⁸ Similarly, the Ninth Circuit in *Satava v. Lowry* ruled that natural depictions, like jellyfish, are unprotectable because they

³³¹ “However, this [the creativity required for copyright protection] concerns a characteristic that can be recognized from the product itself. Therefore, it may not be required that the maker consciously wanted to create a work and consciously made creative choices, which requirement can also present those involved with insurmountable evidentiary problems,” the Dutch Supreme Court (Hoge Raad) said in its Endstra judgment. HR 30 mei 2008, NJ 2008, 556 m.nt. EJD (Endstra/Uitgeverig Nieuw Amsterdam B.V.) (Neth.), <https://uitspraken.rechtspraak.nl/details?id=ECLI:NL:HR:2008:BC2153> [<https://perma.cc/ZPQ2-RHJ4>].

³³² Farley, *supra* note 60, at 395.

³³³ *Id.* at 396.

³³⁴ Lange, *supra* note 61, at 145–46.

³³⁵ *Burrow-Giles Lithographic Co. v. Saroni*, 111 U.S. 53, 60 (1884).

³³⁶ The mere reproduction of a work of art in a different medium should not constitute the required originality for the reason that no one can claim to have independently evolved any particular medium. As discussed above, the law requires “some element of material alteration or embellishment” to the totality of the work. At bottom, the totality of the work is the image itself, and Bridgeman admittedly seeks to duplicate exactly the images of the underlying works. *Bridgeman Art Libr. Ltd. v. Corel Corp.*, 36 F. Supp. 2d 191, 199 (S.D.N.Y. 1999).

³³⁷ See Mary Campbell Wojcik, *The Antithesis of Originality: Bridgeman, Image Licensors, and the Public Domain*, 30 HASTINGS COMM. & ENT. L.J. 257, 265 (2008).

³³⁸ *Meshwerks, Inc. v. Toyota Motor Sales U.S.A., Inc.*, 528 F.3d 1258, 1268 (10th Cir. 2008).

are nature's creations.³³⁹ However, copyright can cover works that transcend mere replication,³⁴⁰ including photographs with significant post-production editing, highlighting that creativity can imbue mechanical reproductions with copyright eligibility.³⁴¹

Although authorial intention remains part of the “platonic” prerequisites for copyrightability, the literary theorists Wimsatt and Beardsley,³⁴² and Barthes,³⁴³ declared the author as unknowable, and more importantly, irrelevant. Authorial intention will be hidden until the technique that is now being developed to read people's minds comes to fruition.³⁴⁴ Therefore, it is challenging to prove what the author had in mind at the moment of conception of the work. Users of gAI were unable to convince the Office, and only Mr. Li managed to convince the Beijing Internet Court that the final image was a rendition of his vision, *ex ante*.

Mr. Thaler's role in shaping the mental imagery behind “Entrance” created by the Creativity Machine was an indirect one, primarily through his selection of the training data and other preparatory actions. Therefore, the Office's assumption was that the image was the result of a “mechanical reproduction” instead of Mr. Thaler's own original mental conception to which he had given a visible form.³⁴⁵

³³⁹ *Satava v. Lowry*, 323 F.3d 805, 813 (9th Cir. 2003).

³⁴⁰ *See E. Am. Trio Prods., Inc. v. Tang Elec. Corp.*, 97 F. Supp. 2d 395, 417 (S.D.N.Y. 2000).

³⁴¹ For example, if after a photo is taken, it is retouched, reworked, cropped, framed, redeveloped or, colored, or a combination. Farley, *supra* note 60, at 390. Photography does not have to be “the product of a soulless labor of the machine.” *Id.*

³⁴² *See* William K. Wimsatt Jr. & Monroe C. Beardsley, *The Intentional Fallacy*, 54 THE SEWANEE REV. 468, 468–69 (1946), <http://www.jstor.org/stable/27537676> [<https://perma.cc/3JLR-DEF6>] (arguing that authorial intention is both recoverable from a text and the locus of that text's meaning, separate from the author).

³⁴³ BARTHES, *supra* note 119, at 142 (positing that the intentions, subjectivity, and biography of an author ought not, and cannot, be used to interpret his or her text. Rather texts are “composites” of different interpretations by the readers).

³⁴⁴ *See* Liam Drew, *The Rise of Brain-Reading Technology: What You Need to Know*, NATURE (Nov. 8, 2023), <https://www.nature.com/articles/d41586-023-03423-6> [<https://perma.cc/S9CS-CEZP>] (noting that a “commercial ecosystem of wearable brain-reading devices is growing”).

³⁴⁵ “Entrance,” *supra* note 129, at 3. *See* U.S. COPYRIGHT OFF., ANNUAL REPORT OF THE REGISTER OF COPYRIGHTS 5 (1966); *see also* Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence, 88 Fed. Reg. at 16190, 16192 (asking “whether the AI contributions are the result of ‘mechanical reproduction’ or instead of an author's ‘own original mental conception, to which [the author] gave visible form’”) (quoting *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 60 (1884)). As also stated in “Spatial,” *supra* note 132, at 4, the Office will not register works produced by a machine or mere mechanical intervention from a human author.

In “Zarya,”³⁴⁶ when Ms. Kashtanova used Midjourney, the results were not considered to be predictable (see below), and therefore not based on a premeditated blueprint. The same can be said for “Entrance,”³⁴⁷ “Spatial,”³⁴⁸ and “SURYAST.”³⁴⁹

The creative process should combine form and matter into an expression of the personality of the author, according to Professor Maurizio Borghi.³⁵⁰ Professor Christopher Buccafusco pointed out the paradox of control: when there is not enough control, the creator is not the author; but when there is too much control, the work is considered not sufficiently creative.³⁵¹ In the same vein, the Beijing Internet Court held that “works completed by following a specific sequence, formula, or structure, which yield identical results regardless of who completes them, lack originality due to their uniform expression.”³⁵² When individuals utilize tools such as Stable Diffusion, the uniqueness and specificity of their prompts, particularly in describing visual elements and composition, significantly enhance the personal expression reflected in the resulting images.³⁵³

The “platonic” ideal in copyright law suggests that an author should mentally conceive the entire blueprint of a work before creation, similar to patent law. However, many authors develop their works incrementally rather than starting with a fully formed concept. Creativity is not mechanistic, and copyright law has evolved to protect works even when serendipity or a lack of conscious intent is involved.

³⁴⁶ “While additional prompts applied to one of these initial images can influence the subsequent images, the process is not controlled by the user because it is not possible to predict what Midjourney will create ahead of time.” “Zarya,” *supra* note 131, at 8.

³⁴⁷ “Entrance,” *supra* note 129 (since there was no direct human intervention at all in the generation).

³⁴⁸ “Spatial,” *supra* note 132, at 7 (“Instead, Mr. Allen is closer to the plaintiff in *Kelley v. Chicago Park District* who sought to claim copyright in a ‘living garden.’” In that case, the 7th Cir. held that Kelley did not have sufficient creative control of the claimed elements of the work).

³⁴⁹ According to the U.S. Copyright Office, “it will ‘depend on the circumstances, particularly how the AI tool operated and how it was used to create the final work.’” “SURYAST,” *supra* note 133, at 4.

³⁵⁰ Maurizio Borghi, *Owning Form, Sharing Content: Natural-Right Copyright and Digital Environment*, in 5 *NEW DIRECTIONS IN COPYRIGHT LAW* 197, 197 (Fiona MacMillan ed., 2007), <https://ssrn.com/abstract=1031855> [<https://perma.cc/SX8F-WCZ8>].

³⁵¹ Christopher Buccafusco, *How Conceptual Art Challenges Copyright’s Notions of Authorial Control and Creativity*, 43 *COLUM. J.L. & ARTS* 375, 375 (2020).

³⁵² “Spring,” *supra* note 217, at 14.

³⁵³ *Id.*

C. Control Over the Creative Process of the Work

The “platonic” ideal on copyright eligibility centers on the author’s total control over their creative work, rooted in the Latin word “auctoritas,” signifying power.³⁵⁴ This control involves decision-making, boundary-setting, and exclusivity.³⁵⁵ Artists who want to generate images with a text-to-image AI must select a model that aligns with their aesthetic vision.³⁵⁶ Users of gAI can influence the outcome with prompt designs, changing the parameters or settings (creativity levels, randomness, specificity, aspect ratio, etc.),³⁵⁷ and importantly iterative refinement. The Office and the District Court for the District of Columbia argued that the influence of gAI is insufficient,³⁵⁸ while the Beijing Internet Court acknowledged that it can be enough.³⁵⁹

Text-to-image models such as Midjourney and Stable Diffusion provide, after the input of a prompt, four images, each with slight variations, so that the user can pick the image that is closest to his or her vision, to further refine that image with a subsequent prompt. The Office, Board and District Court for the District of

³⁵⁴ Nickolas Pappas, *Authorship and Authority*, 47 J. AESTHETICS & ART CRITICISM 325 (1989), <https://doi.org/10.2307/431132> [<https://perma.cc/QZC9-2BB8>].

³⁵⁵ Boyden, *supra* note 309, at 385, 393 (In the absence of transparency between the ratio of creation and generation, Boyden proposed to use “[t]he ability of a person to foresee the work as rendered by a device or process can serve as a proxy for whether that person’s meaning or message is embodied in that work”). This would lead to practical evidentiary law challenges: should the candidate author describe and document his or her envisioned work? This would be burdensome and destroy any spontaneity. Or should the candidate author persuade the Office that he or she envisioned the work all along?

³⁵⁶ It has been argued that the DALL-E, Midjourney and Stable Diffusion LLMs each have their own distinct visual language. Robert Lavigne described the visual language of DALL-E as “realistic and abstract images with a flair for the imaginative,” Stable Diffusion as “images, ranging from hyper-realistic scenes to artistic or abstract compositions” and Midjourney as “specializing in artistic and often abstract interpretations.” Robert Lavigne, *Comparing DALL-E, Stable Diffusion, and Midjourney Prompt Engineering (2024)*, MEDIUM (Jan. 14, 2024), <https://medium.com/@RLavigne42/comparing-dall-e-stable-diffusion-and-midjourney-prompt-engineering-2024-4bf19ac11256> [<https://perma.cc/6VNH-A8W4>].

³⁵⁷ For example, by adding a camera and aperture as a prompt, users of text-to-image AI can dictate the depth of field. Robert K. Baggs, *Like or Loathe Midjourney, Photographers Currently Have an Edge With It*, FSTOPPERS (Aug. 23, 2023), <https://fstoppers.com/artificial-intelligence/or-loathe-midjourney-photographers-currently-have-edge-it-639126> [<https://perma.cc/5ZSZ-UCDX>].

³⁵⁸ While such instructions may give a user greater influence over the output, the AI technology is what determines how to implement those additional instructions. *Thaler v. Perlmutter*, 687 F. Supp. 3d 140, 149 (D.D.C. 2023).

³⁵⁹ See “Spring,” *supra* note 217, at 2, 8.

Columbia seem to perceive this feature as a slot machine, where chance plays an oversized role, instead of an efficient way to come closer to the artistic vision.³⁶⁰ Ms. Kashtanova's lawyer asserted that the Office relied upon oversimplified press accounts of her creative process.³⁶¹ Instead of an unguided, "push-button" process, the creative process Ms. Kashtanova engaged in with Midjourney took over a year; each image took hours, and a page took a day or more.³⁶²

After the initial image is generated by AI, the artist can decide to further modify and enhance it using additional post-processing tools and manual editing, ensuring the final product meets the artist's standards and vision. This was also acknowledged by the Office which attached importance to Ms. Kashtanova's³⁶³ and Mr. Allen's³⁶⁴ respective editing alterations with Adobe Photoshop if they would exert a certain degree of control over the final product. Control plays an important role in contemporary copyright law as well, to point out whether someone is an author or not,³⁶⁵ but in a less totalitarian way than the "platonic" ideal prescribes: authors are those who make creative decisions on their own,³⁶⁶ to exert authority over the expressive creation and have the last say in the final product.³⁶⁷

The Office argued that the technology that adds random noise to an image that evolves into a final image is too unpredictable.³⁶⁸ Users such as Ms. Kashtanova and Mr. Allen did not have control over the tool via textual prompts, and instead, Midjourney generated images in an unpredictable way, according to the Office. As pointed out above, the Office in "Spatial" held that "Midjourney does not understand grammar, sentence structure, or words like humans."³⁶⁹ However, this does not mean that these artists were not able to implement their vision to an aseptic (without being aware of semantics) tool such as Midjourney. In contrast, in the case

³⁶⁰ The Office relies on Midjourney that wrote: Midjourney "does not understand grammar, sentence structure, or words like humans," it instead converts words and phrases "into smaller pieces, called tokens, that can be compared to its training data and then used to generate an image." "Zarya," *supra* note 131, at 7.

³⁶¹ *Id.* at 19.

³⁶² *Id.*

³⁶³ *Id.* at 9–12.

³⁶⁴ "Spatial," *supra* note 132, at 2, 8.

³⁶⁵ See Balganes, *supra* note 4, at 71.

³⁶⁶ *Lindsay v. Wrecked & Abandoned Vessel R.M.S. Titanic*, 52 U.S.P.Q.2d 1609, 1614 (S.D.N.Y. 1999).

³⁶⁷ See *Aalmuhammed v. Lee*, 202 F.3d 1227, 1234 (9th Cir. 2000).

³⁶⁸ The Office discussed the topic of the copyrightability of "aleatory music" [randomly created music] already in 1966. U.S. COPYRIGHT OFF., ANNUAL REPORT OF THE REGISTER OF COPYRIGHT 5 (1967).

³⁶⁹ "Spatial," *supra* note 132, at 6–7.

of “SURYAST,” Mr. Sahni utilized only three inputs that led to the end result: (1) the photo that was made by Mr. Sahni; (2) a style element (“The Starry Night” in the style of Vincent van Gogh); and (3) a style transfer value percentage,³⁷⁰ that was too imprecise to have conceived and executed the human authorship.

Professor Balganesh suggested that in the case of *Naruto*, if Slater had not merely positioned the camera in a location popular with crested black macaques but had also trained a monkey or another animal under the photographer’s control to take the photograph, then the involvement of the animal would be predictable and directed rather than random. This could have potentially allowed the photographer to be recognized as the author.³⁷¹

Professor Dan Burk described thirty-six scenarios to assess whether a fictitious Jackson Pollock is author of the work in each situation and eligible for copyright protection.³⁷² Burk agreed with Balganesh that if Jackson would train an elephant to “dip the paintbrush into paint, and fling paint across a canvas, producing random splatters of color[,]”³⁷³ Jackson would be the author of the work. Burk argued that if Pollock intentionally leaves the window to his studio open, expecting that an errant wind will likely knock over the paint cans that he set up, splattering paint across a nearby canvas, that he could be the author.³⁷⁴ Burk equates the situation of an errant wind with that of feral hogs entering his studio.³⁷⁵ Applying Burk’s reasoning, this makes a generous interpretation of *Naruto* possible because Slater intentionally staged the situation just as one can bet on the errant wind or feral hogs to visit a studio.

In *Kelley*, the Seventh Circuit held that a “living garden lacks the kind of authorship and stable fixation normally required to support copyright.”³⁷⁶ After

³⁷⁰ “SURYAST,” *supra* note 133, at 7.

³⁷¹ Balganesh, *supra* note 4, at 65.

³⁷² Dan L. Burk, *Thirty-Six Views of Copyright Authorship, By Jackson Pollock*, 58 Hous. L. Rev. 263 (2020).

³⁷³ *Id.* at 307.

³⁷⁴ *Id.* at 277.

³⁷⁵ *Id.* at 308.

³⁷⁶ *Kelley v. Chi. Park Dist.*, 635 F.3d 290, 303 (7th Cir. 2011). *But see* PAUL GOLDSTEIN, GOLDSTEIN ON COPYRIGHT § 2.2.2 & n.68.2 (3d ed. 2005 & Supp. 2024) (“In fact no studied garden design will fail to reveal the impress of the artist or architect’s authorship.”).

all, capricious nature rules over the outdoor gardens. The process of tie-dyeing³⁷⁷ is also considered too unpredictable for copyright protection.

Jackson Pollock used randomness to express himself, although he denied “the accident,” with which he meant the accidental in his painting.³⁷⁸ In a 1973 documentary, Pollock described his painting method in this way:

Sometimes I use a brush, but often prefer using a stick. Sometimes, I pour the paint straight out of the can. I like to use a dripping fluid paint. A method of painting as the natural growth out of a need, I want to express my feelings rather than illustrate them. Technique is just a means of arriving at a statement.³⁷⁹

Professor Richard Chused argued that many works of art in recent decades “capitalize on the concept of randomness and the vitality it invokes in a fixed work.”³⁸⁰ According to Chused, removing human agency from AI is unlikely.³⁸¹ Then again, according to a materialistic deterministic worldview, every outcome, from Pollock’s works to products generated by AI after the instructions of prompts, is by definition predetermined.³⁸²

³⁷⁷ “Tie-dye: A resist-dyeing process in which parts of a fabric are compressed and wrapped tightly with yarn or strip material before dyeing.” *Textile Terms*, GEO. WASH. UNIV. TEXTILE MUSEUM, <https://museum.gwu.edu/textile-terms> [<https://perma.cc/GG8Q-K8WP>] (last visited Nov. 8, 2024).

³⁷⁸ “Jackson Pollock said: When I am painting I have a general notion as to what I am about. I can control the flow of paint; there is no accident.” Lore Mariano, *Jackson Pollock’s Number 1A, 1948; or, How Can We Be Abandoned & Accurate at the Same Time?*, TERRAIN GALLERY, <https://terraingallery.org/aesthetic-realism-art-criticism/jackson-pollocks-number-1a-1948-or-how-can-we-be-abandoned-accurate-at-the-same-time/> [<https://perma.cc/ML2X-9QHU>] (last visited Nov. 30, 2024). See also JACKSON POLLOCK, *NEW APPROACHES 57* (Kirk Varnedoe & Pepe Karmel eds., 1999).

³⁷⁹ Contemporary Art Fashion Slub Pop Kitsch, *Jackson Pollock Documentary (circa 1973 or so)*, YOUTUBE (Oct. 27, 2019), <https://www.youtube.com/watch?v=PYpA0iWhjJc&t=20s> [<https://perma.cc/7A9H-ZPUS>]. See, e.g., ALLAN KAPROW, *The Legacy of Jackson Pollock (1958)*, in *ESSAYS ON THE BLURRING OF ART AND LIFE 1*, 3–4 (Jeff Kelley ed., 2003).

³⁸⁰ Richard H. Chused, *Randomness, AI Art, and Copyright*, 40 *CARDOZO ARTS & ENT. L.J.* 621, 622 (2023).

³⁸¹ *Id.* at 626. But see Luciano Floridi, *AI as Agency Without Intelligence: On ChatGPT, Large Language Models, and Other Generative Models*, 36 *PHIL. & TECH.*, no. 15, Mar. 10, 2023, at 1, 6.

³⁸² “In the mind there is no absolute or free will; but the mind is determined to wish this or that by a cause, which has also been determined by another cause, and this last by another cause, and so on to infinity.” BARUCH SPINOZA, *ETHICS*, Pt. II, Proposition 48 (R.H.M. Elwes trans., Monadnock Valley Press 2022) (1677), <https://monadnock.net/spinoza/ethics-2.html> [<https://perma.cc/V76G-ME6R>]. See ROBERT M. SAPOLSKY, *DETERMINED: A SCIENCE OF LIFE WITHOUT A FREE WILL passim* (2023).

In *Alfred Bell*, the Second Circuit held that some random variations from the prior art were sufficient to find originality,³⁸³ and some thin protection. However, in *Toro Co. v. R & R Products Co.*, the Eighth Circuit held that the defendant in a copyright infringement case had copied the plaintiff's part numbers.³⁸⁴ But that these were not proper subject matter for copyright, since they were randomly and arbitrarily selected, and therefore there was no originality.³⁸⁵ Hence, some randomness can provide originality (*Alfred Bell*), but complete randomness cannot (*Toro*).

In contrast to the “platonic” view of the Office and the Beijing Internet Court, in at least some traditional expressive works there is room for randomness, unpredictability, serendipity, timing and luck, in short, for opportunism.³⁸⁶ Serendipity can be described as finding something that what one was not looking for.³⁸⁷ Abraham Zapruder happened to stand at the exact time and place to film the assassination of John F. Kennedy, and he was able to protect his film under copyright law.³⁸⁸ It seems he witnessed and reported on something he was not looking for, and for shooting the film he was rewarded. The Court however emphasized the “creative” choices involved in the selection of camera, film, lens, location, and timing.³⁸⁹

³⁸³ *Alfred Bell & Co. v. Catalda Fine Arts, Inc.*, 191 F.2d 99, 105 (2d Cir. 1951) (including the inadvertent variations caused by “bad eyesight or defective musculature, or a shock caused by a clap of thunder,” may produce material that “the ‘author’ may adopt . . . as his and copyright it”); Professor Boyden described this as situations where “an author can add creativity to elements of a work by ‘ratifying’ their presence post hoc.” Boyden, *supra* note 309, at 391.

³⁸⁴ *See Toro Co. v. R & R Prods. Co.*, 787 F.2d 1208, 1210 (8th Cir. 1986).

³⁸⁵ *Id.* at 1216.

³⁸⁶ Lee, *supra* note 7, at 75 (“The Copyright Office’s restrictive approach is at odds with the creative process and ignores the extensive body of research showing the importance of serendipity, lack of control, accidents, trial and error, randomness, and the use of iterative processes in artistic creation.”).

³⁸⁷ In paragraph 191 Letter 90 To Sir Horace Mann. Arlington Street, Jan. 28, 1754, Horace Walpole wrote: “I once read a silly fairy tale, called ‘The Three Princes of Serendip;’ as their Highnesses travelled, they were always making discoveries, by accidents and sagacity, of things which they were not in quest of: for instance, one of them discovered that a mule blind of the right eye had travelled the same road lately, because the grass was eaten only on the left side, where it was worse than on the right—now do you understand Serendipity?” HORACE WALPOLE, *THE LETTERS OF HORACE WALPOLE, EARL OF ORFORD — VOLUME 2* (Marjorie Fulton ed., Project Gutenberg eBook 2003) (ebook), <https://www.gutenberg.org/cache/epub/4610/pg4610-images.html> [<https://perma.cc/EPP7-JHH2>].

³⁸⁸ *See Time Inc. v. Bernard Geis Assocs.*, 293 F. Supp. 130, 144 (S.D.N.Y. 1968).

³⁸⁹ *Id.* at 143.

Photojournalist Alfred Eisenstaedt's photograph of a sailor and a dental assistant kissing in Times Square symbolized Victory over Japan (V-J) Day, August 14, 1945, the final end of World War II.³⁹⁰

Wildlife photographer Thomas Mangelsen photographed an Alaskan brown bear that stood in the stream while a salmon flew into his mouth, which he titled "Catch of the Day Legacy Reserve."³⁹¹ The gallery of Mangelsen calls this "a testament to [his] ability to previsualize a composition first in his mind's eye, then positioning himself above the falls of Brooks River, allowing all of the critical elements to converge and pure magic to happen."³⁹² In other words Mangelsen increased his chances that he could shoot the picture. Mangelsen himself described the creative process for this picture and the unpredictable outcome that:

[a]fter a week I still wasn't sure I had gotten the image I wanted of the catch. I had seen it several times, which was special enough, but it all happened so fast and there were so many variables, that I couldn't be sure if I had reacted quickly enough to capture it on film. I wouldn't know for certain until I saw the processed film weeks later.³⁹³

Many authors planned their work purposively, only in retrospect. Similarly, Eisenstaedt anticipated the picture he was looking for,³⁹⁴ and Mangelsen allegedly "previsualized" the situation.³⁹⁵

Randomness and serendipity are often important elements in the creation of works. This is not a problem for the registration and protection of traditional works, but becomes an obstacle for the registration and protection of AI-generated

³⁹⁰ Devin Coldewey, *Camera That Shot Famed 'V-J Day Kiss' Photo up for Auction*, NBC NEWS, (Apr. 22, 2013, 5:36 PM), <https://www.nbcnews.com/tech/gadgets/camera-shot-famed-v-j-day-kiss-photo-auction-flna6c9548163> [<https://perma.cc/B3GL-DLS9>]. See generally LAWRENCE VERRIA & GEORGE GALDORISI, *THE KISSING SAILOR, THE MYSTERY BEHIND THE PHOTO THAT ENDED WORLD WAR II* 1–5 (2012) (Eisenstaedt described the combination of instinctive anticipation, aesthetic appraisal, and photographic skills).

³⁹¹ Thomas Mangelsen, *Catch of the Day Legacy Reserve* (photograph), in MANGELSEN, <https://www.mangelsen.com/catch-of-the-day-legacy-reserve-collection-1698lr.html> [<https://perma.cc/P4BK-322E>] (last visited Nov. 9, 2024).

³⁹² *Id.*

³⁹³ *Id.*

³⁹⁴ See Coldewey, *supra* note 390. See generally VERRIA & GALDORISI, *supra* note 390.

³⁹⁵ Mangelsen, *supra* note 391.

products. This is also ironic, since one can argue that humans are less predictable than AI. In other words, the author is not allowed to play dice, but she does.³⁹⁶

D. Inalienable Bond Between Author and Work

In countries with an author's rights system, the notion that there is an inalienable bond between the author and his or her work has led to the protection of moral rights.³⁹⁷ The concept has hardly caught on in countries with a copyright system, such as the U.S. The Berne Convention instructs the members of the Berne Union to implement at least the right of attribution or integrity.³⁹⁸ The U.S. is a member of the Berne Convention, but has hardly incorporated any explicit moral rights, except for the Visual Artists Rights Act (VARA).³⁹⁹ Instead, the Office believes that the U.S. already complies to obligations of the Berne Convention by implementing a patchwork of measures as stand-in for formal moral rights.⁴⁰⁰

According to the "platonic" view, the author's mind instructs his own hands to create the work. In this view one's own manual dexterity is imperative. This view might be too simplistic. According to Mr. Allen he used at least 624 iterations of prompts that lead to the almost finished product of "Spatial."⁴⁰¹ This process is arguably comparable to an iterative process of giving a painter several instructions at a time, until the result is what the instructor had in mind. The principle of a direct

³⁹⁶ Inspired by Albert Einstein's famous saying "Der Herrgott würfelt nicht" (God does not play dice). It seems Einstein expresses people's innate preference that reality should be deterministic and predictable, instead of probabilistic and sometimes random. In a letter Einstein gave his reaction to the part of Nature described by Quantum Mechanics to physicist Max Born on December 4, 1926. He actually wrote, "[t]he theory says a lot, but does not really bring us any closer to the secret of the 'old one.' I, at any rate, am convinced that *He is not playing at dice.*" MAX BORN & ALBERT EINSTEIN, *THE BORN-EINSTEIN LETTERS: FRIENDSHIP, POLITICS AND PHYSICS IN UNCERTAIN TIMES* 88 (Irene Born trans., 2005).

³⁹⁷ Cyrill P. Rigamonti, *The Conceptual Transformation of Moral Rights*, 55 AM. J. COMPAR. L. 67, 73 (2007).

³⁹⁸ See Berne Convention, *supra* note 79, art. 6bis.

³⁹⁹ 17 U.S.C. § 106A. See also Note, *Visual Artists' Rights in a Digital Age*, 107 HARV. L. REV. 1977, 1985 (1994).

⁴⁰⁰ See U.S. COPYRIGHT OFF., *AUTHORS, ATTRIBUTION, AND INTEGRITY: EXAMINING MORAL RIGHTS IN THE UNITED STATES, A REPORT OF THE REGISTER OF COPYRIGHTS* 5 (2019), <https://www.copyright.gov/policy/moralrights/full-report.pdf> [<https://perma.cc/99HX-SG47>]. See, e.g., Georg H. C. Bodenhausen, *United States Copyright Protection and the Berne Convention*, 13 BULL. COPYRIGHT SOC'Y U.S.A. 215, 221 (1966). Ralph S. Brown, *Adherence to the Berne Copyright Convention: The Moral Rights Issue*, 35 J. COPYRIGHT SOC'Y U.S.A. 196, 204 (1988). Justin Hughes, *American Moral Rights and Fixing the Dastar 'Gap'*, 3 UTAH L. REV. 659, 664–77 (2007).

⁴⁰¹ "Spatial," *supra* note 132, at 2, 6.

connection between the author and the work was already belied by painters such as Pieter de Bruegel the younger (1564–1638),⁴⁰² Peter Paul Rubens (1577–1640)⁴⁰³ and Rembrandt Harmenszoon van Rijn (1606–1669),⁴⁰⁴ who all founded schools of painting and kept flourishing studios where talented pupils were learning from precise instructions to paint in the style of the master, and sometimes developed specializations, for example in painting hands, so that the labor could be efficiently divided.

“[A]lthough studio works might be attributed to the master for purposes of artistic authenticity, the attribution of copyright authorship would depend on the degree of oversight that the master was exercising over the apprentices in the workshop.”⁴⁰⁵

John Smith, art historian and writer, argued that if the brilliance of these eminent painters would only be vested in manual dexterity, then it could be easily imitated. Instead, Smith claimed that:

[B]eauties which emanate from a higher source, such as expression, delicacy of gradation, and harmony of tints, they are then beyond the reach of all who are inferior to the master himself. . . .⁴⁰⁶

Although Napoleon Sarony, the master-photographer who was the respondent in *Burrow-Giles* staged the picture of Oscar Wilde by “selecting and arranging” the many elements necessary for the photograph,⁴⁰⁷ his chief operator seems to have

⁴⁰² Between 1559 and 1563, Bruegel the Elder, was working alone and without workshop participation. MARGARET A. SULLIVAN, BRUEGEL AND THE CREATIVE PROCESS, 1559–1563 15 (2010). Bruegel the Younger, together with his workshop, produced a number of copies of his father’s paintings, including one of the Proverbs painting of 1559. *Id.* at 33, 38.

⁴⁰³ *Collaborators of Rubens*, RUBENS EXPERTS, <https://www.rubensexerts.com/rubens-assistants.php> [<https://perma.cc/LX8Y-73JQ>] (last visited Nov. 9, 2024).

⁴⁰⁴ Arthur K. Wheelock Jr., *Issues of Attribution in the Rembrandt Workshop*, NAT’L GALLERY OF ART (2014), <https://www.nga.gov/research/online-editions/17th-century-dutch-paintings/essay-issues-attribution-rembrandt.html> [<https://perma.cc/RA67-W55C>] (last visited Nov. 9, 2024).

⁴⁰⁵ Burk, *supra* note 372, at 305. Of course, one needs to realize that pre-1710 (Statute of Anne), there was no formal copyright law.

⁴⁰⁶ JOHN SMITH, A CATALOGUE RAISONNÉ OF THE MOST EMINENT DUTCH, FLEMISH, AND FRENCH PAINTERS 244 (1836), <https://digi.ub.uni-heidelberg.de/diglit/smith1836bd7/0314/image,info> [<https://perma.cc/BC95-TYJ3>].

⁴⁰⁷ *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 60 (1884).

been Benjamin Richardson who took the actual photographs.⁴⁰⁸ In contemporary art, figures like Andy Warhol in the past, and Jeff Koons today, are known for producing few, if any, of their artworks directly and physically on their own. Warhol relied on assistants in his atelier called “The Factory” to mass produce prints on different sizes and formats.⁴⁰⁹ Also Koons’ coterie relies on expert artisans in his workshop space whom he gives meticulous instructions.⁴¹⁰ “Koons sees himself comparable to a fashion designer, who creates an idea, then employs other individuals to make the product.”⁴¹¹ Koons has fifty employees on the payroll,⁴¹² who prepare works for him and he automatically becomes the author of all these works made for hire.⁴¹³ In *Lindsay*, Alexander Lindsay did not himself film the underwater wreck of the Titanic, but precisely planned and directed the film, which was sufficient to make him the author, especially since the film duplicated Lindsay’s conceptions.⁴¹⁴ Nevertheless, the Supreme Court has stated that “[a]s a general rule, the author is the party who actually creates the work, that is, the person who translates an idea into a fixed, tangible expression entitled to copyright protection.”⁴¹⁵ Authorship is generally a factual question for juries to decide in copyright actions.⁴¹⁶

⁴⁰⁸ Farley, *supra* note 60, at 434–35. ROBERT HIRSCH, *SEIZING THE LIGHT: A SOCIAL & AESTHETIC HISTORY OF PHOTOGRAPHY* 88 (3d ed. 2017).

⁴⁰⁹ Rebecca Marsham, *A Short Guide To Andy Warhol’s Factory*, MY ART BROKER, <https://www.myartbroker.com/artist-andy-warhol/guides/5-things-to-know-about-warhols-factory> [<https://perma.cc/MW6Z-CQ3P>] (last updated Oct. 18, 2023).

⁴¹⁰ Rosie Lesso, *How Does Jeff Koons Make His Art?*, THE COLLECTOR (Aug. 31, 2022), <https://www.thecollector.com/how-does-jeff-koons-make-his-art/> [<https://perma.cc/H7A2-YA4J>].

⁴¹¹ Madeleine Conlin, *Give and Take: On Jeff Koons Mastering Contractual and Statutory Relationships with Other Artists*, *CTR. FOR ART L.* (July 7, 2017), <https://itsartlaw.org/2017/07/07/give-and-take-on-jeff-koons-mastering-contractual-and-statutory-relationships-with-other-artists/> [<https://perma.cc/EL3P-DB6Y>].

⁴¹² *Jeff Koons, LLC Information*, ROCKETREACH, <https://rocketreach.co/jeff-koons-llc-profile-b47cc4c1fc4f91cc> [<https://perma.cc/NBZ9-J6HE>] (last visited Nov. 9, 2024).

⁴¹³ *Compare* 17 U.S.C. § 201(b) with the conditions stated in *Cnty. for Creative Non-Violence v. Reid*, 490 U.S. 730, 750–51 (1989).

⁴¹⁴ *Lindsay v. Wrecked & Abandoned Vessel R.M.S. Titanic*, 52 U.S.P.Q.2d 1609, 1613 (S.D.N.Y. 1999).

⁴¹⁵ *Cnty. for Creative Non-Violence*, 490 U.S. at 737. *But see* Timothy J. McFarlin, *A Copyright Ignored: Mark Twain, Mary Ann Cord, and the Meaning of Authorship*, 69 J. COPYRIGHT SOC’Y U.S.A. 421, 423, 431 (an orally expressed work of authorship can be protected under state-law copyright; the perpetual nature of common-law copyright might still be existing today).

⁴¹⁶ *Andrien v. S. Ocean Cnty. Chamber of Com.*, 927 F.2d 132, 134 (3d Cir. 1991).

In *Andrien*, the plaintiff's direction of a printing company's employee, Carolyn Haines, in compiling preexisting maps, street names, and other information into a map of Long Beach Island rendered him at least an author of the compilation (and possibly a joint author).⁴¹⁷ Ms. Haines acted as his amanuensis just as does a stenographer in typing material dictated by another person.⁴¹⁸ The "platonic" ideal is diluted in *Andrien*.⁴¹⁹

In contrast to the Office, the Beijing Internet Court acknowledged that users of Stable Diffusion do not draw lines or apply color, but only provide textual descriptions that can present human creativity and conception in a tangible form.

There are many examples of indirect or partial connections between authors and works: from works for hire to joint works,⁴²⁰ that are eligible for copyright registration and protection. It is interesting to see that this is now a factor being regarded as a barrier for copyright registration and protection.

E. Expressions of Ideas

Ideas, abstractions, or concepts cannot be protected under copyright law, and only expressions of ideas are eligible for copyright protection.⁴²¹ One can argue that the idea is the mother of all expressions of that idea, and therefore it should be free to be used by every new author to provide his or her own idiosyncratic expression of that idea. For example, in *Kalpakian*, the Ninth Circuit held that a jeweled bee pin is an idea that defendants were free to copy and provide their own expression of this idea.⁴²²

The nineteenth-century Dutch author Herman Gorter argued that art "must be the most individual expression of the most individual emotion."⁴²³ One can argue

⁴¹⁷ *Id.* at 135–36.

⁴¹⁸ *Id.* Ginsburg and Budiardjo describe gAI as a tool, which has an "amanuensis" function. See Jane C. Ginsburg & Luke A. Budiardjo, *Authors and Machines*, 34 BERKELEY TECH. L.J. 343, 412 (2019).

⁴¹⁹ *Andrien*, 927 F.2d at 135 ("These writers are entitled to copyright protection even if they do not perform with their own hands the mechanical tasks of putting the material into the form distributed to the public.").

⁴²⁰ See 17 U.S.C. § 201(a).

⁴²¹ 17 U.S.C. § 102(b) ("In no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work.").

⁴²² *Herbert Rosenthal Jewelry Corp. v. Kalpakian*, 446 F.2d 738, 742 (9th Cir. 1971).

⁴²³ Herman Gorter was a representative of the Dutch literary Movement of the Eighties (1880–1894). Herman Gorter, *Verzen Amsterdam, 1890*, in NIEUWERE LITERATUUR-GESCHIEDENIS 161 (Willem Kloos

that the “platonic” ideal of a copyrighted work should fulfil this condition as well. Interestingly, Article 2.1 of the Korean Copyright Act explicitly refers to emotions in the definition of a copyrighted work: “The term ‘work’ means a creative production that expresses human thoughts and emotions.”⁴²⁴ The stereotypical Romantic notion is that a genuine artist must experience the same emotion as the artwork is expressing during the creation process. In contrast, Richard Wollheim’s theory explains that an author can project sadness in his work without feeling sadness.⁴²⁵ In this way, there is still some connection between the artist’s own emotional state and the emotion conveyed in the artwork.

The distinction between ideas and expression of ideas, becomes very germane in the discussion about whether prompts can convey expressive works. The argument by the Office that one or more instructions are merely ideas is too simplistic. If a user of gAI provides a series of increasingly fine-grained instructions, there comes a point when the instructions are no longer ideas, but expressions of ideas. An analogy of the relation between prompt engineer and gAI is like witness and forensic sketch artist. Sometimes, it becomes less than intuitive to determine who the author of the expressive work is. The forensic sketch artist will draft a suspect after reiterative directions of the witness. The witness provides ever more precise descriptions. With these additions, deletions, and modifications, a profile is drafted of the suspect. When Koons has an idea, he will find an artisan to give form to it. After every version of the work, Koons provides meticulous directions. Again, the question is, at what moment does Koon’s concept become Koon’s expression? If the idea is sufficiently fine-grained, it ceases to be merely ideational, but becomes expressive.

Despite the welcoming attitude of the Beijing Internet Court regarding the copyright eligibility of the AI-generated image “Spring,” the Court held that the analogy of a commissioned artist and client is incorrect.⁴²⁶ It held that the

ed., 1925) (“In ‘t algemeen slechts kan men weten, dat kunst de aller-individueelste expressie van de aller-individueelste emotie moet zijn.”), https://www.dbnl.org/tekst/kloo003veer02_01/kloo003veer02_01_0016.php [<https://perma.cc/8USJ-JNBQ>].

⁴²⁴ Copyright Act, art. 2 para. 1 (S. Kor.), *translated in* Korean Legislation Research Institute’s online database, https://elaw.klri.re.kr/eng_service/lawView.do?hseq=42726&lang=ENG [<https://perma.cc/NS38-2VRN>].

⁴²⁵ See RICHARD WOLLHEIM, *ART AND ITS OBJECTS* 67 (2d ed. 1980).

⁴²⁶ “Spring,” *supra* note 217, at 15.

commissioned artist has their own will and integrates their choices and judgments into the painting; and by contrast, current gAI models do not possess a free will.⁴²⁷ This demonstrates that the Beijing Internet Court is also under the influence of the “platonic” view on copyright eligibility.

In the “Entrance” case, there was no expression of Mr. Thaler.⁴²⁸ In the case of “SURYAST,” the Board found that the expressive elements of pictorial authorship were not provided by Mr. Sahni:⁴²⁹ specifically, it held that the color and position of the elements in the image were generated by RAGHAV, the gAI.

In the case of “Zarya,” the Office held that Ms. Kashtanova’s prompts functioned closer to suggestions than orders. Also, Mr. Allen’s prompts were held to be too indirect for the award-winning result “Spatial,” that was generated predominantly by Midjourney.⁴³⁰ Moreover, Mr. Allen’s input was inextricably merged with the input from Midjourney.⁴³¹ The Office was not convinced that these prompt engineers sufficiently guided the structure and content of their respective images, even though one can argue that the feedback loop significantly enhanced the relevance and quality of the generated images.

One can argue that “Zarya,” “Spatial,” and “Spring” are comparable in their genesis. Ms. Kashtanova asserted that she used hundreds or thousands of prompts in Midjourney;⁴³² Mr. Allen contended that he used at least 624 iterations of prompts in Midjourney;⁴³³ while Mr. Li used twenty positive and 120 negative prompts in Stable Diffusion.⁴³⁴ Their respective human interventions were different in degree, not in kind. Surprisingly, the opposite determinations of the Office and the Beijing Internet Court used the same “platonic” reasoning. Only in the Chinese case of “Spring,” the Beijing Internet Court held that Mr. Li’s reiterative input was sufficient human intervention, meeting their standard

⁴²⁷ *Id.* The certainty with which the Beijing Internet Court claims that humans have free will is remarkable. *Contra* SPINOZA, *supra* note 382; SAPOLSKY, *supra* note 382.

⁴²⁸ “Entrance,” *supra* note 129, at 5 (“[T]he courts have been consistent in finding that non-human expression is ineligible for copyright protection.”).

⁴²⁹ “SURYAST,” *supra* note 133, at 7.

⁴³⁰ “Spatial,” *supra* note 132, at 7.

⁴³¹ *Id.*

⁴³² “Zarya,” *supra* note 131, at 9.

⁴³³ “Spatial,” *supra* note 132, at 2.

⁴³⁴ *See supra* notes 253–54.

of intellectual achievement, and originality, demonstrating sufficient human creativity.⁴³⁵

WHAT IS GOOD IS FORM-GIVING. WHAT IS BAD IS FORM. FORM IS THE END, DEATH. FORM-GIVING IS MOVEMENT, ACTION. FORM-GIVING IS LIFE.

— 2 PAUL KLEE, *NOTEBOOKS: THE NATURE OF NATURE* 269 (Jürg Spiller ed., Heinz Norden trans., George Wittenborn 1973).

Repeating a prompt leads to slightly different outcomes. This instability of outcomes is anathema to the “platonic” view of *ex ante* conception. When one envisions the end product, the “platonic” ideal suggests that one should replicate the envisioned creative steps precisely to achieve that identical end result. This high standard is not applied to traditional works: A modern painter might have a very coarse sense of what he wants to create and by serendipitous techniques such as throwing paint to the canvas, he is making use of certain patterns he finds pleasing. In other words, this process can be repeated, but will lead to different outcomes, just as text-to-image gAI services. The argument that copyright doctrine dictates the standard that the outcome of prompts should be stable is untenable. What one can say, however, is that the prompt engineer, after a series of iterative prompts, is satisfied with the outcome.⁴³⁶

CONCLUSION

This paper points out that the U.S. Copyright Office, the District Courts, and the Beijing Internet Court all use a higher standard of copyright eligibility for AI-generated images, which this author calls a “platonic” standard, than for traditional expressive works, where it uses a humanistic standard. It is inimical to copyright law to apply a different standard on “pictorial, graphical, and sculptural works,”⁴³⁷ because they came into being via generation and not creation. Instead of pretending to apply the same standard for both AI-generated content and traditional expressive

⁴³⁵ “Spring,” *supra* note 217.

⁴³⁶ In the movie *Pollock* (2000) a Life Magazine reporter asked Jackson Pollock: “How do you know when you’re finished with a painting?” Pollock: “How do you know when you’re finished with making love?” *POLLOCK* (Sony Pictures Classics 2000).

⁴³⁷ 17 U.S.C. § 102(a)(5).

works, this author holds that it is justified to provide preferential treatment to human-authored creations over AI-generated products to promote the continued flourishing of human creativity, avert the dilution of human culture, and at the same time allow innovation in AI (especially regarding to science) to thrive.⁴³⁸

This author proposes a moratorium for the protection of AI-generated products until we start making the distinction between creation and generation.

The Office should make available registered works and the metadata of their authors as training data to AI service providers, so that they can license the use of the copyrighted works to train the LLMs. In turn, the AI service providers should make a database accessible to the Office with the products that were generated via their AI services, so that the Office is able to compare the generated products with the works that applicants of copyright registration have submitted.

Once a distinction between creation and generation can be made, two standards need to be applied. The existing humanistic standard for creation; and a new standard for AI-assisted content.

This author recommends the following two methods to provide preferential treatment to human authors:

First, in contrast to the protection of human authors which are eligible for a copyright duration term of seventy years after the death of the author in the U.S., or 50 years after the death of the author in China, a *sui generis* regime for AI-assisted products should be considered, applying the same originality standard as clarified in *Feist*,⁴³⁹ but providing a much shorter duration—for example 5 years in total (independent of the life of the author)—in proportion to the efficient and expedient way of generation. This would enable the products to ascend into the public domain relatively quickly. Another way is to provide only “thin” protection, which means that infringement claims would be more challenging to prove because the copyright only covers the exact expression of the work.⁴⁴⁰ This is important, since it would help counter copyright trolls who could massively churn out gradual

⁴³⁸ See Friedmann, *supra* note 10, at 1.

⁴³⁹ *Feist Publ'ns, Inc. v. Rural Tele. Serv. Co.*, 499 U.S. 340, 345 (1991).

⁴⁴⁰ See *Satava v. Lowry*, 323 F.3d 805, 812 (9th Cir. 2003).

variations of AI-generated material to start suing succeeding users of gAI,⁴⁴¹ if no legal change is made. Users of gAI who would like to be eligible for such a *sui generis* protection would need to provide metadata to the database of the Office. This is indeed a formality, which is a non-issue since the *sui generis* system does not have to comply with the Berne Convention.

A *sui generis* system could only work if the human intervention can be quantified. The burden of proof is with the user of gAI. But the gAI services have a responsibility too: to add indelible watermark, cryptography, and metadata, and to make their database accessible to the Office, so that the latter can compare the applicant's work with the AI-generated product, to measure his or her human input. In absence of the transparency on the ratio between creation and generation, there should be a moratorium on the protection of AI-generated products.

Second, legislators and policy makers could be inspired by the government of Quebec, which has implemented a regulatory framework that ensures that French will remain the dominant language in the Province. Analogous to the “Bill 96, An Act to respect French the official and common language of Québec,”⁴⁴² regulatory measures could be taken to promote the creation of human-authored works and avert the dilution of human culture. One could think of incentives and support to human-authored journalism and cultural sector activities; examples include tax benefits, grants, benchmarks, and funding opportunities for human authors, as well as limitations for AI-assisted products.

In the end, creation is finite, just as authors are finite. Therefore, it should be acknowledged as more valuable than generation.

⁴⁴¹ See Matt Binder, *New Algorithm Generates Every Possible Melody to Curb Copyright Lawsuits*, MASHABLE (Mar. 1, 2020), https://mashable.com/article/music-melody-algorithm-midi-copyright?test_uid=01iI2GpryXngy77uIpA3Y4B&test_variant=a [<https://perma.cc/4ZB7-2432>] (Binder points out a potential example of copyright bullying in music using gAI).

⁴⁴² An Act Respecting French, the Official and Common Language of Québec, S.Q. 2022, c 14 (Can.), https://www.publicationsduquebec.gouv.qc.ca/fileadmin/Fichiers_client/lois_et_reglements/LoisAnnuelles/en/2022/2022C14A.PDF [<https://perma.cc/FN4V-NWKP>].

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EXTRA-LEGAL USES OF TM

CLARK D. ASAY,* LAREINA HINGSON** & STEPHANIE PLAMONDON†

Theoretical accounts of trademark law suggest that trademarks serve multiple marketplace functions, including protecting consumers and producers from unfair dealing, reducing consumer search costs, and incentivizing higher quality products. Producers of goods and services often use the “TM” symbol to signal their assertion of legal rights in a mark, arguably helping advance these goals.

But recently, an interesting phenomenon has arisen in which individuals not engaged in typical commercial activities have been using the TM signifier in ways that do not strictly correspond to the symbol’s legal function. These so-called “extra-legal” uses of the TM symbol can offer insights into how ordinary people understand trademarks; there is also a question of what the appropriation means, if anything, for the efficient functioning of trademark law.

To better understand these extra-legal uses of the TM symbol, we collected data from various social media and text messaging platforms, online discussion boards, and real-world uses. We found that speakers invoking the TM symbol often leveraged the linguistic, cultural, and legal connotations of the symbol to achieve a variety of expressive and creative ends. Overall, we observed that speakers using the TM symbol in expressive speech had a surprisingly sophisticated understanding of the

*Terry L. Crapo Professor of Law, BYU Law School. JD, Stanford Law School. M.Phil, University of Cambridge.

**Visiting Professor, BYU Department of Linguistics.

†Professor of Law, BYU Law School. JD, Harvard Law School. Ph.D Neuroscience, University of Utah. We are grateful to participants in the 2023 UC Davis faculty colloquium and the 2022 IP Scholars Conference at Stanford Law School, who provided valuable feedback to the ideas presented in this Article. We would also like to especially thank Abby Carr, Amy Clayton, David Chandler, Ellie Dearden, Kyra Larsen, and Mandy Jackson for their valuable research assistance.

linguistic and semantic functions of the symbol. This understanding and leveraging of the interrelated meanings of the TM symbol allowed for a flourishing of creativity and a level of sophisticated and nuanced discourse that otherwise might be difficult to achieve in an online format.

The widespread adoption of the TM symbol as a vehicle for expression is not entirely without risks, however. We draw analogies to existing trademark law and doctrines to explore these potential harms, including the risk that consumers and producers will be confused by these expressive uses and the risk that the legal significance of the mark will be “diluted” by competing uses. Though we find these concerns have some merit, we conclude that they are outweighed by the social benefits that flow from allowing speakers to use the TM symbol in expressive ways. This conclusion informs how trademark law should handle these uses going forward.

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INTRODUCTION

Recently, NBA basketball star and fashion guru Jordan Clarkson posted a series of photos of himself on Instagram.¹ Those photos included a selfie, a still shot of his phone playing an interview with him, a photo with friends in the ocean, and several others capturing him in various NBA settings (e.g., entering an arena, playing in an NBA game, signing autographs, and lifting weights).² The post itself wasn't unusual—celebrities make similar posts all the time.³ Rather, it was the post's caption, which simply read “TM,” that stood out. Why would Clarkson use that symbol, borrowed from trademark law, as the sole caption in a social media post?⁴

Typically, trademark owners use the TM symbol to notify others that they claim legal rights in an associated trademark.⁵ Those legal rights consist of the ability to prevent others from using the same or a similar mark in association with their own goods and services.⁶ Trademarks thus help identify the source of goods and services and, according to predominant trademark theories, thereby help

¹ Clarkson has been described by some as the best-dressed athlete in the NBA, with some recent sponsorships to back up that claim. See Mike Destefano, *Jordan Clarkson on Being the Best-Dressed Player in the NBA, the Utah Jazz Offseason Moves, and More*, COMPLEX (Sept. 19, 2022), <https://www.complex.com/style/a/mike-destefano/jordan-clarkson-utah-jazz-nba-best-dressed-interview> [<https://perma.cc/76P6-QR8A>] (describing Clarkson's fashion profile and some of his recent sponsorships).

² Jordan Clarkson (@jordanclarksons), INSTAGRAM (Mar. 26, 2023), <https://www.instagram.com/p/CqRMRfCuFwg/> [perma.cc/SS6P-7BF3].

³ See, e.g., *10 Most 'Selfie' Obsessed Celebrities REVEALED!*, HEART, <https://www.heart.co.uk/showbiz/10-most-selfie-obsessed-celebrities-revealed/> [<https://perma.cc/5LGK-PURY>] (last visited Sept. 22, 2024) (providing a number of examples of celebrity selfies).

⁴ To be clear, social media users do sometimes use the TM symbol in posts. But typically, those uses still pertain to regular legal use of the symbol, i.e., to lay claim to rights in an associated trademark that signifies the source of goods and services. See *Use of Trademarks in #SocialNetworks*, ABG INTELLECTUAL PROPERTY, <https://abg-ip.com/use-of-trademarks-in-social-networks/> [<https://perma.cc/KRJ4-JH59>] (describing uses of trademark symbols in connection with social media).

⁵ *What Is a Trademark?*, U.S. PAT. & TRADEMARK OFF., <https://www.uspto.gov/trademarks/basics/what-trademark> [<https://perma.cc/2DY4-NCEL>] (last visited Sept. 22, 2024) (“Every time you use your trademark, you can use a symbol with it. The symbol lets consumers and competitors know you're claiming the trademark as yours.”).

⁶ See 15 U.S.C. § 1125 (2012) (providing mark users a cause of action against others who use confusingly similar marks as to the source of their goods or services; or who misrepresent their goods and services; or who dilute a mark through blurring or tarnishment).

reduce consumer information costs, stave off unfair competition, and incentivize the production of consistent and high-quality products.⁷

In Clarkson's case, it seems unlikely that Clarkson was using the TM symbol for any of these typical purposes. His use of the symbol does not seem to be an assertion of legal rights in a particular mark as the signifier of the source of specific goods and services. If it were, it's unclear what the "mark" in this situation is and which goods and services the mark is associated with. Even if Clarkson intended to use the TM symbol as a means of branding himself,⁸ it remains the case that his use seems primarily expressive (in some form or another) rather than an actual assertion of legal rights. It seems dubious, after all, that Clarkson's use of the symbol was intended to fend off competitors from adopting a similar persona in a basketball setting.

Clarkson's use is not an isolated example. Increasingly, we see others using the TM symbol in a variety of ways that depart from the symbol's traditional legal functions.⁹ Some uses seem intended as humorous or ironic, while others seem to function as a way of indicating legitimacy.¹⁰ Such uses of the TM symbol have sprung up not only on social media and online conversations, but also in journalism, interpersonal texting, and even in-person interactions. In fact, the TM symbol has even earned its own emoji.¹¹

These types of uses of the TM symbol raise a number of important questions for trademark law. First, what are parties who use the symbol in these atypical ways

⁷ BARTON BEEBE, *TRADEMARK LAW: AN OPEN-SOURCE CASEBOOK* 23–27 (11th ed. 2024) (summarizing these rationales behind trademarks). *See also* William M. Landes & Richard A. Posner, *The Economics of Trademark Law*, 78 *TRADEMARK REP.* 267, 271–72 (1988) (indicating that trademarks help reduce consumer information costs while also incentivizing producers to develop consistent levels of product quality in an effort to build valuable goodwill).

⁸ As we discuss later, the symbol might be particularly helpful in self-branding because the symbol provides a sense of authority and officialness. *See* Goldie Chan, *10 Golden Rules of Personal Branding*, *FORBES* (Nov. 8, 2018), <https://www.forbes.com/sites/goldiechan/2018/11/08/10-golden-rules-personal-branding/sh=2bbcb12658a7> [perma.cc/3LX4-H9M8] (“Creating a personal brand can be a daunting, mythical task.”).

⁹ LaReina Hingson et al., *Trademark™: A Usage-Based Theory of the Trademark Sign*, 208 *J. PRAGMATICS* 3, 3–16 (2023) (providing examples of the ways in which the unregulated use of the TM sign has fostered its creative uses).

¹⁰ *Id.* at 11–15 (providing linguistic interpretations of various uses).

¹¹ *Trade Mark*, *EMOJIPEDIA*, <https://emojipedia.org/trade-mark> [https://perma.cc/4Y3Q-VNHW] (last visited Sept. 16, 2024) (indicating that the TM emoji was added to Emoji 1.0 in 2015).

trying to achieve? Was Clarkson trying to convey something about his particular style or way of living to his nearly two million Instagram followers? Was he trying to claim legal rights? Second, what does this expression indicate about these individuals' understanding (or lack thereof) of trademark law? Why did Clarkson choose to use the TM symbol in expressing himself in the way that he did? And finally, what are the implications of these uses, if any, for trademark law and policy? For instance, does Clarkson's use (and others like his) alter the symbol's meaning or effectiveness in more traditional legal settings?

Scholars in other disciplines have begun to examine the use of the TM symbol in these atypical settings. Linguistic scholars, for instance, have sought to categorize uses of the TM symbol based on the linguistic content of the associated messages.¹² Law scholars have also examined some linguistic aspects of trademark law more generally.¹³ However, up until now, legal scholars have not assessed the use of the TM symbol in these types of atypical settings specifically. This Article does so.

To get a better handle on the questions that Clarkson' and others' uses of the TM symbol raise, we collected data on these atypical trademark uses. Data sources ranged from social media platforms like Facebook and Instagram, to text messaging platforms like Discord, to online journalism, to traditional phone-based text messaging, to real-world uses. In total, we collected around two hundred

¹² Elin McCready, *Unnatural Kinds*, 40 J. PRAGMATICS 1817, 1817 (2008); Hingson et al., *supra* note 9.

¹³ See, e.g., Ronald R. Butters, *A Linguistic Look at Trademark Dilution*, 24 SANTA CLARA COMPUT. & HIGH TECH. L.J. 507, 515 (2008) (discussing how linguistics can help practitioners formulate trademark dilution causes of action); Graeme B. Dinwoodie, *What Linguistics Can Do for Trademark Law*, in TRADEMARKS AND BRANDS (Lionel Bently et al. eds., Cambridge U. Press 2010) (discussing the importance of linguistics in understanding trademarks); Laura A. Heymann, *The Grammar of Trademarks*, 14 LEWIS & CLARK L. REV. 1313, 1319–21 (2010) (discussing incorporating linguistic theory more directly into trademark law); Jake Linford, *Are Trademarks Ever Fanciful?*, 105 GEO. L.J. 731, 731 (2017) (pointing to linguistic research that supports the contention that even fanciful marks may describe their associated products through sound symbolism); Jake Linford, *A Linguistic Justification for 'Generic' Trademarks*, 17 YALE J. L. & TECH. 110, 116 (2015) (relying on linguistic research to support the argument that generic marks can acquire source significance); Roger W. Shuy, *Using Linguistics in Trademark Cases*, in THE OXFORD HANDBOOK OF LANGUAGE AND LAW (Lawrence M. Solan & Peter M. Tiersma eds., 2012) (discussing the use of linguistics in trademark litigation); ROGER M. SHUY, *Using Linguistic Tools and Thinking in Trademark Cases*, in LINGUISTIC BATTLES IN TRADEMARK DISPUTES (2002) (discussing linguistic challenges in trademark litigation).

screenshots or recordings of the TM symbol. We then examined these uses to evaluate their semantic content.

Our findings reveal a range of atypical ways in which individuals use the TM symbol. The primary purpose of the use seems to be expressive: speakers use the TM to communicate something beyond the symbol's legal function. But what are these speakers trying to communicate, and how does it relate to the legal purpose of TM? The answers to these questions vary with the use, but speakers tend to use the symbol, often humorously or ironically, in ways that invoke either the legal function of the symbol or concepts related to it. For example, the symbol is often used to emphasize the "officiality" or "legitimacy" of a word or concept; it is also used to reference the representative or stereotypical nature of a word or concept; and at times, the corporate aspects of a concept. Some speakers use the symbol to comment on or parody existing marks or products; others use it in service of the creative exercise of inventing or branding hypothetical and humorous products (or their own persona, in the case of Clarkson). Yet others invoke the TM symbol humorously in a knowingly (or perhaps unknowingly) futile attempt to have their own speech or ideas protected.

These uses can tell us something about how laypeople understand trademarks and the TM symbol. As mentioned above, the uses discovered in our analysis seemingly intended to invoke a number of interrelated meanings. These meanings are extra-legal in the sense that they are not intended to do what trademarks do: identify the source of a good or service so that a producer can build up valuable goodwill.¹⁴ Yet they do gesture, more or less explicitly, to both the legal and linguistic nature of the TM symbol. This suggests that laypeople have a general idea of what the TM symbol "does"; and further, that those who choose to use it are leveraging these functions for their own expressive ends.

Specifically, speakers seem to be harnessing the linguistic and semantic "powers" of the TM symbol to convey expressive and creative messages: to communicate with each other and engage in discourse; to create community; to comment on society; and to engage in creative exercises and humor. Further, the specific ends to which these speakers appear to be aiming would be quite difficult

¹⁴ Jeanne C. Fromer, *The Role of Creativity in Trademark Law*, 86 NOTRE DAME L. REV. 1885, 1890–92 (2011) (discussing the main theoretical purposes behind trademarks, which include these rationales).

to arrive at in the absence of the TM symbol—the symbol and meanings associated with it allow for the communication of metadiscourse, irony, community building, and other sophisticated forms of communication that are inherently challenging in an online format. The TM symbol, along with a shared understanding of what it represents, thus seems to be acting as a “shortcut” to achieving these ends. In this way, we found the symbol to have surprising value in facilitating digital expression.

But these atypical uses of TM also have implications for trademark law and policy. In particular, the appropriation of TM by parties using it in extra-legal ways could hamper the ability of the TM symbol to function effectively as a legal operator.¹⁵ For instance, the unprincipled use of the TM symbol could lead to various forms of public and consumer confusion. Though many of the uses revealed in our data were likely intended to be humorous, they could conceivably lead to public confusion about whether the speaker in a specific instance was attempting to claim legal rights through use of the symbol.

This confusion could undermine the legal uses of the trademark symbol in several ways. First, it could lead to chilling effects. For example, a party interested in adopting a particular device as a trademark might inaccurately believe a person using the TM symbol expressively in conjunction with that same device is claiming rights in the device. The party might then be dissuaded from using the mark in commerce and developing trademark rights in a mark that is otherwise available. This chilling effect might be particularly troublesome as some empirical evidence suggests that the number of marks available for adoption continues to shrink.¹⁶ Ironically, those initial expressive uses could also chill other expressive uses to the extent that other users interpret the expressive uses as legal in nature.

Second, the expressive use of the TM symbol in conjunction with a word, phrase, or other device might be confusing to the consuming public in various ways that could undermine the legal function of trademarks. For example, consumers might erroneously believe that someone using the symbol in an expressive way is offering a product or service. This confusion could interfere with the efficient

¹⁵ See *U.S. Pat. & Trademark Off. v. Booking.com B. V.*, 591 U.S. 549, 560–61 (2020) (identifying consumer perception as the focus of the federal Lanham Act).

¹⁶ Barton Beebe & Jeanne C. Fromer, *Are We Running Out of Trademarks? An Empirical Study of Trademark Depletion and Congestion*, 131 HARV. L. REV. 945, 977–1020 (2018) (empirically showing substantial word mark depletion and congestion).

functioning of commerce trademark law is meant to facilitate.¹⁷ More generally, the widespread adoption of the TM symbol as an expressive device might confuse the public about what the symbol means or how it is supposed to be used. This confusion about the legal function of the trademark symbol could undermine the notice function the symbol helps advance.¹⁸

Third, even if the public is not confused in many instances, the TM symbol itself, through these various expressive uses, could be hampered in its ability to function as a legal object. The public, upon encountering the TM, might be deprived of the unique legal meaning of the symbol and might thus have to undertake additional mental steps to try to determine the way in which the TM symbol is being used. Ultimately, this could lead to the public discounting the TM symbol and paying it less heed. In the extreme case, the symbol might lose its legal meaning altogether and no longer be able to function as a legal operator.

We don't wish to exaggerate these potential harms, however. In most cases in our sample, the humorous or expressive purpose of the use seems unlikely to confuse consumers or harm trademark owners in ways that trademark law recognizes. And though there is a real risk that in some cases consumers might be confused by expressive uses—or at least have to think twice about what a TM operator is doing in that instance (i.e., whether it is serving a legal or expressive purpose), we think the surprising expressive benefits of extra-legal uses of the symbol outweigh these risks.

Given this conclusion, how should trademark law respond? In many cases, no action is required. Several of the uses we encountered do not implicate trademark law directly because they do not cause legally cognizable harm to producers or consumers. In cases where there is arguably such harm, existing trademark law doctrines like trademark fair use might protect expressive users.¹⁹ Free speech

¹⁷ Stephen L. Carter, *The Trouble with Trademark*, 99 YALE L.J. 759, 759 (1989) (“[Trademarks] lower consumer search costs, thus promoting the efficient functioning of the market.”).

¹⁸ *Trademark Symbols*, INT’L TRADEMARK ASS’N, <https://www.inta.org/fact-sheets/trademark-symbols/> [<https://perma.cc/X44N-BTSE>] (last visited Sept. 16, 2024) (“The TM symbol ... is usually used in connection with an unregistered mark—a term, slogan, logo, or other indicator—to provide notice to potential infringers that common law rights in the mark are claimed.”).

¹⁹ See generally William McGeeveran, *Rethinking Trademark Fair Use*, 94 IOWA L. REV. 49, 54–56 (2008) (discussing trademark fair use in general and discussing some possible reforms to it).

principles might cover others.²⁰ However, in cases where current trademark law does not protect extra-legal uses of the TM symbol, we may wish to reform trademark law doctrines to allow for them because of the social benefits in facilitating online expression these uses advance. We discuss these issues in greater depth throughout the remainder of the Article.

We proceed as follows. Part I discusses some basics of trademark law and the traditional purpose of the trademark symbol. Part II lays out our empirical findings on extra-legal, social uses of the TM symbol. Part III concludes by exploring in greater depth some of the possible ramifications of those uses.

I TM'S LEGAL FUNCTION

Here we provide a brief overview of trademark law, predominant trademark law theories, and the TM symbol's role in all of it. Volumes could be (and have been) written about trademark law and the theories behind it—our purpose here is not to recount those accounts in full, but instead to provide a snapshot as context for the remainder of this Article.

A. *Trademarks and Trademark Theory*

Trademarks are a ubiquitous feature of commerce and marketing in the United States and globally.²¹ According to U.S. law, a trademark is a “word, name, symbol, or device, or any combination thereof” that a person uses in commerce to “identify and distinguish his or her goods” from those made or sold by others and “to indicate the source of the goods.”²² Service marks are the same as trademarks, except that they designate the source of particular services rather than goods.²³ Certification and collective marks are each a species of trademarks with their own sets of rules.²⁴ In this study, because these distinctions are irrelevant for our purposes, we will use

²⁰ See generally Pratheepan Gulasekaram, *Policing the Border between Trademarks and Free Speech: Protecting Unauthorized Trademark Use in Expressive Works*, 80 WASH. L. REV. 887 (2005) (discussing some of the ways in which free speech principles protect users of other trademarks for speech activities).

²¹ In fact, trademarks are so ubiquitous that we may be running out of options. See Beebe & Fromer, *supra* note 16.

²² See 15 U.S.C. § 1127 (2006) (defining a trademark as “includ[ing] any word, name, symbol, or device . . . used by a person . . . to identify and distinguish his or her goods”).

²³ *Id.* (defining a “service mark”).

²⁴ *Id.* (defining “collective” and “certification” marks).

the term “trademark” or “mark” for all these different types of marks for ease of reference.

A trademark owner “has the exclusive right to prevent unauthorized third parties from using the same or similar mark on goods and services where such use is likely to cause confusion among consumers as to the source of the goods and services.”²⁵ Hence, one of the main purposes of trademark law is to protect consumer expectations regarding the source of goods and services.²⁶ Or as many scholars have put it, a primary theoretical justification for trademarks is that they help reduce consumer information costs.²⁷ Trademarks help consumers efficiently navigate the marketplace by providing a recognizable mark for a preferred source of goods and services.²⁸ Essentially, a mark helps consumers find what they are looking for without wasted effort.²⁹

Trademarks have also been understood to help prevent unfair competition.³⁰ Indeed, according to some scholars, unfair competition principles lie at the historical heart of trademark law and help explain many of trademark law’s present-day doctrines.³¹ By preventing competitors from using the same or confusingly similar marks, trademarks allow their owners to reap the financial rewards of whatever goodwill they’ve been able to build in the marketplace.³² By inhibiting

²⁵ Stuart Graham et al., *The USPTO Trademark Case Files Dataset: Descriptions, Lessons, and Insights*, U.S. PAT. & TRADEMARK OFF. 669, 672 (2013).

²⁶ Michael S. Mireles, Jr., *Towards Recognizing and Reconciling the Multiplicity of Values and Interests in Trademark Law*, 44 IND. L. REV. 427, 433 n.37 (2011) (reviewing these trademark theories).

²⁷ Mark P. McKenna, *The Normative Foundations of Trademark Law*, 82 NOTRE DAME L. REV. 1839, 1844 (2007) (“It would be difficult to overstate the level of consensus among commentators that the goal of trademark law is—and always has been—to improve the quality of information in the marketplace and thereby reduce consumer search costs.”); Mark P. McKenna, *A Consumer Decision-Making Theory of Trademark Law*, 98 VA. L. REV. 67, 73 (2012) (“According to the dominant theoretical account, trademark law operates to enable consumers to rely on trademarks as repositories of information about the source and quality of products, thereby reducing the costs of searching for goods that satisfy their preferences.”).

²⁸ McKenna, *The Normative Foundations*, *supra* note 27, at 1844.

²⁹ *Id.*

³⁰ *Id.* at 1848.

³¹ *Id.* (arguing that, in reality, trademark has historically been rooted in protecting producers against unfair competition); *see also* 1 J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 2:12 (5th ed. 2024) (reviewing courts’ rejection of the premise that trademark rights are anti-competitive).

³² MCCARTHY, *supra* note 31; *Qualitex Co. v. Jacobson Products Co., Inc.*, 514 U.S. 159, 164 (1995) (“At the same time, the law helps assure a producer that it (and not an imitating competitor) will reap the financial, reputation-related rewards associated with a desirable product.”).

copycats, trademark rights also enable trademark owners to build up that goodwill in the first place.³³ In serving these ends, trademarks may thus incentivize their owners to invest in developing consistent levels of quality in their goods and services.³⁴ They may also incentivize their owners to aim for higher levels of quality.³⁵

Users of trademarks begin to accrue rights in their marks as soon as they start using them in connection with goods and services in the marketplace.³⁶ Those rights often sound in state common or statutory law.³⁷ But even under federal law, users of marks can acquire rights merely by using the mark in commerce.³⁸ For instance, under the federal Lanham Act, mark users have a cause of action against others who use confusingly similar marks as to the source of their goods or services or who misrepresent their goods and services, regardless of whether the mark is federally registered.³⁹ Furthermore, all states provide for state registration of trademarks.⁴⁰

Consumer perception plays a key role in trademark law and policy generally.⁴¹ For example, the touchstone of trademark liability is likelihood of consumer confusion—if a competing mark is likely to confuse consumers as to the source of the associated good, legal liability becomes more likely.⁴² The more recently

³³ Jennifer E. Rothman, *Navigating the Identity Thicket: Trademark's Lost Theory of Personality, the Right of Publicity, and Preemption*, 135 HARV. L. REV. 1271, 1289–92 (2022) (reviewing this and related rationales behind trademark rights).

³⁴ *Id.* at 1289; see also *Qualitex*, 514 U.S. at 164 (“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.” (citation omitted)).

³⁵ *Qualitex*, 514 U.S. at 164.

³⁶ Shontavia Johnson, *Trademark Territoriality in Cyberspace: An Internet Framework for Common-Law Trademarks*, 29 BERKELEY TECH. L.J. 1253, 1257–59 (2014) (discussing the rule of first use and common law rights that arise through first use).

³⁷ See *id.*

³⁸ 15 U.S.C. § 1127 (2012).

³⁹ *Id.*

⁴⁰ However, as others note, state registration provides little value beyond common law protection obtained through use in commerce. See 3 J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 22:1 (5th ed. 2024).

⁴¹ U.S. Pat. & Trademark Off. v. Booking.com B. V., 591 U.S. 549, 560–61 (identifying consumer perception as the focus of the federal Lanham Act).

⁴² Ann Bartow, *Likelihood of Confusion*, 41 SAN DIEGO L. REV. 721, 722 (2004) (“Confusion among consumers is the grave iniquity against which trademark laws and jurisprudence are intended to guard.”).

added dilution cause of action also considers how use of a mark by a third party might diminish or otherwise affect consumer perceptions of the mark.⁴³ And many other trademark doctrines are concerned with how consumers will interpret various aspects of devices intended to be used as trademarks.⁴⁴ The efficient functioning of the trademark system thus depends to a large extent on policymakers and judges correctly intuiting how consumers will respond to particular marks.⁴⁵ One can argue that the system also depends on consumers' understanding of trademark law itself; perhaps not the nitty gritty details, but at least a general sense of what it means for a symbol or other device to function as a trademark.⁴⁶

B. *The Role of Trademark Symbols in Trademark Law*

Equally crucial to trademarks achieving their intended purposes is the element of notice.⁴⁷ For trademarks to function optimally, competitors should ideally have notice of an entity's assertion of rights in a mark.⁴⁸ Notice discourages competitors from adopting a mark already claimed by another party, which helps prevent

⁴³ Laura R. Bradford, *Emotion, Dilution, and the Trademark Consumer*, 23 BERKELEY TECH. L.J. 1227, 1242–43 (2008) (identifying the harms of dilution as forcing consumers “to work harder” in identifying preferred brands).

⁴⁴ Katherine J. Strandburg, *Rounding the Corner on Trade Dress*, 29 YALE J. ON REG. 387, 391–92 (2012) (“The tension between product design’s potential role as a source identifier and its inherent value to consumers has been recognized for more than one hundred years and underlies the requirement of ‘non-functionality.’”); Thomas R. Lee, Eric D. DeRosia & Glenn L. Christensen, *An Empirical and Consumer Psychology Analysis of Trademark Distinctiveness*, 41 ARIZ. ST. L.J. 1033 (2009) (discussing the role of consumer perception in determining a trademark’s level of distinctiveness); *Booking.com*, 591 U.S. at 560–61 (holding that a term intended to be a trademark “is a generic name for a class of goods and services only if the term has that meaning to consumers.”).

⁴⁵ Michael Grynberg, *The Judicial Role in Trademark Law*, 52 B.C. L. REV. 1283, 1283 (2011) (discussing the need to consider the role of judges in assessing trademark law).

⁴⁶ According to the Supreme Court, consumer perception is part of whether a trademark is protectable at all. So though consumers may not understand all of trademark law and its purposes, some sense of how consumers understand trademarks to work is relevant. See Ned T. Himmelrich, *Consumer Perception of Trademarks is Key to Supreme Court Ruling on Booking.com*, GORDON FEINBLATT LLC (July 2, 2020), <https://www.gflaw.com/what-we-do/insights/consumer-perception-trademarks-key-supreme-court-ruling-bookingcom> [https://perma.cc/4364-7JPG]. See also Dustin Marlan, *Is the Word “Consumer” Biasing Trademark Law?*, 8 TEX. A&M L. REV. 367, 373 (2021) (critiquing the concept of “consumer” in trademark law more generally).

⁴⁷ Robert G. Bone, *Notice Failure and Defenses in Trademark Law*, 96 B.U. L. REV. 1245, 1252–56 (2016) (discussing the importance of notice in trademark law and some of the more prominent notice failures).

⁴⁸ *Id.*

consumer confusion, enables a company to build up goodwill in a mark, and staves off unnecessary litigation.⁴⁹

Notice is arguably most present for trademarks registered under the federal Lanham Act with the U.S. Patent and Trademark Office (USPTO).⁵⁰ Registered marks enter a searchable database, which allows businesses to check for conflicts before adopting a mark.⁵¹ Registered mark owners also gain the privilege of using the ® symbol in conjunction with their mark.⁵² The ® signifies that a claim to legal rights has been vetted by the USPTO and puts competitors on notice of an assertion of rights.⁵³ Federal registration comes with a number of other benefits as well.⁵⁴

But federal registration is not required for trademark protection in the United States.⁵⁵ As mentioned above, businesses can claim common law rights in a mark even without going through the registration process—use in commerce alone is enough to accrue some rights.⁵⁶ Most states offer their own state-level iterations of trademark protection.⁵⁷ And as stated, the federal Lanham Act itself offers protections for unregistered marks.⁵⁸ For businesses relying on common law or state rights, or for those whose marks are not yet federally registered, the “TM”

⁴⁹ *Id.*; see also Peter Karol, *Affixing the Service Mark: Reconsidering the Rise of an Oxymoron*, 31 CARDOZO ARTS & ENT. L.J. 357, 401–02 (2013) (discussing the importance of notice in trademark law in achieving trademark law’s purposes).

⁵⁰ *The Ultimate Guide to Trademark Registration*, GERBEN INTELL. PROP., <https://www.gerbenlaw.com/trademark-registration/> [<https://perma.cc/84Y9-6SL7>] (discussing the many advantages of federal registration of a trademark, which include a number of notice-related benefits).

⁵¹ *Protecting Your Trademark: Enhancing Your Rights Through Federal Registration*, U.S. PAT. & TRADEMARK OFF. 11–13 (2015), https://www.uspto.gov/sites/default/files/BasicFacts_0.pdf [<https://perma.cc/7R2E-T5UR>] (discussing the mechanics of federal trademark registration and the benefits thereof).

⁵² *Id.*

⁵³ *Id.*

⁵⁴ *Id.*; Angela Peterson, *Overdue Notice: Using Virtual Marking to Modernize Trademark Notice Requirements*, 25 STAN. TECH. L. REV. 247, 247 (2022) (discussing some of the remedial advantages of registering a trademark).

⁵⁵ Brian L. Berlandi, *What State Am I In?: Common Law Trademarks on the Internet*, 4 MICH. TELECOMM. & TECH. L. REV. 105, 106 (1998) (discussing how common law rights arise based on use, even if federal registration provides some additional benefits).

⁵⁶ *Id.*

⁵⁷ See *State Trademark Information Links*, U.S. PAT. & TRADEMARK OFF., <https://www.uspto.gov/trademarks/basics/state-trademark-information-links> [<https://perma.cc/2SWC-P6K5>] (Mar. 24, 2021) (providing links to state trademark offices).

⁵⁸ 15 U.S.C. § 1125 (providing federal causes of actions for uses of unregistered marks).

symbol offers an alternative way to put competitors on notice of a claim to trademark rights.⁵⁹

Given the importance of notice in trademark law, the trademark symbols ® and TM play a potentially vital role in trademark law and the theories behind it. And yet, use of these symbols by mark owners is optional. A trademark owner who has registered their mark under the Lanham Act need not use the ® symbol to indicate that their mark is registered⁶⁰ though doing so comes with a number of advantages, including providing both consumers and competitors notice of the mark's registration status.⁶¹ That notice, in turn, provides trademark owners with a greater likelihood of being able to recover profits and damages in an infringement suit.⁶² But technically, the mark owner need not use the symbol if they prefer not to—the trademark owner may still have rights, and may still be able to recover damages, simply by virtue of using their mark in commerce.⁶³

The same is true of the TM symbol. Though trademark owners often use the TM symbol to indicate that they are using an unregistered mark as a trademark, they need not do so.⁶⁴ Under federal, state, and common law, use of an unregistered mark in commerce can still result in trademark rights, with or without use of the symbol.⁶⁵ Indeed, trademarks may not absolutely *need* the actual symbol to play the theoretical roles described above—consumers might associate marks or symbols with producers of goods and a certain level of quality with or without the

⁵⁹ See *Protecting Your Trademark*, *supra* note 51, at 9–10.

⁶⁰ William Borchard, *When the Symbols ® and ™ Should and Should Not Be Used*, COWAN, LIEBOWITZ & LATMAN, P.C. (Nov. 18, 2014), https://www.cll.com/OnMyMindBlog/When_the_symbols_and_should_and_should_not_be_used [<https://perma.cc/5GVH-2MS4>] (“A registration symbol is optional.”).

⁶¹ *Id.*

⁶² 15 U.S.C. § 1111 (indicating that a registered trademark owner who fails to include a registration notice with their mark may only recover profits and damages from someone who infringes their rights upon proof of actual notice of the registration).

⁶³ Jake Linford, *Trademark Owner as Adverse Possessor: Productive Use and Property Acquisition*, 63 CASE W. RES. L. REV. 703, 706 (2013) (“[A]cquiring a trademark requires productive use of a given word, symbol, or other identifier as a trademark—a source signifier.”).

⁶⁴ Michael Kondoudis, *Trademark Symbols TM, SM, ® – An Easy Guide*, THE L. OFF. OF MICHAEL E. KONDOUDIS, PC, <https://www.mekiplaw.com/trademark-symbols-explained/#:~:text=No%2C%20there%20is%20no%20legal,Trademark%20Symbol%20with%20your%20trademarks> [<https://perma.cc/K9NM-3F4K>] (“[T]here is no legal requirement to use a Trademark Symbol. The use of a Trademark Symbol is entirely optional. You do not need to use a Trademark Symbol, and not using a Trademark Symbol will not invalidate your trademark rights.”) (last visited Nov. 26, 2024).

⁶⁵ *Id.*

TM symbol (or the ® symbol, in the case of federally registered marks).⁶⁶ And because producers of goods can have trademark rights in marks without use of the symbol, those producers may still successfully use their marks to stave off unfair competition in the symbol's absence.⁶⁷

But though not required, the symbols may still play vital functions in the marketplace.⁶⁸ And those functions are related to the theoretical purposes behind trademarks discussed above. First, use of the symbols provides clearer notice of the owner's trademark claim—that the trademark user is asserting legal rights in the associated mark and the goodwill that it generates.⁶⁹ For fear of legal liability, that notice might thus help deter would-be competitors from adopting the same or a similar mark.⁷⁰ That deterrence may be particularly relevant because the notice sometimes means that damages resulting from a successful lawsuit are more likely to be higher than they otherwise would be.⁷¹ In these ways, use of the symbols may bolster trademark owners' rights in ways that help fend off unfair dealing and incentivize trademark owners to develop high-quality, consistent products.⁷²

⁶⁶ Andrew Griffiths, *Trade Marks and the Consumer Society*, 15 SCRIPTED 209, 219, 225 (Oct. 2018), <https://script-ed.org/article/trade-marks-and-the-consumer-society/> [<https://perma.cc/W3WZ-EPKP>] (discussing strategies that firms use to leverage trademarks in their branding efforts, all in an effort to attract consumers to their goods and services).

⁶⁷ See generally Robert G. Bone, *Rights and Remedies in Trademark Law: The Curious Distinction Between Trademark Infringement and Unfair Competition*, 98 TEX. L. REV. 1187 (2020) (discussing the role of preventing unfair competition in trademark law and how courts differentiate between unfair competition and trademark infringement).

⁶⁸ Lindsay D. Molnar, *Protection of Product Configurations as Trade Dress in Light of Stuart Spector Designs, Ltd.*, 3 LANDSLIDE 36, 38 (2011) (discussing the importance of trademark notice in determining trademark infringement).

⁶⁹ U.S. PAT. & TRADEMARK OFF., *supra* note 5.

⁷⁰ *Id.*

⁷¹ Deborah M. Lodge, *More About Using the ® and ™ Symbols on Your Trademarks – a U.S. Perspective*, LEXOLOGY: GLOB. BUS. & TECH. BLOG (Apr. 12, 2019), <https://www.lexology.com/library/detail.aspx?g=8c90c1a9-bf9a-4187-8dd7-c57c22606f2c> [<https://perma.cc/E7VV-3WUA>] (“[I]n the absence of a registration notice (e.g., failure to use the ® symbol or other notice), monetary damages may be awarded for infringement of a registered mark only for infringements occurring after the infringer had actual notice of the trademark registration.”).

⁷² *Elgin Nat. Watch Co. v. Illinois Watch Case Co.*, 179 U.S. 665, 674 (1901), *abrogated by Hurn v. Oursler*, 289 U.S. 238 (1933) (“[P]rotection is accorded against unfair dealing, whether there be a technical trademark or not. The essence of the wrong consists in the sale of the goods of one manufacturer or vendor for those of another.”).

For consumers, a trademark symbol might increase the chances that they purchase marked products because the symbol may help alleviate concerns about the products being knock-offs or otherwise illegitimate.⁷³ In other words, an indication of legal status may reassure at least some consumers that the product they are purchasing is what it purports to be.⁷⁴ Per predominant trademark law theory, then, the symbol may help consumers navigate the marketplace with greater confidence and thereby help achieve trademark law's purpose of instilling marketplace integrity from both the consumer' and producer's perspectives.⁷⁵

Producers may also use the symbols in conjunction with their trademarks as a more effective means of advertising their goods and services.⁷⁶ In other intellectual property contexts, use of patent markings may increase the chance that consumers and potential investors will be drawn to the goods and services so advertised.⁷⁷ The idea is that the markings, at least in the minds of consumers, indicate a higher technical quality or an element of government acceptance and ratification than products without these indicators.⁷⁸ Similarly in the trademark context, use of the TM or ® symbol may make it more likely that consumers are drawn to those

⁷³ Ralph S. Brown, Jr., *Advertising and the Public Interest: Legal Protection of Trade Symbols*, 57 YALE L.J. 1165, 1182 (1948) ("The classical economists who enthroned the consumer never dreamed that he would make his decisions under a bombardment of stupefying symbols.").

⁷⁴ *Id.*

⁷⁵ Peter S. Menell & Michael J. Meurer, *Notice Failure and Notice Externalities*, 5 J. LEGAL ANALYSIS 1, 26 ("Trademarks function primarily to promote integrity of the marketplace by enhancing consumer decision-making and encouraging firms to supply quality products and services by protecting means of designating source.").

⁷⁶ See, e.g., Lisa P. Ramsey, *Intellectual Property Rights in Advertising*, 12 MICH. TELECOMM. & TECH. L. REV. 189, 196 ("Trademark law does not protect slogans that are generic or descriptive without secondary meaning, but firms still attempt to stake a claim in such common phrases by using the trademark symbol (™) with the slogan in advertising.").

⁷⁷ Christopher A. Cotropia, *Patents as Signals of Quality in Crowdfunding*, 2021 U. ILL. L. REV. 193, 195 (indicating that labeling projects as patented or patent-pending increased the likelihood of a crowdfunding project drawing interest); Jamal E. Azzam, David H. Henard, & Stephane Salgado, "*Patent Marking*" as a Signaling Strategy: Impacts on Perceived Product Innovativeness and Innovation Adoption, 109 DECISIONS MKTG. 141 (2023) (indicating that consumers believe patent markings signal innovativeness and increase their likelihood of purchasing the marked products). *But see also* Alexander Billy & Neel U. Sukhatme, *Patent Salience: What do Patents Signal to Consumers?*, SSRN (June 6, 2023), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4471087 [<https://perma.cc/4H9F-C6XQ>] (finding that consumers made aware of a product's patented status believe these products to be more innovative and of higher quality than other products, but that consumers, despite that understanding, do not appear to be more likely to buy patented products than non-patented products).

⁷⁸ See Billy & Sukhatme, *id.* at 4, 12, 14.

products bearing indications of a particular legal status—consumers may often view these symbols as indicators of higher quality products or as products that have been socially ratified and accepted through the process of advertising and seeking trademark rights.⁷⁹ In this way, producers can use the symbol as a means of signaling quality and acceptance, and consumers may rely on it accordingly.

This point is somewhat different from what predominant trademark law theory teaches us about trademarks. That theory suggests that trademarks (and their associated symbols) are helpful indicators of source upon which consumers and producers rely in navigating the marketplace and preventing unfair competition.⁸⁰ Using TM symbols as advertising mechanisms has less to do with helping consumers find the particular sources they’re looking for and more to do with drawing them in in the first place. However, to the extent the symbol plays the role of influencing initial consumer decisions, it can subsequently play the role of confirming the legitimacy of the product in later transactions.

Hence, though not absolutely required, the TM signifier plays an important role in helping trademarks achieve their theoretical purposes.⁸¹ By helping instill greater confidence in both consumers and producers, TM symbols can facilitate more efficient marketplace transactions and the development of high-quality goods in ways that promote healthy competition.⁸²

⁷⁹ See Mark A. Lemley, *The Modern Lanham Act and the Death of Common Sense*, 108 YALE L.J. 1687, 1690 (1999) (discussing the signaling effect of trademarks in advertising, which may boil down to something like, “we advertise, and therefore we must sell a good of sufficiently high quality that we can afford this high-cost expenditure.”); 1 MCCARTHY ON TRADEMARKS & UNFAIR COMPETITION § 3:13 (5th ed.) (“In addition to serving as indicators of source and quality, trademarks act as a prime element in advertising”).

⁸⁰ Menell & Meurer, *supra* note 75, at 26.

⁸¹ GREGORY J. BATTERSBY & CHARLES W. GRIMES, LAW OF MERCHANDISE AND CHARACTER LICENSING § 8:17 (2022) (“Appropriate trademark . . . notices should appear on all goods bearing a merchandising property and, in all advertising promotional pieces, and packaging for the goods that bear the merchandising property . . . The importance of such trademark . . . notices cannot be overstated.”).

⁸² See, e.g., *American Steel Foundries v. Robertson*, 269 U.S. 372, 380 (1926) (“The law of trade-marks is but a part of the broader law of unfair competition.”). For a discussion of the scope of what constitutes “unfair competition,” see Christine Haight Farley, *The Lost Unfair Competition Law*, 110 TRADEMARK REP. 739 (2020).

II EXTRA-LEGAL USES OF TM

The TM symbol uses discussed above are primarily *legal* uses of the symbol. That is, they are meant to signify legal rights in the associated trademark. Even when producers use the TM symbol as a form of advertising, such uses still have a legal element in that the claimed legal status of the mark is an integral part of convincing consumers of the wisdom of their purchase.

In this Part, we discuss the rise of *extra-legal* uses of the TM symbol. In the examples we examine below, the TM symbol's use is typically expressive in some way or another. It is not primarily (or seriously) meant to claim legal rights in the associated marks. In Part III, we discuss the implications of these extra-legal uses for trademark law and society more generally.

In the Introduction, we discussed the case of Jordan Clarkson, who posted a series of photos of himself on Instagram with the caption “TM.” Although we are not privy to Clarkson's motivations in including this caption, we can only assume that he was not seriously attempting to claim legal rights in any product or service—mainly because he had no product or service to offer. He is a professional basketball player, so the product or service he provides is, essentially, himself. But people themselves are not branded with trademarks, even when they provide a good or service in the marketplace.⁸³ Hence, Clarkson's use of the symbol seems to have been expressive—he was trying to communicate something with the use of the TM symbol (though exactly what he was trying to communicate is not immediately clear to us).

Clarkson is not alone in using the TM symbol in an expressive way. It has become an increasingly common occurrence to encounter the TM symbol being used expressively—primarily on social media but also in journalism and in everyday digital or in-person communications.

For this Article, we collected data on approximately 200 instances of these expressive uses of the TM symbol. We used a convenience sampling method,

⁸³ Vic Lin, *Can You Trademark a Person's Name?*, PATENTTRADEMARKBLOG, <https://www.patenttrademarkblog.com/person-name-trademark/> [<https://perma.cc/H8LS-NWNZ>] (discussing the requirements of trademarking a personal name, one of which being that the applicant must specify the goods or services associated with the trademark).

which included online searches on various platforms and organic encounters with the symbol through everyday conversations and internet and social media use. Data sources ultimately included social media platforms Facebook, Instagram, and Twitter; text messaging platform Discord; online discussion board Reddit; online journalism; traditional phone-based text messaging; and real-world uses. Data collection continued until theoretical saturation was reached. We then examined these uses to evaluate their semantic content—i.e., how the speakers were using the symbol and what they might be trying to communicate.

We found that the expressive uses of TM we identified could be loosely grouped into one of several categories. We identify these categories (with examples) below and explain how these categories may be related to some of the legal and linguistic meanings of the trademark symbol. We then discuss some broader themes brought to light by these uses.

Before proceeding, we emphasize that in constructing these categories, we are not suggesting that we fully comprehend the purpose behind the use of the TM symbol in any given situation. In many and perhaps most cases, it is difficult to decipher precisely what the speaker intends to convey through inclusion of the TM symbol in their message. This is the case in the Clarkson example in the Introduction and the rest of the examples we encountered (many of which we discuss below). In some cases, the speaker themselves may not fully understand their purpose in using the TM symbol.

Nonetheless, it seems clear that all of the uses we surveyed are extra-legal and expressive in some form or another. While these uses have a connection to the symbol's traditional legal function, they seem to go beyond that function in a variety of ways. Our categories in the following sections are thus based on our best estimations of the speakers' intent given the context. This exercise, we believe, helps inform our implications for trademark law in Part III. But we acknowledge that any given speaker using the TM symbol may have had a different expressive purpose in mind than the one we assign to them in the following sections.

A. *Categorizing Extra-Legal Uses of the TM Symbol*

1. *Identifying or Creating a “Stock Phrase”*

When the TM symbol occurs in connection with a trademark that is in commercial use, it is often recognized as a ‘legal’ or ‘genuine’ use by the public.⁸⁴ These uses of the TM symbol are described as those in which a new sense of the phrase is created, meaning that the word or phrase no longer has the dictionary meaning it would otherwise have.⁸⁵ Instead, a new meaning is created, which refers in some way to the entity claiming legal rights in the trademark.

Take the example of “CrossFit™.” The two words “cross” and “fit” have their own meanings in English. For “cross,” the meaning is something akin to “intersecting.” For “fit,” the meaning is along the lines of “in good shape for an activity.” Together, these two words could mean “intersecting workouts that cause one to be in good shape for various activities.” The addition of the TM symbol, however, makes it unambiguous that the user is not referring to any collection of workouts, but to a specific brand of workouts that is provided by a specific entity—CrossFit. The new spelling of these two words, “cross” and “fit,” into a single word without spacing and with capitalization, CrossFit, strengthens the visual representation of the trademark as a new word with a new meaning. In creating these new meanings, such uses might be characterized as “legal” uses of the TM symbol because the symbol functions as shorthand for a claim to trademark rights.

This new meaning carries with it a sense of legitimacy: the mark helps give the word a new meaning and, in doing so, provides assurances that the associated trademark is a legitimate indicator of the source of the goods and services so marked.⁸⁶

⁸⁴ See generally, McCready, *supra* note 12; John December, *Characteristics of Oral Culture in Discourse on the Net*, 12TH ANNUAL PENN STATE CONFERENCE ON RHETORIC AND COMPOSITION (1993), <http://www.december.com/john/papers/psrc93.txt> [<https://perma.cc/3DAA-RZGA>]; Gregory N. Carlson, *Reference to Kinds in English* (1977) (Doctrinal Dissertation, University of Massachusetts at Amherst), in *OUTSTANDING DISSERTATIONS IN LINGUISTICS* 1, 1 (Jorge Hankamer ed., 1980); Emily A. E. Williams, *Pragmatic Extension in Computer-Mediated Communication: The Case of ‘#’ and ‘™’*, 181 *J. PRAGMATICS*, 165 (2021).

⁸⁵ See McCready, *supra* note 12, at 1818.

⁸⁶ Hingson et al., *supra* note 9, at 11.

The ability of the TM symbol, in conjunction with elements like spacing and capitalization, to transform a series of words with individual meanings into something new has been recognized and leveraged by those using the symbol in extra-legal ways. Indeed, one of the primary ways we observed the TM symbol being used was to signal or emphasize that a phrase was a so-called “stock phrase”—a group of words that has developed a particular meaning through cultural use⁸⁷ Well-known examples of stock phrases include “thinking outside the box” or “last but not least.”⁸⁸ Like trademarked words or phrases, stock phrases have a meaning that transcends the ordinary meaning of the words that make up that phrase. But in the case of stock phrases, that meaning is purely cultural rather than legal.

Some of those we observed using the TM symbol to emphasize a stock phrase did so with phrases that are relatively well known in popular culture. For example, one social media user asked her followers whether any of them, like her, enjoyed re-reading or re-watching “JUST THE PARTS of a movie/show/fanfic that give them The Feels™” while skipping over other, less interesting parts of these media.⁸⁹ In this case, the speaker appears to be using the TM symbol (as well as capitalization) to emphasize the stock nature of the concept of “the feels,” defined by Urban Dictionary as a “wave of emotion that hits you like a truck.”⁹⁰ In another case, an X (formerly Twitter) user declared that she knew she had “had a Day™” at work because “complete and utter silence” afterwards brought her joy.⁹¹ In this case, the speaker is apparently signaling that she is using the phrase “having a day,” in its stock sense, which is to indicate that one is having a difficult day.⁹²

⁸⁷ *Stock Phrase*, THE FREE DICTIONARY, <https://idioms.thefreedictionary.com/stock+phrase> [<https://perma.cc/3RKT-VTV9>].

⁸⁸ *Id.*

⁸⁹ Falling-Pixie Creations (@falling-pixie), TUMBLR (Mar. 5, 2021, 4:30 PM), <https://www.tumblr.com/falling-pixie/642985611249254400/does-anyone-else-reread-or-rewatch-just-the-parts> [<https://perma.cc/9CDT-97U5>].

⁹⁰ *The Feels*, URBAN DICTIONARY, <https://www.urbandictionary.com/define.php?term=the%20feels> [<https://perma.cc/8DG3-6KVL>]; see Hingson et al., *supra* note 9, at 10 (describing “TheFeels™” as an example of a “phrase that represents a concept others can relate to or identify with”).

⁹¹ lindsay (@Boltronn), X (Oct. 22, 2019), <https://x.com/Boltronn/status/1186786491957166080> [<https://perma.cc/2VUU-VLNM>].

⁹² As one Medium user explains, the reason she uses the phrase “having a day” is because she “refuse[s] to call any day a bad day.” Nicole Perez, MEDIUM (Apr. 20, 2018), <https://medium.com/@nperez226/im-having-a-day-today-and-the-reason-i-call-it-a-day-is-because-i-refuse-to-call-any-day-a-bad-317e1e03128d>

Others who used the TM symbol in conjunction with stock phrases did so not to emphasize the accepted cultural meaning of the phrase, but instead to attach a new, often humorous, meaning to the phrase. For example, one Instagram user of Chinese descent included the phrase “Made in China™” in her biography.⁹³ In this case, the speaker is apparently using the stock phrase “made in China” to humorously describe herself—a new and surprising use of the phrase. In another case, a user urged their followers to “Just Say No™” to free software because that is how “they” (presumably the purveyors of such software) “get you hooked.”⁹⁴ In this case the speaker is referencing the stock phrase “just say no to drugs” to humorously warn against another perceived danger.⁹⁵

In yet other instances, speakers used the TM symbol in an attempt to “create” a stock phrase that had not yet attained widespread cultural recognition. Instead of using the TM symbol to validate the known meaning of a stock phrase or attempting to imbue a well-known stock phrase with a new meaning, these examples made use of the TM symbol to both create the stock phrase and define its meaning.

For example, in one instance an Instagram user expressed that she “love[s] it” when she is the “SoloGirl™” in a public place.⁹⁶ Recognizing that this was not yet an accepted stock phrase, she then went on to explain the meaning she was trying to convey with the phrase: “[w]hen you’re in a public place and you’re by yourself surrounded by people with huge groups of friends or couples and you’re the mysterious powerful solo girl ... main character traits!”⁹⁷ In this case, the speaker is apparently using the TM symbol (and associated capitalization and lack of spacing) to create a phrase that conveys a particular social and cultural meaning.

[<https://perma.cc/9PC4-T9GW>]; see Hingson et al., *supra* note 9, at 10 (describing “having a day” as an example of a “stock phrase”).

⁹³ Taylor Shennett (@taylorshennett), INSTAGRAM, <https://www.instagram.com/taylorshennett/?hl=en> [<https://perma.cc/4QXT-N8FF>] (last visited Oct. 10, 2024).

⁹⁴ Subsequent to our discovering this post, the specific Reddit user and post are no longer found on Reddit. A copy of the post is on file with the authors.

⁹⁵ The stock phrase “just say no to drugs” originates from a 1980s advertising campaign that urged children to avoid recreational drug use by “just saying no.” *Just Say No*. WIKIPEDIA, https://en.wikipedia.org/wiki/Just_Say_No [<https://perma.cc/4L3V-T42D>].

⁹⁶ Via (@lovergirl), TUMBLR, (Oct. 5, 2021), <https://lovergirl.tumblr.com/post/644233337194577920/i-love-it-when-im-the-solo-girl-like-u-know> [<https://perma.cc/H8DK-QVW2>].

⁹⁷ *Id.*

The use of the TM symbol in conjunction with stock phrases often seemed to be serving the larger purpose of signaling the speaker's community affiliation.⁹⁸ Using a stock phrase in a conversation signals that one is familiar with the phrase and is an active part of a continuing discussion where the phrase has been previously used.⁹⁹ The stock phrase also often represents a concept others in the community can identify with or relate to.¹⁰⁰ The addition of the TM symbol to the stock phrases amplifies these aspects and introduces an element of metadiscourse by signaling (without overtly stating) that all those who use or have used the phrase are included in the community.¹⁰¹ For example, in one texting conversation, a speaker referred to themselves as a "certified Gay Disaster™."¹⁰² The friend to whom they were speaking responded "I love your certified Gay Disaster™ness."¹⁰³ By picking up on the stock phrase used by the first speaker, the friend is able to convey a sense of solidarity while also communicating that they are attuned to the conversation and the particular words and phrases being used.

2. *Emphasizing (Often Humorously or Ironically) the Official Aspects, Importance, or Legitimacy of a Phrase or Concept*

As mentioned, the ability of the TM symbol to imbue a word or phrase with new meaning also conveys a sense of legitimacy: by transforming a word or phrase into a trademark, the TM symbol communicates to the consuming public that the trademark is a legitimate indicator of the source of the associated goods and services.¹⁰⁴ When a consumer sees the TM symbol or ® in association with a good or service, they can assume that it is the "official" version of the good or service and not a knock-off.¹⁰⁵ For example, when a consumer sees the logo Nintendo

⁹⁸ Hingson et al., *supra* note 9, at 10; *see also Stock Phrase*, YOUR DICTIONARY, <https://www.yourdictionary.com/stock-phrase> [<https://perma.cc/BL8N-RWBX>] (defining a stock phrase as "a phrase frequently or habitually used by a person or group and thus associated with them.").

⁹⁹ Hingson et al., *supra* note 9, at 10.

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

¹⁰² *Id.*

¹⁰³ *Id.*

¹⁰⁴ *Id.* at 11.

¹⁰⁵ *How to Use Trademark Symbols Correctly*, TAILOR BRANDS <https://www.tailorbrands.com/blog/trademarksymbols#:~:text=A%20trademark%20symbol%20is%20a,of%20your%20product%20or%20service> [<https://perma.cc/9E7Y-UX2U>] ("Trademark symbols accomplish 3 essential jobs. They exist to provide "public notice" and deter sub-standard imitations of your product or service.").

Switch™, the TM symbol helps convey the message that this is a game console provided and endorsed by the Nintendo gaming company.¹⁰⁶ Although a purveyor of goods or services need not seek government permission to use the TM symbol (unlike the ® symbol, which requires federal registration), consumers may also see the TM symbol as a signal of legitimacy.¹⁰⁷ As such, the symbol carries with it a sense of authority and the message that the associated word or phrase has been ratified and accepted as a distinct concept.¹⁰⁸

Those using the TM symbol in extra-legal ways have recognized the sense of authority and legitimacy the symbol carries, and have used it to expressive advantage to emphasize (often humorously or with an ironic sense of exaggeration) the official, important, or legitimate nature of something. For example, one social media user communicated that they had “Important™” information about a “talented actor” from the Harry Potter film series.¹⁰⁹ They then provided screenshots from a Wiki Fandom article about Crackerjack the cat, who played Crookshanks in the film Harry Potter and the Prisoner of Azkaban. The article explains how Crackerjack’s trainers saved his shed fur, rolled it into balls, and clipped it back onto him as a means of creating the “mangy appearance” necessary for the role.¹¹⁰ In this case, the speaker is apparently using the TM symbol (along with capitalization) to ironically emphasize the weighty nature of some humorous trivia about a cat actor.

In another instance, a speaker sent their friend a song over text message, with the commentary that it was a “certified BOP™” (bop being a slang term for a good song).¹¹¹ In this case, the speaker seems to be using the TM symbol (along with a word—certified—that also gestures to concepts of legitimacy and authority) to

¹⁰⁶ Kondoudis, *supra* note 64 (“Trademark symbols help consumers recognize your trademarks. Trademark symbols identify the visual cues (e.g., names and logos) that you want your customers to seek out.”).

¹⁰⁷ Hingson et al., *supra* note 9, at 11.

¹⁰⁸ *Id.*

¹⁰⁹ OBVIOUSLY (@severusish), TUMBLR (Feb. 6, 2022, 2:03 PM), <https://www.tumblr.com/severusish/675465616381149184/important-info-about-the-talented-actor-who> [<https://perma.cc/QC98-A9FP>].

¹¹⁰ *Crackerjack*, FANDOM: HARRY POTTER WIKI, <https://harrypotter.fandom.com/wiki/Crackerjack> [<https://perma.cc/Z226-C2AY>].

¹¹¹ *Bop*, URBAN DICTIONARY, <https://www.urbandictionary.com/define.php?term=bop> [<https://perma.cc/69AW-QJBZ>]. See also Jack Edwards (@jackbenedwards), X (Oct 26, 2020, 1:01 PM), <https://x.com/jackbenedwards/status/1320772451727511554> [<https://perma.cc/C6VP-HKHA>]. A copy of the text is on file with the authors.

express (probably in a somewhat tongue-in-cheek way) that their personal opinion of a song is ratified and broadly accepted by a wider community.

In yet another instance, a social media user jokingly claimed that a famous content creator named PearlescentMoon, who focuses her content on the online game Minecraft,¹¹² had created a new game piece, by stating: “PearlescentMoon light block. Its [sic] official™.”¹¹³ The speaker included a humorous picture of this so-called new light block, but then clarified in the hashtags below that it was a “#haha joke.”¹¹⁴ In this case, the speaker is apparently using the TM symbol (in conjunction with the word “official”) to ironically claim that something is an accepted and official good or service when it clearly is not.

In all of these cases, we see speakers leveraging the concepts of legitimacy and officialness the TM symbol invokes to humorously or ironically emphasize these qualities in various objects—a piece of information, an opinion about a song, and a joke product.

3. *Stereotyping or Caricaturing a Word or Phrase*

We also encountered uses of the TM symbol in connection with a speaker’s invoked caricature or consciously stereotyped meaning of common words or phrases. In these cases, speakers seemed to rely on the function of the TM symbol already discussed—the ability of the symbol to transform a series of words with individual meanings into a phrase that represents a specific product or category (like CrossFit™).¹¹⁵

For instance, in one Reddit post, a woman claimed she was “not like other girls™.”¹¹⁶ In the rest of the post, she described a number of things that such girls (also referred to as “Basic Bi#@!\$%™”) regularly do, but which she typically avoids. These activities included going to the mall, adopting current fashions,

¹¹² See PearlescentMoon, TWITCH, <https://www.twitch.tv/pearlescentmoon> [<https://perma.cc/26BU-8E9W>] (last visited Oct. 16, 2024).

¹¹³ HumanEO (@humaneO), TUMBLR (Jan. 6, 2022, 4:58 PM), <https://www.tumblr.com/humaneO/672668109796229120/pearlescentmoon-light-block-its-official> [<https://perma.cc/WDY3-YREB>].

¹¹⁴ *Id.*

¹¹⁵ Dr. Jimmy Yam (@JimmyJoeYam), X (Sept. 15, 2023, 7:57 PM), <https://x.com/JimmyJoeYam/status/1702864313470329162> [<https://perma.cc/S2Q4-T6SK>].

¹¹⁶ Subsequent to our discovering this post, the specific Reddit post is no longer found on Reddit. A copy of the post is on file with the authors.

and looking to social media influencers for life guidance. She lamented having undertaken such activities recently (including listening to a few social media influencers), while still asserting her difference from these “Other Girls(TM).” Here, the speaker appears to use the TM symbol to help her create and communicate a stereotyped and caricatured category—that of “Other Girls(TM).”

Other speakers seemed to use the TM symbol for similar expressive purposes. For instance, users on Tumblr relied on the symbol to distinguish between more common meanings of certain nouns and those users’ caricatures of the meaning of those same nouns. In one case, the Tumblr user indicated that the definition of “feminist” was “I believe in equality for everything between the sexes.”¹¹⁷ That definition of “feminist” omitted the TM symbol. However, the user’s definition of “Feminist™” read: “ALL MEN ARE A##HOLES AND SHOULD DIE! WE DON’T NEED ANY OF THEM ANYWAYS AND THEY NEVER DO ANYTHING GOOD FOR US!”¹¹⁸ In another case, the user defined “Christian” in a more or less traditional manner (i.e., as a believer in God and Jesus Christ), but defined a “Christian™” as a stereotyped religious zealot who strictly and literally adhered to every word of the Bible and viewed anyone that deviated from that path as a spawn of Satan.¹¹⁹

As a final example, one Instagram user, in a post about “types as high schoolers,” provided an entry about “The Popular Kid TM.”¹²⁰ The poster defined “The Popular Kid TM” as one who bullies introverts/shy kids, dates whoever they’d like (including, secretly, members of the sports team), and, in general, is having the time of their lives.

In these examples, the speakers appear to rely on the TM symbol to help caricature certain concepts or groups or reference a stereotypical meaning of a word or phrase. The TM symbol helps communicate that they are in fact referencing the stereotyped meaning and not the more realistic, nuanced meaning of the term or phrase.

¹¹⁷ lilkittynellie, TUMBLR (April 5, 2017), <https://thecheesyllama.tumblr.com/post/159217040796/seereethepagan-lilkittynellie> [<https://perma.cc/R9FZ-8WLM>].

¹¹⁸ *Id.*

¹¹⁹ @seereethepagan, TUMBLR (April 5, 2017), <https://thecheesyllama.tumblr.com/post/159217040796/seereethepagan-lilkittynellie> [<https://perma.cc/R9FZ-8WLM>].

¹²⁰ Subsequent to our discovering this post, the specific Instagram post is no longer found on Instagram. A copy of the post is on file with the authors.

4. *Ownership*

As discussed in Part I, a provider of goods and services who uses a trademark in commerce acquires certain legal rights in that mark. Specifically, they gain the exclusive right to prevent others from using the same or similar mark in commerce in ways that would confuse the consuming public about the source of goods or services.¹²¹ Those who use trademarks that become famous also have a right to prevent others from using the mark in ways that would diminish or harm the reputation of their mark, subject to certain limits.¹²²

Trademark scholars would be quick to point out, however, that having these rights in a trademark does not mean that the mark owner has property rights or so-called “rights in gross” in the mark itself, which would allow them to control or prevent all unauthorized uses of the mark.¹²³ For example, trademark law recognizes that there are significant free speech concerns implicated by granting legal rights in language and other means of expression, and it therefore attempts to limit mark owners’ rights in ways that give due consideration to these concerns.¹²⁴

Nevertheless, the association of trademark rights with the concept of ownership is one that seems to have entered the public consciousness.¹²⁵ Mark users are often said to “own” the mark, despite whatever limitations apply to that ownership.¹²⁶ In fact, the TM symbol plays an important role in advancing this narrative by suggesting to the public that the associated trademark is owned by a particular entity. As one practitioner put it: “The primary benefit of the trademark

¹²¹ Graham et al., *supra* note 25, at 672 (specifying the rights of trademark owners).

¹²² Bradford, *supra* note 43, at 1243 (discussing a trademark cause of action for dilution by blurring and tarnishment).

¹²³ See, e.g., *United Drug Co. v. Theodore Rectanus Co.*, 248 U.S. 90, 97 (1918) (stating that “supposing that a trade-mark right is a right in gross or at large, like a statutory copyright or a patent for an invention” is a “fundamental error”).

¹²⁴ See generally, e.g., Lisa P. Ramsey, *Increasing First Amendment Scrutiny of Trademark Law*, 61 SMU L. REV. 381 (2008) (discussing first amendment limitations on trademark law).

¹²⁵ See, for instance, the titles of the following articles: Pamela S. Chestek, *Who Owns the Open Source Project Name?*, 103 TRADEMARK REP. 1240 (2013); Pamela S. Chestek, *Who Owns the Mark? A Single Framework for Resolving Trademark Ownership Disputes*, 96 TRADEMARK REP. 681 (2006); Matthew A. Alsberg, *I’ll Be Your Mirror: Broadening the Concept of Trademark Joint Ownership to Reflect the Developing Collaborative Economy*, 44 SW. L. REV. 59 (2014). These and others point to ownership of marks rather than rights in marks.

¹²⁶ Alexandra J. Roberts, *Trademark Failure to Function*, 104 IOWA L. REV. 1977, 1984 n.28 (2019) (indicating that “[o]wnership of a valid trademark is a prerequisite for a trademark infringement action”).

notice ... is that it puts the public on notice that you are claiming rights to the mark. Using TM ... is an effective way to tell the world that the mark is yours.”¹²⁷

Consistent with this, we observed several speakers using the TM symbol to gesture to the concept of ownership. In some cases, it appeared that these uses of the TM symbol were intended to be humorous or tongue-in-cheek. For example, one social media user, apparently frustrated with having her words posted on social media by others without credit, complained about it as follows: “when u say something to someone in DMs and then they post it public without credit is like ok i’m going to talk like this nowTM (Copyright Hannah Capstellium 2021, All Rights Reserved).”¹²⁸ In this case, the speaker is apparently joking that she might need to resort to legal means (including trademark and copyright law) to control the uncredited use of her speech.¹²⁹

It is unclear here what level of understanding the speaker has of trademark or copyright law or whether she seriously thinks that using these symbols could protect against future unauthorized use of her speech (though the authors doubt that).¹³⁰ But in many ways the answers to these questions are irrelevant because her invocation of the TM symbol functions as a *cultural* rather than a *legal* assertion of rights. The speaker is publicly asserting that she does not want her speech copied without credit, and the TM symbol, with its cultural association of ownership over speech, adds rhetorical weight to this assertion.¹³¹

In other cases, social media users unaffiliated with a company or product placed the TM symbol directly after their social media handle.¹³² While we can’t divine the user’s purpose in doing so in any given case, one reasonable interpretation is that in many of these instances, the user is attempting to claim some ownership rights in their handle through use of the TM symbol. Again, these types of uses do not seem like legal assertions, at least insofar as trademark law is concerned. Names can be used as trademarks, but they must be used in connection

¹²⁷ *Why Use Notice of Trademark or Copyright?*, DUNNER LAW (July 14, 2011), <https://dunnerlaw.com/why-use-notice-of-trademark-or-copyright/> [<https://perma.cc/T7Q2-8VAJ>].

¹²⁸ Hingson et al., *supra* note 9, at 10.

¹²⁹ *Id.*

¹³⁰ *Id.* at 13.

¹³¹ *Id.*

¹³² *See, e.g.*, Catturd TM (catturd2), X, <https://x.com/catturd2> [<https://perma.cc/J5AJ-T7MF>] (last visited Nov. 6, 2024).

with a good or service offered in commerce.¹³³ It's possible that in some of these instances, the user is attempting to claim legal rights in their handle as a trademark that designates the source of their goods and services (perhaps as an influencer, as we discuss in the category below). But in many of the more casual examples that we observed, it seems more likely that the user is trying to use the TM symbol to assert *cultural* ownership in their unique social handle.

5. *Branding*

Product branding

If there's one function of a trademark most laypeople seem to understand, it's the traditional branding function.¹³⁴ Providers of goods and services use trademarks to “build a brand”—i.e., to develop a positive reputation and consumer goodwill for their goods and services and their company as a whole.¹³⁵ They do this not only by providing quality goods and services associated with the trademark, with the hope that consumers will appreciate this quality and come away with a positive feeling about the brand, but also through marketing and advertising campaigns specifically geared at enhancing the brand's reputation.¹³⁶

Those we observed using the TM symbol in extra-legal ways often seemed to do so with the branding function of trademarks in mind. Many times this use was humorous, and the humor took one of several different creative forms. In one instance, a TikTok user wondered what it might be like to brand a simple food product consumers don't generally associate with a particular company—an egg.¹³⁷ Using the concept of eggTM, she developed a humorous video where she used elaborate lighting, music, and camera shots to create a “commercial” for

¹³³ Laura A. Heymann, *Naming, Identity, and Trademark Law*, 86 *IND. L.J.* 381, 386 (2011) (discussing how personal names can sometimes function as trademarks when they play a commercial role).

¹³⁴ Katya Assaf, *Brand Fetishism*, 43 *CONN. L. REV.* 83, 89 (2010) (discussing how firms primarily use trademarks to brand themselves and how that purpose may differ from trademark law's goal of providing consumers with marketplace information).

¹³⁵ See, e.g., Alexander Krasnikov, Saurabh Mishra & David Orozco, *Evaluating the Financial Impact of Branding Using Trademarks: A Framework and Empirical Evidence*, 73 *J. MKTG.* 154, 156 (2009) (using trademarks as measures of firms' branding efforts).

¹³⁶ Manel Khedher, *Personal Branding Phenomenon*, 6 *INT'L L.J. BUS. MGMT.* 29, 37 (2014) (discussing these strategies).

¹³⁷ Grace Wells (@gracewellsphoto), *TikTok* (Feb. 13, 2022), https://www.tiktok.com/@gracewellsphoto/video/7064287460494167302?_t=8qbox4iVjl0&_r=1 [<https://perma.cc/KAP8-SP9A>].

an egg similar to the sophisticated advertising campaigns consumers are used to seeing in other contexts.¹³⁸ In this case, in addition to being quite fun and creative, the egg™ clip is also arguably acting as a satire or commentary on modern advertising techniques.

In other instances, speakers used the TM symbol not to comment on advertising generally, but to poke fun at or parody specific products. For example, one Reddit user posted a picture of a dimly-lit and intimidating-looking piece of exercise equipment with various straps, ropes, bars, and pulleys. The caption for this image was “Allow me to introduce . . . the FrankenRack (TM).”¹³⁹ In this case, the speaker is apparently using the branding function of the TM symbol to make fun of a product that, in their view, bears a closer resemblance to an apparatus from a horror story than the exercise machine it was intended to be.

In yet other instances, social media users took advantage of the branding function of the TM symbol to engage in the creative exercise of imagining new or fantastical goods and services. One long social media thread involved several users weighing in on an imaginary soap product based on the character Severus Snape from the Harry Potter series (a Severus Snape soap).¹⁴⁰ One social media user coined the term “Severus Snoap™” for the fantastical product and opined on possible combinations and scents for the soap (“lemon and verbena, bergamot, mandarin orange, cypress, coriander, tarragon and sage” was one option).¹⁴¹ In this case, the branding function of the TM symbol is apparently acting to bring together Harry Potter fans in the fun and creative exercise of imagining new products based on their favorite characters. In a similar vein, social media users created a fictional band called “the Pigz (tm)” based on a photo of guinea pigs “posing” in a manner that uncannily resembled a rock band’s promotional picture.¹⁴²

¹³⁸ *Id.*

¹³⁹ Subsequent to our discovering this post, the specific Reddit user and post are no longer found on Reddit. A copy of the post is on file with the authors.

¹⁴⁰ OBVIOUSLY (@severusish), TUMBLR (April 30, 2022, 7:00 PM), <https://www.tumblr.com/delsdelights/683000087257939968/new-soap-softly-simmering> [<https://perma.cc/PC7L-LKSV>].

¹⁴¹ *Id.*; see also Delirium’s Delights (@delsdelights), TUMBLR (Feb. 20, 2022, 1:42 PM), <https://www.tumblr.com/severusish/675283114996678656/answering-for-a-you-but-also-a-me-here-are> [<https://perma.cc/5NS8-XN6B>].

¹⁴² Subsequent to our finding this example, Reddit suspended the user for unidentified violations of its terms of service. The original post was found here: https://www.reddit.com/r/guineapigs/comments/psh9l0/the_pigz_tm_about_to_drop_their_hottest_album_yet/. A copy of the original post is on file with the authors.

Self-branding

In the age of social media and influencers, a concept that has entered the public consciousness is that of “people as brands.” Celebrities or influencers don’t market one specific product—rather, they market themselves or their lifestyles as a way of attracting audiences, garnering views on social media (for which they often receive compensation from the social media platforms) and attracting lucrative sponsorship or endorsement deals from various companies.¹⁴³ In addition to speakers using the TM symbol extra-legally to invoke the traditional branding function of trademarks in the context of goods and services (whether real or imagined), we also observed several speakers using the TM symbol in an attempt (whether humorous or serious was not always clear) to brand themselves.

Take, for instance, the example of Jordan Clarkson discussed above—the professional basketball player who posted a series of photos of himself on Instagram with the caption “TM.”¹⁴⁴ In this case, there is no product or service beyond Clarkson himself. But perhaps this is exactly what Clarkson was trying to communicate—that he himself is a brand. Although the concept of “people as brands” is not recognized by trademark law—there is no legal protection under trademark law absent use in commerce of a mark in association with a particular good or service—it does seem to be an idea that has some purchase in the social media world.¹⁴⁵

As discussed above, we also came across many examples where parties used the TM symbol in association with the speaker’s social media name or “handle.” For example, one X user had the handle “Hot Girl MessTM”;¹⁴⁶ another on

¹⁴³ Hingson et al., *supra* note 9, at 14; Alexandra J. Roberts, *False Influencing*, 109 GEO L.J. 81, 84 (2020) (discussing this phenomenon while arguing that many may run afoul of the law when failing to disclose endorsement deals); Janet Balis, *How the Best Brand-Influencer Partnerships Reach Gen Z*, HARV. BUS. REV. (June 21, 2023), <https://hbr.org/2023/06/how-the-best-brand-influencer-partnerships-reach-gen-z> [<https://perma.cc/BV4B-NBMM>] (discussing some of the tactics that social media influencers use to brand themselves and how traditional firms can learn from them in their own branding efforts).

¹⁴⁴ Clarkson, *supra* note 2.

¹⁴⁵ TMEP (May 2024) §§ 813-.01(c), 1206.04 (2022) (indicating the requirements for personal names to be registered as trademarks, which include that they be used in connection with goods or services).

¹⁴⁶ Hot Girl MessTM (@olarvia), X, <https://x.com/olarvia> [<https://perma.cc/Q6HD-ARWU>] (last visited October 8, 2024).

Instagram called himself “Ygrene™.”¹⁴⁷ In these cases, as discussed, the speakers may simply be attempting to assert cultural ownership over their handles and thereby ward off others from using a similar handle or name. But alternatively and relatedly, they may be attempting to go a step further and “brand” their online personas through use of the TM symbol. Even if that use does not enable them to enforce rights in their online persona, they may be attempting to communicate to the public that they are the “official” account associated with a particular name or handle.¹⁴⁸ By providing notice to others that they consider their online personas to be a proprietary brand, social media users may be able to build their reputations in much the same way that traditional providers of goods and services build their reputations through legally enforceable trademarks.

6. *Emphasizing or Commenting on the Commercial Aspects of a Concept, Product, or Society*

As discussed in Part I, legally enforceable trademarks come into being when a provider of goods or services uses them in commerce in association with the provision of those goods or services.¹⁴⁹ The commercial nature of a trademark is thus an inextricable part of its function—legally enforceable trademarks don’t exist without use in commerce.¹⁵⁰

The association between trademarks and commerce was not lost on the speakers we observed using the TM symbol extra-legally; in fact, many of these speakers leveraged this aspect of trademarks to call out or emphasize the commercial or corporate nature of a concept, product, or society more broadly.

In one case, for example, an online article published by *New York Magazine* was discussing the rise of a new social media platform, called BeReal, which markets itself as more “authentic” than traditional platforms like Facebook and

¹⁴⁷ Subsequent to our discovering this user, they changed their Instagram username to “ygrene.fr.” ygrene_fr (@ygrene_fr), INSTAGRAM, https://www.instagram.com/ygrene_fr/ (last visited Nov. 5, 2024). The original screenshot showing use of the TM symbol in this manner is on file with the authors.

¹⁴⁸ See, e.g., Clown World™ 🤡 (ClownWorld_), X, https://x.com/ClownWorld_ [<https://perma.cc/CU33-S6VN>] (last visited Nov. 6, 2024) (indicating “Official #ClownWorld™ 🤡 #NoCaptionNeeded **DM us for removals/credit”).

¹⁴⁹ See *supra* Part I.

¹⁵⁰ Vic Lin, *What Is Trademark Use in Commerce?*, PATENTTRADEMARKBLOG, <https://www.patenttrademarkblog.com/trademark-use-in-commerce/> [<https://perma.cc/KE5T-36V2>] (describing the use in commerce requirement for acquiring trademark rights).

Instagram.¹⁵¹ According to the article, BeReal aims to achieve this goal by, among other things, encouraging their users to post unfiltered and uncurated photos and updates.¹⁵² The article sought the input of a commentator who believed that in the case BeReal, “authenticity has turned into just another product to sell.”¹⁵³ The article quoted the commentator who opined that “on social media, and I think even when we’re talking about someone being real, it’s not the *real* real, it’s the ‘New Real,’ which is more down-to-earth than what we put on, but it’s still not the actuality.”¹⁵⁴ The author of the article immediately followed up this quote with the summarizing statement: “It’s Real™.”¹⁵⁵ Here, it appears that the author of the article is using the TM symbol to emphasize the commercial nature of a concept—in this case, the promise of authenticity or “realness” being marketed by a social media platform. The TM symbol helps underscore in a new way the point being made by the author—that in the case of this new social media platform, authenticity is a “product” and (by implication) should be subject to the same cautions and caveats sophisticated consumers employ when evaluating more traditional offerings of goods and services.

In another case, we observed an X (formerly known as Twitter) user employing the TM symbol to comment on the commercial and capitalist nature of society more broadly. The speaker communicated the following vignette:

i laugh as elon musk beams a meme directly to my frontal cortex via NeuraLink™. omg epic win. i blink twice to NeuraLike™ it, then think very hard “thank you sir! please send bitcoin.” i open my eyes. it’s suddenly nighttime and i am strangling a union organizer.¹⁵⁶

In this case, the speaker imagines a dystopian future where consumers willingly buy products that give companies (and their leaders) direct access to their brains, unwittingly allowing these companies to control them for political and

¹⁵¹ Michelle Santiago Cortés, *The Anti-Instagram App Promising to Make Us Feel Good*, THE CUT (May 20, 2022), <https://www.thecut.com/2022/05/bereal-app-solve-social-media-problem.html#> [<https://perma.cc/MA8Z-7PMV>].

¹⁵² *Id.*

¹⁵³ *Id.*

¹⁵⁴ *Id.*

¹⁵⁵ *Id.*

¹⁵⁶ @MNateShyamalan, X (Nov. 30, 2022, 1:54 PM), <https://x.com/MNateShyamalan/status/1598027618917679105> [<https://perma.cc/PE54-JQ76>].

monetary gain. Although the speech is humorous, the speaker is also apparently making a serious point about capitalism and consumers' willingness to buy products and services that might—despite the fun and convenience they offer—also carry a risk of serious personal and societal harm. The TM symbol, used in conjunction with the parodized (but real) product NeuraLink and the imaginary concept of NeuraLike, helps underscore the fact that these (like many of the services we rely on every day) are commercial products, offered and backed by corporate entities that might have goals and agendas that differ greatly from our own.

B. Broader Themes

As discussed above, the extra-legal uses of the TM symbol we observed were primarily expressive, in the sense that those deploying the symbol were trying to communicate something by using it. In other words, speakers were choosing to use the TM symbol because the symbol added meaning to the words and phrases they used it in conjunction with.¹⁵⁷ But what were they trying to communicate, and what meaning were they trying to add to their speech by using the TM symbol?

Many of these uses seemed to have much in common with the expressive uses of the hashtag Professor Alexandra Roberts has documented. In her article *Tagmarks*, Roberts quotes a *New York Times* piece about hashtags, where author Julia Turner notes that a “hashtag gives the writer the opportunity to comment on his own emotional state, to sarcastically undercut his own tweet, to construct an extra layer of irony, to offer a flash of evocative imagery, or to deliver metaphors with striking economy.”¹⁵⁸

Many of these purposes seem to be in play with the extra-legal uses of the TM symbol we observed as well; especially peoples' use of the symbol to convey irony, sarcasm, or an element of metacommentary (i.e., a commentary on the commentary). Indeed, Emily Williams, in a study on the use of the hashtag and TM symbol on the discussion site Reddit, noted that the hashtag and the TM symbol

¹⁵⁷ See Emily A.E. Williams, *Pragmatic Extension in Computer-Mediated Communication: The Case of ‘#’ and ‘TM’*, 181 J. PRAGMATICS 165, 166 (2021) (discussing how the trademark symbol can be used to produce metadiscourse and add layers of meaning).

¹⁵⁸ Alexandra J. Roberts, *Tagmarks*, 105 CAL. L. REV. 599, 610 (2017) (quoting Julia Turner, *#InPraiseOfTheHashtag*, N.Y. TIMES MAG. (Nov. 4, 2012), <https://www.nytimes.com/2012/11/04/magazine/in-praise-of-the-hashtag.html> [<https://perma.cc/6W6G-2U7K>]).

were both often used to engage in metacommentary, including expressing sarcasm; to communicate affiliation with a particular group (for example, by using the same TM-ed or #-ed “inside joke”); and to express criticism and ridicule.¹⁵⁹

Williams refers to the hashtag and the TM symbol as “artificial operators.”¹⁶⁰ Artificial operators seem to be serving a particular purpose in online discourse by helping people on social media communicate in nuanced ways (metacommentary, sarcasm, irony, inside jokes) that might otherwise be quite difficult to achieve in dispersed communities and without the aid of other verbal and nonverbal cues such as tone, inflection, facial expression, and body language.¹⁶¹

But though the hashtag and TM symbol both facilitate online communication in these ways, the TM symbol is distinct in the sense that, unlike the hashtag, which originated on social media as a generic topic marker,¹⁶² the TM symbol has its origins in trademark law and has a distinct legal purpose and meaning. It appears that this meaning has not been lost on those who use it expressively; in fact, the speakers we observed using the symbol often leveraged various aspects of this legal meaning as a way to more effectively achieve their ends of criticism, humor, affiliation-signaling, sarcasm, irony, or metadiscourse.

Consistent with this, the website TV tropes, which catalogs tropes in popular culture,¹⁶³ has an entry on the extra-legal use of the TM symbol as a trope titled TradesnarkTM.¹⁶⁴ The entry on Tradesnark opines that

A humorous way to make ThingsTM stand out is to add Random Trademark Symbols[®] everywhere. May be used as a Social Commentary[®] on our increasingly homogenized, commercialized

¹⁵⁹ Williams, *supra* note 157, at 171–74.

¹⁶⁰ *Id.* at 166.

¹⁶¹ *Id.* at 165.

¹⁶² *Id.* at 167.

¹⁶³ The website defines a trope as “a storytelling device or convention, a shortcut for describing situations the storyteller can reasonably assume the audience will recognize. Tropes are the means by which a story is told by anyone who has a story to tell.” *Tropes*, TV TROPES, <https://tvtropes.org/pmwiki/pmwiki.php/Main/Tropes#:~:text=A%20trope%20is%20a%20storytelling,the%20same%20thing%20as%20cliches> [<https://perma.cc/W8K5-JG2K>]. It goes on to explain that “[t]ropes are not the same thing as cliches. They may be brand new but seem trite and hackneyed; they may be thousands of years old but seem fresh and new.”

¹⁶⁴ *Tradesnark*TM, TV TROPES, <https://tvtropes.org/pmwiki/pmwiki.php/Main/Tradesnark> [<https://perma.cc/P2N4-PXQW>].

World®), but more often than not, done just because of the Rule of FunnySM. They can also be used to point out how Cliche™ something is, or employed in Sarcasm Mode (perhaps in conjunction with Scare QuotesSM) to passive-aggressively imply that something exists only as a Concept™; for example, some people refer to global warming as “Global Warming™”. Another sarcastic variationSM is to sprinkle Trade Snark over your paraphrase of an opponent’s position to imply that he’s using the term in question as a meaningless buzzword®.¹⁶⁵

As this entry notes (and as we also found in our data analysis), when used expressively, the TM symbol is often employed as a commentary on commercialization, as a way to mark or emphasize something as a cliché or stock phrase, or to indicate the stereotypical or conceptual nature of something. As discussed above, these uses of the symbol all gesture back to one or more of the interrelated meanings of the TM symbol as a legal operator.

In this way, the TM symbol, with its built-in legal significance, seems to be acting as an efficient shortcut for those wishing to communicate in increasingly nuanced ways in online communities. The question for trademark scholars is whether this appropriation of the symbol poses any problems for its continued effectiveness as a legal device. We address this question in the next Part.

III IMPLICATIONS FOR TRADEMARK LAW

Extra-legal uses of the TM symbol raise a number of important implications for trademark law. In this Part, we discuss some of the more pertinent ones. In doing so, we draw analogies to trademark infringement doctrines to help conceptualize these issues. We then discuss which harms we believe are most likely to occur and conclude with a discussion of what, if anything, trademark law should do about any of it.

A. *Likelihood of Confusion*

The first doctrine that serves as a helpful analogy to the harms that might arise with extra-legal uses of the TM symbol is the likelihood of confusion doctrine. The primary test for trademark infringement is the likelihood of confusion analysis,

¹⁶⁵ *Id.*

which asks whether the public is likely to be confused by a competitor's use of a name or symbol similar to that being used by a trademark owner.¹⁶⁶ This test helps serve the policy goals of protecting consumers from being confused about the true source of a good or service, while also protecting producers trying to build up goodwill in their offerings (which is made possible, in part, through correct source identification by the public).¹⁶⁷ But the unprincipled use of the TM symbol itself could lead to various forms of public and consumer confusion. We call this possible implication the “confusion implication.”

For example, extra-legal uses of the TM symbol may result in a significant amount of consumer confusion as consumers struggle to discern between legal and expressive uses of the symbol. Consumers may continue to associate the symbol primarily with an assertion of legal rights in a mark. And because of that continued association, expressive uses may sometimes, and perhaps even frequently, lead to consumers being confused as to whether the symbol is functioning legally or expressively in any given context.

This confusion could undermine the legal uses of the trademark symbol in a number of ways. First, it could lead to chilling effects. Interested parties might inaccurately believe a person using the TM symbol expressively is claiming rights in a mark. This could dissuade them from using what is actually an unclaimed mark in commerce and developing trademark rights in a mark that is available. This chilling effect might be particularly concerning in light of empirical evidence suggesting that the number of marks available for adoption is shrinking.¹⁶⁸

Ironically, those initial expressive uses could also chill other expressive uses if the public interprets the expressive uses as legal. Indeed, in our examples discussed above, we saw situations where people using the TM symbol expressively were arguably trying to claim some kind of legal rights, even though trademark law does not support legal rights in these contexts. For example, many social media users added a TM symbol to their social media handles, suggesting they were trying to

¹⁶⁶ Robert G. Bone, *Taking the Confusion Out of Likelihood of Confusion: Toward a More Sensible Approach to Trademark Infringement*, 106 Nw. UNIV. L. REV. 1307 (2012) (discussing this test and proposing reforms to it).

¹⁶⁷ 1 MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 2:1 (5th ed. 2023) (explaining the purposes of trademark protection to be protecting both consumers and producers).

¹⁶⁸ Beebe & Fromer, *supra* note 16, at 947.

claim the exclusive right to use these handles. Other social media users might be deterred from using similar expression, although legally there is no basis for this deterrence.

Second, and perhaps more concerning, the expressive use of the TM symbol with words or phrases might be confusing to the consuming public in various ways that could undermine the ways trademarks are meant to help consumers. For example, consumers might wrongly believe that someone using the symbol in an expressive way is offering a product or service. They might, for instance, believe that the Severus Snape Soap (Severus SnoapTM) is a real product, and spend time and effort looking for it. This confusion could interfere with the efficient functioning of the marketplace by increasing consumer information costs, whose reduction, according to leading commentators, is a primary goal of trademark law.¹⁶⁹

More generally, the widespread adoption of the TM symbol for expressive purposes might confuse the public about what the symbol is for or how it is supposed to be used. This confusion about the proper legal function of the trademark symbol could undermine the notice function the symbol is meant to promote.

B. Dilution and Discounting

A second relevant trademark doctrine that could be used to conceptualize the potential harms of unprincipled use of the TM symbol is the infringement doctrine of trademark dilution.¹⁷⁰ A dilution cause of action prevents non-mark holders from using a protected, “famous” mark in ways that either damage the mark’s reputation or impair the ability of the mark to function as a source identifier.¹⁷¹ Although it is possible, in theory, that parties will be confused by extra-legal uses of the TM symbol to the extent that they are chilled from using the same mark

¹⁶⁹ Stacey Dogan, *A Search-Costs Theory of Limiting Doctrines in Trademark Law*, 97 TRADEMARK REP. 1223, 1223 (2007) (“Over the past two decades, the search costs theory of trademark law has attracted a substantial following among both commentators and courts.”).

¹⁷⁰ Michael Adams, *The Dilution Solution: The History and Evolution of Trademark Dilution*, 12 DEPAUL J. ART, TECH & INTEL. PROP. L. 143, 145 (2002) (discussing the historical development of the dilution cause of action in trademark law).

¹⁷¹ *Trademark Dilution (Intended for a Non-Legal Audience)*, INT’L TRADEMARK ASSOC. (Nov. 9, 2020), <https://www.inta.org/fact-sheets/trademark-dilution-intended-for-a-non-legal-audience/> [<https://perma.cc/H42Z-68L3>] (providing an overview of the dilution cause of action).

for expressive or commercial purposes, in many cases actual confusion may be unlikely. However, dilution theory is based on the premise that third-party use of a mark can hamper the ability of a mark to act as a source identifier even when consumers are not confused about the source of a good or service.¹⁷² Thus, for example, if (as Frank Schechter famously argued in his 1927 article advocating for a dilution cause of action) the term Kodak were to be used “for bath tubs and cakes, ‘Mazda’ for cameras and shoes, or ‘Ritz-Carlton’ for coffee,” these marks would lose the uniqueness that leads them to be good source identifiers and they would “inevitably be lost in the commonplace words of the language, despite the . . . vast expenditures in advertising them.”¹⁷³

Similarly, even if the public is not confused such that they mistakenly believe someone who is using the TM symbol expressively is trying to claim rights in a mark, the TM symbol itself, through these various expressive uses, could be hampered in its ability to function as a legal object. The public, upon encountering the TM, might be deprived of the unique legal meaning of the symbol and might have to undertake additional mental steps to try to determine the way in which the TM symbol is being used in any given instance.¹⁷⁴

Ultimately, this may result in many consumers discounting the symbol’s significance. That is, if consumers frequently have to exert mental effort to accurately discern the symbol’s meaning in any given scenario, then those consumers may eventually come to ignore the symbol altogether, or at least pay it less heed than otherwise. Hence, because extra-legal uses may, over time, erode the TM symbol’s legal meaning, many consumers may come to attach less weight to the TM symbol. We call this possibility the “discounting implication.”

But even if consumers do not discount the symbol’s significance, the fact that they have to undergo additional mental steps (or incur increased “imagination costs”) every time they encounter the symbol is a harm that trademark law has

¹⁷² Kathleen B. McCabe, *Dilution-by-Blurring: A Theory Caught in the Shadow of Trademark Infringement*, 68 *FORDHAM L. REV.* 1827, 1840–45 (2000) (discussing the development and theory behind anti-dilution law).

¹⁷³ Frank I. Schechter, *The Rational Basis of Trademark Protection*, 40 *HARV. L. REV.* 813, 830 (1927).

¹⁷⁴ Graeme W. Austin, *Tolerating Confusion About Confusion: Trademark Policies and Fair Use*, 50 *ARIZ. L. REV.* 157, 159 (2008) (describing “imagination costs” that consumers must undertake when others use similar marks as some of the costs that anti-dilution causes of action are meant to protect against).

recognized.¹⁷⁵ We therefore differentiate this situation and call it the “dilution implication.” Dilution may ultimately lead to discounting, but even if it does not, it may still exert a harm on the consuming public and also on the producers who rely on the symbol to effectively communicate legal notice.¹⁷⁶

The discounting implication has some similarities to both the confusion and dilution implications but is also different in important ways. The implications are similar because in all three situations consumers face difficulty discerning the symbol’s meaning in any given context. But with the discount implication, consumers discount the symbol’s legal significance over time—they attach less weight to the symbol because they simply don’t know what to make of it in any given context. Hence, with the discount implication, initial confusion or dilution ultimately leads to some or many consumers giving up on the symbol.

With the confusion and dilution implications, conversely, most consumers continue to attach legal significance to the symbol, even in situations where parties use the symbol expressively. In fact, that ongoing consumer reliance is a primary source of ongoing consumer confusion and increased imagination costs (rather than apathy, as with the discount implication). We discuss the importance of this difference below when we discuss the likelihood of these implications playing out.

¹⁷⁵ McCabe, *supra* note 172, at 1828 (discussing some of the possible harms that anti-dilution law is meant to protect against).

¹⁷⁶ Trademark law recognizes two forms of dilution: dilution by blurring and dilution by tarnishment. 15 U.S.C. § 1125 (c). With dilution by blurring, the harm is what Frank Schechter described: A mark loses the “uniqueness” that allows it to be a good source identifier through widespread and varied use. Schechter, *supra* note 173, at 30. With dilution by tarnishment, the harm is more specific: a mark’s reputation is “tarnished” by use in association with socially questionable subject matter like sex, drugs, or low quality goods or services. *See* 15 U.S.C. § 1125 (c)(2)(C). Here we focus on the possibility of a dilution-by-blurring-type harm for the TM symbol—the widespread use of the symbol in various extra-legal contexts might cause the symbol to lose its uniqueness as a legal operator and require the public to undertake additional mental steps on encountering the symbol to discern the way it is being used in any given instance. It is also possible that a dilution by tarnishment harm could occur through widespread extra-legal use—that use of the TM symbol in association with unsavory expressive speech could harm the “reputation” of the symbol as a legitimate legal operator that grants a sense of legitimacy to those using it. In our data collection, we didn’t encounter any instances where it seemed obvious that the use could impose a tarnishment harm on the symbol. But this is certainly a possibility.

C. *Genericide*

A third trademark doctrine that may serve as a helpful analogy in contemplating the harms of extra-legal uses of the TM symbol is the doctrine of genericide.¹⁷⁷ Marks that initially serve as good indicators of source—or are, in the language of trademark law, ‘distinctive’—can lose this source-identifying function over time through widespread, unauthorized, and unprincipled use.¹⁷⁸ For example, the term Thermos, once a reliable indicator that a product was being offered by the Thermos company, lost its source-identifying ability as the public began using the term widely to refer to any insulated beverage container.¹⁷⁹ By failing to prevent this shift in use and understanding, the Thermos company committed ‘genericide’ and lost its trademark rights in the term.¹⁸⁰

Similarly, widespread social appropriation of the TM symbol may ultimately mean that consumers simply fail to grasp the symbol’s legal significance altogether, regardless of context. In other words, the symbol’s extra-legal uses may become so widespread that the symbol becomes an ineffective means of signifying a claim to legal rights—even in clearly legal contexts. The TM symbol may become “generic” in the sense that consumers no longer typically associate it with its original purpose of signifying legal rights in a trademark. We call this final possible implication the “generic implication.”

The generic implication is similar to the discount implication in that in both scenarios the symbol ultimately loses a significant amount of its legal meaning. But they differ in that with the generic implication, the symbol loses its legal meaning entirely. With the discount implication, on the other hand, the symbol retains some of its legal significance. The difference between the two implications, then, is one of degree.

¹⁷⁷ Peter J. Brody, *Reprotection for Formerly Generic Trademarks*, 82 U. CHI. L. REV. 475, 475 (2015) (discussing the doctrine of genericide).

¹⁷⁸ *Id.*

¹⁷⁹ Mary Beth Quirk, *15 Product Trademarks That Have Become Victims of Genericization*, CONSUMER REPS. (July 19, 2014), <https://www.consumerreports.org/consumerist/15-product-trademarks-that-have-become-victims-of-genericization/> [<https://perma.cc/46NX-PNYT>] (providing a list of former trademarks that have undergone genericide, including “Thermos”).

¹⁸⁰ *Id.*

D. Which Harms Are Most Likely?

Which, if any, of these implications is most likely? For starters, for any of these implications to come about, broader social appropriation of the symbol than seems to be occurring at the moment would be required. This study was not structured to address the question of how broadly parties use the TM symbol in expressive ways—we encountered many extra-legal uses of the TM symbol, but we did not attempt to decipher how frequently those uses occur. So the claim that broader appropriation would be necessary is based on anecdotal observations that extra-legal uses of the TM symbol are not all that pervasive. Be that as it may, we feel fairly confident that current levels of extra-legal uses are not so pervasive that the average consumer faces difficulty in interpreting the TM symbol's significance in most contexts.

But that may well change over time. Many of the social uses we came across occurred on venues where younger generations predominate. To the extent that those rising generations increasingly make use of the TM symbol in expressive ways, those uses may, over time, result in any or all of the implications discussed above.

Yet we believe that the discount and generic implications are unlikely to come about for several reasons, even if extra-legal uses of the symbol rise. For starters, as discussed in Part II, the symbol's expressive purposes often depend on others understanding, at least in part, the symbol's legal significance. In humorous examples, for instance, the user's message would fall flat without the readers understanding both the symbol's typical legal significance and the humor to be found in using that symbol in the given context. In examples where a party uses the TM symbol to convey the legitimacy or authority of a concept, again, use of the symbol would be ineffective if interpreters of the message did not understand (at least in part) the typical legal sense of the symbol. This does not mean, of course, that lay people need to understand the nuanced ins-and-outs of trademark law for extra-legal uses of the symbol to work. But at some level, for expressive uses to serve their purposes, those interpreting the expressive uses must have some sense that use of the TM symbol typically indicates an assertion of legal rights in the associated mark.

The effectiveness of expressive uses of the TM symbol thus depends, in significant part, on the symbol remaining an effective legal tool. This does not

mean that consumers will never be confused about the symbol's legal significance or that they will never have to exert some mental effort to discern the way the symbol is being used as extra-legal uses of the TM symbol rise. But it does seem to mean that the TM symbol's legal significance is likely to remain mostly intact, since otherwise extra-legal uses of the symbol are likely to diminish (i.e., the attractiveness of using the symbol in an expressive way would diminish because that expression would lack meaning without the symbol's typical legal significance in the background). The expressive and legal uses of the TM symbol are thus likely to reach a natural equilibrium in their relationship to one another. And that equilibrium would likely prevent either the discount or generic implications.

Of course, the discount implication may be compatible with increasing extra-legal uses of the TM symbol in some respects. For instance, consumers may discount the symbol's legal significance even while understanding the symbol's historical legal roots. And that historical understanding may then inform their understanding of extra-legal uses of the symbol. But the point remains that to the extent that significant numbers of consumers discount the symbol's significance, that discounting makes extra-legal uses less likely because the symbol becomes a less meaningful expressive symbol.

The confusion and dilution implications are a different matter. These implications seem more likely than the other two for several reasons. First, as with the other two implications, the confusion and dilution implications become more likely as extra-legal uses of the symbol increase. Though only anecdotal, our observations suggest that extra-legal uses of the TM symbol are rising and will continue to rise. Digital media use, where the vast majority of these social uses happen, is unlikely to decrease.¹⁸¹ Instead, if anything, it's likely to continue increasing.¹⁸² Furthermore, younger generations are those that typically make social uses of the symbol, and those generations show no obvious signs of

¹⁸¹ See Kevin Westcott et al., *2022 Digital Media Trends, 16th Edition: Toward the Metaverse*, DELOITTE INSIGHTS (Mar. 28, 2022), <https://www2.deloitte.com/za/en/insights/industry/technology/digital-media-trends-consumption-habits-survey/summary.html> [https://perma.cc/DR9S-EML8] (discussing digital media usage trends with a focus on gaming).

¹⁸² See Dave Chaffey, *Global Social Media Statistics Research Summary May 2024*, SMART INSIGHTS (May 1, 2024), <https://www.smartinsights.com/social-media-marketing/social-media-strategy/new-global-social-media-research/> [https://perma.cc/6JPA-EL9Q] (highlighting research showing the growing worldwide usage of digital media).

discontinuing such uses. We know of no lawsuits surrounding such uses, for instance, which might deter at least some from using the symbol expressively. The rise of such expressive uses of the symbol thus makes at least some amount of confusion and dilution in the marketplace likely.

Second, unlike the other implications, the confusion and dilution implications depend on the symbol retaining much of its original legal meaning in the mind of the average consumer. If it were not so, because the symbol had lost much or all of its legal significance, consumers would be more likely to just ignore the symbol altogether—and, accordingly, those wishing to engage in various types of expressive speech might cease using it.

As discussed above, we think the symbol is likely to retain a significant portion of its legal significance, even as extra-legal uses rise. That is, because effective extra-legal uses depend on the symbol retaining a significant amount of legal significance, we think extra-legal and legal uses will reach a natural equilibrium that helps preserve a significant amount of the symbol's legal significance. Yet that natural equilibrium also makes the confusion and dilution implications more likely because, at least in some cases, consumers will face difficulty ascertaining whether a use is legal or expressive in nature. Thus, for the same reason we think the discount and generic implications are unlikely, we think the confusion and dilution implications are more likely to come about.

E. How Should Trademark Law Respond?

If that is all so, this brings us to another question: whether the law should change to better accommodate extra-legal uses of the TM symbol or, conversely, to discourage them. On the one hand, we might wish to ensure that the law clearly accommodates extra-legal uses of the symbol for their speech value—given the way the TM symbol appears to be used, one might reasonably argue that these extra-legal uses of the symbol serve legitimate speech purposes in enabling people to more effectively convey messages relating to important social and political matters.¹⁸³ Indeed, extra-legal uses of the TM symbol might be particularly

¹⁸³ See William McGeeveran, *Four Free Speech Goals for Trademark Law*, 18 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 1205 (2008) (discussing various ways that trademark law might better accommodate speech interests).

valuable to traditionally marginalized groups of people who otherwise face difficulty in getting their points across in the marketplace of ideas.¹⁸⁴

On the other hand, one of trademark law's primary purposes is to help prevent consumer confusion in the marketplace by, for instance, helping curb consumer information costs.¹⁸⁵ Consumer information costs may rise as consumers struggle to decipher between legal and expressive uses of the symbol. To the extent that social uses of the TM symbol add to or create consumer confusion, we may wish to adjust trademark law to avoid that result.

To assess whether trademark law needs adjustments to accomplish one or both of these objectives, we must briefly reassess the legal status of the TM symbol. Remember, use of the symbol alone does not a trademark make.¹⁸⁶ Rather, use of the symbol in conjunction with a mark is an assertion of rights in the associated mark, not an actual indication of them.¹⁸⁷ The symbol, then, despite often performing a function related to legal rights, does not, in and of itself, create any rights. Instead, it is simply a way for trademark holders to signal to others in the marketplace that they wish to claim rights, acquired through use in commerce, in the associated trademark.

Consequently, extra-legal uses of the symbol, in the abstract, would not appear to violate any specific (current) doctrine of trademark law. The symbol is simply a signaling tool—and if the person sending the signal doesn't actually mean what people typically associate the symbol with, so be it. The law, as currently

¹⁸⁴ See Kathleen M. Sullivan, *Two Concepts of Freedom of Speech*, 124 HARV. L. REV. 143, 144 (2010) (discussing a “free speech as equality” conception of free speech that envisions extra free speech solicitude towards traditionally marginalized groups). See also Erica Goldberg, *First Amendment Cynicism and Redemption*, 88 U. CIN. L. REV. 959, 988 (2020) (discussing free speech rights as requiring the acceptance of speech from the disempowered).

¹⁸⁵ Stacey L. Dogan & Mark A. Lemley, *Trademarks and Consumer Search Costs on the Internet*, 41 HOUS. L. REV. 777 (2004) (articulating the rationale that trade symbols help consumers create a reliable identification shorthand for goods which reduces search costs).

¹⁸⁶ Patrick J. Concannon, *Proper Use of Trademarks and Trademark Symbols*, NUTTER IP LAW BULL. (Feb. 8, 2019), <https://www.nutter.com/ip-law-bulletin/proper-use-of-trademarks-and-trademark-symbols> [perma.cc/NJ85-PQZA] (“In fact, the TM and SM symbols do not have any legal significance, but instead are informal ways of telling the world that you are claiming ownership of trademark rights in a word, phrase, and/or logo.”).

¹⁸⁷ *Id.*

constructed, would not appear to have much to say with respect to extra-legal uses of the symbol in isolation.

But, as we observed, extra-legal uses of the symbol are usually used not in isolation, but in conjunction with a term, phrase, or even an existing trademark. And at least some of those uses may implicate current trademark law doctrines. The clearest example would be use of the symbol in connection with an existing trademark. For instance, if someone uses the TM symbol in connection with the fake product “Frankenrack” in a way that suggests some connection to the real trademark “Nordictrack,” that use might trigger a lawsuit from Nordictrack because of the possibility of consumer confusion.

Do we need to adjust trademark law to allow for—or discourage—such uses? Existing trademark doctrines such as fair use—which allows for uses of marks in a variety of contexts, including descriptively or as a means of commentary—may often provide legal cover for use of the symbol in these ways.¹⁸⁸ The example described above, for instance, would likely qualify as a parody because it appears to function as a humorous commentary on the Nordictrack brand.¹⁸⁹

In other contexts, greater uncertainty may exist. For instance, when someone uses the TM symbol in connection with a non-trademarked word or phrase as a means of humorously indicating legitimacy, that use would not seem to implicate current trademark law in the same way as the above example. With no accompanying trademark, after all, there is no question of fair use because the symbol’s user is not commenting on any existing trademark or its owner. If a word or phrase that is the same or similar to an existing mark is not used in commerce so as to potentially cause consumer confusion, there is no legal cause of action.¹⁹⁰

That use, then, probably takes us outside of current trademark law entirely. Use of the TM symbol, after all, is simply an assertion of legal rights, not an actual

¹⁸⁸ See generally William McGeeveran, *The Trademark Fair Use Reform Act*, 90 B.U. L. REV. 2267 (2010) (discussing trademark fair use and proposing several reforms to the concept to further protect expressive uses of trademarks).

¹⁸⁹ See J. David Mayberry, *Trademark Nominative Fair Use: Toward a Uniform Standard*, 102 TRADEMARK REP. 820, 821 (2012) (discussing nominative fair use and some possible adjustments to it to improve it).

¹⁹⁰ About Trademark Infringement, U.S. PAT. & TRADEMARK OFF., <https://www.uspto.gov/page/about-trademark-infringement> [<https://perma.cc/HWC2-WFVU>] (outlining trademark infringement and dilution).

indication of them.¹⁹¹ So when parties use the symbol in such expressive ways, there does not appear to be an immediate legal consequence for such a use.

But to the extent that we wish to encourage such extra-legal uses of the TM symbol because of their speech value—and from what we saw in our data collection, the TM symbol was extremely valuable in facilitating nuanced online discourse—explicitly clarifying the legal status of the TM symbol in the statute would be worthwhile. Legal doctrines outside of trademark law, for instance, could potentially be brought to bear against extra-legal users of the TM symbol in a way that discourages such uses. For instance, under Section 5 of the FTC Act, “deceptive and unfair trade practices” can be actionable.¹⁹² States also have similar state-level causes of action.¹⁹³ To avoid these and possibly other legal actions being brought against extra-legal users of the TM symbol, the statute could make clear that use of the TM symbol as anything other than an assertion of legal rights in an associated mark is a fair use of the symbol.

Doing so, of course, might then pave the way to the undesirable result of consumer confusion or dilution, as discussed above. After all, if any use of the symbol outside of its typical legal role is considered fair game, then expressive users may flood the marketplace with such uses in a way that confuses consumers or dilutes the meaning of a mark rather than conveying meaning to them.

But we think this is unlikely to happen. Our non-exhaustive survey of extra-legal uses suggests that consumers can navigate most such uses of the symbol without experiencing undue confusion. This is because the humor or expressive purpose in most extra-legal uses is either obvious or at least inferable. Although we do think the confusion and dilution implications are the most likely to occur, we don’t tend to think that extra-legal uses of the TM symbol will create undue levels of these harms. Rather, confusion and dilution are more likely to be the exception than the rule because too much confusion or dilution would typically undermine the user’s purpose in using the symbol. In other words, extra-legal uses of the symbol

¹⁹¹ Concannon, *supra* note 186.

¹⁹² Daniel J. Solove & Woodrow Hartzog, *The FTC and the New Common Law of Privacy*, 114 COLUM. L. REV. 583, 583 (2014) (discussing the evolution of the FTC’s enforcement of privacy policies through the authority to regulate unfair and deceptive trade practices).

¹⁹³ Henry N. Butler & Joshua D. Wright, *Are State Consumer Protection Acts Really Little-FTC Acts?*, 63 FLA. L. REV. 163, 173 (2011) (discussing state-level consumer protections and their similarities and differences from the FTC Act).

would become less attractive if those uses resulted in too much consumer confusion or dilution of the mark's meaning.

Further, and perhaps more importantly, we believe any social harms that arise from a limited amount of consumer confusion and dilution of the TM symbol are outweighed by the surprising and significant expressive value of the TM operator.

CONCLUSION

The TM symbol—a humble legal operator available to providers of goods and services to signal their claim to rights in a trademark—has developed a surprising following of social media users and digital conversants. These speakers have appropriated the symbol in their online and texting conversations to serve a variety of rhetorical ends. In most cases these ends are not ‘legal’ in the sense that they are not seriously attempting to communicate a claim to legal rights. But in almost all cases we documented (and we looked at about 200) the use of the symbol gestures to one or more interrelated “meanings” evoked by the symbol's traditional legal function. In this way, the TM symbol seems to be serving as an efficient shortcut for those wishing to communicate in increasingly nuanced ways in a digital format. It allows for the effective communication of irony, sarcasm, humor, and social commentary. It also contributes to community building and affiliation signaling. In some cases, its use was more directly related to its legal function, allowing speakers to put others on notice that they claimed “cultural” rights in a name, word, or phrase, even if legal rights were not available.

We believe this to be a positive development overall. Anything that facilitates expression and contributes to the ability of individuals to form communities and engage in robust and sophisticated discussion provides a social benefit, in our view.

But the extra-legal adoption of the TM symbol comes with potential costs that should be also considered. These mainly have to do with the risk that these uses will hamper the ability of the TM symbol to function as it was intended—as a legal operator. Consumers and competitors might be confused in various ways by these uses. Even if not confused, they might need to undertake additional mental steps to determine the way in which the TM symbol is being used in any given instance. Ironically, these are the very harms trademark law seeks to prevent or minimize, in an effort to ensure the smooth functioning of the marketplace. Over time, consumers and competitors might begin to pay less attention to the TM

symbol if it is not easy to discern its function. In the extreme case, the symbol might lose its legal meaning entirely.

Although we consider these harms and conclude that the widespread extra-legal use of the TM symbol might indeed lead to some level of confusion or the requirement of additional mental effort on the part of the public, we ultimately decide that these risks are worth the benefit. Indeed, we believe it would be helpful if the law clarified that these uses of the TM symbol are “fair” and thus not subject to legal liability.

In many ways, this is a developing story. The use of the TM symbol for extra-legal communication may become more widespread over time, or it may be a passing fad that peters out. The public may grow to become more sophisticated in discerning various uses of the symbol, or they may become more confused as use of the symbol proliferates. As the story develops, the recommendations in this Article may need to be revisited. But, for now, we applaud the creativity and ingenuity of those we witnessed using the symbol in novel ways and we recommend that the law support these uses.

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TRANSFORMING FAIR USE

GLYNN S. LUNNEY, JR.*

In the United States, the fate of fair use, and by extension, copyright itself, hang in the balance. In recent years, courts have disagreed over fair use's proper scope. On the one side are appellate decisions that interpret fair use broadly. While these decisions do not go so far as to suggest that every reuse is fair, they typically use the talismanic phrase "transformative use" to give fair use a generous and flexible interpretation. On the other side are appellate decisions that interpret fair use restrictively. While again they do not go so far as to suggest no reuse is fair, they typically either reject the transformative use rubric outright or give it a miserly construction.

In Andy Warhol Foundation v. Goldsmith, the Court largely sided with the courts that favored a narrow and restrictive view of transformative use specifically and fair use more generally. In reaching its conclusion, the Court used a variety of interpretative approaches: realism, textualism, and purposivism. This article critically re-examines each of these interpretative approaches and demonstrates that none supports the Court's reasoning and outcome.

While courts are bound by the Court's Goldsmith decision, it is a judicial decision, not legislation. Courts should treat it as such. Each of the Court's statements on various issues should not be treated as independently binding, but as a reflection of a unified whole, tied to the specific facts of the Goldsmith case. In particular, courts should confine the decision's application to other instances where a commercial use that was previously licensed is now claimed as a fair use. Wendy Gordon has previously suggested that where licensing is very likely to fail, fair use should be more

* Distinguished Professor of Law, Texas A&M University School of Law. I would like to thank Wendy Gordon, Mark Lemley, Pam Samuelson, Rebecca Tushnet, and participants at the 2023 and 2024 Works-in-Progress Intellectual Property Colloquium for helpful feedback on the article. Any errors remain my responsibility.

readily found. Goldsmith represents the opposite side of the coin: Where licensing of a commercial use is very likely to succeed, and indeed, where the copyright owner has previously licensed the precise use at issue, a court should tend to find infringement to reinforce the licensing market in place.

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INTRODUCTION

Thirty years ago, in *Campbell v. Acuff-Rose Music*, the Court introduced transformative use into copyright’s fair use analysis.¹ When an author copies from a copyrighted work to create a new work, the *Campbell* Court held, whether the copying constitutes fair use depends, inter alia, on “whether and to what extent the new work is ‘transformative.’”² A new work is transformative if, rather than “merely ‘supersed[ing] the objects’ of the original creation,”³ the new work “instead adds something new, with a further purpose or different character, altering the first with new expression, meaning, or message.”⁴ If present, such a transformative use weighs, perhaps decisively, in favor of finding the use fair and hence non-infringing under the first statutory fair use factor—“the purpose and character of the use.”⁵

¹ *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 579 (1994).

² *Id.* (citation omitted).

³ *Id.* (quoting *Folsom v. Marsh*, 9 F. Cas. 342, 348 (C.C.D. Mass. 1841)).

⁴ *Id.*

⁵ Section 107 of the Copyright Act of 1976 sets forth four factors that a fair use determination “shall include”: (1) “the purpose and character of the [alleged infringer’s] use”; (2) “the nature of the [allegedly infringed] copyrighted work”; (3) “the amount and substantiality ... used in relation to the [allegedly infringed] copyrighted work as a whole”; and (4) “the effect of the use upon the potential market for or value of the [allegedly infringed] copyrighted work.” 17 U.S.C. § 107.

In the decades since, appellate courts have split over the role that transformative use should play in the fair use analysis. On one side, a series of appellate decisions embraced transformative use and relied on it to expand the scope of fair use.⁶ On the other, a series of appellate decisions expressed skepticism regarding the analytical utility of transformative use, rejected the rubric's broad or general application, and ruled in ways that narrowed the fair use doctrine.⁷

In 2021, the Court had its first opportunity to resolve the split over the proper role for transformative use, specifically, and the direction of fair use, generally, in *Google v. Oracle*.⁸ In its decision, the Court held that Google's verbatim copying of 11,500 lines of code from the copyrighted computer program, Java, to create a new operating system for the mobile environment, Android, was fair use as a matter of law.⁹ In its reasoning, it identified Google's use as transformative, specifically,¹⁰ and approved a broader and more flexible approach to fair use, generally.¹¹ However, the Court cautioned that its decision might apply narrowly—only within

⁶ See, e.g., *Authors Guild v. Google, Inc.*, 804 F.3d 202, 216–17 (2d Cir. 2015) (finding the scanning of entire copyrighted books to create a searchable database highly transformative and therefore fair); *Cariou v. Prince*, 714 F.3d 694, 706 (2d Cir. 2013) (finding the vast majority of Richard Prince's appropriation art adding color to Cariou's photos transformative and therefore fair); *Kelly v. Arriba Soft Corp.*, 336 F.3d 811, 818 (9th Cir. 2003) (finding Arriba Soft's low resolution thumbnail copy of a full size, high resolution photograph transformative because the thumbnail was used for an image search engine on the Internet and therefore fair).

⁷ See, e.g., *Andy Warhol Found. for the Visual Arts, Inc. v. Goldsmith*, 11 F.4th 26, 32 (2d Cir. 2021) (finding that Warhol's *Prince* series, when published in a magazine, was not fair use vis-à-vis the earlier black-and-white photograph on which the series was based), *aff'd*, 598 U.S. 508 (2023); *Fox News Network, LLC v. TVEyes, Inc.*, 883 F.3d 169, 177, 180–81 (2d Cir. 2018) (finding that the copying of television programs to create a searchable database was transformative but nonetheless unfair); see also *Kienitz v. Sconnie Nation LLC*, 766 F.3d 756, 758 (7th Cir. 2014) (expressing skepticism as to *Cariou's* approach, criticizing reliance on transformative use as a substitute for the statutory factors, and worrying that overbroad reading of transformative use threatens to override the copyright owner's exclusive right to prepare derivative works, but finding that the defendant's use at issue was nevertheless fair).

⁸ *Google LLC v. Oracle Am., Inc.*, 141 S. Ct. 1183, 1186 (2021).

⁹ *Id.* at 1209.

¹⁰ *Id.* at 1204 (“These and related facts convince us that the ‘purpose and character’ of Google’s copying was transformative—to the point where this factor too weighs in favor of fair use.”).

¹¹ *Id.* at 1203 (“To the extent that Google used parts of the Sun Java API to create a new platform that could be readily used by programmers, its use was consistent with that creative ‘progress’ that is the basic constitutional objective of copyright itself.”); *id.* at 1206 (“Further, we must take into account the public benefits the copying will likely produce. Are those benefits, for example, related to copyright’s concern for the creative production of new expression? Are they comparatively important, or unimportant, when compared with dollar amounts likely lost (taking into account as well the nature of the source of the loss)?”).

the computer programming context and perhaps only to the specific facts of the *Google v. Oracle* dispute itself.¹²

Just two years later, in *Andy Warhol Foundation v. Goldsmith*, the Court had a second opportunity to resolve the split over the proper role for transformative use and to set the direction of fair use going forward.¹³ Rather than build on its decision in *Google v. Oracle*, however, the Court reversed course. At issue were a series of sixteen silkscreens and drawings that artist Andy Warhol had created based on professional photographer Lynn Goldsmith's black-and-white photograph of the musical artist Prince.¹⁴ After the Second Circuit held that the sixteen Warhol works were not transformative as a matter of law under the first fair use factor,¹⁵ the Andy Warhol Foundation ("the Foundation") petitioned for certiorari and asked the Court to determine whether "a work of art is 'transformative' when it conveys a different meaning or message."¹⁶ After granting the petition for certiorari, the Court re-framed the question presented. Instead of asking whether a work of art is transformative generally, the Court asked whether the specific use at issue—the Foundation's licensing of one of the Warhol Prince prints (known as "*Orange Prince*") for use on a magazine cover—was transformative.¹⁷ As is often the case, the framing of the question dictated the Court's answer.¹⁸ As the Court noted, Goldsmith had also licensed the use of her black-and-white photo for a magazine

¹² See *id.* at 1206 ("We do not say that these questions are always relevant to the application of fair use, not even in the world of computer programs. Nor do we say that these questions are the only questions a court might ask. But we do find them relevant here in helping to determine the likely market effects of Google's reimplementation.").

¹³ *Andy Warhol Found. for the Visual Arts, Inc. v. Goldsmith*, 598 U.S. 508, 528 (2023).

¹⁴ *Id.* at 515.

¹⁵ *Andy Warhol Found. for Visual Arts, Inc. v. Goldsmith*, 11 F.4th 26, 44 (2d Cir. 2021).

¹⁶ The question presented was:

Whether a work of art is "transformative" when it conveys a different meaning or message from its source material (as this Court, the Ninth Circuit, and other courts of appeals have held), or whether a court is forbidden from considering the meaning of the accused work where it "recognizably deriv[es] from" its source material (as the Second Circuit has held).

Petition for Writ of Certiorari at i, *Goldsmith*, 598 U.S. 508 (No. 21-869).

¹⁷ *Goldsmith*, 598 U.S. at 515–16.

¹⁸ Daniel Kahneman and Amos Tversky won the Nobel prize in economics in 2002 for their work on this issue. For their initial article on the topic, see generally Daniel Kahneman & Amos Tversky, *Prospect Theory: An Analysis of Decision Under Risk*, 47 *ECONOMETRICA* 263 (1979).

cover.¹⁹ So, in a sense, Warhol's artwork and Goldsmith's photo were both vying for the same money. Both artists wanted their works on magazine covers, and both wanted money for such use. As a result, the Court held that the Foundation's licensing of Warhol's art for a magazine cover was not transformative under the first fair use factor.²⁰ Because the Foundation agreed that the other three fair use factors weighed in Goldsmith's favor, Warhol's use was unfair.²¹

It is a startling decision. Startling not as to outcome, on which reasonable minds can disagree, but on the route by which the Court held Warhol's use unfair. The Court could readily have said that to whatever extent Warhol had transformed the meaning, message, or aesthetic of Goldsmith's original black-and-white photograph under the first statutory fair use factor, that transformative character was outweighed: (i) by the potential lost licensing revenue to Goldsmith under the fourth factor; or (ii) by some combination of the other three fair use factors.²² Indeed, given the Court's repeated insistence in its opinion that the issue required balance and was a question of degree, such an approach to resolving the case would have been more consistent internally.²³ Yet, that is not how the Court resolved the fair use issue. Instead, the Court resolved the case by concluding that Warhol's use was not transformative at all under the first factor.²⁴ No balance. No question of degree. Despite the artistic choices Warhol made in creating his silkscreens and drawings, in the Court's view, Warhol's *Orange Prince*, at least when used for a magazine cover, was no more transformative than an

¹⁹ *Goldsmith*, 598 U.S. at 520.

²⁰ *Id.* at 545–46.

²¹ *Id.* at 551.

²² Again, Section 107 directs the Court to weigh four non-exclusive factors when analyzing fair use, including: (1) the purpose and character of the use, (2) the nature of the use, (3) the amount and substantiality taken in comparison to the copyrighted work as a whole, and (4) the effect of the new use on the market—or potential market—for the original. 17 U.S.C. § 107.

²³ *See, e.g., Goldsmith*, 598 U.S. at 525 (“But the first fair use factor instead focuses on whether an allegedly infringing use has a further purpose or different character, which is a matter of degree, and the degree of difference must be weighed against other considerations, like commercialism.”); *id.* at 526–27 (“This balancing act between creativity and availability (including for use in new works) is reflected in one such limitation, the defense of ‘fair use.’”); *id.* at 528 (“Whether a use shares the purpose or character of an original work, or instead has a further purpose or different character, is a matter of degree.”); *id.* at 529 (“As before, ‘transformativeness’ is a matter of degree.”); *id.* at 549–50 (“Fair use instead strikes a balance between original works and secondary uses based in part on objective indicia of the use’s purpose and character, including whether the use is commercial and, importantly, the reasons for copying.”).

²⁴ *Goldsmith*, 598 U.S. at 545–46.

exact, mechanically or digitally re-created copy of Goldsmith's black-and-white photograph. That conclusion is startling. By reaching it, the Court effectively equated Warhol, probably the most celebrated and influential American artist of his generation, with a copy-shop employee.²⁵

It was probably this implicit characterization of Warhol that provoked Justice Kagan to write her blistering dissent.²⁶ The sharp disagreement between Justice Sotomayor, writing for the Court, and Justice Kagan, in dissent, hearkens back to the equally sharp disagreement between Justices Stevens and Blackmun in *Sony Corp. v. Universal City Studios*.²⁷ As in *Sony*, the viciousness with which the majority and the dissent assailed each other's position in *Warhol* likely reflects a combination of factors. Among them, two in particular stand out for me. First is Sayre's Law.²⁸ Like academic politics, copyright politics are vicious because the stakes are so small. Whether we agree with Kagan or Sotomayor, people will still go to bed every night hungry, thirsty, and at risk of death from war, poverty, and disease. The climate crisis will continue towards its seemingly inevitable conclusion. And the end of real economic growth in the United States will still loom.²⁹ Against these truly important stakes, whether copyright is slightly broader or slightly narrower so that one wealthy copyright owner, such as the Foundation, will or will not have to pay a token licensing fee to some other wealthy copyright

²⁵ When the California Supreme Court transplanted the transformative use rubric from copyright's fair use privilege into the right of publicity, as a way of balancing the celebrity's property interest against the First Amendment's free speech interests, it cited Warhol as one of several paradigmatic examples of transformative use. *See Comedy III Prods., Inc. v. Gary Saderup, Inc.*, 21 P.3d 797, 809 (Cal. 2001) ("We emphasize that the transformative elements or creative contributions that require First Amendment protection are not confined to parody and can take many forms, from factual reporting to fictionalized portrayal, from heavy-handed lampooning to subtle social criticism") (citations omitted). Notably, for an example of "subtle social criticism," the Court cites JOHN COPLANS, ANDY WARHOL 50–52 (1970) (explaining Warhol's celebrity portraits as a critique of the celebrity phenomenon).

²⁶ *See Goldsmith*, 598 U.S. at 558–93 (Kagan, J., dissenting).

²⁷ *See Sony Corp. of America v. Universal City Studios Inc.*, 464 U.S. 416, 456 (1984).

²⁸ Sayre's Law is usually formulated: "In any dispute, the intensity of feeling is inversely proportional to the value of the stakes at issue." CHARLES ISSAWI, ISSAWI'S LAWS OF SOCIAL MOTION 178 (1973).

²⁹ Real economic growth rate has been falling steadily in the United States since the 1960s. By straight line projection, real economic growth in the United States will end in 2051. *See Glynn S. Lunney, Jr., An Introduction to the Law and Economics of Trademarks*, in RESEARCH HANDBOOK ON THE LAW & ECONOMICS OF TRADEMARKS 5, 11 n.20 (Edward Elgar Publ'g, 2023). If this projection holds, the next generation will be the first American generation that, on average, does not do better, in terms of real per capita GDP, than their parents did.

owner, such as Goldsmith, is hard to get worked up about. Second, we will never know for certain who was right. The counterfactual world in which Justice Kagan's position prevailed does not exist, or at least, is unavailable for our inspection. We cannot therefore readily compare outcomes in the world where the majority prevailed to outcomes in a world where the dissent prevailed to know who was right and who was mistaken.

As a result, whether the Court's decision will lead to more creative works or fewer, whether those works will be higher or lower quality in terms of their emotional and aesthetic impact, and whether they will be distributed more or less widely, is difficult to know. The only thing we can say for sure is that the Court's decision will make fair use litigation more expensive. By requiring fair use to be decided for new works on a use-by-use basis, courts going forward will have to decide questions of fair use not once for each new work, but repeatedly, for each use of each new work. The need for repeated rounds of fair use litigation threatens to increase the cost of fair use litigation exponentially. That might not have been so bad in the analog world in which copyright was born. Because of the high costs entailed in the distribution of creative work through the printing press, broadcast radio and television, theater chains, and the other distribution mechanisms available in the analog world, only the privileged few could share their creative efforts with the many in any event. Whether copyright was long, broad, and complicated, or short, narrow, and simplistic made little difference. In the analog world, having a high-cost copyright system was not a barrier to entry in itself. It merely reinforced the preexisting high-cost structure of the available analog distribution technologies. Today, however, we live in a digital world. In today's digital world, social media and other avenues of digital distribution have made it trivially easy for anyone to share even their most idle creative impulse with the many. In today's digital world, the high cost of copyright itself has become the defining barrier to authoring and distributing creative work. Precisely at a time when digital technologies have democratized authorship and made the fair use privilege available to the many, the Court's *Goldsmith* decision threatens to restrict the availability of the fair use privilege to those few that can afford the expense of repeated litigation.

As justification for gating fair use behind repetitive litigation, the Court offered a variety of reasons reflecting a mixture of interpretative approaches. From a realist perspective, the Court wrote that substitution is copyright's "bête

noire,”³⁰ and at least when used for a commemorative magazine cover, Warhol’s *Orange Prince* is not transformative because it is a substitute, even if “not a perfect substitute,” for Goldsmith’s photograph.³¹ From a textualist perspective, the word “transform” cannot simultaneously: (i) define activity as infringing, as part of the definition of a derivative work, and (ii) define activity as non-infringing, as part of the definition of fair use. From a purposivist perspective, finding Warhol’s use to be fair would require the Court to find many films based upon novels to be fair as well and thus frustrate Congress’s intent to grant the copyright owners of novels the exclusive right to control the making of their novels into films.³²

Insisting that its prior decision in *Campbell v. Acuff-Rose* tied its hands, the *Goldsmith* Court reduced the first fair use factor to a three-part, mechanical checklist.³³ First, does the defendant’s specific use at issue serve the same general purpose as the plaintiff’s work seeks to serve? Second, is the defendant’s specific use at issue commercial? Third, does the defendant’s work criticize or otherwise comment on the plaintiff’s work?

Unfortunately, the Court’s analysis and resulting checklist are fatally flawed. The Court’s realism is unrealistic. Its textualism ignores the statutory text. And its purposivism frustrates Congress’s purpose in elevating fair use from common law exception to statutory privilege. As for its reading of *Campbell*, the *Goldsmith* Court mistakes dicta for holding. The resulting mechanical checklist is contrary to the statutory text, is contrary to the Court’s own precedent, and frustrates Congress’s purpose in enacting copyright.

Under the Constitution, Congress has the authority to enact copyright legislation for a singular purpose: “the Progress of Science.”³⁴ To achieve that purpose, Congress did not define copyright as all rights with no limits. To the contrary, to balance the competing interests at stake, between earlier authors and later authors, between authors and consumers, between what may be freely copied and what may not be freely copied, Congress defined copyright to include both

³⁰ *Goldsmith*, 598 U.S. at 527.

³¹ *Id.* at 535–36.

³² 17 U.S.C. 106(2) (providing copyright owners the exclusive right “to prepare derivative works based upon the copyrighted work”).

³³ *Goldsmith*, 598 U.S. at 550, 532.

³⁴ U.S. CONST. art. I, § 8, cl. 8.

rights and limits, as the *Goldsmith* majority recognized.³⁵ Yet, Justice Gorsuch, in his concurrence, insisted that interpreting the fair use doctrine to help strike that balance is not the Court’s proper role. As he chided Justice Kagan:

Worry not. This case does not call on us to strike a balance between rewarding creators and enabling others to build on their work. That is Congress’s job.³⁶

While Justice Gorsuch is correct that it is Congress’s job to balance appropriately the various interests at stake in defining the optimal scope of copyright, Congress may do that job in, at least, two ways. First, Congress can do so directly through statutory language. Congress could, for example, set a shorter or longer copyright term or define the copyright owner’s exclusive rights more broadly or more narrowly—not that courts, including the *Goldsmith* Court itself, have paid much attention to the statutory language Congress used to define the exclusive rights.³⁷ Second, Congress can do so indirectly, by delegating the task of striking the appropriate balance to others, such as the federal courts. When it came to fair use, by expressly leaving the analysis open-ended, Congress delegated the task of defining fair use in a way that optimally balances the competing interests at stake to the courts.³⁸ Pretending otherwise merely guarantees that the Court will perform its congressionally delegated task poorly.

Consider, for example, the language that Congress used to define the fourth fair use factor. That language requires a court to consider “the effect of the use upon the market for or potential value of the copyrighted work.”³⁹ While the statute

³⁵ See *Goldsmith*, 598 U.S. at 523 (citing 17 U.S.C. § 106 (defining rights); §§ 107–122 (providing various limits)).

³⁶ *Id.* at 555 (Gorsuch, J., concurring). Justice Kagan was indeed concerned about this balance and how the *Goldsmith* decision would harm artists by “stymie[ing] and suppress[ing]” artistic development and ultimately harm the public by “constrain[ing] creative expression.” *Id.* at 581–82 (Kagan, J., dissenting).

³⁷ For example, the Court twice added the words “sequel” and “spinoff” to the definition of a derivative work even though Congress itself did not include those words in the statutory text defining a derivative work. *Id.* at 541, 548. See generally also Glynn S. Lunney, Jr., *Copyright, Literally*, 51 *AIPLA L.Q.* 479, 482, 492 (2023).

³⁸ See 17 U.S.C. § 101 (“The terms ‘including’ and ‘such as’ are illustrative and not limitative.”); see also *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 577–78 (1994) (“The text employs the terms ‘including’ and ‘such as’ in the preamble paragraph to indicate the ‘illustrative and not limitative’ function of the examples given ... which thus provide only general guidance about the sorts of copying that courts and Congress most commonly had found to be fair uses.” (citations omitted)).

³⁹ 17 U.S.C. § 107(4).

identifies this factor and requires a court to consider it, the statute does not tell a court how to evaluate this factor or how to balance it against the other three.⁴⁰ For example, the statute does not say, at one extreme, that any effect on the market will make a use unfair. Nor does it say, at the other extreme, that only a complete destruction of value will make a use unfair.⁴¹ Instead, the statute leaves to the courts the question how much or what sort of loss in potential value will weigh in favor of or against fair use.

The same is true for the other three fair use factors. The statute identifies them. The statute requires a court to consider them.⁴² But the statute does not say how to weigh each factor on its own or how to balance them against the others. The statute does not even provide a comprehensive definition of each.⁴³ Moreover, the statute directly states that the four statutory factors are not the only factors a court may consider in evaluating fair use. The statutory language setting forth the four fair use factors is open-ended–inclusive, rather than exclusive. It expressly leaves courts the leeway to develop and consider factors other than the four factors the statute expressly sets forth.⁴⁴

⁴⁰ The other three fair use factors are: (1) “the purpose and character of the use”; (2) “the nature of the copyrighted work”; and (3) “the amount and substantiality of the portion used in relation to the copyrighted work as a whole.” 17 U.S.C. § 107.

⁴¹ In one of the first applications of the fair use doctrine in *Folsom v. Marsh*, Justice Story wrote that if the defendant’s use were permitted as fair “the plaintiff’s copyright [would] be totally destroyed.” 9 F. Cas. 342, 349 (C.C.D. Mass. 1841). If Congress codifies a judicially-created doctrine, an argument can be made that Congress adopted the standard for how much of an effect on value was required to establish that a use was unfair from cases such as *Folsom v. Marsh* that created the doctrine.

⁴² 17 U.S.C. § 107 (“In determining whether the use made of a work in any particular case is a fair use the factors to be considered *shall* include” (emphasis added)).

⁴³ For example, the second statutory factor requires a court to consider “the nature of the copyrighted work.” 17 U.S.C. §107(2). But the statute does not otherwise define what “nature” will weigh in favor of or against fair use. Presumably, a court should look to judicial definitions of the term in fair use cases decided before the enactment of the Copyright Act of 1976. But, if that’s what Congress intended, that just proves my point. The statutory fair use language itself does not strike the appropriate balance. Rather, it incorporates the balance that courts had previously struck on the issue and directs courts to continue, through common law development, to strike that balance in future fair use cases.

⁴⁴ Section 107 provides that a fair use determination “shall include” a consideration of the four fair use factors. 17 U.S.C. § 107. The word “shall” in that phrase makes consideration of the four statutory fair use factors mandatory. At the same time, the word “include” in that phrase leaves a court room to articulate and consider factors other than the four statutory factors. *See* 17 U.S.C. § 101 (defining “including” and “such as” as “illustrative and not limitative”).

In short, when it came to fair use, Congress did not strike the appropriate balance between the competing policy concerns—whether “between rewarding creators and enabling others to build on their work,”⁴⁵ or otherwise—that copyright and fair use can implicate. Instead, Congress attempted to codify a judicially created and judicially developed doctrine. But any such attempt is necessarily fraught: fraught with the risk that reducing a common law doctrine to a simplistic set of factors may omit or misstate something important and fraught with the risk that codifying the doctrine at a specific point in time may risk stifling further judicial development and common law evolution. Congress codified fair use despite these risks. Not to bar further judicial development of fair use or to reduce the complexities of balancing the interests at stake to a mechanical checklist,⁴⁶ but to give fair use express statutory recognition. Where before the Copyright Act of 1976, fair use was a judicially created exception to the legislatively drafted and executively approved statutory exclusive rights, after the Act, fair use became statutory too. Codifying fair use ensured that fair use carried a dignity and stature equal to the copyright owner’s exclusive rights.

The Court once proclaimed: “[I]t should not be forgotten that the Framers intended copyright itself to be the engine of free expression.”⁴⁷ Yet, to achieve that lofty goal, copyright cannot be all rights and no limits. Balance is required. Some of the limitations necessary to ensure balance Congress dictated directly in the statute. Even though technology may change over time and circumstances may vary from case-to-case, some limits—limits such as the term of copyright⁴⁸—can be defined adequately in advance and applied uniformly, even mechanically, across cases. But some limits necessary to achieve the optimal balance cannot be defined in

⁴⁵ *Andy Warhol Found. for the Visual Arts, Inc. v. Goldsmith*, 598 U.S. 508, 541, 579 (2023) (Kagan, J., dissenting).

⁴⁶ *See* H.R. REP. NO. 94-1476, at 65 (1976). The House Report accompanying the enactment of the Copyright Act of 1976 expressly defines fair use as “an equitable rule of reason.” *Id.* The Report further notes that the four statutory factors “provide some gauge for balancing the equities.” *Id.* The Report continues:

Beyond a very broad statutory explanation of what fair use is and some of the criteria applicable to it, the courts must be free to adapt the doctrine to particular situations on a case-by-case basis. Section 107 is intended to restate the present judicial doctrine of fair use, not to change, narrow, or enlarge it in any way.

Id.

⁴⁷ *Harper & Row Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 558 (1985).

⁴⁸ 17 U.S.C. § 302 (setting the term of copyright).

advance nor can they be applied uniformly or mechanically. Changing technology and changing circumstances from case to case may require a more flexible set of standards intelligently applied. In codifying fair use, Congress expressly recognized fair use as one of the limits necessary to achieving the appropriate balance. But Congress did not reduce fair use to a mechanically applied checklist. Nor did Congress balance the competing interests at stake itself. Instead, it provided some general guides and left to the courts the task of applying those guides, or developing new ones, to ensure that the two sides of copyright, rights and limits, optimally balance the competing interests at stake.⁴⁹

In the remainder of this article, I will explore and develop each of these issues. I begin in Section I with a brief history of transformative use in fair use doctrine. Section II then explores the Court's *Warhol* decision in more detail. As part of this exploration, Section II critically reexamines the Court's decision on its own terms and finds the decision fundamentally lacking. The Court's realism is unrealistic. The Court's textualism ignores the statutory text. The Court's purposivism defeats the purpose for which Congress enacted fair use.

To chart a path forward for fair use, Section III returns to the statutory text and the Court's own precedents. In both, we find the need for balance. Through threats of litigation and unduly burdensome licensing requirements, too much copyright will stifle the very creativity and widespread dissemination of original works that copyright seeks to encourage. Too little, and there is a risk that the public may receive too few original works of authorship. Congress gave fair use express statutory recognition in the Copyright Act of 1976 to recognize its essential role in striking that balance. With fair use, however, rather than strike that balance itself, Congress left the balancing to the courts. By appropriately drawing the line between fair and unfair use on a case-by-case basis, courts can ensure that copyright continues to "promote the Progress of Science" as the technology, markets, and economics associated with authorship change. The final Section concludes.

To begin, we turn to the origins of transformative use.

⁴⁹ See H.R. REP. NO 94-1476, *supra* note 46.

I

A BRIEF HISTORY OF TRANSFORMATIVE USE

Transformative use was introduced into fair use innocently enough. The Court set the stage in its first two decisions applying fair use after Congress formally codified the doctrine in the Copyright Act of 1976. In the first, *Sony Corp. v. Universal City Studios*, the Court addressed whether a consumer’s use of a Betamax to copy broadcast television programs for the purpose of time shifting was a fair use.⁵⁰ The Ninth Circuit and Justice Blackmun in dissent argued that it could not be a fair use because it was not “productive.”⁵¹ A Betamax consumer merely copied the television program for its intrinsic purpose, not to facilitate the creation of some new work of authorship, they argued. Such a consumptive or ordinary use could not be fair, they insisted.⁵² The *Sony* majority disagreed.⁵³ And although the *Sony* majority acknowledged the continued relevance of the productive nature of the use in appropriate fair use contexts,⁵⁴ its rejection of the Ninth Circuit’s and the dissent’s “productive use” arguments had the effect of eliminating or sharply limiting the relevance of “productive use” to the fair use analysis. As part of its analysis, the *Sony* majority also seemed to suggest, at least in dicta, a presumption that every commercial use of a copyrighted work was unfair.⁵⁵

In the second, *Harper & Row v. Nation Enterprises*, the Court considered whether copying and publishing a 2,200-word essay—that quoted a total of 300-400 words directly from President Gerald Ford’s at the time forthcoming biography—was fair use.⁵⁶ In concluding that it was not, the Court emphasized

⁵⁰ *Sony Corp. of America v. Universal City Studios Inc.*, 464 U.S. 417, 421 (1984).

⁵¹ *See Universal City Studios, Inc. v. Sony Corp.*, 659 F.2d 963, 971–72 (9th Cir. 1982) (“Without a ‘productive use’, i. e. when copyrighted material is reproduced for its intrinsic use, the mass copying of the sort involved in this case precludes an application of fair use.”), *rev’d*, 464 U.S. 417 (1984); *Sony*, 464 U.S. at 497 (Blackmun, J., dissenting) (“Fair use is intended to allow individuals engaged in productive uses to copy small portions of original works that will facilitate their own productive endeavors.”).

⁵² *Id.*

⁵³ *Sony*, 464 U.S. at 454–455.

⁵⁴ *See Sony*, 464 U.S. at 455 (pointing out that the distinction between “productive” and “unproductive uses” is an important consideration, “but it cannot be wholly determinative”).

⁵⁵ *Id.* at 449 (“If the Betamax were used to make copies for a commercial or profit-making purpose, such use would presumptively be unfair.”).

⁵⁶ *See Harper & Row Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 558 (1985).

that the biography from which the defendant had copied was, at the time of the defendant's use, unpublished.⁵⁷

With only these two Supreme Court decisions to go by, appellate courts in the late 1980s took the Court's reasoning much further than the facts and holdings of each case would require. By 1990, a trial judge, Judge Pierre N. Leval, had grown frustrated with what he saw as the Second Circuit's overly narrow approach to fair use, particularly with respect to reuse of unpublished materials for biographical research.⁵⁸ For such research in particular, the Court's decisions in *Sony* and *Harper & Row*, taken together, would seem to leave very little fair use room. *Sony* both: (i) made it hard to rely on the productive nature of the use; and (ii) suggested that such use was presumptively unfair as long as the researcher intended to sell the resulting biography.⁵⁹ *Harper & Row* reinforced the conclusion that the use was unfair because the scholarly researcher was copying from unpublished materials.⁶⁰ But Judge Leval felt that, at least some, such uses were fair. The researchers were combing through obscure historical archives and bringing new information to light. In Judge Leval's view, copyright should reward, not punish, these researchers' creation and dissemination of new knowledge. Yet, despite his careful and thorough analysis explaining why the uses at issue in the cases before him were fair, the Second Circuit would reverse.⁶¹ No one likes to be reversed. So Judge Leval wrote a law review commentary explaining why he was mostly right and why the Second Circuit was mostly wrong on the fair use issue.⁶² As part of that explanation, Judge Leval suggested that fair use in copyright law "turns primarily on whether, and to what extent, the challenged use is transformative."⁶³

⁵⁷ *Id.* at 554 ("We conclude that the unpublished nature of a work is '[a] key, though not necessarily determinative, factor' tending to negate a defense of fair use.") (internal citations omitted).

⁵⁸ See *New Era Publ'ns Int'l, ApS v. Henry Holt & Co., Inc.*, 695 F. Supp. 1493, 1501, 1503 (S.D.N.Y. 1988) (Leval, D.J.), *aff'd on other grounds*, 873 F.2d 576 (2d Cir. 1989); *Salinger v. Random House, Inc.*, 650 F. Supp. 413, 422 (S.D.N.Y. 1986) (Leval, D.J.), *rev'd*, 811 F.2d 90 (2d Cir. 1987).

⁵⁹ *Sony*, 464 U.S. at 449, 454-455.

⁶⁰ *Harper & Row Publishers*, 471 U.S. at 551.

⁶¹ See *New Era Publ'ns Int'l, ApS*, 695 F. Supp. at 1501, *aff'd on other grounds*, 873 F.2d 576 (2d Cir. 1989); *Salinger*, 650 F. Supp. at 422, *rev'd*, 811 F.2d 90 (2d Cir. 1987).

⁶² Pierre N. Leval, *Towards a Fair Use Standard*, 103 HARV. L. REV 1105, 1114 (1990).

⁶³ *Id.* at 1111.

Four years later in *Campbell v. Acuff-Rose Music*, the Court embraced Judge Leval's suggestion and incorporated transformative use into the fair use analysis.⁶⁴ In *Campbell*, the Court faced the question whether 2 Live Crew's rap song *Pretty Woman*, was a fair use of Roy Orbison's song, *Oh, Pretty Woman*. 2 Live Crew had copied the opening phrase and a distinctive bass riff from Orbison's song. After that, however, the meaning and message of 2 Live Crew's song diverged quite dramatically from Orbison's.⁶⁵ Although the Sixth Circuit accepted the district court's finding that 2 Live Crew's song was "a criticism in the nature of a parody in the popular sense," the Sixth Circuit nevertheless reversed the district court's conclusion of fair use.⁶⁶ Citing language from the Court's opinions in *Sony* and *Harper & Row*, the Sixth Circuit held "that the admittedly commercial nature of [2 Live Crew's] derivative work . . . requires the conclusion that the first factor weighs against a finding of fair use."⁶⁷

After granting *certiorari*, the Supreme Court reversed.⁶⁸ With respect to the first fair use factor, the purpose and character of the defendant's use,⁶⁹ the *Campbell* Court rejected the rule, that the Sixth Circuit had, "ostensibly culled from *Sony*, that 'every commercial use of copyrighted material is presumptively . . . unfair.'"⁷⁰ As the Court noted, any such "presumption would swallow nearly all of the illustrative uses in the preamble paragraph of § 107."⁷¹ Instead of a presumption, the *Campbell* Court held that commercial use was merely "a separate factor that tends to weigh against a finding of fair use."⁷² As for how heavily commercial use will weigh against fair use in any given case, "even the force of that tendency will vary with context."⁷³

⁶⁴ *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 579 (1994).

⁶⁵ *Id.* at 573 (quoting the district court for its conclusion that the 2 Live Crew version "quickly degenerates into a play on words, substituting predictable lyrics with shocking ones" to show "how bland and banal the Orbison song" is).

⁶⁶ *Acuff-Rose Music, Inc. v. Campbell*, 972 F.2d 1429, 1437 (6th Cir. 1992), *rev'd*, 510 U.S. 569 (1994).

⁶⁷ *Id.*

⁶⁸ *Campbell*, 510 U.S. at 594.

⁶⁹ The first statutory fair use factor is: "the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes." 17 U.S.C. § 107(1).

⁷⁰ *Campbell*, 510 U.S. at 583–84 (quoting *Sony Corp. of America v. Universal City Studios, Inc.*, 464 U.S. 417, 451 (1984)).

⁷¹ *Id.* at 584.

⁷² *Id.* at 585 (quoting *Harper & Row Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 562 (1985)).

⁷³ *Id.*

Rather than rely on the commercial nature of a use as the central touchstone under the first factor, the *Campbell* Court directed courts to consider the transformative purpose or character of the use. Specifically, the *Campbell* Court wrote that the analysis of the first factor must evaluate:

whether the new work merely “supersede[s] the objects” of the original creation, or instead adds something new, with a further purpose or different character, altering the first with new expression, meaning, or message; it asks, in other words, whether and to what extent the new work is “transformative.”⁷⁴

If the defendant copies to create such a transformative work, that weighs strongly in favor of fair use under the first fair use factor. Leaving room for such transformative works promotes one of copyright’s legitimate ends—the creation of new works of authorship—directly.⁷⁵

Moreover, once the Court concluded that 2 Live Crew’s use was transformative, that shaped, if not dictated, the remainder of the Court’s analysis.⁷⁶ In analyzing another consideration under the first fair use factor, the Court held that, although 2 Live Crew’s use was commercial, the commercial nature of 2 Live Crew’s use did not weigh against fair use because 2 Live Crew’s use was transformative.⁷⁷ Under the second fair use factor,⁷⁸ although 2 Live Crew copied from an entertaining, rather than useful, work, the Court held that did not weigh against fair use because 2 Live Crew’s use was transformative.⁷⁹ Under the third fair use factor,⁸⁰ although 2 Live Crew copied the “heart of the work,” at least

⁷⁴ *Id.* at 579.

⁷⁵ As the Court explained, “the goal of copyright, to promote science and the arts, is generally furthered by the creation of transformative works.” *Id.*

⁷⁶ For an empirical study of fair use decisions that shows that courts continue to rely on transformative use to override the other fair use factors, see Jiarui Liu, *An Empirical Study of Transformative Use in Copyright Law*, 22 STAN. TECH. L. REV. 163 (2019).

⁷⁷ *Campbell*, 510 U.S. at 584–85.

⁷⁸ The second statutory fair use factor is: “the nature of the copyrighted work.” 17 U.S.C. § 107(2).

⁷⁹ *Campbell*, 510 U.S. at 586 (“This fact, however, is not much help in this case, or ever likely to help much in separating the fair use sheep from the infringing goats in a parody case, since parodies almost invariably copy publicly known, expressive works.”).

⁸⁰ The third statutory fair use factor is: “the amount and substantiality of the portion used in relation to the copyrighted work as a whole.” 17 U.S.C. § 107(3).

according to the Sixth Circuit,⁸¹ the Court held that did not weigh against fair use because 2 Live Crew's use was transformative.⁸²

As for the fourth factor, “the effect of the use upon the potential market for or value of the copyrighted work,”⁸³ the transformative nature of 2 Live Crew's use ensured that 2 Live Crew's *Pretty Woman* would not serve as a market substitute for Roy Orbison's *Oh, Pretty Woman*.⁸⁴ No ordinarily prudent consumer looking for the Roy Orbison version would buy the 2 Live Crew version instead. They were quite different songs, each with its own message and aesthetic appeal. Moreover, because the 2 Live Crew song could be perceived as a parody,⁸⁵ and hence a criticism of the Roy Orbison song, the Court reasoned that the copyright owner would not ordinarily license the use.⁸⁶ Thus, the transformative nature of 2 Live Crew's use also weighed against an effect upon “the potential market for or value of” Orbison's song under the fourth fair use factor.⁸⁷ Nevertheless, the Court held that the transformative nature of 2 Live Crew's use did not fully resolve the fourth factor. The Court left open the possibility that 2 Live Crew's transformative use might somehow interfere with the licensing market for a less critical, more sympathetic rap version of *Oh, Pretty Woman*.⁸⁸ Seizing on a concession that 2 Live Crew's attorney made in oral argument—that fair use is an affirmative defense—the

⁸¹ *Acuff-Rose Music, Inc. v. Campbell*, 972 F.2d 1429, 1438 (6th Cir. 1992), *rev'd*, 510 U.S. 569 (1994) (“We conclude that taking the heart of the original and making it the heart of a new work was to purloin a substantial portion of the essence of the original.”).

⁸² *Campbell*, 510 U.S. at 588–89 (“Copying does not become excessive in relation to parodic purpose merely because the portion taken was the original's heart.”).

⁸³ 17 U.S.C. § 107(4).

⁸⁴ *Campbell*, 510 U.S. at 591 (“Indeed, as to parody pure and simple, it is more likely that the new work will not affect the market for the original in a way cognizable under this factor, that is, by acting as a substitute for it (‘supersed[ing] [its] objects’). This is so because the parody and the original usually serve different market functions.” (citations omitted)).

⁸⁵ The notion that the 2 Live Crew version was actually a parody is a bit silly. It seems to me unlikely that 2 Live Crew itself thought they were making fun of the original, rather than just creating their own song. More likely, in my estimation, the suggestion that the song was a parody of the original came from 2 Live Crew's lawyers.

⁸⁶ *Campbell*, 510 U.S. at 591–92. As the Court noted in its opinion, 2 Live Crew had approached Acuff-Rose to obtain a license, and Acuff-Rose had rejected the possibility. *See id.* at 572. On remand, the parties settled their dispute when Acuff-Rose agreed to license the use.

⁸⁷ *Id.*

⁸⁸ *Id.* at 592–93.

Campbell Court placed the burden on the defendants to introduce evidence on that issue and remanded for further development of the record.⁸⁹

In this initial proposal and adoption, there were few hints of what transformative use would become. In Judge Leval's analysis and in *Campbell* itself, transformative use seemed merely a new label for an old fair use doctrine, "productive use," – a doctrine that had fallen out of favor after *Sony*. Whether under the new "transformative use" label or the old "productive use" label, the question, as traditionally understood, was whether, and to what extent, the alleged infringer used what was copied to create a new or different work. If so, the productive or transformative nature of the use weighed in favor of fair use. If not, then not.

That changed in 2003. On July 7th of that year, the Ninth Circuit responded to a petition for rehearing by issuing its second opinion in *Kelly v. Arriba Soft*.⁹⁰ Judge Thomas G. Nelson wrote the opinion and held that, as a matter of law, a search engine's copying and display of thumbnail-size versions of full-size copyrighted images found elsewhere on the Internet was a fair use.⁹¹ There was nothing transformative about the thumbnail versions of the full-sized images, at least not in the traditional sense of the word. No new work was created. No new aesthetic meaning explored. In the words of the copyright owner Kelly: "because Arriba reproduced his exact images and added nothing to them, Arriba's use cannot be transformative."⁹² The Ninth Circuit rejected Kelly's interpretation of the word "transformative" as overly restrictive.⁹³ The thumbnail may have merely reduced the size and resolution of the original image, yet by doing so, the resulting thumbnail served a different purpose from Kelly's original. Rather than the aesthetic enjoyment the originals provided, the thumbnails were intended to "improv[e] access to information on the internet."⁹⁴ The Ninth Circuit held that

⁸⁹ *Id.* at 590–91. For a further discussion of the proper characterization of the fair use doctrine and the proper placement of the burden of proof, see Glynn S. Lunney, Jr., *Fair Use and Market Failure: Sony Revisited*, 82 B.U. L. REV. 975, 989–90 n.70 (2002); Lydia P. Loren, *Fair Use: An Affirmative Defense?*, 90 WASH. L. REV. 685 (2015).

⁹⁰ *Kelly v. Arriba Soft Corp.*, 336 F.3d 811, 815 (9th Cir. 2003).

⁹¹ *Id.* at 822.

⁹² *Id.* at 818–19.

⁹³ *Id.* at 819.

⁹⁴ *Id.*

because the later use served a new purpose it was transformative. Because it was transformative, the use was fair.⁹⁵

While both *Kelly* and *Campbell* used the same word “transformative,” they otherwise had very little in common. The question in *Campbell* was one that copyright has struggled to answer from its inception: how much of an earlier work can a later author reuse and for what purposes, given that all authorship inevitably entails some borrowing.⁹⁶ It was not a new question nor did it arise due to new authorship or distribution technology. In contrast, the question at the heart of *Kelly* was entirely new and entirely the result of a new distribution technology, the Internet. The closest parallel to the Arriba Soft copyright issue in the analog world would be whether the description of a book in a card catalog in a library infringed the copyright in the book.

While some of the language in both Judge Leval’s commentary and the Court’s ruling in *Campbell* could be read to encompass a different purpose as a transformative use,⁹⁷ it is not clear that either intended or foresaw the extension of the transformative use rubric to encompass creating thumbnail images for an Internet search engine. Nor is it clear that either considered “purpose and character” to be separate and distinct categories—“purpose or character.”⁹⁸ The trial judge in *Kelly*, Judge Taylor of the Central District of California, and on appeal, Judge

⁹⁵ *Id.* at 819, 822. The panel also found the fourth factor to weigh in favor of fair use. *Id.* at 821–22.

⁹⁶ As Justice Story once explained: “In truth, in literature, in science and in art, there are, and can be, few, if any, things, which in an abstract sense, are strictly new and original throughout. Every book in literature, science and art, borrows, and must necessarily borrow, and use much which was well known and used before.” *Emerson v. Davies*, 8 F. Cas. 615, 619 (No. 4,436) (C.C.D. Mass. 1845).

⁹⁷ The *Campbell* Court, in particular, uses the word “or” to distinguish a transformative use with a “further purpose” from a transformative use with a “different character.” *See Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 579 (1992) (describing the issue in terms of whether the allegedly infringing use “adds something new, with a further purpose or different character”) (emphasis added). Nevertheless, both Judge Leval and the *Campbell* Court were resolving cases involving classic derivative uses, where a later author borrows from an existing work to create a new work. It would be another decade before the search engine use would arise. To think that either Judge Leval or the *Campbell* Court both: (i) foresaw precisely how search engines would develop and (ii) had identified the optimal legal framework for resolving the associated fair use issue attributes an unlikely degree of omniscience.

⁹⁸ The *Campbell* Court expressly substituted the word “or” for the word “and” in setting forth its analysis. *Compare Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 579 (1992) (describing the issue in terms of whether the allegedly infringing use “adds something new, with a further purpose *or* different character” (emphasis added)), *with* 17 U.S.C. 107(1) (directing courts to consider “the purpose *and* character of the use” (emphasis added)).

Nelson of the Ninth Circuit, deserve the credit (or blame) for being the first to apply *Campbell*'s language outside of its original context.⁹⁹ They also deserve credit (or blame) for effectively dividing transformative use into two distinct categories.¹⁰⁰ First, for cases like *Campbell* where an author copied from a copyrighted work to create a new work, the question is whether the new work has a transformative character. Second, for cases like *Kelly* that involve a new use of an existing work, the question is whether the new use has a transformative purpose.

The two types of transformative use are not only different in terms of the types of follow-on uses to which they apply but also because the two types of uses serve fundamentally different ends.¹⁰¹ Courts applied the transformative character rubric when a defendant used what was copied to create a new work, one “with a different new expression, meaning, or message” compared to the earlier work.¹⁰² This approach seeks to advance the first legitimate end for which Congress may enact copyright: the creation of new works of authorship.¹⁰³ In contrast, courts applied the transformative purpose rubric when a defendant used what was copied to expand access to existing works. Uses such as an image search engine or the Google Books project do not create new works, but they give us new forms of, and easier, access to existing works. Finding fair use in transformative purpose cases

⁹⁹ *Kelly v. Arriba Soft Corp.*, 77 F. Supp. 2d 1116, 1116 (C.D. Cal. 1999) (Taylor, J.); *Kelly v. Arriba Soft Corp.*, 336 F.3d 811, 815 (9th Cir. 2003) (Nelson, J.); see also Kathleen K. Olson, *Transforming Fair Use Online: The Ninth Circuit Productive-Use Analysis of Visual Search Engines*, 14 COMM. L. & POL'Y 153, 155 (2009); Caile Morris, *Transforming Transformative Use: The Growing Misinterpretation of the Fair Use Doctrine*, 5 PACE INTELL. PROP. SPORTS & ENT. L.F. 10, 18 (2015).

¹⁰⁰ The first statutory fair use factor directs a court to consider “the purpose and character of the use.” 17 U.S.C. § 107(1). Although the statute used the word “and,” the *Kelly* panel implicitly interpreted “and” to encompass “or”—a longstanding interpretative practice. *Kelly*, 336 F.3d at 818. See, e.g., *United States v. Fisk*, 70 U.S. 445, 447 (1866) (“In the construction of statutes, it is the duty of the court to ascertain the clear intention of the legislature. In order to do this, courts are often compelled to construe ‘or’ as meaning ‘and,’ and again ‘and’ as meaning ‘or.’”). As a result, that an alleged infringer’s use has either a transformative character or a transformative purpose is sufficient to weigh in favor of fair use.

¹⁰¹ For earlier scholarship separating transformative use into two categories, see generally Rebecca Tushnet, *Content, Purpose, or Both?*, 90 WASH. L. REV. 869 (2015).

¹⁰² *Campbell*, 510 U.S. at 571.

¹⁰³ See, e.g., *id.* at 579 (“Although such transformative use is not absolutely necessary for a finding of fair use, the goal of copyright, to promote the science and the arts, is generally furthered by the creation of transformative works.”).

thus seeks to advance copyright's second legitimate end: ensuring widespread dissemination of, and access to, existing works of authorship.¹⁰⁴

Yet despite their differences, both the original “transformative character” aspect and the more recent “transformative purpose” aspect of the transformative use rubric followed similar trajectories. For both, beginning in the early 2000s, courts relied on the transformative use label to justify increasingly expansive fair use outcomes. These decisions reached their apogee in *Cariou v. Prince* in the traditional transformative character context¹⁰⁵ and in *Authors Guild v. Google* in the transformative purpose context.¹⁰⁶ Some thought these decisions went too far, provoking scholarly and judicial responses that questioned and criticized their approach to fair use.¹⁰⁷ This led some courts to embrace a narrower view of fair use. In decisions such as *Andy Warhol Foundation v. Goldsmith*, a pair of decisions involving *Dr. Seuss Enterprises*, and *Fox News v. TVEyes*,¹⁰⁸ judicial panels rejected claims of fair use on facts arguably similar to those on which judicial panels had found fair use just a few years earlier.

Although the reasons for the rejection varies somewhat from decision to decision, these restrictive fair use decisions tend to focus on the two substantive concerns that the Second Circuit panel identified in *Andy Warhol Foundation*: (1) a textual concern that overly broad fair use threatens to eviscerate the copyright

¹⁰⁴ See, e.g., *Eldred v. Ashcroft*, 537 U.S. 186, 206 (2003) (upholding the Copyright Term Extension Act of 1998 on the grounds that it is rationally related to the legitimate ends for which Congress may enact copyright because it “may also provide greater incentive for American and other authors to create and disseminate their work in the United States.”).

¹⁰⁵ *Cariou v. Prince*, 714 F.3d 694, 707–08 (2d Cir. 2013); see, e.g., *TCA Television Corp. v. McCollum*, 893 F.3d 168, 181 (2d Cir. 2016) (“Insofar as *Cariou* might be thought to represent the high-water mark of our court’s recognition of transformative works, it has drawn some criticism.”).

¹⁰⁶ *Authors Guild v. Google, Inc.*, 804 F.3d 202, 214 (2d Cir. 2015).

¹⁰⁷ See, e.g., MELVILLE NIMMER, NIMMER ON COPYRIGHT § 13.05[B][6], at 13.224.20 (“It would seem that the pendulum has swung too far in the direction of recognizing any alteration as transformative, such that this doctrine now threatens to swallow fair use.”); *Kienitz v. Sconnie Nation*, 766 F.3d 756, 758 (7th Cir. 2014) (“We’re skeptical of *Cariou*’s approach, because asking exclusively whether something is ‘transformative’ not only replaces the list in § 107 but also could override 17 U.S.C. § 106(2), which protects derivative works.”).

¹⁰⁸ See *Andy Warhol Found. for the Visual Arts, Inc. v. Goldsmith*, 11 F.4th 26, 33–35, 52 (2d Cir. 2021), *aff’d*, 598 U.S. 508 (2023); *Dr. Seuss Enters., L.P. v. ComicMix LLC*, 983 F.3d 443, 448–50, 461 (9th Cir. 2020), *cert. denied*, 141 S. Ct. 2803 (2021); *Dr. Seuss Enters., L.P. v. Penguin Books USA, Inc.*, 109 F.3d 1394, 1396–97, 1403 (9th Cir. 1997); *Fox News Networks, LLC v. TVEyes, Inc.*, 883 F.3d 169, 174–75, 180–81 (2d Cir. 2018).

owner's exclusive rights generally and the derivative work right specifically; and (2) an instrumental concern that overly broad fair use might reduce the incentives for original authorship.¹⁰⁹ The first concern leads panels to narrow subtly or to reject outright the application of the transformative use rubric outside the specific fact pattern the Court addressed in *Campbell*. The second concern leads panels to weigh the fourth factor heavily against fair use if there was any chance that the use, if found infringing, could become a possible source of licensing revenue. They would weigh such a possibility heavily against fair use almost without regard to how unexpected or remote that possibility was.

In the next section, we turn to the Court's decision in *Andy Warhol Foundation v. Goldsmith* as an illustration of this restrictive fair use trend and critically re-examine the proffered textual and instrumental justifications for narrowing fair use.

II

A CRITICAL RE-EXAMINATION OF NARROWING FAIR USE

Although the dispute just came before the Court last year, the foundations for the *Andy Warhol Foundation v. Goldsmith* litigation were laid forty years ago, back in 1981. At that time, Prince Rogers Nelson—or as he became commonly known, Prince—was just starting his musical career, and Newsweek hired Lynn Goldsmith to take photographs of him.¹¹⁰ Among other photographs, Goldsmith took a black-and-white frontal portrait of Prince.¹¹¹ Three years later, in 1984, Prince had released his album *Purple Rain* and had become a pop culture icon.¹¹² Condé Nast wanted to run a story on Prince in *Vanity Fair* and paid Goldsmith a \$400 license fee to use the black-and-white photograph as an artist's reference.¹¹³ Unbeknownst to Goldsmith, Condé Nast hired Andy Warhol as the artist who would use Goldsmith's photograph to create the artwork to accompany the Prince story, and Warhol did so.¹¹⁴ The article ran in *Vanity Fair* and Warhol's *Purple Prince* accompanied

¹⁰⁹ *Goldsmith*, 11 F.4th at 39, 50.

¹¹⁰ *Andy Warhol Found. for the Visual Arts, Inc. v. Goldsmith*, 382 F. Supp. 3d 312, 318 (S.D.N.Y. 2019), *rev'd*, 11 F.4th 26 (2d Cir. 2021), *aff'd*, 598 U.S. 508 (2023).

¹¹¹ *Id.*

¹¹² Twila L. Perry, *Conscious and Strategic Representations of Race: Prince, Music, Black Lives, and Representation*, 27 S.C. INTERDISC. L.J. 549, 550 (2018).

¹¹³ *Id.*

¹¹⁴ *Id.*

it.¹¹⁵ For thirty-two years, nothing further happened. But then, in 2016, Prince died of an accidental fentanyl overdose.¹¹⁶ Condé Nast decided to do an issue commemorating Prince's life and so approached the Andy Warhol Foundation to use *Purple Prince* once again.¹¹⁷ However, Warhol had actually created sixteen different *Prince* works based upon Goldsmith's photograph (known collectively as "the *Prince* series").¹¹⁸ After learning that the Andy Warhol Foundation had additional images from the *Prince* series, Condé Nast obtained a license for a different *Prince* series image, *Orange Prince*, and ultimately used the image for the commemorative issue's cover.¹¹⁹ When Goldsmith learned of the use, copyright litigation ensued.¹²⁰

On cross motions for summary judgment, the district court held that each of the sixteen art works in Warhol's *Prince* series was transformative.¹²¹ Applying the standard the Court had established in *Campbell*, the district court asked not whether the work was solely or primarily transformative, but whether a transformative character "may reasonably be perceived."¹²² The district court also applied the standard for transformative use that the *Campbell* Court had established: "The central purpose of this investigation is to determine 'whether the new work merely supersede[s] the objects of the original creation or instead adds something new, with a further purpose or different character, altering the first with new expression, meaning, or message.'"¹²³ The district court noted the specific alterations Warhol made to the earlier photograph, and based upon those alterations, concluded:

These alterations result in an aesthetic and character different from the original. The Prince Series works can reasonably be perceived to

¹¹⁵ *Id.*

¹¹⁶ *Id.* at 321; John Eligon & Serge F. Kovalski, *Prince Died From Accidental Overdose of Opioid Painkiller*, N.Y. TIMES (June 2, 2016), <https://www.nytimes.com/2016/06/03/arts/music/prince-death-overdose-fentanyl.html> [<https://perma.cc/ZQG6-BCP7>].

¹¹⁷ *Id.* Andy Warhol himself had died in 1987, and the Andy Warhol Foundation became the owner of the *Prince* Series. *Id.* at 320.

¹¹⁸ *Id.* at 319.

¹¹⁹ *Id.* at 321.

¹²⁰ *Id.* at 321–22.

¹²¹ *Id.* at 326.

¹²² *Id.*; *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 582 (1994) ("The threshold question when fair use is raised in defense of parody is whether a parodic character may reasonably be perceived.").

¹²³ *Id.* at 325 (quoting *Campbell*, 510 U.S. at 579 (citations and quotation marks omitted) (alteration in original)).

have transformed Prince from a vulnerable, uncomfortable person to an iconic, larger-than-life figure.¹²⁴

After ruling that Warhol's *Prince* series was transformative, the court concluded that Warhol's series was a fair, and hence non-infringing, use.¹²⁵

On appeal, the Second Circuit reversed.¹²⁶ Although the appellate panel acknowledged that the Warhol *Prince* series embodied a different aesthetic from Goldsmith's photograph, the panel held that Warhol's use was not transformative.¹²⁷ Following the lead of earlier decisions questioning the transformative use rubric, the *Warhol* panel, first, worried that an overbroad fair use doctrine would undermine the derivative work right generally¹²⁸ and the right to control the making of a film from a novel specifically.¹²⁹ Second, the panel also held that Warhol's use, despite the admittedly different aesthetics, served the same purpose, at least, at a sufficiently high level of generality.¹³⁰ Both Goldsmith's photograph and Warhol's silkscreens "are portraits of the same person."¹³¹ Third, the panel emphasized that Warhol's use was commercial.¹³² Although the panel acknowledged that the Court itself in *Campbell* had rejected the presumption that the *Sony* decision had seemingly endorsed—that a commercial use is presumptively unfair¹³³—the panel nevertheless seemed to embrace such a presumption.¹³⁴ For these three reasons, the panel held that the first statutory fair

¹²⁴ *Id.* at 326.

¹²⁵ *Id.* at 326, 331.

¹²⁶ *Andy Warhol Found. for the Visual Arts, Inc. v. Goldsmith*, 11 F.4th 26, 54 (2d Cir. 2021), *aff'd*, 598 U.S. 508 (2023).

¹²⁷ *Id.* at 42 ("With this clarification, viewing the works side-by-side, we conclude that the Prince Series is not 'transformative' within the meaning of the first factor.").

¹²⁸ *Id.* at 39 (noting that "an overly liberal standard of transformativeness, such as that employed by the district court in this case, risks crowding out statutory protections for derivative works.").

¹²⁹ *Id.* at 39–40, 42.

¹³⁰ *Id.* at 40.

¹³¹ *Id.* at 42.

¹³² *Id.* at 44–45.

¹³³ *Sony Corp. v. Universal City Studios, Inc.*, 464 U.S. 417, 449 (1984) ("If the Betamax were used to make copies for a commercial or profit-making purpose, such use would presumptively be unfair.").

¹³⁴ *Goldsmith*, 11 F.4th at 44–45 ("[N]either can we conclude that Warhol and AWF are entitled to monetize it without paying Goldsmith the 'customary price' for the rights to her work, even if that monetization is used for the benefit of the public."). As a legal scholar, I have noticed a trend for courts to offer unpersuasive reasoning in a negative or even double negative phrasing, as the *Warhol* panel does here ("neither," "without"). I am not sure if this is an attempt "to hide the ball" or "to soften the blow." But if

use factor weighed against Warhol's use being fair. Based upon that conclusion and its review of the other fair statutory use factors,¹³⁵ the panel held that Warhol's use was unfair as a matter of law.¹³⁶

The Foundation petitioned for *certiorari* and asked the Court to decide a single question:

Whether a work of art is “transformative” when it conveys a different meaning or message from its source material (as this Court, the Ninth Circuit, and other courts of appeals have held), or whether a court is forbidden from considering the meaning of the accused work where it “recognizably deriv[es] from” its source material (as the Second Circuit has held).¹³⁷

After granting *certiorari*, the Court refused to answer the question presented—whether *Orange Prince* was transformative as a new work of art. Instead, the Court answered a different one: Whether the licensing of *Orange Prince* for a magazine cover of a commemorative issue about Prince was a transformative use.¹³⁸

As it often does, the question's framing dictated the Court's answer. The Court adopted a mechanical three-question checklist to determine that the specific use of *Orange Prince* at issue was unfair under the first fair use factor. The first question was whether *Orange Prince*, when used as a magazine cover for a story about Prince, served the same purpose, broadly defined, as Goldsmith's photograph. The second was whether the use at issue was commercial. The third was whether Warhol had a particularly compelling justification for his copying in that he was criticizing, parodying, or commenting on the Goldsmith photograph.¹³⁹

something is not persuasive when phrased affirmatively, then it will remain unpersuasive when written in this negative or backward phrasing. All this sort of negative phrasing accomplishes is to make the court's holding difficult to understand.

¹³⁵ 17 U.S.C. § 107.

¹³⁶ *Goldsmith*, 11 F.4th at 32.

¹³⁷ Petition for a Writ of Certiorari at i, *Andy Warhol Found. for the Visual Arts, Inc. v. Goldsmith*, 598 U.S. 508 (2023) (No. 21-869).

¹³⁸ *Andy Warhol Found. for the Visual Arts, Inc. v. Goldsmith*, 598 U.S. 508, 511 (“The fair use provision, and the first factor in particular, requires an analysis of the specific ‘use’ of a copyrighted work that is alleged to be ‘an infringement.’”).

¹³⁹ While the Court purports that a valid justification comes down to whether the work “furthers the goal of copyright, namely, to promote the progress of science and the arts, without diminishing the incentive

Working through this checklist, the Court held that *Orange Prince* served the same purpose, broadly defined, as Goldsmith's photograph.¹⁴⁰ Both works depict Prince. The Court also held that the Foundation's use was commercial.¹⁴¹ Condé Nast paid the Foundation a licensing fee to use *Orange Prince* as the cover of the commemorative magazine issue. Finally, the Court held that Warhol did not have a compelling justification for the copying.¹⁴² *Orange Prince* did not parody, comment on, or criticize Goldsmith's photograph. Having mechanically worked through its checklist, the Court concluded that each item weighed against fair use and held accordingly.¹⁴³

In adopting a checklist approach, the Court relied on an *ad hoc* mixture of interpretative approaches. First, from a realist perspective, it insisted that substitution is copyright's "bête noire."¹⁴⁴ Reframing the analysis from Warhol's works themselves, as set forth in the original question presented, to the licensing of *Orange Prince* for use on the cover of a magazine commemorating Prince's life enabled the Court to offer, at least, the pretense that for that use specifically, Warhol's *Orange Prince* was a substitute for Goldsmith's photograph.¹⁴⁵ Second, from a textualist perspective, the Court undermined the transformative use rubric generally by noting that the word "transform" is not included in the statutory text of fair use, but is included in the statutory text defining a derivative work.¹⁴⁶ From a textual perspective, relying on the same word "transform" to identify a use as

to create," *id.* at 531, it ultimately reduces the persuasive justification to parody or "other commentary or criticism that targets an original work . . ." *Id.* at 532.

¹⁴⁰ *Id.* at 550 (concluding the two works "share substantially the same purpose").

¹⁴¹ *Id.* ("[The Foundation's] use is of a commercial nature.").

¹⁴² It is interesting that the Court insisted we must focus not on the copying to create *Orange Prince* generally, but on the use of *Orange Prince* on the magazine cover specifically in analyzing the first fair use factor. Yet, the Court's pretense on this issue slips a bit when it comes to whether Prince had a compelling justification for the copying. The Court does not insist that the Foundation must show that *Orange Prince* on a magazine cover specifically criticized, commented on, or parodied Goldsmith's photograph, but whether *Orange Prince* did so at all.

¹⁴³ *Goldsmith*, 598 U.S. at 550.

¹⁴⁴ *Id.* at 528.

¹⁴⁵ *Id.* at 536 ("[The Foundation's] licensing of the Orange Prince image thus 'supersede[d] the objects,' . . . i.e., shared the objectives, of Goldsmith's photograph, even if the two were not perfect substitutes." (quoting *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 579 (1994))).

¹⁴⁶ *Id.* at 529 ("That is important because the word 'transform,' though not included in § 107, appears elsewhere in the Copyright Act. The statute defines derivative works, which the copyright owner has 'the exclusive righ[t]' to prepare, § 106(2), to include 'any other form in which a work may be recast, transformed, or adapted,' § 101.").

non-infringing, as part of the definition of fair use, fatally conflicts, or so the Court seemed to suggest, with Congress's use of the same word to identify a use as an infringing derivative work. Third, from a purposivist perspective, finding Warhol's use to be fair would require the Court to find many films based upon novels to be fair as well. It might also allow thousands of follow-on creative works to flourish.¹⁴⁷ This apparently is a bad thing because it would frustrate Congress's intent to grant the copyright owners of novels the exclusive right to control the making of their novels into films specifically, and the intent to grant copyright owners a broad derivative work right generally.¹⁴⁸ Fourth, the *Goldsmith* Court insisted that its own precedent mandated the Court's outcome.

As stated in the introduction, however, the Court's reasoning on each of these approaches is flawed. The following sections discuss the flaws in the Court's reasoning for each approach.

A. *Realism without Reality*

The Court's realism is unrealistic. From a realist's perspective, the Court's analysis gets off to a great start. The Court correctly identified substitution as copyright's "bête noire."¹⁴⁹ From the outset, copyright's purpose has been to address the risk of market failure that arises from the sale of unauthorized, and hence, lower priced copies of a book. As the Stationers Company long ago articulated, without copyright, a second printer will offer unauthorized copies of the same book for less. Consumers will buy the lower priced unauthorized copies instead of the higher priced authorized copies.¹⁵⁰ As a result, the first printer will not recoup its investment. Foreseeing that result, the first printer will not publish the authorized copies in the first place. Unless copyright intervenes, these copying

¹⁴⁷ See *id.* at 546 ("To hold otherwise would potentially authorize a range of commercial copying of photographs, to be used for purposes that are substantially the same as those of the originals. As long as the user somehow portrays the subject of the photograph differently, he could make modest alterations to the original, sell it to an outlet to accompany a story about the subject, and claim transformative use.").

¹⁴⁸ *Id.* at 529 ("But an overbroad concept of transformative use, one that includes any further purpose, or any different character, would narrow the copyright owner's exclusive right to create derivative works. To preserve that right, the degree of transformation required to make "transformative" use of an original must go beyond that required to qualify as a derivative.").

¹⁴⁹ *Id.* at 528.

¹⁵⁰ STATIONERS' COMPANY, A TRANSCRIPT OF THE REGISTERS OF THE COMPANY OF STATIONERS OF LONDON: 1554-1640 A.D. 805 (Edward Arber, ed., 2nd ed. 1875) (1586 petition to the Star Chamber to renew privileges in books).

competitors will cause the book market to fail. Without copyright, many books that society values will go unauthored and unpublished.

For that risk of market failure to be realized, however, it is not enough that two works generally serve the same purpose. By that definition, 2 Live Crew's version of *Pretty Woman* would not be transformative because it serves the same general purpose—listening pleasure—as the Roy Orbison original, *Oh, Pretty Woman*. For competitive substitution to occur and the risk of market failure to be realized, a second work must be so similar to the first that, given a small, but non-transitory price increase on the first, a consumer will actually switch to the second.¹⁵¹ By that standard, 2 Live Crew's *Pretty Woman* and Roy Orbison's *Oh, Pretty Woman* are not substitutes.¹⁵² No ordinarily prudent consumer, looking for the Roy Orbison version, would buy the 2 Live Crew instead. But by that standard, *Orange Prince* and Goldsmith's black-and-white photograph are not substitutes either. Indeed, by that standard, *Orange Prince* and Goldsmith's photo are not substitutes even if we focus on the specific licensing of the Warhol work for Condé Nast's commemorative magazine cover, as the Court insisted we must.¹⁵³

Even the *Goldsmith* Court is careful never to state outright that *Orange Prince* and Goldsmith's black-and-white photo are substitutes. Instead, the Court approaches the issue in a backhanded way and merely asserts that the two works “shared the [same] objectives, even if the two are not perfect substitutes.”¹⁵⁴ But to say that two products are not perfect substitutes is to say nothing at all, at least outside the realm of economic theory. And the *Goldsmith* Court's approach to defining this issue—do the two works serve the same purpose broadly defined—is not likely to differentiate competitive substitutes that may pose a risk of market failure, from everything else. For example, using the Court's approach, one might conclude that salt supersedes the demand and hence serves as a substitute for pepper, at least when both are used to season food. Just like Warhol's print and Goldsmith's photo, while salt and pepper are not perfect substitutes, both serve the same purpose for that specific use—to season food. Just like Warhol's print and

¹⁵¹ See U.S. Dep't of Justice & Fed. Trade Comm'n, Horizontal Merger Guidelines § 1.11 (1992); Glynn S. Lunney, Jr., *Trademark Monopolies*, 48 EMORY L.J. 367, 424–26 (1999) (using the test to show that even Coke and Pepsi are not competitive substitutes).

¹⁵² See *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 591 (1994).

¹⁵³ *Goldsmith*, 598 U.S. at 534.

¹⁵⁴ *Id.* at 536.

Goldsmith's photo, both salt and pepper are sold commercially and thus vie for the same consumer dollars. Therefore, salt supersedes the purpose of pepper, and thus, salt is a substitute for pepper—or so the *Goldsmith* Court's reasoning would lead one to conclude.

Yet, that conclusion is nonsense, and the reasoning by which the Court reached it misses the point entirely. Even though salt and pepper are used for the same purpose, they have different flavor and texture profiles and are therefore not substitutes.¹⁵⁵ More likely, even when both are used to season food, they are unrelated goods.¹⁵⁶ As a result, the introduction of pepper into a marketplace, where formerly only salt was available, does not lead to market failure. To the contrary, enabling consumers to choose, against the backdrop of a budget constraint, whether to buy salt or pepper, and if so, how much of each, is precisely how markets ensure a Pareto optimal allocation of resources. It allows each consumer to maximize their utility by making purchases that reflect their preferences subject to their budget constraint. That is not market failure but market success. The substitution that has long been the *bête noire* of copyright is the competitive substitution of copies that both: (i) duplicate the appeal of the original so closely that consumers will buy them instead of the original; and (ii) do so at a lower price because they were copied. Only when both conditions are satisfied does a risk of market failure arise that would justify government intervention, such as copyright. Even if “the two are not perfect substitutes,” neither salt and pepper, nor Warhol's print and Goldsmith's photo, pose such a risk of market failure. *Orange Prince* neither duplicates the appeal of Goldsmith's preexisting photo so closely that consumers will substitute one for the other nor was *Orange Prince* available at a lower licensing fee because of copying.¹⁵⁷

Moreover, as the Court expressly recognized in *Google* and *Campbell*, whether two products are substitutes is ultimately a factual issue. In both *Google*

¹⁵⁵ Economically, two goods are substitutes when a reduction in the price for one of the goods reduces demand for the other.

¹⁵⁶ Economically, two goods are unrelated when a reduction in the price for one of the goods neither increases nor decreases demand for the other.

¹⁵⁷ Even the *Goldsmith* Court illustrates its substitution point by placing the commemorative issue bearing *Orange Prince* on its to the cover photographs of three other magazine covers commemorating Prince's death. *See Goldsmith*, 598 U.S. at 521. None of those other three commemorative issues use Goldsmith's “plain Jane” black-and-white photo. All pose Prince far more dramatically than Goldsmith's black-and-white photograph.

and *Campbell*, the Court addressed this issue under the fourth fair use factor, the effect of the use “upon the market for or potential value of the copyrighted work,” rather than under the first factor, “the purpose and character of the use.”¹⁵⁸ Yet, whether addressed under the first fair use factor or the fourth, the question of whether if one of the Warhol works had not been available or if the licensing fee for using *Orange Prince* had been just a little higher, Condé Nast would have used the Goldsmith photograph instead, remains factual, not legal.¹⁵⁹ It cannot ordinarily be resolved on summary judgment.¹⁶⁰

More importantly, however, the emphasis on substitution feels, in part, like an anachronistic throwback, and, in part, like an intentional misdirect. As historical anachronism, the Court’s test under the first fair use factor, asking whether the defendant’s use “‘supersede[s] the objects’ of the original creation” or “‘supplant[s]’ the original,” traces back to Justice Story’s opinion in *Folsom v. Marsh* in 1841.¹⁶¹ However, in 1841, the copyright act then in force provided no derivative work right at all.¹⁶² The 1831 Copyright Act gave the copyright owner “the sole right and liberty of printing, reprinting, publishing and vending such map, chart, book or books.”¹⁶³ No dramatization right. No translation right.¹⁶⁴ No abridgement right. At that time, competitive substitution was not merely something copyright particularly disliked—the *bête noire* of copyright, as it were—but was copyright’s sole focus and defined the full extent of the copyright owner’s exclusive rights.

¹⁵⁸ 107 U.S.C. § 107; see *Google LLC v. Oracle Am., Inc.*, 141 S.Ct. 1183, 1206–08 (2021); *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 590–94 (1994).

¹⁵⁹ As I have shown elsewhere, even a paperback version and an electronic copy of the same novel do not serve as competitive substitutes under this standard. See Glynn S. Lunney, Jr., *The Copyright Tax*, 68 J. COPYRIGHT SOC’Y 117 (2021); see also Glynn S. Lunney, Jr., *Trademark Monopolies*, 48 EMORY L.J. 367, 424 (1999) (showing that Coke and Pepsi are not competitive substitutes under a proper approach to market definition).

¹⁶⁰ See *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 593–94 (1994) (denying summary judgment in the absence of evidence on whether 2 Live Crew’s rap parody interfered with the market for an authorized rap derivative).

¹⁶¹ *Goldsmith*, 598 U.S. at 528 (quoting *Campbell*, 510 U.S. at 579); *Folsom v. Marsh*, 9 F. Cas. 342, 348 (C.C.D. Mass. 1841).

¹⁶² Act of February 3, 1831, ch. 16, § 1, 4 Stat. 436, 436 (1831).

¹⁶³ *Id.*

¹⁶⁴ See *Stowe v. Thomas*, 23 F. Cas. 201, 206–07 (E.D. Pa. 1853) (finding that a translation of an original work is not an infringing use because it does not result in a copy of the original within the meaning of the statute).

But that is no longer true. Beginning in 1870 with congressional recognition of the translation right,¹⁶⁵ copyright has expanded its focus beyond competitive substitution to encompass the opportunity to license an original work for uses that are not competitive substitutes. A film based upon a novel, for example, increases on average sales of the underlying novel, and is thus a complement, not a substitute. Yet, as the *Goldsmith* Court itself recognized, the Copyright Act today grants the copyright owner in a novel the exclusive right to make such a film.¹⁶⁶ While competitive substitution remains a central concern of copyright, it does not define its limits, as it did in 1841. So, the question becomes, why the pretense? Given the express statutory recognition of the derivative work right, why bother pretending that *Orange Prince* is a competitive substitute for Goldsmith's black-and-white photo? There was no evidence in the record that the use of *Orange Prince* for the magazine cover cost Goldsmith a sale, in the sense that but-for *Orange Prince*, Goldsmith's black-and-white photo would have been used instead. But it may have cost her a "lost opportunity to license," as I have used that phrase previously.¹⁶⁷ Today, that should be enough, and yet, it is not the Court's focus.

For me, this is where the feeling that the Court's emphasis on substitution is an intentional misdirect arises. Focusing on substitution enables the Court to distinguish its fair use holding in *Google v. Oracle*.¹⁶⁸ In *Google*, the later work, Android, served as an operating system for smart phones.¹⁶⁹ The earlier work, Java, in contrast, operated in the laptop and desktop markets.¹⁷⁰ As a result, the two served "distinct and different" "environments."¹⁷¹ Adopting a narrow focus on substitution allowed the *Goldsmith* Court to assert, accurately, that Android did not "supersede the objects" of the original work, Java, on which it was based.¹⁷² But

¹⁶⁵ Act of July 8, 1870, ch. 230, § 86, 16 Stat. 198 (granting copyright owners the translation right).

¹⁶⁶ *Goldsmith*, 598 U.S. at 541; see 17 U.S.C. § 106(2).

¹⁶⁷ See Glynn S. Lunney, Jr., *Re-Examining Copyright's Incentives-Access Paradigm*, 49 VAND. L. REV. 483, 546 n.246 (1996).

¹⁶⁸ See *Goldsmith*, 598 U.S. at 535–36 (distinguishing *Google LLC v. Oracle America, Inc.*, 141 S. Ct. 1183 (2021)).

¹⁶⁹ *Google*, 141 S. Ct. at 1203 ("Here Google's use of the Sun Java API seeks to create new products. It seeks to expand the use and usefulness of Android-based smartphones.").

¹⁷⁰ *Id.* at 1206 ("The jury heard ample evidence that Java SE's primary market was laptops and desktops.").

¹⁷¹ *Id.* at 1203.

¹⁷² *Goldsmith*, 598 U.S. at 543 n.18 (describing how since the *Google* Court relied on the "distinct and different" environments of the two works in finding fair use, the Court's finding of fair use in *Google* and no fair use in *Goldsmith* can be reconciled); see also *id.* at 535–36 (describing how Andy Warhol's *Orange*

that begs the question whether Android superseded the objects of a licensed Java derivative designed for the smartphone market. The *Google* Court addressed that issue directly, ruling under the fourth fair use factor that a jury could permissibly find that “Android did not harm the actual or potential markets for Java SE.”¹⁷³

Thus, the *Goldsmith* Court’s insistence that substitution is the focus of the inquiry enabled the *Goldsmith* Court to dodge two potential impediments to its desired result. First, it enabled the *Goldsmith* Court to decide the fair use issue as a matter of law. Where the Court in both *Campbell* and *Google* required factual evidence on whether the later use affected “the potential market for or value” of the earlier work, the *Goldsmith* Court simply offered its own opinion on the issue. No pesky evidence. No expensive trial. Simple judicial fiat. Second, the focus on substitution enabled the Court to avoid the need to balance what is likely to be gained and what is likely to be lost from finding or rejecting the fair use privilege on the facts presented.

Such balancing is the quintessential heart of any realist approach to fair use. In *Google*, the Court addressed this balancing directly. The *Google* Court began by acknowledging that:

Google copied portions of the Sun Java API precisely, and it did so in part for the same reason that Sun created those portions, namely, to enable programmers to call up implementing programs that would accomplish particular tasks.¹⁷⁴

For the *Goldsmith* Court, this statement would mark the end of the analysis into whether the defendant’s use was transformative. But for the *Google* Court, it marks the beginning. From that starting point, the *Google* Court goes on: Android is a new program; it expands the utility of Android-based smartphones; it offers a “highly creative and innovative tool” for smartphones.¹⁷⁵ In short, Google used what it copied “to create a new platform that could be readily used by programmers.”¹⁷⁶ For the *Google* Court, that made Google’s verbatim copying of 11,500 lines of Java

Prince image indeed shared the objectives, or “supersede[d] the objects,” of Goldsmith’s photograph, since the “environments” (or purposes) of the works are not “distinct and different”).

¹⁷³ *Google*, 141 S. Ct. at 1206.

¹⁷⁴ *Id.* at 1203.

¹⁷⁵ *Id.*

¹⁷⁶ *Id.*

code to create Android transformative.¹⁷⁷ The copying gave us a new program and thus, “was consistent with that creative ‘progress’ that is the basic constitutional objective of copyright itself.”¹⁷⁸ As for the other side of the balance—the risk that a finding of fair use will reduce creative output by undermining incentives—the Court relied on the jury’s finding of no harm to “the potential market for or value of” Java.¹⁷⁹

In *Warhol*, no such balancing is evident.¹⁸⁰ Despite the self-evident differences between *Orange Prince* and the black-and-white photograph, the *Goldsmith* Court rejects the argument that these differences establish a transformative purpose or character:

Although the purpose could be more specifically described as illustrating a magazine about Prince with a portrait of Prince, one that portrays Prince somewhat differently from Goldsmith’s photograph (yet has no critical bearing on her photograph), that degree of difference is not enough for the first factor to favor AWF, given the specific context and commercial nature of the use.¹⁸¹

As for why that degree of difference is not enough, the Court explains that if such a difference in degree were enough, that would allow a thousand creative flowers to bloom:

To hold otherwise would potentially authorize a range of commercial copying of photographs, to be used for purposes that are substantially the same as those of the originals. As long as the user somehow portrays the subject of the photograph differently, he could make modest alterations to the original, sell it to an outlet to accompany a story about the subject, and claim transformative use.¹⁸²

¹⁷⁷ *Id.* at 1204.

¹⁷⁸ *Id.* at 1203.

¹⁷⁹ *Id.* at 1206.

¹⁸⁰ I recognize that Justice Breyer expressly acknowledged the limited reach of the Court’s decision in *Google v. Oracle*. *See id.* at 1206 (“We do not say that these questions are always relevant to the application of fair use, not even in the world of computer programs.”).

¹⁸¹ *Andy Warhol Found. for the Visual Arts, Inc. v. Goldsmith*, 598 U.S. 508, 512 (2023).

¹⁸² *Id.* at 546.

The Court does not explain exactly why allowing a thousand creative flowers, each with modest alterations, to bloom is undesirable.¹⁸³ Just as leaving room for the substantially similar but different Android operating system did, leaving room for additional substantially similar but different photographs would seem “consistent with that creative progress that is the basic constitutional objective of copyright itself.”¹⁸⁴ A thousand creative flowers would seem to allow everyone to find the exact version that best satisfies their aesthetic and other preferences. Allowing each consumer to purchase the version that best satisfies their preferences, subject to an exogenous budget constraint, is the very definition of market success, not market failure. Instead of explaining why that is not true, the Court merely repeats itself:

Copying might have been helpful to convey a new meaning or message. It often is. But that does not suffice under the first factor.¹⁸⁵

Again, the Court offers no explanation for why copying to convey a new meaning or message does not suffice. Perhaps, the Court believes the reason is self-evident. Perhaps, the Court believes that repeating the statement will make it true.

Most likely, however, these assertions reflect a fundamental misunderstanding as to how markets, particularly those for copyright-protected goods, work. For example, the Court might be implicitly assuming that licensing for magazine covers about Prince (the “market”) is a zero-sum game and that each additional “substantially similar” creative flower reduces the revenue for existing market participants proportionally. Under those assumptions, Goldsmith’s photograph might stand to lose directly as copyright allows more and more creative flowers to bloom. Indeed, under those assumptions, as each additional “substantially similar” flower enters the market, Goldsmith loses proportionally. At some point, an overly generous fair use doctrine might allow enough creative flowers to enter the market that Goldsmith no longer earns enough to cover her persuasion costs and the market, as a result, fails.

Among other difficulties, this implicit model of the market for copyrighted works misunderstands how markets operate. If “substantially similar” meant that

¹⁸³ These sorts of unexplained statements may be what Justice Kagan is referencing in her dissent when she cautions readers to “ask yourself about the ratio of reasoning to *ipse dixit*” in the majority opinion. *Goldsmith*, 598 U.S. at 560–61 n.2 (Kagan, J., dissenting).

¹⁸⁴ *Google*, 141 S. Ct. at 1203.

¹⁸⁵ *Goldsmith*, 598 U.S. at 547.

two works: (i) were exact copies of each other; (ii) were as indistinguishable as two grains of rice; and (iii) were otherwise competitive substitutes; the additional creative flowers may add no value beyond that created by Goldsmith's photo. But there is a wide gap between substantially similar and indistinguishable. In that wide gap, there is plenty of room for differences in aesthetic, meaning, or message between an earlier and a later work that matter to consumers.¹⁸⁶ In the *Goldsmith* case, *Orange Prince* may be substantially similar to Goldsmith's photo, for purposes of copyright law, but the two works are not the same. The differences between them matter in two ways. First, some consumers may prefer Goldsmith's photo, while others prefer *Orange Prince*. As a result, *Orange Prince* adds value. *Orange Prince* may add value by increasing the licensing fees available within the existing market. For example, the available license fees may increase in that market from \$1,000 to \$2,000. Or, more likely, *Orange Prince* may add value by creating a new market for licensing a Warhol original depicting Prince. Second, the differences between the Goldsmith photo and *Orange Prince* matter because the differences mean that *Orange Prince* is not a competitive substitute. The availability of *Orange Prince* without a copyright license would not lead to market failure, but to market success, as consumers choose which work better satisfied their preferences.

For a realist, there are, in the end, three possibilities that might justify the Court's holding that Warhol's use is insufficiently transformative. First, the *Goldsmith* Court could be saying, as the above discussion suggests, that *Orange Prince* conveys no new meaning, message, or aesthetic to anyone beyond Goldsmith's black-and-white photo. In other words, we, as a society, are no better off: (i) with *Orange Prince* and the photo than we would be (ii) with the photo alone. Second, the *Goldsmith* Court could be admitting that *Orange Prince* adds something new, and thus society is better off with both works than society would be with the photo alone. Nevertheless, a license is both practicable and readily available. Society, therefore, has nothing to lose by requiring the Foundation to pay Goldsmith her pound of flesh for the use of *Orange Prince* on a magazine cover.

¹⁸⁶ As the Court recognized in *Bleistein v. Donaldson Lithographing Co.*, even seemingly small differences between works may justify giving each their own copyright. 188 U.S. 239, 250 (1903) ("Personality always contains something unique. It expresses its singularity even in handwriting, and a very modest grade of art has in it something irreducible, which is one man's alone.").

Or, third, the *Goldsmith* Court could be saying that, on balance, shifting rents from Warhol to Goldsmith will lead to more and better original works going forward.

From a realist perspective, however, each of these possibilities has fundamental flaws. The first possibility—that Warhol’s artwork adds no value to society—is untrue. The Court acknowledges that we, as a society, are better off with Warhol’s *Prince* series than we would be without them.¹⁸⁷ And as the Court long ago recognized, art remains art whether hung on the walls of a museum, or used commercially as an advertisement for a circus or on the cover of a magazine.¹⁸⁸ So the particular use made should not matter. Moreover, as the *Goldsmith* Court itself acknowledges, courts should not be making these sorts of artistic value judgments “outside of the narrowest and most obvious limits” in any event.¹⁸⁹ If *Orange Prince* were a mere Xerox copy of Goldsmith’s black-and-white photo, then a court might be justified in holding, as a matter of law, that Warhol’s copy did not add value to society through the creation of a new work with a new aesthetic, a new message, or a new meaning.¹⁹⁰ But whatever one thinks about the merit or value

¹⁸⁷ See *Goldsmith*, 598 U.S. at 534 n.10 (acknowledging that if Warhol’s *Prince* works had been used for teaching purposes, the case might have come out differently); *id.* at 557–58 (Gorsuch, J., concurring) (acknowledging that a museum display of *Orange Prince* might be fair use).

¹⁸⁸ *Bleistein*, 188 U.S. at 251 (“Again, the act, [even if it limits copyright protection to ‘works connected with the fine arts,]’ does not mean that ordinary posters are not good enough to be considered within its scope . . . A picture is none the less a picture, and none the less a subject of copyright, that it is used for an advertisement.”).

¹⁸⁹ See *Goldsmith*, 598 U.S. at 544 (quoting *Bleistein*, 188 U.S. at 251 (“It would be a dangerous undertaking for persons trained only to the law to constitute themselves final judges of the worth of pictorial illustrations, outside of the narrowest and most obvious limits.”)). However, for an example of a case where a court seems to be saying that society is better off without the later work altogether, see *Dr. Seuss Enters., L.P. v. Penguin Books USA, Inc.*, 109 F.3d 1394, 1401 (9th Cir.) (finding a subsequent book that copied the visual and rhyming style of Dr. Seuss’s *The Cat in the Hat* to tell the story of the O.J. Simpson murder trial in a book entitled *The Cat NOT in the Hat!* was not transformative, cutting against finding fair use), *cert. dismissed*, 521 U.S. 1146 (1997).

¹⁹⁰ It might still add value by expanding dissemination of, or access to, the Prince image. In *Cambridge University Press v. Patton*, the Eleventh Circuit recognized increased dissemination as a constitutional purpose of copyright but cautioned that a potential fair use will always increase dissemination. 769 F.3d 1232, 1282 (11th Cir. 2014). As a result, the panel suggested that increased dissemination will not prove helpful to separate “the fair use sheep from the infringing goats.” *Id.* But this is wrong. While every potential fair use may increase dissemination, the relevant balance compares how much the use at issue increases dissemination for any given risk the use may pose to the likelihood that the copyrighted work at issue will be authored and published.

of Warhol's art, I think that we can all agree that *Orange Prince* is not a mere Xerox copy of Goldsmith's black-and-white photo.

The second possibility—that society has nothing to lose by requiring a license—is also untrue. Society always has something to lose by requiring a license. Here, a realist must distinguish, as the Court did not, between circumstances where requiring a license will increase the incentives for authorship and circumstances where requiring a license will not. The paradigmatic example of the first scenario is copyright's prohibition on the unauthorized reproduction of a copyrighted work. By requiring a license to print copies of a novel, for example, copyright can ensure a monopoly in the market for those copies.¹⁹¹ Only the authorized copies will be available. That monopoly will increase the producer surplus associated with those copies for both the publisher and the author. Copyright thus creates a larger pie for the publisher and author to share.

Nevertheless, although prohibiting competitive substitution can increase the incentives for authorship, we should not misunderstand what competitive substitution of the sort that may lead to market failure requires. Competitive substitution does not occur merely because a thousand “substantially similar” flowers bloom, even if each has only “modest alterations.” In recent work, I have shown that a hardcopy, a paperback copy, and an e-book version of the same novel are not competitive substitutes for each other.¹⁹² While how close two versions of the same work have to be for competitive substitution is ultimately an empirical question, it is an empirical question that research has largely answered. For direct competitive substitution to occur, something like unauthorized file sharing of exact copies of the same work is necessary. Even that sort of file sharing is not a perfect substitute¹⁹³—a reminder of how useless the Court's use of that characterization was. But file sharing can and does reduce the sales of authorized copies of, for example, a song. The file sharing of a digital copy of a song is, thus, a competitive substitute for the purchase of an authorized copy of that same song. But *Orange Prince* is not. In the record before the Court, there was no evidence that but-for

¹⁹¹ See Lunney, *supra* note 37.

¹⁹² *Id.*

¹⁹³ If file sharing were a perfect substitution for an authorized purchase, revenue from authorized sales would have fallen, effectively, to zero—the price of a file shared copy. While revenue from authorized sales fell sharply in the recording industry after the rise of file sharing, they did not fall to zero.

the availability of *Orange Prince* at a lower price, Condé Nast would have used Goldsmith's black-and-white photo instead.¹⁹⁴

But the Court might say Goldsmith could derive, and did derive, revenue by licensing Warhol's use. That's true, but again, in balancing what society has to gain and what it has to lose in terms of promoting "the Progress of Science" from requiring such a license, a realist would again recognize that requiring a license for such a derivative use will sometimes increase and sometimes decrease the incentives for authorship. Requiring a license to make a film from a copyrighted novel, for example, likely increases the incentives for both the novel's author and the film's producer. By requiring a license, copyright ensures that instead of twelve "motion picture versions" of *Harry Potter and the Sorcerer Stone*, there will be only one—at least at any given time. By doing so, copyright ensures a monopoly for the authorized film. That monopoly will enable the one licensed film producer to capture more producer surplus than the twelve film producers would have captured, combined, in a competitive market. More producer surplus means a larger pie, and hence more revenue, for both the novel's author and the film producer to share. Thus, requiring a license for a motion picture version of a novel means more incentives for both.

However, that is not true in the *Goldsmith* case. In the *Goldsmith* case, requiring a license case will not increase the incentives for authorship. Unlike the authorized publisher or the authorized motion picture version, the Foundation will not earn more from Warhol's artwork by obtaining a license from Goldsmith. The price of a Warhol original in the market derives not from a license from Goldsmith, but from Warhol's own market power and his fame as an artist. Even if a thousand other artists used the Goldsmith black-and-white photo to create their own works of art, the value of the Warhol originals would remain unchanged.¹⁹⁵ Requiring a license does not therefore increase the size of the pie associated with the Warhol *Prince* series. It simply requires Warhol to share his pie with Goldsmith.

¹⁹⁴ If there was conflicting evidence on this issue, summary judgment should have been denied. The case should be set for trial to permit the parties to introduce evidence on this factual issue.

¹⁹⁵ Although we are not able to view directly this counterfactual world, there is a thriving market for "art reproductions." These reproductions seek to reproduce as closely as possible, for example, famous oil paintings, not just as posters, but on a stroke-by-stroke basis using the same materials as the original. Despite the widespread existence of such art reproductions, the market prices of the famous originals remain exceedingly high.

If forcing that wealth transfer were costless, there would be no associated efficiency loss. But like most forced wealth transfers, this one is not costless. To force the wealth transfer, the Court interprets copyright law to require the Foundation to obtain a license. Negotiating a license imposes transaction costs. Those transaction costs come out of the producer surplus available. As a result, forcing Warhol to share reduces, rather than increases, the incentives for authorship. Some of the incentives that would otherwise go to an artist will now go to lawyers. Because it reduces the incentives for authorship, requiring a license in the *Goldsmith* case cannot address the risk of market failure long thought to justify copyright. Redistributing wealth from the Foundation to Goldsmith may feel emotionally satisfying to some, but it does not and cannot promote “the Progress of Science.”¹⁹⁶

In addition, requiring a license also opens the door to a failed licensing negotiation. Even where: (i) a license is generally practicable because there are only two parties to the negotiation and the gains from trade far exceed the transaction costs of negotiating the license; and (ii) the copyright owner is generally willing to license the use at issue, a license negotiation may still fail. Oracle and Google, for example, tried to negotiate a license for the creation of Android from Java, but were unable to agree to terms.¹⁹⁷

Thus, under the second possibility, from a realist perspective, concluding that Warhol was an infringer reduces the incentives for authorship. It also creates a risk of licensing failure. In the *Goldsmith* case, society does have something to lose by requiring a license.

The third possibility—that shifting rents from Warhol to Goldsmith would somehow increase creative output—would justify the Court’s ruling if true. Unfortunately, the Court offers no reason to believe it is true. The Court does note that “licenses, for photographs or derivatives of them, are how photographers like Goldsmith make a living. They provide an economic incentive to create original works, which is the goal of copyright.”¹⁹⁸ However, as the Court acknowledges,

¹⁹⁶ U.S. CONST. art. I, § 8, cl. 8.

¹⁹⁷ *Google LLC v. Oracle Am., Inc.*, 141 S. Ct. 1183, 1210 (2021) (Thomas, J., dissenting) (“Google sought a license to use the library in Android, the operating system it was developing for mobile phones.”).

¹⁹⁸ *Andy Warhol Found. for the Visual Arts, Inc. v. Goldsmith*, 598 U.S. 508, 535 (2023). The Court’s use of a subordinate “which” clause at the end of the sentence is unfortunate. First, it subordinates the most

“[t]his copyright case involves not one, but two artists.”¹⁹⁹ Even if one believes, despite the empirical evidence to the contrary,²⁰⁰ that additional revenue for authors leads to increased creative output, the Court offers no reason to believe that merely shifting revenue from Warhol to Goldsmith, or from artists like Warhol to artists like Goldsmith, will increase, on balance, creative output, either in this case or going forward. Even if the “more-revenue-equals-more-creative-output” assumption holds, requiring a license in this case would increase Goldsmith’s creative output at the expense of decreasing Warhol’s, or more generally, increase the creative output from artists like Goldsmith at the expense of decreasing the creative output of artists like Warhol going forward. The Court offers no reason to believe that society would be better off, on balance, from that trade-off. Indeed, as previously noted, the Court expressly disclaims its authority to make any such value judgment.²⁰¹

In short, the Court’s realism is unrealistic. In the *Warhol* case, more incentives for Goldsmith necessarily mean less for Warhol. From a realist perspective, there is no reason to believe that such rent redistribution will increase authorial output, on balance, or otherwise “promote the Progress of Science.” Realism is not, however, the sole, or perhaps even primary, interpretative approach the *Goldsmith* Court relied on to justify its outcome. The Court also seems to suggest that the statutory text requires it. To the textual justifications for the Court’s outcome, we now turn.

B. *Textualism without Text*

The Court’s textual analysis ignores the statutory text. The Court’s principal textual argument follows the lead of Judge Easterbrook, who is not exactly well-

important point in the sentence. Second and more importantly, it is ambiguous as to what the “which” refers to. Specifically, is it the “economic incentive” that is copyright’s goal? Or is it the creation of additional “original works”? Even worse, the Court may be asserting that “an economic incentive” will always and necessarily lead to more “original works.” Unfortunately, the recording industry’s experience with file sharing has conclusively disproved any supposed causal link between revenue and the output of original works.

¹⁹⁹ *Id.* at 514.

²⁰⁰ See GLYNN LUNNEY, *COPYRIGHT’S EXCESS: MONEY AND MUSIC IN THE US RECORDING INDUSTRY* 80–81 (2018) (demonstrating that music industry creative output did not increase as revenues rose from the 1960s into the 1990s and did not decrease as revenues fell from 2000 through 2015).

²⁰¹ See *Goldsmith*, 598 U.S. at 544 (“A court should not attempt to evaluate the artistic significance of a particular work.”).

known for his textualist approach to statutory interpretation.²⁰² In *Kienitz v. Sconnie Nation*, Judge Easterbrook, writing for a panel of the Seventh Circuit in 2014, expressed skepticism about transformative use.²⁰³ He cautioned that relying on transformative use to find a use fair seemed to conflict with the statutory definition of a derivative work, writing:

asking exclusively whether something is “transformative” not only replaces the list in § 107 but also could override 17 U.S.C. § 106(2), which protects derivative works. To say that a new use transforms the work is precisely to say that it is derivative and thus, one might suppose, protected under § 106(2).²⁰⁴

In *Warhol*, the Court embraced the same argument:

But *Campbell* cannot be read to mean that § 107(1) weighs in favor of any use that adds some new expression, meaning, or message. Otherwise, “transformative use” would swallow the copyright owner’s exclusive right to prepare derivative works.²⁰⁵

In particular, both courts point to the word “transformed” in the definition of a derivative work to undermine transformative use in the fair use analysis and to confine its potential scope.²⁰⁶ Of course, both courts are right that the word “transformed” does appear in the statutory definition of a derivative work.²⁰⁷ From a textualist perspective, there would seem, then, to be a conflict in using the same

²⁰² Judge Easterbrook is about as far from a textualist as one can find. If he relies on the statutory text at all, it is only because he finds it convenient to undermine some other approach so that he can more readily replace it with the law-and-economics approach he prefers. *See Keinitz v. Sconnie Nation LLC*, 766 F.3d 756, 758 (7th Cir. 2014) (“We think it best to stick with the statutory list, of which the most important usually is the fourth (market effect). We have asked whether the contested use is a complement to the protected work (allowed) rather than a substitute for it (prohibited).”), *cert. denied*, 575 U.S. 913 (2015).

²⁰³ *Id.*

²⁰⁴ *Id.*

²⁰⁵ *Goldsmith*, 595 U.S. at 541 (discussing *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 579 (1994)). *See also id.* at 548 (criticizing the dissent for “offer[ing] no theory of the relationship between transformative uses of original works and derivative works that transform originals”).

²⁰⁶ *See id.* at 529; *Kienitz*, 766 F.3d at 758.

²⁰⁷ 17 U.S.C. § 101 (defining a “derivative work” as “a work based upon one or more preexisting works, such as . . . any . . . form in which a work may be recast, *transformed*, or adapted.” (emphasis added)).

word to define a use both as infringing, as a derivative work, and as non-infringing, under fair use.²⁰⁸

However, this supposed conflict is more apparent than real. Properly interpreted, the word “transform,” when used in the fair use context, carries a different meaning from the same word when used in the derivative work context. Indeed, the word “transform” carries precisely the opposite meaning in the two contexts. For fair use, the *Campbell* Court defined “transformative” as copying to create a work with “new expression, meaning, or message.”²⁰⁹ In contrast, for a derivative work, “transformed” means copying an existing work into a new language or artistic medium, while retaining the same expression, the same meaning, and the same message.

Both the Seventh Circuit in *Keinitz* and the Court in *Warhol* mistake the meaning of the root word “transform” in the derivative work context because they pluck the word “transformed” out of the definition of a derivative work and attempt to define it in isolation. For a textualist, such an approach is improper. After all, “transformed” is not the only word Congress used in defining a derivative work. We should not ignore the rest.²¹⁰ If we look at the statutory text in its entirety, Congress defined a derivative work, in relevant part, as:

... a work based upon one or more preexisting works, such as a translation, musical arrangement, dramatization, fictionalization, motion picture version, sound recording, art reproduction, abridgment, condensation, or any other form in which a work may be recast, transformed, or adapted.²¹¹

In this statutory definition, the word “transformed” appears as part of a catch-all phrase at the end of a list of specific examples. As a result, for a textualist, the principle that the specific defines the general—or in Latin, *ejusdem generis*—governs.²¹² In other words, to define the catch-all phrase “any other form

²⁰⁸ 17 U.S.C. § 106(2) (granting the copyright owner the exclusive right “to prepare derivative works”).

²⁰⁹ *Campbell*, 510 U.S. at 579.

²¹⁰ *United States ex rel. Polansky v. Exec. Health Res., Inc.*, 599 U.S. 419, 432 (2023) (“‘[E]very clause and word of a statute’ should have meaning.” (quoting *Montclair v. Ramsdell*, 107 U.S. 147, 152 (1883))).

²¹¹ 17 U.S.C. § 101.

²¹² *See Yates v. United States*, 574 U.S. 528, 545 (2015) (“[E]jusdem generis . . . counsels: ‘[W]here general words follow specific words in a statutory enumeration, the general words are [usually] construed to embrace

in which a work may be ... transformed,” we must look to the specific examples listed.

If we look to the specific examples the definition of a derivative work includes, *Orange Prince* is not a derivative work. Sure, it might be thought to be “based upon” the Goldsmith black-and-white photo in some general sense. It might also be thought to be “any other form in which [the Goldsmith photo] may be ... transformed,” again in some general sense. And if “based upon” and “transformed” were the only words found in the statutory definition, such a broad and general interpretation of those words might be appropriate. However, they are not the only words Congress used to define a derivative work. Congress included not just these general phrases but specific examples to illustrate what the general phrases mean. For art such as Warhol’s, Congress used the phrase “art reproduction” to identify the specific type of later works based upon an earlier work that would be considered derivative works.²¹³ “Art reproduction” is a term of art and has a very specific meaning. It does not merely refer to a later work that is based upon, or transforms, an earlier work in some broad or general sense; Rather, “art reproduction” describes a later work that attempts to duplicate the earlier work as closely as possible.²¹⁴ Under that literal meaning, *Orange Prince* is not an art reproduction.

Nor is *Orange Prince* any of the other specific examples in the statutory text. It is not a translation or a musical arrangement or a dramatization or a fictionalization or a motion picture version or a sound recording or an abridgment or a condensation. And because it is none of the specific examples listed, *Orange Prince* also does not fall within the general language, whether “based upon” at the start of the list of examples, or “any other form in which a work may be recast, transformed, or adapted” at the end of the list. For a textualist, the specific defines the general.

only objects similar in nature to those objects enumerated by the preceding specific words.” (quoting Wash. State Dep’t of Soc. & Health Servs. v. Guardianship Est. of Keffeler, 537 U.S. 371, 384 (2003)).

²¹³ See 17 U.S.C. § 101.

²¹⁴ See *Reproduction*, AVANT ARTE, <https://avantarte.com/glossary/reproduction> [<https://perma.cc/Q36L-9XT6>]. This raises the question whether any art reproduction may also be original. See *Bridgeman Art Libr., Ltd. v. Corel Corp.*, 25 F.Supp.2d 421, 426–27 (S.D.N.Y. 1998) (finding that “the mere reproduction of a work of art does not constitute the required originality” for copyrightability under United Kingdom law), *aff’d on reh’g*, 36 F. Supp. 2d 191, 199–200 (S.D.N.Y. 1999).

For a textualist, both the general phrase “based upon” at the start of the list and the catch-all phrase “[otherwise] transformed” at the end of the list should be interpreted in the light of the specific examples set forth in the statute. Interpreted in the light of the specific examples set forth in the statute, both “based upon” and “any other form in which a work may be . . . transformed” mean based upon or transformed in the same way as the listed examples are based upon or transform an earlier work.

When we look at the specific examples, it stands out that they all refer to later works that copy from an earlier work in order to tell the same story, share the same aesthetic, convey the same message, albeit in a new language or artistic medium, as the earlier work. If I take the characters from *Romeo and Juliet* and put them in a movie that tells a different story, that is not a “motion picture version” of *Romeo and Juliet*. A motion picture version of the play *Romeo and Juliet* tells the same story, shares the same aesthetic, and conveys the same message as the play. Similarly, if I take the characters from *Romeo and Juliet* and tell a different story based upon those characters in German, that is not a “translation” of *Romeo and Juliet*. A translation of *Romeo and Juliet* from English to German tells the same story, shares the same aesthetic, and conveys the same message as the English original. While some changes are inevitable when a novel is brought to life on the screen or when an English-language novel is translated, we should not mistake those incidental changes for the intentional changes we see in *Orange Prince*. Nor should we overlook the fact that every one of the specific examples Congress listed in the statutory definition of a derivative work involves a later work that tells the same story, shares the same aesthetic, or conveys the same message, albeit in a different language or artistic medium, as the work they are based upon. Because that characteristic is common to all the specific examples Congress listed, the phrases “based upon” and “transformed” should be interpreted to cover additional uses only if they do likewise. The specific defines the general.²¹⁵

Thus, put in context and interpreted properly, the word “transformed” in the derivative work right carries exactly the opposite meaning from the one the *Campbell* Court gave “transformative” in the fair use context. Where

²¹⁵ A similar interpretative principle, words are defined by the company they keep, or, in Latin, *noscitur a sociis*, suggests that the phrase “based upon” in the statutory definition of a derivative work should be given a similarly narrow construction. See Lunney, *supra* note 37.

“transformative” for purposes of fair use means copying to create a new work with a new meaning, a new message, or a new aesthetic, “transformed” in the derivative work right means copying to create the same work with the same meaning, the same message, and the same aesthetic, albeit in a new language or artistic medium.

Rather than interpret the statutory text as written, the *Goldsmith* Court both ignores the inconvenient parts of the statutory text and rewrites the statutory definition. Thus, when the statutory definition of a derivative work does not include the words “sequel” and “spinoff,” the Court rewrites the text so it does.²¹⁶ This is not textualism.

From a textualist perspective, the *Goldsmith* Court makes other mistakes as well. For example, the Court acknowledges that the statutory text expressly makes the derivative work right (and all the other exclusive rights as well) “subject to” fair use.²¹⁷ On its face, the phrase “subject to” means that some uses that would otherwise qualify as infringing derivative works are nonetheless non-infringing because they are a fair use. The phrase “subject to” also expressly subordinates the derivative work right to fair use. If the textual phrase “subject to” is not plain enough, the text of the statutory fair use section begins: “Notwithstanding the provisions of section 106 and 106A, the fair use of a copyrighted work . . . is not an infringement of copyright.”²¹⁸ Like the phrase “subject to,” the “notwithstanding” text expressly defines fair use as non-infringing activity even when it would otherwise fall within the scope of one of the copyright owner’s exclusive rights—stating directly that when fair use applies, it trumps the derivative work right. Nevertheless, the Court rejects the plain meaning of the statutory text and reverses the hierarchy the statutory text establishes. Instead of following the statutory language, the Court writes:

²¹⁶ *Andy Warhol Found. for the Visual Arts, Inc. v. Goldsmith*, 598 U.S. 508, 541 (2023) (“Many derivative works, including musical arrangements, film and stage adaptations, sequels, spinoffs, and others that ‘recast, transfor[m] or adap[t]’ the original, § 101, add new expression, meaning or message, or provide new information, new aesthetics, new insights and understandings.”).

²¹⁷ *Id.* at 529 (“To be sure, th[e derivative work] right is ‘[s]ubject to’ fair use.” (citing 17 U.S.C. §§ 106, 107)).

²¹⁸ § 107.

To preserve [the derivative work] right, the degree of transformation required to make “transformative” use of an original must go beyond that required to qualify as a derivative.²¹⁹

In this sentence, the Court both reverses the hierarchy the statutory text imposes and renders fair use impotent and irrelevant. Because the statutory text makes the derivative work right “subject to” fair use, the Court’s role is not to preserve the derivative work right from fair use. Rather, it is to identify those uses that fall within the scope of the derivative work right that are nonetheless non-infringing because they are fair. More problematically, if fair use applies only to a use that “go[es] beyond” the derivative work right, as the *Goldsmith* Court suggests,²²⁰ then it will never apply at all. If the use at issue “go[es] beyond” the derivative work right, then the later work is so far different from the earlier work as to be non-infringing in any event. At that point, fair use becomes unnecessary.

From a textualist perspective, we see the same “pro-exclusive rights, anti-fair use” bias in the Court’s willingness, on the one side, but refusal, on the other, to add to the open-ended language in the text of the Copyright Act. For example, both the definition of the derivative work and the fair use privilege include open-ended statutory language.²²¹ In the definition of a derivative work, the statute uses the open-ended phrase “such as” before the list of examples.²²² Similarly, in the preamble, section 107 offers a list of uses that might qualify as fair use and precedes the examples with the open-ended words “including” and “such as.”²²³ In setting forth the four fair use factors, the statutory text states that an analysis of fair use “shall include” the four factors.²²⁴ Again, the word “include” is open-ended and expressly leaves room for courts to develop additional factors. In defining “the

²¹⁹ *Goldsmith*, 598 U.S. at 529.

²²⁰ *Id.*

²²¹ See 17 U.S.C. § 101 (“The terms ‘including’ and ‘such as’ are illustrative and not limitative.”); *id.* (defining a derivative work); § 107 (defining fair use).

²²² § 101 (defining a derivative work).

²²³ § 107 (“[T]he fair use of a copyrighted work, *including* such use by reproduction in copies or phonorecords or by any other means specified by that section, for purposes *such as* criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright.” (emphasis added)).

²²⁴ *Id.*

purpose and character of the use” under the first fair use factor, the statutory text is again open-ended: “including whether such use is of a commercial nature.”²²⁵

Such open-ended statutory text gives the Court not complete freedom but at least some leeway to add to the statutory text. The Court probably went beyond the permissible bounds of that leeway in its zeal to add “sequels” and “spinoffs” to the definition of a derivative work.²²⁶ But regarding whether the Court went too far in expanding the derivative work right or not, the Court should presumably have the same leeway to add to the examples of fair use, to develop additional fair use factors, and to define what constitutes a fair purpose or character under the first factor of the fair use analysis. Yet, the Court eschewed any such authority. For example, rather than balance what the public has to gain and what the public has to lose, generally, from a defendant’s use, as the Court did in *Google v. Oracle*, the *Goldsmith* Court pretended that the statutory text required a different balance under the first fair use factor. Because the first fair use factor expressly mentions “commercial nature,”²²⁷ the *Goldsmith* Court insisted that any transformative character or purpose must be balanced solely against the work’s commercial nature.²²⁸ Despite the open-ended nature of the statutory text defining the first fair use factor, nothing else may be considered, at least according to the *Goldsmith* majority. In effect, the same open-ended statutory text must be interpreted to expand the derivative work right but to narrow the fair use privilege, according to the Court. Nothing in the statutory text supports that approach.

Just as realism cannot justify the Court’s decision, neither can textualism. The statutory text of the Copyright Act does not support the Court’s outcome, its reasoning, or its approach. That leaves purposivism as the last possible interpretative approach that might justify the Court’s decision, and to that interpretative approach we now turn.

²²⁵ *Id.*

²²⁶ *Goldsmith*, 598 U.S. at 541 (noting that sequels and spinoffs are not like the specific examples in the statutory list in § 107).

²²⁷ § 107(1). In defining the “purpose and character” of the use, the first factor also expressly mentions “nonprofit educational purposes,” but that aspect of the first factor was not relevant to the *Goldsmith* case.

²²⁸ *Goldsmith*, 598 U.S. at 532–33 (“In sum, the first fair use factor considers whether the use of a copyrighted work has a further purpose or different character, which is a matter of degree, and the degree of difference must be balanced against the commercial nature of the use.”).

C. Purposivism without Purpose

The Court's purposivism defeats the purpose for which Congress enacted copyright. Like its principal argument from a textualist perspective, the Court's principal purposivist argument also focuses on the risk that an overbroad interpretation of transformative use in the fair use context will gut the derivative work right generally and the exclusive right of the copyright owner of a novel to prepare a film based upon the novel specifically. Here, the argument is not a realist's argument that society will be better off, and the Progress of Science better promoted, if the Court holds Warhol's use unfair. Nor is it a textualist's argument that the text of the Copyright Act requires the Court to hold that Warhol's use is unfair because the derivative work right trumps the fair use privilege. As discussed, the text of the Copyright Act expressly states the opposite: fair use, if present, trumps the derivative work right. Instead, the argument seems to be that Congress intended the owner of a copyright in a novel to have the exclusive right to transform that novel into a motion picture and ruling in favor of Warhol would frustrate that intent.

Yet, the Court is mistaking a question for an answer. Let us assume that Congress intended in 1976 to recognize that making a film from a copyrighted novel was an infringing rather than fair use. The question is whether Congress intended that placement of the line between infringing and fair use to remain forever in place no matter how the technology, markets, and economics of creating and distributing original works of authorship changed. If Congress did so intend, then the film-from-a-novel example may suggest an answer to the proper placement of the line between infringing and fair uses, at least in those cases that are similar. But if Congress did not so intend, then the film-from-a-novel example is not an answer, but a question to be answered: Have the technology, markets, and economics associated with such films changed sufficiently such that what was once infringing should now be fair?

Congress, after all, made the derivative work right, along with every other right, "subject to" fair use.²²⁹ Thus, even a use that would seem to fall squarely within the scope of one of the exclusive rights—indeed, even a use that was once the paradigmatic case of infringement—may become fair as the technology,

²²⁹ 17 U.S.C. §§ 106, 107.

markets, and economics of creating and distributing original works change. Consider, for example, the mechanical duplication of an entire copyrighted work. Such a use falls squarely within the reproduction right.²³⁰ Moreover, at one time, mechanically duplicating a copyrighted work and offering the resulting unauthorized copy as a competitive substitute for the original at a lower price represented the paradigmatic case of unfair, infringing use. While such mechanical copying increased dissemination of an existing work, the use was thought to be on balance unfair because allowing lower priced substitute copies was thought to pose an existential threat to authorship. As the Stationers Guild argued in a 1586 petition to the Star Chamber: If a publisher does not have the right to stop such unauthorized mechanical duplication, “no books at all should be [printed].”²³¹ This sort of mechanically perfect copy is precisely the use that would seem most likely to “prejudice the sale, or diminish the profits, or supersede the objects, of the original work,” as Justice Story wrote in creating and explaining the first fair use factor in *Folsom v. Marsh*.²³²

Yet, even if true, that conclusion is not a truth for all time. It is a function of the technology for authoring and distributing original works and the associated economics and markets of a given time. It may be during the analog era and the days of the printing press that exact duplication of an entire work created a material risk of market failure. However, exact duplication was not a threat to authorship in the pre-printing press era, when books were copied by hand. And exact duplication is not inevitably a threat to authorship today.²³³ Just as the introduction of the printing

²³⁰ § 106(1) (providing the copyright owner exclusive rights “to reproduce the copyrighted work in copies or phonorecords”).

²³¹ As the Stationers Company argued:

And further if [copyright] be revoked no bookes at all shoulde be prynted, within [a] shorte tyme, for commonlie the first prynter is at charge for the Author’s paynes, and somme other suche like extraordinarie cost, where an other that will prynt it after hym, com[es] to the Copie gratis, and so maie he sell better cheaper than the first prynter, and then the first prynter shall never [sell] his bookes.

2 A TRANSCRIPT OF THE REGISTERS OF THE COMPANY OF STATIONERS OF LONDON: 1554-1640 A.D. at 805 (Edward Arber ed., 1875).

²³² *Folsom v. Marsh*, 9 F.Cas. 342, 348 (C.C.D. Mass. 1841).

²³³ See, e.g., *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 454–55 (1984) (holding that duplication of entire work for purposes of time shifting was a fair use); *Authors Guild v. Google, Inc.*, 804 F.3d 202, 207 (2nd Cir. 2015) (holding that duplication of millions of copyrighted books to create a

press gave rise to the need for copyright,²³⁴ so too, today, new and ongoing changes in the technology and economics of authorship have shifted and will continue to shift where the line between fair and unfair uses should fall to optimally balance copyright's constitutional purpose. As a result, uses that were once unfair can become fair as the technology and economics of authorship change. Thus, in *Sony Corp. v. Universal Pictures*, the Court held that the mechanical duplication of an entire work for a consumer's later viewing—a use that, in Justice Story's day, represented the paradigmatic example of an unfair use—had, as the technology and the associated markets changed, become fair.²³⁵ For Justice Story, the relevant reproduction and distribution technology was the printing press. At that time, only a competing publisher could make such a use. As a result of the technology available at that time, allowing such a use raised the specter of lower priced substitute copies that would deprive the original author and publisher of any return on their investment. But by the time of *Sony*, technology had changed. With the Betamax, an ordinary consumer could make a copy. Together with the change in the associated markets from a direct charge for access, that is, \$9.95 for a copy of the book, to an indirect charge, that is, watch embedded advertisements, the balance between: (i) the threat to future creative output and (ii) the potential expansion in access to existing creative works had shifted in favor of allowing such copying, at least under some of the circumstances the facts in *Sony* presented²³⁶

Fair use thus allows a court to incorporate flexibility into the Copyright Act. As the technologies, markets, and economics associated with authorship change, courts can adjust the boundaries copyright sets between fair and unfair uses accordingly. Even a use that at one time represented the paradigmatic case of infringement may become fair as technology changes and the associated economics of, and markets for, authorship change, as the *Sony* case itself well illustrates.²³⁷

searchable database that revealed snippets was a fair use), *cert. denied*, 578 U.S. 941 (2016); *Sega Enters. Ltd. v. Accolade, Inc.*, 977 F.2d 1510, 1514 (9th Cir. 1992) (holding that duplicating entire video game programs to identify code needed to ensure compatibility was fair use).

²³⁴ *Sony*, 464 U.S. at 430 (“From its beginning, the law of copyright has developed in response to significant changes in technology. Indeed, it was the invention of a new form of copying equipment—the printing press—that gave rise to the original need for copyright protection.”).

²³⁵ *Id.* at 454–55.

²³⁶ *Id.*

²³⁷ *Id.* (holding that the mechanical reproduction of entire copyrighted television programs for personal time-shifting was fair use).

We should therefore be cautious before enshrining a historical relic, such as the rule requiring a license before making a movie from a book, as the touchstone for drawing the line between fair and unfair use for all time.

When we turn to the film-from-a-novel context specifically, the technology, markets, and economics of such uses have all changed dramatically since 1976. In particular, the shift from the analog creation and distribution technologies of the 1970s to digital has radically changed the economics of, and associated markets for, audio-visual works based upon novels. In the analog era, making a film or audio-visual work for public performance was expensive. Distribution was limited. As a result, only the privileged few could share their creativity with the public. In the digital era, the costs of creation have fallen dramatically, and the avenues for distribution have increased exponentially. Through social media platforms, such as YouTube, Instagram, Twitch, and TikTok, and with an iPhone in their hand, anyone can make and share their audiovisual creativity with the world. As of 2022, on YouTube alone, more than 500 hours of new audiovisual content was added every minute.²³⁸ That is 30,000 hours of new audiovisual content every hour. At first glance, the risk of market failure in the digital era is not that we may have too little original content but that we will have too much.

In terms of the balance copyright strives to achieve, digital technologies have shifted that balance sharply in favor of fair use for two reasons. First, the rise of digital technologies has sharply reduced the cost of producing and distributing original works of authorship. The need for copyright to provide an incentive for such authorship, and as a result, the benefits from copyright's exclusive rights, have fallen correspondingly. Second, the rise of digital technologies has also radically expanded the avenues for building on earlier works. The costs of copyright's exclusive rights have thus risen accordingly.

If we focus on filmmaking specifically, during the analog era, filmmaking exhibited economic characteristics, including high fixed and low marginal costs, that may have led to natural monopoly even in the absence of copyright. In a natural monopoly setting, whether copyright protects broadly against unauthorized film versions of a novel or not, the market itself would only support one such work.

²³⁸ Laura Ceci, *Hours of video uploaded to YouTube every minute as of February 2022*, STATISTA (Apr. 11, 2024), <https://www.statista.com/statistics/259477/hours-of-video-uploaded-to-youtube-every-minute/> [<https://perma.cc/946A-8SRA>].

In the digital era, that is no longer true. Consider the slew of unauthorized but professionally produced *Sherlock Holmes* audio-visual works. After the copyright on the *Sherlock Holmes* stories finally expired,²³⁹ the public received at least three English-language, professionally produced film or television works based upon the novel more or less simultaneously. Robert Downey Jr. starred as the titular character in a pair of movies, *Sherlock Holmes* and *Sherlock Holmes: A Game of Shadows*, released in 2009 and 2011, respectively.²⁴⁰ Benedict Cumberbatch starred as the titular character in four seasons of the BBC series, *Sherlock*, with the first season released in 2010.²⁴¹ Jonny Lee Miller starred as the character in the CBS television series, *Elementary*, that aired for seven seasons, beginning in 2012.²⁴²

It seems self-evident that multiple *Sherlock Holmes* works better promote “the Progress of Science” than does just one.²⁴³ With several to choose from, fans can find the version that matches their preferences more perfectly. True fans can enjoy all three. Copyright should not, after all, seek to achieve creative monopoly—a single creative work controlled by a single creative voice. After all, individual tastes and preferences may vary. So your idea of the perfect song and mine may be quite different. Instead, copyright should expressly encourage creative competition—different authors presenting their own variations on any given theme. If courts continue to place the line between fair and infringing uses in the digital age as they placed it in the analog age, we will have to wait for copyright to expire to enjoy the full benefits of the creative competition that digital technologies enable. Recognizing that the introduction of digital technology has changed the economics

²³⁹ “Between 1887 and 1927, Sir Arthur Conan Doyle wrote four novels and 56 short stories featuring the beloved detective Sherlock Holmes. The copyrights for these works expired in the UK and Canada in 1980, were revived there in 1996, and then expired again in 2000.” Brogan Woodburn, *Sherlock Holmes Copyright: An Overview*, RED POINTS: BLOG (last updated June 8, 2022), <https://www.redpoints.com/blog/sherlock-copyright/> [https://perma.cc/RAY6-R2MM].

²⁴⁰ *SHERLOCK HOLMES* (Warner Bros. Pictures 2009); *SHERLOCK HOLMES: A GAME OF SHADOWS* (Warner Bros. Pictures 2011).

²⁴¹ *Sherlock* (BBC television broadcast July 25, 2010).

²⁴² *Elementary* (CBS television studios Sept. 27, 2012).

²⁴³ For an argument that society may be worse off with three professionally produced *Sherlock Holmes*, see Michael Abramowicz, *A Theory of Copyright’s Derivative Right and Related Doctrines*, 90 MINN. L. REV. 317 (2005). In so arguing, he builds on the prospect theory approach that Edmund Kitch originally set forth in the context of patent law. See Edmund Kitch, *The Nature and Function of the Patent Sys.*, 20 J.L. & ECON. 265, 266 (1977). Others have debunked this approach. See Mark A. Lemley, *Ex Ante versus Ex Post Justifications for Intellectual Property*, 71 U. CHI. L. REV. 129 (2004); John Duffy, *Rethinking the Prospect Theory of Patents*, 71 U. CHI. L. REV. 439 (2004). I will not address it further.

of authorship—and embracing a more vibrant fair use doctrine and adopting a correspondingly narrower scope to the reproduction, derivative work and public performance rights—would allow for more creative competition during a work’s copyright term.

Even if derivative uses were not inevitably natural monopolies in the analog era, derivative uses during the analog era were both fewer and generally more predictable. For example, the predictability that a best-selling novel would be made into a film allowed licensing revenue from that use to become part of the *ex ante* incentives for authors to write best-selling novels. Moreover, in the analog era, each derivative work had to earn sufficient revenue to cover the already high costs of analog distribution. As a result, the transaction costs for licensing derivative use were trivial, relative to the other costs of authoring and distributing a derivative work, and licensing failure were correspondingly unlikely.

But the rise of digital creation and distribution has changed this, too. In the digital era, reuses have become both many and unpredictable. Rather than become an expected part of the *ex ante* incentives, requiring licenses for follow-on uses will more likely create unpredictable and unexpected windfalls. Precisely to the extent that such windfalls are unpredictable and unexpected, they will not serve to encourage authorship of the earlier work. Moreover, in the digital era, a derivative work need not earn much, if any, revenue to make its creation and distribution economically rational. Thus, the risk that the transaction costs of negotiating a license will exceed the gains in trade, and hence cause licensing failure, rise accordingly. Failing to adjust the line between fair and unfair uses accordingly to reflect these differences between the digital and analog eras, makes it less likely that copyright will strike an appropriate balance between earlier and later authors.

Rather than rely on the novel-to-movie copyright rule as a touchstone to expand copyright for other types of works, courts should be re-visiting whether, if tested against a fair balancing of its costs and benefits today, the rule should continue to exist in our new digital world at all. At the very least, it suggests that applying an evidentiary-based, case-by-case balancing of whether a finding of infringement or a finding of fair use would better promote “the Progress of Science,” courts should not use the novel-to-film rule as a model for expanding similar protections elsewhere in copyright.

That is the approach the Court adopted in *Google v. Oracle*, where the Court recognized the need to avoid expanding the film-from-a-novel rule into a general rule for other types of copyrighted works.²⁴⁴ Although the *Google* Court acknowledged the broad derivative work right in the novel-to-film context, it refused to rely on that rule as a touchstone for resolving whether Google's copying was fair or unfair.²⁴⁵ In rejecting Oracle's argument that Google's use had harmed the "potential market for or value of" Java, the Court began its analysis with three facts it believed a jury could find. First, a jury could find that the copyright owner of Java "was poorly positioned to succeed in the mobile phone market."²⁴⁶ Second, a jury could find that the markets in which Java and Android were marketed—desktops and laptops for Java, smart phones for Android—were separate and distinct.²⁴⁷ Third, the jury could find that Google's use of the lines of code from Java to create Android would benefit Java's copyright owner "as it would further expand the network of Java-trained programmers."²⁴⁸

Yet, all these facts are just as true in the novel-to-film context. First, popular authors, such as J.K. Rowling, are poorly positioned, and lack the technical skills and resources, to make their own films based upon their novels. Second, movies and books are separate markets, just as laptops and mobile smartphones are. And third, the release of a film based upon a popular novel increases demand for the novel, by increasing the network of those interested in it and adding to the novel's fanbase.²⁴⁹

²⁴⁴ *Google LLC v. Oracle Am., Inc.*, 141 S. Ct. 1183, 1206 (2021) ("Making a film of an author's book may similarly mean potential or presumed losses to the copyright owner. Those losses normally conflict with copyright's basic objective: providing authors with exclusive rights that will spur creative expression. But a potential loss of revenue is not the whole story. We here must consider not just the amount but also the source of the loss . . . Further, we must take into account the public benefits the copying will likely produce.").

²⁴⁵ *Id.*

²⁴⁶ *Id.*

²⁴⁷ *Id.* at 1207.

²⁴⁸ *Id.*

²⁴⁹ Curiously, in *Kienitz v. Sconnie Nation*, Judge Easterbrook rejected the transformative use rubric on the grounds that it would fail to give proper scope to the derivative work right. 766 F.3d 756, 758 (7th Cir. 2014). Yet, in place of the transformative use rubric, Judge Easterbrook proposed relying on a substitute-complement line to drive the fair use analysis. *Id.* ("We have asked whether the contested use is a complement to the protected work (allowed) rather than a substitute for it (prohibited)."). If courts were to embrace this substitute versus complements approach, then film versions of a novel would generally become a fair use. The available empirical evidence establishes that film versions are generally complements to the novel (i.e., increase sales of the associated novel), rather than substitutes for it (i.e. decrease sales of the associated

Despite these similarities, the *Google* Court refused to extend the broad derivative work right from the novel-to-film context to computer programs. Of course, the Court did not address the real differences between licensing Android and licensing a film. The first difference is that the practice of licensing a film version of a novel has been so long established and is so predictable that the expected licensing fees have become a significant and systematic part of the *ex ante* incentives for authors to write popular novels. In contrast, in *Google v. Oracle*, no such practice was, as yet, established. At the time the original copyright owner, Sun, wrote Java, Sun had no reason to expect that Google would copy 11,500 lines from Java to build Android. Sun had no reason, therefore, to incorporate the expectation of any licensing fees from such a use into its cost-benefit analysis of whether to author and publish the Java computer program at the time that decision was made. That is true as far as it goes. But the Court's ruling not only resolved the dispute between Google and Oracle, it also established a legal rule going forward. In evaluating that legal rule, the more difficult questions to answer are: first, whether, had the Court found infringement in *Google v. Oracle*, such licensing would become the norm, just as licensing novels to be made into films is the norm today; and second, if licensing became the norm for computer programs, would that outcome better promote "the Progress of Science" than a finding of fair use.

Fortunately, the *Google* Court did not need to answer those more difficult questions to determine whether requiring a license or finding fair use was more likely to promote "the Progress of Science" because of the second difference between licensing Android and licensing a film. As previously discussed, requiring a license to prepare a motion picture version of a novel tends to ensure exclusivity for the film in the marketplace. Requiring a license to make such a film thus generates market power. That increases the producer surplus associated with the film. Thus, in the film context, requiring a license rather than finding fair use increases the incentives for both film and underlying novel. That is not true for Android. The revenue for and surplus associated with Android are not the result of a license from Oracle. They are the result of Google's market power and associated network effects. As in the *Goldsmith* case, requiring a license would simply require Google to share some of its surplus with Oracle. Requiring a license would

novel). So, Judge Easterbrook's proposed alternative is just as likely to override the derivative work right as the transformative use rubric he criticized.

thus convert some of the surplus associated with Android into transaction costs. Requiring a license would thus reduce the incentives for authorship accordingly.

In sum, the *Goldsmith* Court's argument that holding Warhol's use to be transformative would frustrate Congress's intent to require a license to make a film from a novel is unpersuasive for two reasons. First, Congress intentionally made the exclusive right to make a film based upon a novel as subject to fair use as it made every other exclusive right. As a result, in an appropriate case, courts will need to decide whether the technology, markets, and economics of film production and distribution have changed sufficiently that fair use should cut back on the derivative work right accordingly. The film-from-a-novel example is not an answer to where the line between infringing and fair uses lies. It is a question waiting for a suitable case for courts to answer. Second, there is no need to revisit the scope of the film-from-a-novel rule in the *Goldsmith* case. The associated markets for the later use are simply different. For a film based upon a copyrighted novel, requiring a license guarantees exclusivity, increases the producer surplus associated with the film, and thus increases incentives for both film and novel. That is not true for *Orange Prince*, and it is not true for Android. Ignoring such material differences only ensures that the Court will misbalance the interests of earlier and later authors and misplace the line between fair and unfair uses.

Just as realism and textualism cannot support the *Goldsmith* Court's reasoning or outcome, neither does purposivism. Congress intended the derivative work right to be "subject to" fair use, just like every other exclusive right.²⁵⁰ Whether making a film from a copyrighted novel is an infringing use and requires a license is not the answer to the proper placement of the line between fair and infringing uses. Even if, at one time for a given technology, such a use represented the paradigmatic case of copyright infringement, time and technologies change. The question is whether those changes suggest that a different placement of the fair use line would better promote "the Progress of Science" today. That leaves the *Goldsmith* Court's final justification: *Campbell* made us do it.²⁵¹ To that justification, we now turn.

²⁵⁰ 17 U.S.C. §§ 106, 107.

²⁵¹ *Andy Warhol Found. for the Visual Arts, Inc. v. Goldsmith*, 598 U.S. 508, 510 (2023).

D. Campbell: Mistaken and Misapplied

In insisting that *Campbell* required its outcome, the *Goldsmith* Court made a mistake common to the writings of first-year law students. It mistook dicta for holding. In particular, the *Goldsmith* Court relied on *Campbell*'s distinction between parody and satire to insist that a new meaning, message, or aesthetic alone is insufficient to make a work transformative for purposes of the first fair use factor.²⁵² But satire was not before the Court in *Campbell*, only parody. As a result, that distinction is unnecessary to the *Campbell* Court's decision. The distinction is dicta.

Because satire was not before the Court, we should not expect the Court to have balanced the equities satire implicates as carefully as it balanced the equities for parody.²⁵³ That is one reason to distrust dicta. There are others.²⁵⁴ But the satire-parody distinction is not just dicta; it is “backhanded” dicta. Whatever the reasons to distrust dicta generally, backhanded dictum is even less trustworthy. Backhanded dictum effectively says, “Sorry, Acuff-Rose you lose here. But if only the use at issue had been satire, you would have won.” Such a statement offers the Court a chance: (i) to make its analysis seem more reasonable; and (ii) offer the losing side something. Moreover, it does so at no cost to the Court—it is in not binding. As a result, through such backhanded dicta, the Court can appear reasonable and offer each side something without any need to find infringement based upon the distinction the Court articulates.

²⁵² *Goldsmith*, 598 U.S. at 510–11 (2023) (“[P]arody has an obvious claim to transformative value . . . [p]arody needs to mimic an original to make its point, and so has some claim to use the creation of its victim’s (or collective victims’) imagination, whereas satire can stand on its own two feet and so requires justification for the very act of borrowing.” (alteration in original) (quoting *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 579, 580–81 (1994)); *id.* at 511–12 (“*Campbell* cannot be read to mean that § 107(1) weighs in favor of any use that adds new expression, meaning, or message . . . The meaning of a secondary work, as reasonably can be perceived, should be considered to the extent necessary to determine whether the purpose of the use is distinct from the original.”)).

²⁵³ See *United States v. Teague*, 953 F.2d 1525, 1536 (11th Cir. 1992) (en banc) (Edmondson, J., concurring) (“[D]icta is inherently unreliable for what a court will do once faced with a question squarely and once its best thoughts, along with briefs and oral argument, are focused on the precise issue.”); Michael Sean Quinn, *Argument and Authority in Common Law Advocacy and Adjudication: An Irreducible Pluralism of Principles*, 74 CHI.-KENT L. REV. 655, 710 (1999).

²⁵⁴ See generally Michael C. Dorf, *Dicta and Article III*, 142 U. PA. L. REV. 1997, 1998 (1994).

Generally, one of the reasons we distrust dicta is that the adversary system will often be less effective at bringing the critical trade-offs to the Court's attention. With backhanded dicta, the adversary system fails entirely. The attorney for 2 Live Crew, Bruce Rogow, was there to defend the interests of his clients, not satirists. If it helped his clients win, he was not only perfectly willing to throw satirists and every other non-parody use under the bus, ethically he was required to do so. And he did.²⁵⁵

In his brief to the Court and at the outset of his oral argument, Rogow adopted a broad view of parody.²⁵⁶ Parody, he argued initially:

can poke fun at the original, or it can poke fun at something else using the original work. There are two aspects of the criticism. One would be criticism of the original work, the other would be criticism of society using the original work as a means of conveying that criticism.²⁵⁷

Yet, as soon as Justice O'Connor challenged his initial position as overbroad and unnecessary to the resolution of the case, Rogow abandoned it:

Justice O'Connor, for this case it is true that the parody in this case only poked fun at the original. And one could limit this case to just those facts and that would be quite fine.²⁵⁸

If testing the pros and cons of a given rule in the fires of the adversary crucible is an essential part of the judicial process, no such testing occurred in *Campbell* with respect to whether parody and satire should receive differing treatment under fair use. As soon as he was challenged on the issue, Rogow made no attempt to explain why satire should also qualify as a transformative use. As he was ethically required to do, he abandoned any attempt to defend satire to increase the likelihood of a fair use holding for his clients.

²⁵⁵ Transcript of Oral Argument at 4–5, *Campbell*, 510 U.S. 569 (No. 92-1292).

²⁵⁶ *Id.*; Brief on the Merits for Petitioner at 15, *Campbell*, 510 U.S. 569 (No. 92-1292). Before the codification of fair use in the Copyright Act of 1976, courts had recognized that fair use encompassed both parody and satire. *See, e.g.*, *Berlin v. E.C. Publ'ns, Inc.*, 329 F.2d 541, 545 (2d Cir. 1964) (“For, as a general proposition, we believe that parody and satire are deserving of substantial freedom—both as entertainment and as a form of social and literary criticism.”).

²⁵⁷ Transcript of Oral Argument at 4, *Campbell*, 510 U.S. 569 (No. 92-1292).

²⁵⁸ *Id.* at 5.

Because 2 Live Crew's use presented the question, the *Campbell* Court could and did decide that a later work that copies from an earlier work in a way that "can reasonably be perceived" as parody is transformative.²⁵⁹ But 2 Live Crew's use was not satire.²⁶⁰ As their attorney quickly conceded at oral argument, 2 Live Crew's song did not use what was copied to comment on or criticize some aspect of society more generally. As a result, the *Campbell* Court had no power under Article III to resolve the question of whether a satiric use was transformative and hence, should weigh in favor of or against fair use under the first fair use factor.²⁶¹

The *Goldsmith* Court could properly rely on *Campbell* for its holding that parody, because it comments on the earlier work from which it borrows, is transformative. The *Goldsmith* Court could also treat *Campbell*'s dicta regarding satire not being transformative as persuasive and follow it. But to treat that distinction as binding was and is a mistake.²⁶² As I have explained elsewhere, courts are structurally ill-suited to law-making through the common law process.²⁶³ Adversary testing of the precise question at issue is one of the judiciary's very few mechanisms that helps ensure that the common law process works at all.²⁶⁴ The *Goldsmith* Court should not have been so quick to abandon that mechanism by pretending that the *Campbell* Court had resolved an issue not before it.

Yet, even if we overlook the holding-dicta distinction, the *Goldsmith* Court failed to follow the very rule from *Campbell* it purports to retain: in evaluating the purpose of the later work, the test is whether criticism or commentary "can

²⁵⁹ *Campbell*, 510 U.S. at 583.

²⁶⁰ And in truth, it was not parody either. Campbell and his bandmates were just more amenable than Warhol to speak the words their attorneys suggested. Surely, that should not be the test for whether a use is fair.

²⁶¹ See Dorf, *supra* note 254.

²⁶² Andy Warhol Found. for the Visual Arts, Inc. v. Goldsmith, 598 U.S. 508, 542–43 (2023).

²⁶³ See Glynn S. Lunney, Jr., *Trademark's Judicial De-Evolution: Why Courts Get Trademark Cases Wrong Repeatedly*, 106 CALIF. L. REV. 1195, 1245 (2018) (noting that "Courts can rule only on the cases that come before them. And while courts have some limited ability to gather information independently, they rely for the most part on the information that the parties choose to provide them.").

²⁶⁴ For an example of a court led astray by dicta, see *John Wiley & Sons, Inc. v. Kirtsaeng*, 654 F.3d 210, 218, 221–22 (2d Cir. 2011) (following dicta from the Court's decision in *Quality King Distribs., Inc. v. L'Anza Rsch. Int'l*, 523 U.S. 135 (1998), to hold that the first sale doctrine did not apply to a copy lawfully made abroad), *rev'd*, 568 U.S. 519 (2013) (rejecting its earlier dicta when confronted with the precise issue and holding that the first sale doctrine does apply to a copy lawfully made abroad).

reasonably be perceived.”²⁶⁵ As the Goldsmith Court expressly held, Warhol’s subjective intent does not determine whether *Orange Prince* had a critical purpose.²⁶⁶ Instead, whether a critical purpose is present must be determined by an objective examination of the two works.²⁶⁷

Applying that test to *Orange Prince*, its criticism of and commentary on Goldsmith’s photo is immediately apparent. *Orange Prince* re-frames and re-colors Goldsmith’s photo.²⁶⁸ In doing so, *Orange Prince* proclaims loudly and in unmistakable terms that Goldsmith’s photo is “Boring!”²⁶⁹ By re-framing and re-coloring the Goldsmith photo,²⁷⁰ *Orange Prince* exclaims: “A black-and-white photo exhibiting the garden variety creativity of a high school yearbook photo is no way to portray a pop icon. Here’s how you portray a pop icon.” The criticism of and commentary on the Goldsmith photo can readily be perceived by the differing creative choices Warhol made, just as my students can readily perceive the criticism and commentary I am making when I provide a model answer. All you have to do is look at what is different to see what you did wrong. Of course, both *Orange Prince* and Goldsmith’s photos still depict Prince. But Goldsmith has no copyright over Prince himself. Prince’s features are his own. They are not original to Goldsmith. By making different creative choices on the issues each of them respectively controls, while still portraying Prince, *Orange Prince* can reasonably be perceived to criticize, even ridicule, Goldsmith’s photo.

If the *Goldsmith* Court could not see the changes Warhol made to Goldsmith’s creative choices as both critical of and commenting on Goldsmith’s “white-bread original,”²⁷¹ it was not really looking.

²⁶⁵ The *Goldsmith* Court quotes the “can reasonably be perceived” standard only in the context of discussing the findings of the district court. See *Goldsmith*, 598 U.S. at 512.

²⁶⁶ *Id.* at 544 (“Nor does the subjective intent of the user (or the subjective interpretation of a court) determine the purpose of the use.”).

²⁶⁷ *Id.* at 512, 545, 549–50.

²⁶⁸ *Id.* at 522.

²⁶⁹ As the *Goldsmith* Court acknowledges, all of the magazine covers commemorating Prince’s death used more dramatic poses of Prince; none used Goldsmith’s black-and-white photograph. *Id.* at 521.

²⁷⁰ Curiously, in its opinion, the *Goldsmith* Court asserts: “Orange Prince crops, flattens, traces, and colors the photo but otherwise does not alter it.” *Id.* at 522. The Court appears unaware that by cropping, flattening, and coloring Goldsmith’s photo, Warhol had removed all traces of Goldsmith’s originality in her photo in creating *Orange Prince*.

²⁷¹ *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 582 (1994) (quoting *Acuff-Rose Music, Inc. v. Campbell*, 972 F.2d 1429, 1442 (6th Cir. 1992) (Nelson, J., dissenting), *rev’d*, 510 U.S. 569 (1994)).

No more than realism, textualism, or purposivism could, deference to its own precedent cannot support the *Goldsmith* Court’s reasoning or outcome.

III

FAIR USE: THE PATH FORWARD

That leaves us with a question, however: Where does fair use go from here? Whether the *Goldsmith* decision is right or wrong in its analysis—indeed, even if the Court just made up its approach—the *Goldsmith* decision remains the law. But it is the law only in a particular sense. Judicial power is always limited. Sometimes, courts acknowledge the limited nature of their power. For example, in *Google v. Oracle*, Justice Breyer expressly cautioned that the Court was deciding only the case before it.²⁷² But such an express statement is unnecessary. That limitation is inherent in judicial power. Courts *always* resolve *only* the parties’ dispute before them. Nothing more. Courts have neither the competence nor the authority to act as a legislature.²⁷³ Thus, not everything the *Goldsmith* Court said is binding law on other parties or in other cases going forward.

Moreover, even I, as troubled as I am by much of what the *Goldsmith* Court did, have to concede that the *Goldsmith* majority was unmistakably right on one issue: The path forward lies in the statutory language and the Court’s fair use decisions. Both statutory language and the Court’s previous fair use cases provide a single guide for fair use going forward: balance. Not the stilted, constrained balance suggested by the *Goldsmith* Court—that is, balancing any transformative purpose or character exclusively against commerciality under the first factor. Instead, a broad balancing of the competing interests at stake in the placement of the infringement-fair use line, including balancing the interests of earlier authors against later authors, of authors against distributors, of authors and distributors against consumers. In short, the statutory language, the legislative history, and the Court’s own precedent all require a broad inquiry into whether finding fair use or infringement in a given case will better promote the “Progress of Science” in the circumstances presented under all the statutory factors and potentially additional considerations as well.

²⁷² See *Google LLC v. Oracle Am., Inc.*, 141 S. Ct. 1183, 1206 (2021) (“We do not say that these questions are always relevant to the application of fair use, not even in the world of computer programs.”).

²⁷³ See *William W. Bierce, Ltd. v. Hutchins*, 205 U.S. 340, 347 (1907) (“[C]ourts are not legislatures and are not at liberty to invent and apply specific regulations according to their notions of convenience.”).

The statutory language requires courts to balance what the public has to gain and what it has to lose in terms of “the Progress of Science” from a court’s placement of the line between fair and infringing uses. The statutory language does not define an exclusive set of factors to be mechanically understood and applied. As previously discussed, the statutory language defining fair use is repeatedly open-ended. First, in the preamble, it sets forth the types of uses and different purposes that might qualify as fair use.²⁷⁴ In setting forth these lists, Congress used the word “including” and the phrase “such as” to expressly make both inclusive and open-ended, allowing for courts to add to each list when they see fit.²⁷⁵ Second, Congress stated that a fair use analysis “shall consider” the four fair use factors listed.²⁷⁶ While the word “shall” requires a court to consider the four statutory factors, the phrase “shall consider” allows the court to consider additional factors in its fair use analysis as well. Third, and finally, in defining the first fair use factor, the statutory language provides two examples of the sort of purpose and character that might weigh for or against fair use. But again, Congress preceded the two examples with open-ended language—“including.”²⁷⁷ That open-ended language again leaves the Court free to add to the statutory examples even within a single fair use factor.

Similarly, and as previously discussed, while the statute states four of the factors a court “shall consider,” the statute does not define those factors or explain how they are to be weighed against one another. For example, the first factor directs a court to consider the “purpose and character of the use.” Yet, the statute does not provide a comprehensive definition of either purpose or character.²⁷⁸ In setting forth the first factor, the statute does offer two exemplars of a use’s “purpose and character”: “whether such use is of commercial nature or is for nonprofit educational purposes.”²⁷⁹ The lack of a definition of these words, along with the

²⁷⁴ 17 U.S.C. § 107 (“[T]he fair use of a copyrighted work, *including* such use by reproduction in copies or phonorecords or by any other means specified by that section, for purposes *such as* criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright.” (emphasis added)).

²⁷⁵ *Id.*

²⁷⁶ *Id.* (“In determining whether the use made of a work in any particular case is a fair use the factors to be considered shall include” (emphasis added)).

²⁷⁷ 17 U.S.C. § 107(1) (directing courts to consider “the purpose and character of the use, *including* whether such use is of a commercial nature or is for nonprofit educational purposes” (emphasis added)).

²⁷⁸ *See id.*

²⁷⁹ *Id.*

open-ended nature of the examples given, leaves courts considerable leeway to define “purpose and character” as appropriate to balance what the public has to gain and what it has to lose under the specific circumstances presented. Moreover, the statute provides no guidance on how heavily any given “purpose and character” shall weigh in the overall analysis.

The statute defines the second factor as “the nature of the copyrighted work,” and the third as “the amount and substantiality of the portion used in relation to the copyrighted work as a whole.”²⁸⁰ But again, the statute gives no indication of how heavily any given nature or amount shall weigh for or against fair use. The statute expressly leaves those issues for a court to resolve on a case-by-case basis under the circumstances presented.

The only portions of the statute that are clear and unambiguous with respect to fair use are those portions defining the relationship between fair use and the exclusive rights. As discussed, in section 106, the statute expressly states that the exclusive rights are “subject to” the fair use doctrine.²⁸¹ In section 107, the statute expressly states that “the fair use of a copyrighted work ... is not an infringement of copyright,” the exclusive rights set forth in sections 106 and 106A “notwithstanding.”²⁸² This language expressly subordinates the exclusive rights to the fair use privilege. The language also provides that fair use expressly carves out uses that would otherwise fall within the literal scope of the exclusive rights and defines them as non-infringing. But as to whether fair use should be the exception or the rule, or something in between, the statute does not expressly say. Precisely how to balance the exclusive rights and fair use so as to appropriately balance the competing interests at stake, the statute leaves to the courts.

If we look to the legislative history accompanying the enactment of the Copyright Act of 1976 and the statutory codification of fair use, we find the same story. Congress did not intend for the statutory codification to “freeze” the common law development of fair use.²⁸³ Nor did it intend to reduce the

²⁸⁰ 17 U.S.C. § 107(2), (3).

²⁸¹ 17 U.S.C. § 106 (“Subject to sections 107 through 122, the owner of copyright under this title has the exclusive rights to do and to authorize any of the following ...”).

²⁸² 17 U.S.C. § 107.

²⁸³ As the House Report accompanying the enactment of the Copyright Act of 1976 states: “The bill endorses the purpose and general scope of the judicial doctrine of fair use, but there is no disposition to

complexities of balancing the interests at stake to a mechanical checklist.²⁸⁴ Instead, Congress provided “a very broad statutory explanation of what fair use is and some of the criteria applicable to it.”²⁸⁵ Otherwise, Congress intended to leave “courts . . . free to adapt the doctrine to particular situations on a case-by-case basis.”²⁸⁶ As for whether fair use should be the rule or the exception, or something in between, the legislative history suggests something in between. The House Report accompanying the codification of fair use describes it as “an equitable rule of reason.”²⁸⁷ Describing fair use as a “rule of reason” suggests courts need to balance whether a finding of fair use or infringement for the use at issue will better promote “the Progress of Science,” just as they balance what the public has to gain and what the public has to lose in terms of competition in antitrust cases where the “rule of reason” phrase originated.²⁸⁸

freeze the doctrine in the statute, especially during a period of rapid technological change.”H.R. REP. NO. 94-1476, at 66 (1976), *as reprinted in* 1976 U.S.C.C.A.N. 5659, 5680.

²⁸⁴ The House Report accompanying the enactment of the Copyright Act of 1976 expressly defines fair use as “an equitable rule of reason.” *Id.* at 65. The Report further notes that the four statutory factors “provide some [gau]ge for balancing the equities.” *Id.* The Report continues:

Beyond a very broad statutory explanation of what fair use is and some of the criteria applicable to it, the courts must be free to adapt the doctrine to particular situations on a case-by-case basis. Section 107 is intended to restate the present judicial doctrine of fair use, not to change, narrow, or enlarge it in any way.

Id. at 66; *see also* ALAN LATMAN, FAIR USE OF COPYRIGHTED WORKS(1958), *reprinted as Study No. 14 in Copyright Law Revision Stud. Nos. 14–16, prepared for the Subcomm. on Patents, Trademarks, and Copyrights of the S. Comm. on the Judiciary*, 86th Cong., 2d Sess., at 5 (1960) (describing fair use as “a rule of reason” that balances the interests of the copyright owner in an earlier work and the interests of a later author who borrows from the earlier work to create a new one).

²⁸⁵ *See* H.R. REP. NO. 94-1476, at 66.

²⁸⁶ *Id.*; *see also* *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 577 (1994) (“The task is not to be simplified with bright-line rules, for the statute, like the doctrine it recognizes, calls for case-by-case analysis.”).

²⁸⁷ *See* H.R. REP. NO. 94-1476, at 65 (“Although the courts have considered and ruled upon the fair use doctrine over and over again, no real definition of the concept has ever emerged. Indeed, since the doctrine is an equitable rule of reason, no generally applicable definition is possible, and each case raising the question must be decided on its own facts.”).

²⁸⁸ *See, e.g.*, *Nat’l Soc’y Pro. Eng’rs v. United States*, 435 U.S. 679, 691 (1978) (“From Mr. Justice Brandeis’ opinion for the Court in *Chicago Board of Trade*, to the Court opinion written by Mr. Justice Powell in *Continental T. V., Inc.*, the Court has adhered to the position that the inquiry mandated by the Rule of Reason is whether the challenged agreement is one that promotes competition or one that suppresses competition.”).

When we look to the Court's previous decisions on fair use, balance is precisely what the Court has done. It has treated the statutory codification not as freezing the doctrine in place, nor as setting forth a mechanically-applied checklist, but as a living common law doctrine by which the Court may balance whether, in terms of more and better original authorship and its wider dissemination, the public has more to gain by allowing or prohibiting the use at issue. In its first case applying the newly codified fair use privilege, the Court in *Sony* found that time-shifting constituted fair use.²⁸⁹ Time-shifting is not listed in the preamble of section 107, and indeed, is quite different from the examples the preamble lists.²⁹⁰ Nevertheless, the Court found the use fair.²⁹¹ On balance, the public gained more from the increased access to existing original works that the Betamax and time-shifting enabled, than it might lose from the merely speculative losses in the "potential market for or value of" the copyrighted works at issue.²⁹² In the second case, *Harper & Row Publishers v. Nation Enterprises*, the Court found the Nation's scooping of excerpts from Gerald Ford's then unpublished biography to be an unfair use.²⁹³ The defendant's use at issue was one of the examples listed in the preamble of section 107—news reporting.²⁹⁴ But the Court, on balance, found that despite the news-reporting purpose, the public had more to lose from the harm to the actual market for the biography than it had to gain from the Nation's use.²⁹⁵ In striking that balance, the Court was both realistic and flexible. In terms of realism, the infringement finding in the case did not deprive the public of the Nation's thoughts on the Nixon pardon. It simply required the Nation to wait a few more weeks for the biography and the officially licensed excerpt in *Time* magazine to

²⁸⁹ See *Sony Corp. v. Universal City Studios, Inc.*, 464 U.S. 417, 454–55 (1984) (holding that duplication of entire work for purposes of time shifting was a fair use).

²⁹⁰ 17 U.S.C. § 107 (“[T]he fair use of a copyrighted work, including such use by reproduction in copies or phonorecords or by any other means specified by that section, for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright.”).

²⁹¹ *Sony*, 464 U.S. at 454–55.

²⁹² *Id.* at 450, 454–55.

²⁹³ *Harper & Row Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 540 (1985).

²⁹⁴ § 107 (“[T]he fair use of a copyrighted work, including such use by reproduction in copies or phonorecords or by any other means specified by that section, for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright.” (emphasis added)).

²⁹⁵ See *Harper & Row*, 471 U.S. at 568–69.

be published before it published its own essay.²⁹⁶ In terms of flexibility, the Court added a consideration to the second fair use factor, whether the plaintiff's work was unpublished or published,²⁹⁷ and rewrote the third fair use factor to focus on the "amount and substantiality of the portion used" in relation to the defendant's work,²⁹⁸ rather than in relation to the plaintiff's work, as the statute provides.²⁹⁹

Then, in *Campbell*, as previously discussed, the Court added transformative use to the first fair use factor.³⁰⁰ Holding 2 Live Crew's song to be transformative meant the public had something to gain, that is, a new song, from allowing the use. But that was not the end of the issue. The *Campbell* Court did not hold that the use was fair because it was transformative. Instead, it remanded to allow the defendants to present evidence on whether 2 Live Crew's version interfered with the potential market for a licensed derivative.³⁰¹ If it did, presumably the trial court would need to balance the transformative character of the song against that harm to the potential market for Orbison's original.

Although some may want to confine its relevance to computer programs, as if Congress drafted a different derivative work right or fair use privilege for computer programs specifically, the Court's decision in *Google v. Oracle* reflects the same balancing. Google's copying gave the public a new, original work of authorship: Android.³⁰² Finding that copying to be fair use, rather than an infringing derivative work, ensured the public broad and ready access to Android. And it did so without undue harm to "the potential market for or value of" Java.³⁰³

The statutory text, the legislative history, and the Court's own decisions all point to a single unifying guide to resolving fair use cases: balance. All three suggest the need for fair use to balance, flexibly and realistically, what the public has to gain and what it has to lose in terms of the "Progress of Science" from an infringement or fair use holding in the circumstances presented. Only through such

²⁹⁶ *See id.* at 562.

²⁹⁷ *Id.* at 563–64.

²⁹⁸ *See id.* at 565–66.

²⁹⁹ 17 U.S.C. § 107(3) (requiring a court to consider as the third fair use factor "the amount and substantiality of the portion used in relation to the copyrighted work as a whole").

³⁰⁰ *See Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 579 (1994).

³⁰¹ *Id.* at 592–94.

³⁰² *Google LLC v. Oracle Am., Inc.*, 141 S. Ct. 1183, 1203 (2021).

³⁰³ *Id.* at 1208.

a balance can a court determine whether a fair use or infringement outcome will better promote “the Progress of Science” going forward.

Yet, if balance is the key, that still leaves the question of how to calibrate that balance. Congress has the authority to enact copyright for a single purpose: “to promote the Progress of Science.” The Court has defined that purpose to include two legitimate ends: (i) increasing creative output; and (ii) increasing its dissemination.³⁰⁴ As a result, if a court could know, before it made its decision, whether fair use or infringement would lead, going forward, to: (i) more or better original works; and/or (ii) their broader dissemination, then striking the appropriate balance between fair use and infringement would simply require the court to rule accordingly. In such a case, that the use at issue fell squarely within one of the exclusive rights, as the copying in *Sony* did, is not a reason to reject fair use. It is the reason fair use applies.

Yet, in practice, the issue is not quite so simple. Courts, like the rest of us, lack perfect information. That may explain why Justice Story, rather than having set forth the relevant balance directly, instead set forth a number of proxies. In the absence of perfect information regarding whether fair use or infringement will better promote the Progress of Science going forward, looking to factors such as “the nature and objects of the selections made, the quantity and value of the materials used, and the degree in which the use may prejudice the sale, or diminish the profits, or supersede the objects, of the original work,”³⁰⁵ may serve as useful proxies that cast light on whether “the Progress of Science” is better served by allowing or prohibiting the use at issue.

For me, the *Goldsmith* Court is best read as embracing an additional proxy. As the Court noted, Condé Nast paid a licensing fee for the initial use.³⁰⁶ Later, in responding to the dissent’s concerns, the Court insisted that “[i]t will not impoverish our world to require [the Andy Warhol Foundation] to pay Goldsmith a fraction of the proceeds from its reuse of her copyrighted work.”³⁰⁷ Taken together, these statements suggest an inverse principle to Wendy Gordon’s market failure

³⁰⁴ See *Harper & Row Publishers, Inc. v. Nation Enterprises*, 471 U.S. 539, 558 (1985).

³⁰⁵ *Folsom v. Marsh*, 9 F. Cas. 342, 348 (C.C.D. Mass. 1841).

³⁰⁶ *Andy Warhol Found. for the Visual Arts, Inc. v. Goldsmith*, 598 U.S. 508, 517 (2023).

³⁰⁷ *Id.* at 549.

approach to fair use.³⁰⁸ Specifically, these statements suggest that, in the absence of more perfect information and at least for commercial uses, where a licensing market already exists and licenses are routinely obtained for the use at issue, a court should tend to find infringement, rather than fair use. Indeed, the facts in *Goldsmith* go beyond a market situation where licenses are routinely obtained. In *Goldsmith*, it is not just that such uses could be, and in theory would be, easily licensed. The previous use of the Warhol *Prince* series for an identical commercial use was licensed.³⁰⁹

In short, we should read the Court's decision as a court decision. In recent decades, the Court has decided fewer and fewer cases.³¹⁰ In response, academics, lawyers, and judges have sought more meaning in the fewer decisions the Court has given us. Every line is carefully parsed. Every sentence becomes its own holding—true and valid not just on the particular facts before the Court, but generally for all facts and for all time. This is unfortunate. For reasons that I have explained elsewhere, courts work best when their dispute resolution function is primary and their lawmaking function secondary or incidental. The more closely we tie a court's decisions to the precise facts before the court, the more the decision makes sense. The less closely, the less sense. The Court's authority in *Goldsmith* is to resolve the dispute before the Court, not to make broad proclamations about the meaning of fair use going forward. When we read the Court's definition of transformative character and see the balance the Court articulated, we must recognize that the Court's analysis of those issues is inevitably colored by the facts before it. On those facts, the first and nearly identical commercial use of the Warhol's *Prince* series was licensed; yet no attempt to license the second such use was made. This "failure to license a previously licensed use" matters—not just for the overall resolution of the case, but for understanding each and every aspect of the Court's decision, including the Court's interpretation of transformative character. The use of *Orange Prince* on a magazine cover commemorating the life of Prince

³⁰⁸ See generally Wendy J. Gordon, *Fair Use as Market Failure: A Structural and Economic Analysis of the Betamax Case and Its Predecessors*, 82 COLUM. L. REV. 1600 (1982). In some of her later work, Professor Gordon has tried to explain how her initial position has been misunderstood and become a caricature of the position she articulated. See Wendy J. Gordon, *Excuse and Justification in the Law of Fair Use: Transaction Costs Have Always Been Only Part of the Story*, 50 J. COPYRIGHT SOC'Y U.S.A. 149, 150 n.3, 159–60 (2003).

³⁰⁹ *Andy Warhol Found. for the Visual Arts, Inc. v. Goldsmith*, 598 U.S. 508, 515 (2023).

³¹⁰ Ryan J. Owens & David A. Simon, *Explaining the Supreme Court's Shrinking Docket*, 54 WM. & MARY L. REV. 1219, 1225–26 (2012).

was not transformative for the reasons the Court articulated in defining the nature of transformative character, but also because the identical use has previously been licensed and no attempt was made to license the second such use. If we try to rely on the Court's language and reasoning outside of the specific factual context in which *Goldsmith* arose, we risk missing the point of the decision.

We see support for the use of this “failure to license a previously licensed use” principle as a fair use proxy in the Court's resolution of the fair use claim in its 1990 *Stewart v. Abend* decision.³¹¹ In that case, Jimmy Stewart and Alfred Hitchcock had set up a film production company, Patron, Inc., and obtained a license to make a film based upon a copyrighted short story, “It Had to Be Murder.”³¹² Under the license, Patron made and publicly exhibited the film *Rear Window*.³¹³ Because of the special rules for vesting of the renewal term under the 1909 Copyright Act,³¹⁴ that license expired at the end of the primary copyright term for the short story, sometime in the late 1960s.³¹⁵ The film was nonetheless broadcast on the ABC television network in 1971.³¹⁶ In the ensuing lawsuit, the principal issue was whether the creator of a derivative work that was properly licensed at the time it was created, as with *Rear Window*, could continue exploiting the derivative work during the renewal term after the license had expired.³¹⁷ The Court held that they could not.³¹⁸ As an alternative, the defendants argued that they could broadcast their film under the fair use privilege.³¹⁹ In rejecting that argument, the *Stewart* Court relied primarily on *Sony*'s presumption that “every [unauthorized] commercial use of copyrighted material is presumptively an unfair exploitation of the monopoly privilege that belongs to the owner of the copyright.”³²⁰

³¹¹ See *Stewart v. Abend*, 495 U.S. 207, 236–38 (1990).

³¹² *Id.* at 212.

³¹³ *Id.*

³¹⁴ Cornell Woolrich, the author of the short story, had granted a license that covered both the initial 28-year term (the primary term) and the 28-year renewal term that the 1909 Copyright Act established. However, under the 1909 Act, such a license was effective only if Woolrich survived until the start of the renewal term. As it happened, Woolrich died in 1968 before the renewal term vested. *Id.* As a result, Woolrich's license expired at the end of the primary term for the short story.

³¹⁵ *Id.* at 212.

³¹⁶ *Id.*

³¹⁷ *Id.* at 211.

³¹⁸ *Id.* at 235–36.

³¹⁹ *Id.* at 236.

³²⁰ *Id.* at 237.

But even without *Sony's* presumption, requiring a license to make or publicly perform a motion picture version of a copyrighted short story makes more sense, at least in the absence of perfect information, than a fair use determination. The licensing of such uses is not merely possible; in theory, it already occurs routinely. Indeed, as in *Goldsmith*, such a use is not just easy to license in theory, the actual defendants in the case had licensed such use when they previously made it.³²¹ It may well be that with perfect information, a court could discern that requiring licenses in this situation does not, on balance, better promote “the Progress of Science” than does a fair use result. In the real world, however, courts do not have perfect information. With the limited information available as to whether such a license will or will not better promote “the Progress of Science,” leaving a working market in place is probably the better bet.

In the introduction, I suggested that reasonable minds can differ as to whether the Foundation's use should be fair or infringing. For me, this is precisely the argument by which I can see holding Warhol's use unfair. Condé Nast obtained a license for the first use of Warhol's *Purple Prince*. There seemed to be a practical and working licensing market in place. It may be that with perfect information, a court could see that fair use would better promote “the Progress of Science” than the Court's infringement outcome. But with the information available, it is plausibly better to reinforce the licensing market in place. Thus, going forward, I would read the *Goldsmith* decision as holding that where the use at issue is commercial and there is an established licensing market, and particularly where the defendant has licensed the identical use previously, then a court should tend to find infringement rather than fair use.

The only consideration that gives me pause in both *Stewart* and *Goldsmith* are the heightened risks of licensing failure when the parties move from an *ex ante* to an *ex post* licensing negotiation. In these markets, *ex ante* bargains, where neither side yet knows the value of the licensed work or use, are routinely stuck. Uncertainty over whether the short story will actually be made into a film, for example, or whether the film will be a hit or a dud, keep royalty and other demands reasonable. When the size of the licensed pie, and indeed, the question of whether there will even be any licensed pie, remain unknown, both sides have an incentive to cooperate to ensure that there is a licensed pie and to maximize its size. In addition,

³²¹ Andy Warhol Found. for the Visual Arts, Inc. v. Goldsmith, 598 U.S. 508, 515 (2023).

when *ex ante*, neither side is locked into bargaining with the other. If a given short story author makes royalty or other demands that are out of line with market norms, for example, the film production company can turn to other authors. The same is true on the other side. If the film production company offers an unreasonably low royalty or other terms inconsistent with market norms, the short story author can shop around.

When we move from *ex ante* to *ex post* licensing, however, the framework for negotiations changes. Now, each side is locked into negotiating with the other. The value of the licensed work has also been revealed. A game of chicken or bilateral monopoly hold-up may ensue as the would-be licensor and the would-be licensee each try to maximize their respective share of the now known and baked pie. The negotiations switch from cooperative, trying to maximize the size of an unknown and not-yet-baked pie, to antagonistic, trying to maximize my share of an existing pie. Even if licensing is routine in a market *ex ante*, courts should not too readily assume that licensing will be equally routine in the same market *ex post*. Moreover, when the two parties are forced to negotiate with each other in the *ex post* market, they do so in the shadow of the law—with the likely legal outcome if the parties were to litigate setting boundaries on the licensing negotiations. In the *ex post* context, where the alternative is litigation, each party will agree to a license only if they expect to do, at least, as well from the license as they expect they could do litigating. Unfortunately, the dual threats of statutory damages and injunctive relief may unfairly bias the *ex post* licensing negotiations in favor of the licensor. Holding the possibility of a fair use resolution over the parties can help re-balance the licensing negotiations in this context and encourage both sides to be reasonable.³²²

Reading *Goldsmith* as turning on the ease of licensing also helps us understand why the *Goldsmith* Court distinguished *Campbell*. In *Campbell*, 2 Live Crew had actively sought a license before the litigation, but the copyright owner refused. In refusing, the copyright owner specifically stated: “[W]e cannot permit

³²² In *Goldsmith* itself, the Court noted that Goldsmith herself waived the broader claims of infringement and the multi-millions in damages she had sought to ensure a fair use outcome. 598 U.S. 508, 534 n.9 (2023).

the parody of ‘Oh, Pretty Woman.’”³²³ As the *Campbell* Court noted, “‘People ask . . . for criticism, but they only want praise.’”³²⁴

Campbell represents the other side of relying on licensing as a proxy for the balance fair use strives to establish—one that Wendy Gordon originally suggested: Where we expect the licensing market to fail, a court should tend to find fair use, rather than infringement.³²⁵ Licensing failure risks barring the defendant’s use directly. When licensing failure occurs, the public does not receive the benefit of the defendant’s use (because it does not occur). The defendant does not receive any revenue (because the defendant’s use does not occur). *And* the plaintiff does not receive any additional licensing revenue or attribution from the defendant’s use (again, because it does not occur). That’s a lose-lose-lose proposition. If there is good reason to believe that the licensing market will fail, allowing a use that directly promotes “the Progress of Science” – whether because the use at issue gives us a new original work or because the use at issue expands access to existing works—is the better choice.

Moreover, for some uses, requiring a license may distort rather than bar the use at issue. If the point of a digital database is to house a complete and comprehensive historical record of audio-visual works, requiring the permission of the copyright owner, as a panel of the Second Circuit did in *TVEyes*,³²⁶ holds an accurate historical record hostage to the whims of each copyright owner. A copyright owner may choose not to license those clips that portray them, with the benefit of hindsight, in an unflattering manner.³²⁷ Requiring a license may distort what is included in such a digital archive, just as requiring a license for a film or book review may distort what is supposed to be a neutral or objective review. In addition, the public may be better served by competing comprehensive archives, as we have had historically with libraries, rather than siloed archives, such as one for CNN, one for Fox, and one for MSNBC. Thus, even where licensing is practicable,

³²³ *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 572–73 (1994).

³²⁴ *Id.* at 592 (quoting W. SOMERSET MAUGHAM, *OF HUMAN BONDAGE* 241 (Penguin ed., 1992)).

³²⁵ See Gordon, *supra* note 308.

³²⁶ *Fox News Networks, LLC. v. TVEyes, Inc.*, 883 F.3d 169, 182 (2d Cir. 2018) (finding that the copying of television programs to create a searchable database was somewhat transformative but nonetheless unfair), *cert. denied*, 139 S. Ct. 595 (2018).

³²⁷ See *Fox News Networks, LLC. v. TVEyes, Inc.*, 43 F. Supp. 3d 379, 387 (S.D.N.Y. 2014) (“Fox News licensees must covenant that they will not show the clips in a way that is derogatory or critical of Fox News.”), *rev’d*, 883 F.3d 169 (2d Cir.), *cert. denied*, 139 S. Ct. 595 (2018).

courts should consider whether imposing a licensing requirement will distort what society receives, whether what society receives is an audiovisual archive, a movie or book review, or something else.

At the same time, courts must be cautious and not assume licensing failure is inevitable too readily. Even where the cost of individually licensing each use appears impractical, class action litigation and other collective resolution mechanisms may make seemingly impractical licensing practical. Given a choice between leaving money on the table and being creative, potential licensors and licensees in copyright markets can be creative. They can sometimes find ways to overcome even seemingly insurmountable difficulties to license uses.³²⁸

Nevertheless, at least as a first cut approximation, whether licensing a defendant's use is likely to prove trivially easy or frustratingly hard can provide a helpful guide. In the absence of perfect information as to whether fair use or infringement will better promote "the Progress of Science," the ease and certainty of obtaining a license can provide a useful proxy for courts trying to resolve a fair use case. In cases involving commercial use where a successful license negotiation is almost certain and will not distort what society receives, courts should tend to find infringement. This is particularly true where an identical previous use by the same party had been licensed. On the other hand, in cases involving commercial use, where a successful license negotiation is unlikely or will distort the use at issue, courts should tend to find fair use.

When a case falls somewhere in between these two ends of the licensing success-licensing failure spectrum, such as in *Google v. Oracle*, where both parties negotiated in good faith but were unable to agree to licensing terms,³²⁹ then a court should balance what the public has to gain and what it has to lose in terms of copyright's constitutional objective from allowing or prohibiting the use at issue.

³²⁸ Although ultimately rejected by the court, the attempted settlement in the Google books case provides one such example.

³²⁹ *Google LLC v. Oracle Am., Inc.*, 141 S. Ct. 1183, 1212 (2021) (Thomas, J., dissenting) (noting that "[a]t least four times between 2005 and 2006, the two companies attempted to negotiate a license, but they were unsuccessful").

CONCLUSION

To achieve its constitutional purpose, copyright requires balance. Congress elevated fair use from common law exception to statutory privilege to help achieve that balance. In codifying fair use, Congress provided some general guidelines, but largely left it to courts to apply those guidelines and to develop additional guides, as necessary, to determine whether, in any given case, a finding of fair use or infringement would better advance copyright's constitutional purpose.³³⁰ Until *Goldsmith*, the Court recognized that making this determination required not a mechanical checklist, but a realistic balancing of whether allowing or prohibiting the use at issue is likely to better promote "the Progress of Science" going forward.

To give fair use the role Congress intended it to play in promoting that purpose, courts should narrowly read *Goldsmith* to hold that where the use at issue is commercial and there is an established licensing market for the use at issue, a court should tend to find infringement rather than fair use. In the absence of perfect information as to whether a finding of fair use or infringement will better promote "the Progress of Science" going forward, reinforcing an existing and well-functioning licensing market is the better bet. Particularly where an identical commercial use had previously been licensed, a certainty of licensing success in this setting provides a workable but inverse proxy to Gordon's market failure approach for resolving fair use cases.

Courts should be careful not to read more into the *Goldsmith* decision than Article III authorized the Court to decide. Even where the Court's language and reasoning seems to apply, the further divorced a district or circuit court's application of *Goldsmith* is from the specific facts of the *Goldsmith* case itself, the less reliable the Court's analysis becomes.

³³⁰ U.S. CONST. art. I, § 8, cl. 8.

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ENABLEMENT AND WRITTEN DESCRIPTION BEYOND THE PROTEIN
FOLDING HORIZON

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* J.D. Candidate, New York University School of Law, 2025; B.S., M.S. in Mechanical Engineering, Washington University in St. Louis, 2018–19. I would like to thank the Notes Committee of the NYU Journal of Intellectual Property and Entertainment Law for their thoughtful comments and suggestions, and especially Meredith Phipps for her vital editorial support. I am immensely grateful to Professor Jeanne Fromer for her comments, edits, encouragement, and support in developing this note. Finally, I am thankful to my friends and family for their unceasing love and support while I wrote this note, and during my entire journey throughout law school.

INTRODUCTION

Protein folding, the process by which a linear polypeptide chain folds into a three-dimensional structure, is an eighty-year challenge that has been described as the final frontier of molecular biochemistry. Despite how long it has remained unsolved, it appears that science is accelerating towards the solution with the advent of neural net AI. Researchers are racing to build, refine, and use tools utilizing these advancements into all stages of drug development. A Google team was just awarded a Nobel Prize for advancements in protein folding prediction. This paper proposes a possible future wherein AI-enabled virtual modeling is perfectly able to predict protein folding and protein interactions. At least for antibody prediction, this horizon is fast approaching.

The advance in technology could help resolve current issues with pharmaceutical patenting. Antibodies have a history of functional claiming due to the technical complexities inherent in the science, with the USPTO even creating a carve out specifically to allow functionally claimed antibodies. Even when it became possible to structurally identify antibodies, courts have accepted that it was uniquely difficult and simply not how the art was practiced. However, there has been a recent move away from this view. In *Amgen Inc. v. Sanofi*, the Supreme Court affirmed the shift towards a heightened “full-scope” enablement standard for genus claims. Courts have taken note and have begun to trend towards invalidating genus patents for insufficient enablement. Yet beyond the protein folding horizon, pharmaceutical patentees will be able to respond to these changes by utilizing AI enabled protein folding prediction tools. There is a risk that these tools are too powerful and allow patentees to tie up too much in return for too little. Courts should be ready to respond to maintain the patent balance.

I

THE PROTEIN FOLDING CHALLENGE

Proteins are large molecules that perform nearly all the work in a cell.¹ They serve as structures, catalysts, hormones, enzymes, and building blocks, and help to execute nearly all cell functions alongside other specialized roles such

¹ BRUCE ALBERTS ET AL., *MOLECULAR BIOLOGY OF THE CELL* 129 (4th ed. 2002).

as antibodies, toxins, or sources of luminescence.² All proteins found in plant and animal life are made up of varied combinations of just twenty common amino acids.³ They are linked together to form a long unbroken one-dimensional amino acid (1DAA) string that then folds into a three-dimensional shape.⁴ Most purified proteins will spontaneously refold *in vitro* after being completely unfolded into its 1DAA chain.⁵ The three-dimensional structure of a protein determines its biochemical properties because the structure and function of a protein are intimately intertwined.⁶ Therefore, being able to predict how a protein folds equates to predicting its function. The scientific endeavor to develop a method to predict protein structure is known as the protein folding problem. There are four levels of protein organization.⁷ At the primary level is the chain of amino acids that make up the 1DAA string. At the secondary level, the chain of amino acids folds into a three-dimensional shape. Common shapes include the alpha helix (where the coils up in a corkscrew shape) and the beta sheet (where the chain folds up on itself).⁸ At the tertiary level, the secondary structures interact with one another and the entire protein shape forms by folding up on itself.⁹ Finally, at the quaternary level, multiple tertiary structures may interact with one another to form a final protein.¹⁰ This level also includes protein-protein-interaction.

² *Id.*

³ Michael Lopez & Shamim S. Mohiuddin, *Biochemistry, Essential Amino Acids*, NAT'L INST. OF HEALTH: NAT'L CTR. FOR BIOTECH. INFO, <https://www.ncbi.nlm.nih.gov/books/NBK557845/> [<https://perma.cc/PE54-JQ76>].

⁴ Ken A. Dill & Justin L. MacCallum, *The Protein-Folding Problem, 50 Years On*, 338 SCIENCE 1042, 1042 (2012).

⁵ T. E. Creighton, *Protein Folding*, BIOCHEMISTRY J. 1, 1 (1990).

⁶ Dill & MacCallum, *supra* note 4, at 1042.

⁷ *Protein*, NAT'L HUMAN GENOME RSCH. INST., <https://www.genome.gov/genetics-glossary/Protein> [<https://perma.cc/87LH-KGKL>] (last updated Oct. 24, 2024).

⁸ ALBERTS ET AL., *supra* note 1, at 136.

⁹ NAT'L HUMAN GENOME RSCH. INST., *supra* note 7.

¹⁰ *Id.*

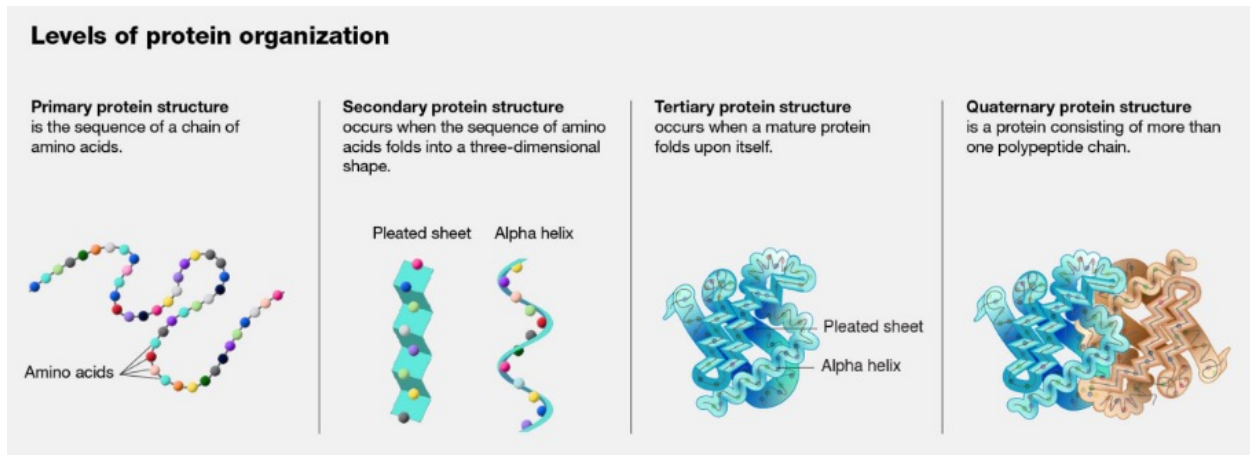


Figure 1. Levels of Protein Organization¹¹

The protein folding problem may be broken down into three questions:¹²

(i) The physical folding code: How is the structure of a protein determined by the physiochemical properties encoded into its 1DAA chain?

(ii) The folding mechanism: How, despite having an immense number of possible combinations, is a protein able to fold so quickly?

(iii) Predicting protein structure from amino acid sequence: How can a computer algorithm be used to predict a protein's structure based off of its amino acid sequence?

The accuracy of computer modelling of physical phenomena depends on accounting for all physical forces correctly.¹³ After a molecule is put in a random initial configuration, the structure is subsequently determined by repeatedly solving laws of physics for the atoms of the protein molecule and the solvent. "Template-based modeling" is when target sequences that are already in the Protein Data Base (PDB) are modeled and tends to be easier.¹⁴ By contrast, "free modeling" prediction is when there are no known similar sequences and tends to be more

¹¹ *Id.*

¹² Dill & MacCallum, *supra* note 4.

¹³ *Id.* Some of the physical forces that contribute to protein folding include hydrogen bonds, van der Waals interactions, backbone angle preferences, electrostatic interactions, hydrophobic interactions, and chain entropy.

¹⁴ Dill & MacCallum, *supra* note 4, at 1044.

difficult.¹⁵ In order to fully utilize this technology, folding prediction must be reliable even when databases are limited.

One major experimental endeavor to study the kinetics of protein folding involved finding folding intermediaries, which are partially structured states along the folding pathway.¹⁶ Biochemical pathways almost always have been solved by isolating pathway intermediates and studying their structures. However, this approach has failed with protein folding pathways. Protein folding intermediates exist for an exceedingly short period of time (<1 s); thus one cannot isolate and study them using traditional structural methods.¹⁷ This led to the development of new investigatory methods including mutational studies, hydrogen exchange, fluorescence labeling, laser temperature jumps, and single molecule methods.

Despite the myriads of efforts, a complete “folding mechanism” remains elusive. Ken A. Dill and Justin L. MacCallum define a folding mechanism as “a narrative that explains how the time evolution of a protein’s folding to its native state derives from its amino acid sequence and solution conditions.”¹⁸ In other words, it is a general principle applicable to a broad range of proteins that accounts for the differences and similarities in folding routes for various proteins.

Researchers have been able to confirm some conclusions. Proteins appear to fold in hierarchical tree structures, rather than linear routes.¹⁹ The stability appears to increase as the partial structure develops.²⁰ Proteins also appear to first develop local structures before folding into global structures.²¹ Scientists are working to

¹⁵ *Id.*

¹⁶ See generally C. Robert Matthews, *Pathways of Protein Folding*, 62 AM. REV. BIOCHEMISTRY 653 (1993).

¹⁷ S. Walter Englander et al., *Protein Folding and Misfolding: Mechanism and Principles*, 40 Q. REVS. BIOPHYSICS 287, 289 (2008).

¹⁸ Dill & MacCallum, *supra* note 4, at 1043.

¹⁹ J. Hockenmaier et al., *Routes Are Trees: The Parsing Perspective on Protein Folding*, 66 PROTEINS: STRUCTURE, FUNCTION, AND BIOINFORMATICS 1, 1 (2007).

²⁰ Englander et al., *supra* note 17, at 320 (“The sequential formation of native-like foldons in a stepwise pathway manner flows naturally from the obvious fact that the association of complementary structures is energetically favorable. Pre-existing structure guides and stabilizes the formation of complementary structure.”).

²¹ Hockenmaier et al., *supra* note 19, at 1; Dill & MacCallum, *supra* note 4, at 1043.

unravel the mystery of protein folding, but there is seemingly no shortage of questions to answer.²²

We know far more sequences than structures, due to developments in high-throughput sequencing outpacing developments in structure prediction.²³ Google's Deepmind team recently developed a deep learning-based AI tool, AlphaFold2 (AF2).²⁴ While it was heralded as groundbreaking, it still had a substantial error rate.²⁵ Molecular modeling still requires physical, experimental validation. It is unclear when, if ever, modeling technology will reach a point where physical validation of modeling is never required.

A. *How Close Are We?*

However far we are from crossing the “protein folding horizon” where protein structures and interactions are modellable with certainty, one thing is certain. Researchers have been making tremendous progress. A deep learning neural network AI framework has burst onto the scene, with experts noting that it frequently achieved “an accuracy comparable to that of experimentally derived models.”²⁶ This section details recent improvements in the field and reasons to believe that the horizon is fast approaching.

²² See generally William A. Eaton, *Modern Kinetics and Mechanism of Protein Folding: A Retrospective*, 125 J. PHYSICAL CHEMISTRY B 3452 (2021).

²³ See Mihaly Varadi et al., *Alphafold Protein Structure Database: Massively Expanding the Structural Coverage of Protein-Sequence Space with High-Accuracy Models*, 50 NUCLEIC ACIDS RSCH. D439, D439 (2022) (noting there are nearly 220 million unique protein sequences in the Universal Protein Resource while PDB held only 180,000 structures for 55,000 distinct proteins).

²⁴ See generally John Jumper et al., *Highly Accurate Protein Structure Prediction with AlphaFold*, 596 NATURE 583 (2021).

²⁵ Ewen Callaway, *'The Entire Protein Universe': AI Predicts Shape of Nearly Every Known Protein*, NATURE (July 29, 2022), <https://www.nature.com/articles/d41586-022-02083-2> [<https://perma.cc/558W-6LX>] (“35% of the more than 214 million predictions are deemed to be highly accurate, which means they are as good as experimentally determined structures. Another 45% are considered to be accurate enough for many applications.”).

²⁶ See generally Joana Pereira et al., *High-Accuracy Protein Structure Prediction in CASP14*, 89 PROTEINS: STRUCTURE, FUNCTION, AND BIOINFORMATICS 1687 (2021) (noting that AF2 and competitors who followed the path built by AF were tremendously successful at predicting backbone structures, though noting that side-chains present a more difficult challenge).

1. *Community Cooperation*

Protein folding is such a grand challenge that organized communal effort is commonplace. Critical Assessment of Protein Structure Prediction (CASP) was one of the first community-wide competitions that spurred advancement, though other competitions have subsequently arisen.²⁷ CASP is held every two years, and each time many different “target sequences” (proteins with structures known only to the organizers) are given to research groups, who test their algorithmic schemes to predict the 3D structures of said targets. Competition organizers then evaluate group performance and publish a paper detailing the results.²⁸ Afterwards, competitors publish their results and methods, allowing the community to learn and improve upon successful methods. With a focus on scientific progress rather than commercial profit, these competitions are important so that advances are immediately disseminated and incorporated into future efforts.

AF2 won CASP14.²⁹ The organizers of CASP14 heralded AF2 as the solution to the protein structure prediction problem.³⁰ The organizers noted that complex deep learning approaches were the most successful. Though AF2 showed substantially improved results compared to its predecessor AlphaFold

²⁷ See, e.g., John Moult et al., *A Large-Scale Experiment to Assess Protein Structure Prediction Methods*, 23 *PROTEINS: STRUCTURE, FUNCTION, AND BIOINFORMATICS* ii (1995) (introducing the first CASP competition to evaluate protein structure prediction performance); Joël Janin et al., *CAPRI: A Critical Assessment of Predicted Interactions*, 52 *PROTEINS: STRUCTURE, FUNCTION, AND BIOINFORMATICS* 2 (2003) (describing Critical Assessment of Prediction of Interactions (CAPRI) which assesses protein-protein docking); Andrea Rizzi et al., *Overview Of The SAMPL6 Host-Guest Binding Affinity Prediction Challenge*, 32 *J. COMPUTER-AIDED MOLECULAR DESIGN* 937 (2018) (assessing predictions of the binding affinities of small organic molecules to biological macro-molecules); Irina Kufareva, *Advances in GPCR Modeling Evaluated By The GPCR Dock 2013 Assessment: Meeting New Challenges*, 22 *STRUCTURE* 1120 (2014) (describing GPCR-Dock, an assessment of the progress in molecular modeling and ligand docking for G-protein coupled receptors).

²⁸ Pereira et al., *supra* note 26, at 1687 (“One of the standard metrics of accuracy in CASP is the Global Distance Test Total Score (GDT_TS), which corresponds to the average percentage of cognate C α pairs within distance cutoffs of 1, 2, 4 and 8Å. The closer its GDT_TS is to 100%, the more accurate the backbone of a model.”).

²⁹ Jumper et al., *supra* note 24, at 583–584.

³⁰ Pereira et al., *supra* note 26, at 1697–98 (“AF2 marks a solution to the structure prediction problem for single protein chains which have a folded structure. . . . AF2 and related methods represent a key step on the path to derive all structural properties of a protein by computation, such as dynamics, ligand interactions, folding path and folded state under different conditions. The importance of this for the life sciences is difficult to overstate.”).

(AF) in CASP13, the second-ranked model in CASP14 also outperformed AF, showing that groups improved upon AF.³¹ The success of AF2 continued to expand during CASP15, despite AF2 not even participating.³² AF2 has been open source since 2021, and participants have integrated the AI system into their own approaches, with moderate improvements in accuracy and strides in predicting protein interactions.³³ Systems building on AF2 are “approaching the accuracy of experimental methods.”³⁴

There is much anticipation as the impacts of AF2 reverberate throughout the scientific community. After the source code of the software was released, many research papers have cited and utilized AF2.³⁵ Deepmind announced AlphaFold3 on May 8, 2024, with improved accuracy in predicting protein-ligand docking interactions, protein-nucleic acid interactions, and antibody-antigen prediction accuracy.³⁶ The results “show that high accuracy modelling across biomolecular space is possible within a single unified deep learning framework.”³⁷ The Royal Swedish Academy of Sciences recognized the work of the Google Deepmind team behind AF2 when Demis Hassabis and John M. Jumper were awarded the Nobel Prize in Chemistry 2024 for their stunning breakthrough.³⁸

2. *Growth of Protein-Structure Databases*

Community cooperation has not been limited to competitions. The PDB was established in 1971 as the central archive for all experimentally determined protein structures. It has steadily grown and has been formally maintained by an

³¹ *Id.* at 1697.

³² Maximilian Schreiner, *CASP15: AlphaFold’s Success Spurs New Challenges in Protein-Structure Prediction*, DECODER (Dec. 14, 2022), <https://the-decoder.com/casp15-alphafolds-success-brings-new-challenges/> [<https://perma.cc/NJ25-EM5D>].

³³ *Id.*

³⁴ *Id.*

³⁵ See generally Ewen Callaway, *What’s Next For The AI Protein-Folding Revolution*, 604 NATURE 234 (2022).

³⁶ See generally Josh Abramson et al., *Accurate Structure Prediction of Biomolecular Interactions with AlphaFold 3*, NATURE (2024), <https://www.nature.com/articles/s41586-024-07487-w> [<https://perma.cc/AD3N-SEQE>].

³⁷ *Id.*

³⁸ *Press Release*, NOBEL FOUND. (Oct. 9, 2024), <https://www.nobelprize.org/prizes/chemistry/2024/press-release/> [<https://perma.cc/M8C6-G9PV>]. See also *They have revealed proteins’ secrets through computing and artificial intelligence*, NOBEL FOUND. (Oct. 9, 2024), <https://www.nobelprize.org/uploads/2024/10/popular-chemistryprize2024-3.pdf> [<https://perma.cc/GXP8-P7ES>].

international consortium known as the Worldwide Protein Data Bank (wwPDB) as a uniform global resource.³⁹ There are currently more than 230,000 protein structures within the database, with the annual deposition rate rising 500% over 20 years from 2000 to 2020.⁴⁰

After winning CASP14, the creators of AF2 released the AlphaFold Protein Structure Database (AlphaFold DB) in a partnership with the European Bioinformatics Institute.⁴¹ While the protein structures have yet to be fully validated, the AlphaFold DB contains 214,683,839 structures, an astronomical increase from the PDB collection.⁴² This massive data trove contains the predicted structures of nearly every protein known in science and showcases the potential of protein folding technology.⁴³ The AlphaFold DB has been likened to enabling a “Google search” of protein structures for millions of researchers around the globe.⁴⁴ As recognition for this monumental advancement in scientific research pours in, its impact will be felt throughout various fields and particularly in pharmaceutical innovation.

B. Drug Design

Advancements in protein prediction technology will have significant impacts throughout the scientific community. One area that will particularly be affected is the development of pharmaceuticals.

³⁹ See generally Helen M. Berman, *The Protein Data Bank: A Historical Perspective*, 64 ACTA CRYSTALLOGRAPHICA 88 (2007).

⁴⁰ *Deposition Statistics*, wwPDB, <https://www.wwpdb.org/stats/deposition> [<https://perma.cc/UQ22-Y85J>] (May 7, 2024) (showing 2940 deposits in 2000 and 15436 deposits in 2020).

⁴¹ Varadi et al., *supra* note 23, at D440.

⁴² *Frequently Asked Questions*, ALPHA FOLD PROTEIN STRUCTURE DATABASE, <https://alphafold.ebi.ac.uk/faq#faq-3> [<https://perma.cc/DE54-3GK5>] (last visited May 9, 2024). Though far from every possible protein is available. ALBERTS ET AL., *supra* note 1, at 141 (estimating that for a typical protein length of about 3000 amino acids, more than 10^{390} different chains could be made, though fewer than one in a billion would be stable).

⁴³ Callaway, *supra* note 25.

⁴⁴ Christian Edwards & Katie Hunt, *Scientists Who Used AI to ‘Crack the Code’ of Almost All Proteins Win Nobel Prize in Chemistry*, CNN (Oct. 9, 2024, 8:08AM), <https://www.cnn.com/2024/10/09/science/nobel-prize-chemistry-proteins-baker-hassabis-jumper-intl/index.html> [<https://perma.cc/FCQ9-3DFP>].

1. *Discovery*

The first step of drug development is discovery, where massive sets of drug candidates are reviewed and narrowed down for further research. Projects can start by screening as many as a million compounds to end up with one or two candidate molecules.⁴⁵ There are multiple stages of drug discovery, including:⁴⁶

- Target Identification – Identifying biological targets for drugs to bind to that elicit a desired response when bound.
- Target Validation – Validating identified targets through tools such as animal models, monoclonal antibodies, and chemical genomics.
- Hit Identification & Lead Discovery – Screening for compounds that bind to targets with strategies including high throughput screening (HTS), focused screening, fragment screening, structural aided drug design, virtual screening, physiological screening, and NMR screening. After compounds pass screening, the lead discovery stage is used to screen using *in vitro* assays to characterize both efficacy and safety.
- Hit-to-Lead – Refining hits to produce more potent and selective compounds through the use of structure-activity relationship (SAR) investigations and HTS assays. The multitude of hits from Hit Identification are studied in parallel, and physiochemical and *in vitro* properties crucial to drug use are characterized, such as solubility and permeability.
- Lead Optimization – Improving deficiencies in the lead compound while maintaining favorable properties. There are various properties and tests to consider, such as high-dose pharmacology, pharmacodynamic (PK/PD) studies, dose linearity, and repeat dosing PK looking for drug-induced metabolism and metabolic profiling.

A variety of screening techniques to identify hit molecules exist. HTS involves screening entire compound libraries against the target using physical assays. This can be an extremely expensive and time-consuming process, requiring the use of laboratory automation.⁴⁷ This testing assumes no prior knowledge that will aid in

⁴⁵ J.P. Hughes et al., *Principles of Early Drug Discovery*, 162 *BRIT. J. PHARMACOLOGY* 1239, 1248 (2011).

⁴⁶ *Id.* at 1239.

⁴⁷ *Id.*

narrowing the scope of the search. Focused screening selects from a smaller subset of compounds that are known to likely have some success based on prior knowledge of the protein.⁴⁸ These strategies have given rise to discovery paradigms using pharmacophores (structural features in a molecule that is recognized at a receptor site and is responsible for the molecule's biological activity, often shared by compounds that bind to the same target) and molecular modeling to conduct virtual screening.⁴⁹ Such pharmacophore based virtual screening (PBVS) strategies search large libraries of chemical structures to identify compounds that are likely to bind to the target.⁵⁰ PBVS techniques will continue to grow more prevalent as libraries of chemical structures expand and modeling programs improve.⁵¹ Any of these techniques may be combined with one another; virtual screening can be followed up with *in vitro* or physiological screening of the compounds.

Companies are already experimenting with virtual drug development. Isomorphic Labs, established under Alphabet, Inc. as a spin off from DeepMind, has partnered with Novartis AG and Eli Lilly & Co. to work on AI-enabled drug discovery.⁵² A fully AI generated compound developed by Hong Kong-based

⁴⁸ *Id.*; Campbell McInnes, *Virtual Screening Strategies in Drug Discovery*, 11 CURRENT OP. CHEM. BIOLOGY 494 (2007). See also Philine Kirsch et al., *Concepts and Core Principles of Fragment-Based Drug Design*, MOLECULES, Nov. 26, 2019, at 1 (providing a review of fragment-based drug design (FBDD), an alternative to HTS). FBDD starts by screening a library of compounds for binding to a particular target. Fragments are selected to represent ideal binding motifs as desirable starting points for further optimization. After selection, fragments are enhanced through fragment linking, merging, or growing. Compared to HTS, FBDD uses relatively smaller compound libraries and more sensitive assay methods for hit identification due to a weaker binding affinity. FBDD has a lower throughput and thus selection of the compound library is done carefully to generate high quality hits. The quality of the fragment library being screened has a direct influence on the outcome of an FBDD project.

⁴⁹ See generally OM SILAKARI & PANKAJ KUMAR SINGH, CONCEPTS AND EXPERIMENTAL PROTOCOLS OF MODELLING AND INFORMATICS IN DRUG DESIGN 203–34 (2020).

⁵⁰ *Id.*

⁵¹ See, e.g., Marwin H. S. Segler et al., *Generating Focused Molecule Libraries for Drug Discovery with Recurrent Neural Networks*, 4 ACS CENT. SCI. 120 (2018) (proposing a completely *in silico*, data-driven approach utilizing recurrent neural networks to generate molecular structures *de novo*).

⁵² See *Isomorphic Labs Kicks Off 2024 with Two Pharmaceutical Collaborations*, ISOMORPHIC LABS (Jan. 7, 2024), <https://www.isomorphiclabs.com/articles/isomorphic-labs-kicks-off-2024-with-two-pharmaceutical-collaborations> [https://perma.cc/NUZ5-WKG5].

Insilico Medicine is currently in phase II clinical trials.⁵³ A fully AI generated compound developed by Hong Kong-based Insilico Medicine is currently in phase II clinical trials.

C. *Antibodies Beyond The Protein Folding Horizon*

Given the importance of proteins to pharmaceutical research, it is easy to imagine a future where near perfectly accurate protein structure and docking prediction is a common tool for research. Such clear insight into the molecular world would revolutionize therapeutic design. Scientists could utilize massively expanded compound data banks that contain information on protein structures and functions predicted down to the atomic level. Scientists may also be able to use AI tools to screen existing compounds, dream up new ones, and refine them. The various physiochemical properties of any known compound would be readily available, and any novel or combined compound would go through reliable simulations to ascertain these properties. The drug discovery process could be done entirely *in silico* (on a computer), or at the very least with minimal experimental validation. Use of AI is already being integrated into every stage of the drug development process, from drug design and development to designing and running clinical trials.⁵⁴ Science is accelerating down this path.

A study of FDA approved therapeutic agents between 2009 and 2018 determined that the mean cost of bringing a new drug to market ranged from \$314 million to \$2.8 billion depending on the therapeutic area.⁵⁵ Advancements in simulation will likely lower these costs. As protein folding and molecular simulation accuracy improves, drug design methods implementing these new tools

⁵³ See Urtė Fultinavičiūtė, *Insilico's AI drug enters Phase II IPF trial*, CLINICAL TRIALS ARENA (June 27, 2023), <https://www.clinicaltrialsarena.com/news/insilico-medicine-ins018055-ai/?cf-view> [<https://perma.cc/8M49-MNFD>].

⁵⁴ See generally Debleena Paul et al., *Artificial Intelligence in Drug Discovery and Development*, 26 DRUG DISCOVERY TODAY 80 (2021).

⁵⁵ Olivier J. Wouters et al., *Estimated Research and Development Investment Needed to Bring a New Medicine to Market, 2009-2018*, 323 JAMA 844, 844 (2020).

will improve in parallel.⁵⁶ One example is the implementation of AI simulation technology for antibody modeling and interface analysis in drug discovery.⁵⁷

Antibodies are a type of proteins utilized in certain drugs and treatment methodologies. They are incredibly diverse and connect with complementary large molecules known as antigens.⁵⁸ It is estimated that an individual has tens of billions of variations in their body at any given time.⁵⁹ Scientists think that the number of unique antibodies mirror the number of stars in the galaxy.⁶⁰ These immune receptors have immense biological value as they have the potential to bind to almost any other large molecule, even those that have yet to be conceived.⁶¹ Antibodies are valuable because they will *only* bind with a single antigen, though a single antigen can bind with multiple, slightly varied antibodies.⁶² This property makes them useful as research tools, therapies, and diagnostics. They are “among the most frequently used tools in basic science research”.⁶³ Antibody based therapeutics are currently the largest class of biotherapeutics, with five of the current top-selling therapeutics being monoclonal antibodies.⁶⁴ The global antibody market was estimated to be at USD 162.17 billion in 2023 and is estimated to grow at a

⁵⁶ Richard A. Norman et al., *Computational Approaches to Therapeutic Antibody Design: Established Methods and Emerging Trends*, 21 BRIEFINGS BIOINFORMATICS 1549, 1558 (2020) (noting that while current methods reduce the need for experimental effort during Lead Identification, there is room for improvement to better understand the immunogenicity and overall ‘developability’ potential of compounds through improved understanding of biophysical properties).

⁵⁷ *Id.* (reviewing existing methods to create novel molecules ab initio, including OptCDR, OptMAVEN, AbDesign, and RosettaAntibodyDesign).

⁵⁸ Mark A. Lemley & Jacob S. Sherkow, *The Antibody Patent Paradox*, 132 YALE L.J. 994, 1002–03 (2023).

⁵⁹ *Id.*

⁶⁰ *Id.*; B. Briney et al., *Commonality Despite Exceptional Diversity in the Baseline Human Antibody Repertoire*, 566 NATURE 393, 397 (No. 7744, Feb. 2019) (estimating that the immune system could potentially generate up to a quintillion unique antibodies).

⁶¹ Lemley & Sherkow, *supra* note 58, at 1003–04.

⁶² *Id.* at 1004.

⁶³ *Id.* (citing Mathias Uhlen et al., *A Proposal for Validation of Antibodies*, 13 NATURE METHODS 823, 823 (2016)).

⁶⁴ Norman et al., *supra* note 56, at 1549 (“Five of the current top-selling blockbusters are monoclonal antibodies: adalimumab and infliximab (anti-TNF α), rituximab (anti-CD20), bevacizumab (anti-VEGF), trastuzumab (anti-HER2/neu) and their market presence is still expanding.”).

compound annual growth rate (CAGR) of 11.31% from 2024 to 2032, to be worth USD 425.38 billion by 2032.⁶⁵

Antibodies are “Y” shaped molecules comprising of two heavy amino acid chains and two light amino acid chains.⁶⁶ The heavy chain has a variable domain (VH) and three or four constant domains (CH1, CH2, CH3, CH4). The light chain has a variable domain (VL) and a constant domain (CL). Within the VH and VL domains are complementary determining regions (CDR) that vary greatly to determine the antigen the antibody will bind to. The arms of the Y are composed of a light chain paired with the VH and CH1 domains of the heavy chain. This is referred to as the Fab region while the vertical segment of the Y is referred to as the Fc region.

Multiple antibodies may bind to a particular antigen, possibly in different places. The specific place on an antigen that a particular antibody’s Fab region binds to is known as the “epitope.”⁶⁷ The strength with which a particular antibody binds to a specific epitope is known as the antibody’s “affinity.”⁶⁸ Finally, how stable the binding is, how long the interaction lasts, is known as an antibody’s “avidity.”⁶⁹ These various properties of antibodies make them a powerful, customizable tool in scientific research.

Monoclonal antibodies are created using hybridoma technology. Invented by Georges Köhler and César Milstein in 1975, and applied to transgenic humanized mouse strains, hybridoma technology has allowed scientists to generate high quality and fully human monoclonal antibodies.⁷⁰ The process begins by immunizing a mouse subject with a target antigen, which creates an immune response. Then splenocytes (white blood cells from the spleen) are extracted and

⁶⁵ *Global Antibodies Market Size, Share Trends, COVID-19 Impact & Growth Analysis Report—Segmented by Product Type, Indication, End User, Application and Region—Industry Forecast (2022 to 2027)*, MARKET DATA FORECAST (Jan. 2022), <https://www.marketdataforecast.com/market-reports/antibodies-market> [<https://perma.cc/VK6J-3QAX>].

⁶⁶ CHRISTOPHER E. LOH, ANTIBODY CLAIMS: PATENT ELIGIBILITY AND WRITTEN DESCRIPTION ISSUES (2020), Lexis, <https://www.lexisnexis.com/community/insights/legal/practical-guidance-journal/b/pa/posts/antibody-claims-patent-eligibility-and-written-description-issues> [<https://perma.cc/ENX4-SFRU>].

⁶⁷ Lemley & Sherkow, *supra* note 58, at 1003.

⁶⁸ *Id.*

⁶⁹ *Id.*

⁷⁰ See generally Chonghui Zhang, *Hybridoma Technology for the Generation of Monoclonal Antibodies*, in ANTIBODY METHODS AND PROTOCOLS 117 (2012).

fused with immortal myeloma cells, creating a mixture including unfused cells, nonproducing hybridomas, and antibody-producing hybridomas. These are then screened and isolated for a cell line that contains both the antibody-producing ability of splenocytes and the reproducibility of myelomas. This is an immensely resource-intensive step as individual hybridoma cells must be separated and cloned. If successful, a culture of genetically identical hybridomas can be used to produce a single antibody nearly infinitely.

One type of drug likely to be profoundly impacted by the protein-folding revolution is antibody-drug conjugates (ADC), which have been described as “magic bullets.”⁷¹ ADCs are complex molecules, combining an antibody, a linker, and a toxin. The antibody acts as a sort of guidance system, to bring the toxin (often called the “payload” or “warhead”) to the site of action. The linker connects the two components and must be stable. ADCs present an opportunity for improved drugs due to the specificity granted by the antibody guidance.⁷² Unfortunately, due to the complexity of the molecule, ADCs often pose tremendous IP challenges due to the potentially overlapping patent claims from various parties.⁷³

II PATENT LAW

To obtain a patent, an applicant must meet four criteria. The patent must be useful,⁷⁴ novel,⁷⁵ non-obvious,⁷⁶ and meet a written description requirement.⁷⁷ The written description must enable a “person skilled in the art” to make and use the invention in “full, clear, concise, and exact terms.”⁷⁸ These requirements serve as the statutory screens to protect the “carefully crafted bargain for encouraging the creation and disclosure of new, useful, and nonobvious advances in technology and design” in return for the exclusive monopoly granted by the federal government.⁷⁹ Though utility patents only offer a limited term of protection, they protect

⁷¹ Ulrich Storz, *Antibody-drug conjugates: Intellectual Property Considerations*, 7 *MABS* 989, 989 (2015).

⁷² *Id.* at 993 (stating that ADCs have an advantage over conventional chemotherapy as they can direct their toxic payloads to targets with high specificity, reducing non-specific side effects).

⁷³ *Id.* at 1008.

⁷⁴ 35 U.S.C. § 101.

⁷⁵ *Id.* § 102.

⁷⁶ *Id.* § 103.

⁷⁷ *Id.* § 112.

⁷⁸ *Id.*

⁷⁹ *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 150–51 (1989).

functional features that strongly influence the market success of a product.⁸⁰ Courts strictly police access to utility patents due to the outsized impact a utility patent can have on the market for a product.

A. *AI Challenges*

Challenges arise when major changes in the landscape shift the field and pose novel questions to the court of how to apply the rules while staying faithful to the goals of the patent system. The latest such development is the advent of AI. In recent years machine learning AI has made incredible strides with the likes of ChatGPT and Dall-E.⁸¹ Though its success is most visible through chatbots and text, image, or video generators, neural net models are disrupting the channels of innovation as well. Legal scholars have begun to grapple with patent law questions that arise with AI. Should AI tools be considered eligible subject matter for patentability, or are they a “basic tool[] of scientific and technological work” that should not be monopolized?⁸² How should AI-assisted inventorship be treated? So far, the Federal Circuit has held that only natural persons can hold patents,⁸³ but Congress still has room to intervene.⁸⁴ In addition to posing general questions for patent law,

⁸⁰ See Christopher Buccafusco et al., *Intelligent Design*, 68 DUKE L.J. 75, 84 (2018).

⁸¹ MCKINSEY & COMPANY, *What is Generative AI?* (Apr. 2, 2024), <https://www.mckinsey.com/featured-insights/mckinsey-explainers/what-is-generative-ai/> [https://perma.cc/T6SQ-65UY].

⁸² *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014) (citing *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)); *Compare Public Views on Artificial Intelligence and Intellectual Property Policy*, USPTO (Oct. 2020), at 7–8 (reporting that many actors view AI inventions to be at risk for patent ineligibility), with David Kappos & Asa Kling, *Ground-Level Pressing Issues at the Intersection of AI and IP*, 22 COLUM. SCI. TECH. L. REV. 263, 269 (2021) (noting there are 339,828 patent families related to AI worldwide and yet only 1,264 have been involved in litigation, a relatively low litigation rate of 0.37%).

⁸³ See *Thaler v. Vidal*, 43 F.4th 1207, 1213 (Fed. Cir. 2022) (holding that the term “individual” in the Patent Act is limited to natural persons and pointing to precedent preventing non-natural persons such as corporations and sovereigns from being inventors).

⁸⁴ A proposed alternative approach involves attributing AI assisted inventorship to the natural person operating the AI who identifies the useful outputs. David L. Schwartz & Max Rogers, *“Inventorless” Inventions? The Constitutional Conundrum of AI-Produced Inventions*, 35 HARV. J.L. & TECH. 531, 569–70 (2022).

AI development raises specific issues of utility,⁸⁵ novelty,⁸⁶ and non-obviousness⁸⁷ for the pharmaceutical industry. This paper will focus on the enablement and written description requirements for pharmaceutical patents and how they may change with AI-enabled protein structure prediction methods.

⁸⁵ If AI systems could simulate the efficacy of compounds, would such *in silico* simulation satisfy the utility test? With what confidence interval? Currently for pharmaceutical inventions, utility of novel compounds depends on *in vivo* and *in vitro* experimental results. *See* *Brenner v. Manson*, 383 U.S. 519 (1966) (finding insufficient utility in a novel steroid compound solely from being an adjacent homologue of an effective steroid with no additional testing); *In re Kirk*, 54 C.C.P.A. 1119, 1125–26 (C.C.P.A. 1967) (finding insufficient utility merely because a compound is similar to a useful compound). *Cf. In re Jolles*, 628 F.2d 1322, 1327-28 (C.C.P.A. 1967) (finding sufficient utility in a novel compound due to similarity coupled with experimental validation); *Cross v. Iizuka*, 753 F.2d 1040, 1051 (Fed. Cir. 1985) (explaining that early-stage *in vitro* testing is sufficient to find utility in the right circumstances). *See* MPEP § 2107.03(III). The U.S. Courts of Customs and Patent Appeals (C.C.P.A.) was a five-judge Article III appellate court on the same level as the U.S. Courts of Appeals. The Federal Courts Improvement Act of 1982 abolished the C.C.P.A. *See* Pub. L. No. 97-164, 96 Stat. 28 (1982) (codified as amended in scattered sections of 28 U.S.C.). The U.S. Court of Appeals for the Federal Circuit (“Federal Circuit”) adopted C.C.P.A. decisional law as binding precedent. *See* *Corp. v. United States*, 690 F.2d 1368, 1370 (Fed. Cir. 1982) (en banc).

⁸⁶ Generally, the “all elements rule” sets a narrow standard for anticipation as the prior art disclosure must contain “each and every element of a claimed invention.” *Lewmar Marine, Inc. v. Bariant, Inc.*, 827 F.2d 744, 747 (Fed. Cir. 1987); *see also* *Merck & Co. v. Teva Pharmaceuticals USA, Inc.*, 347 F.3d 1367, 1372 (Fed. Cir. 2003) (stating that for a reference to be anticipatory, it must describe all of the elements and limitations of the claim in a single reference and enable a PHOSITA to make and use the claimed invention). However, future AI systems might unleash new compounds at a dizzying rate and rapidly expand the field of anticipatory prior art to impede patent applications for novel compounds. Particularly if compound libraries focus on specific groups, such as RNA or antibody binding sites. Establishing utility through any form of testing is irrelevant to anticipation. *In re Hafner*, 410 F.2d 1403, 1405 (C.C.P.A. 1969) (“[A] disclosure lacking a teaching of how to use a fully disclosed compound for a specific, substantial utility or of how to use for such purpose a compound produced by a fully disclosed process is, under the present state of the law, entirely adequate to anticipate a claim to either the product or the process and, at the same time, entirely inadequate to support the allowance of such a claim.”).

⁸⁷ What may have been non-obvious to a researcher or a team working without the help of an AI tool may become obvious to an assisted inventor, and the impact of AI assistance will continue to expand the definition of what is obvious. *See* Ryan Abbott, *Everything Is Obvious*, 66 UCLA L. REV. 2, 34 (2019) (“[G]iven there is no limit to how sophisticated computers can become, it may be that everything will one day be obvious to commonly used computers.”); Lexi Heon, *Artificially Obvious but Genuinely New: How Artificial Intelligence Alters the Patent Obviousness Analysis*, 53 SETON HALL L. REV. 359, 379 (2022) (“[T]he fear of AI creating a world where everything is obvious is impending, if not already at least partially present.”); Olga Gurgula, *AI-Assisted Inventions in the Field of Drug Discovery: Readjusting the Inventive Step Analysis*, 2 INT’L J. SOC. SCI. PUB. POL’Y 7 (2020).

B. *A Background on Genus Claiming and Enablement*

The utility patent system is one that gives nominally uniform rights across various industries, to the benefit of some and the detriment of others. The pharmaceutical industry is one where patent protection is seen to be crucial for innovation.⁸⁸ In addition to obtaining protection for specific compounds that have been discovered, patentees routinely seek genus claims, which protect “a group of compounds closely related both in structure and in properties.”⁸⁹ Some scholars argue that genus claims are critical for meaningful patent protection of chemical compounds, as there is a risk that infringers who capture the heart of the invention could avoid liability “by a minor modification of the particular embodiments disclosed in the patent’s specification.”⁹⁰ If granted, genus claims also afford patentees a broad scope of protection without having to actually make each species covered by the claim. A common technique for genus claiming in chemistry and biotechnology is to draw a core chemical structure with an array of variables around it, representing various chemical groups.⁹¹ This claiming practice allows for a large number of permutations within the scope of the claim.

Historically, courts accepted these genus claims, with the CCPA reversing a USPTO enablement rejection on the ground that a more detailed disclosure would force an inventor to carry out an immense number of experiments and discourage them from filing applications.⁹² The focus was on whether the inventor demonstrated that some species functioned as intended and provided direction for how to test the rest.⁹³ As long as gaps in disclosure could be readily filled by the PHOSITA’s (person having ordinary skill in the art) knowledge, courts would allow

⁸⁸ See DAN L. BURK & MARK A. LEMLEY, *THE PATENT CRISIS AND HOW COURTS CAN SOLVE IT* 4 (U. Chi. Press 2009) (“In the pharmaceutical industry, there seems to be a strong consensus . . . that patents are critical to innovation . . . [whereas] [I]awyers and executives in the information technology industries . . . almost invariably see the patent system as a cost rather than a benefit to innovation.”).

⁸⁹ *In re Kalm*, 378 F.2d 959, 963 (C.C.P.A. 1967).

⁹⁰ Brief for Intellectual Property Professors as Amici Curiae Supporting Petitioners at 4, *Amgen Inc. v. Sanofi*, 598 U.S. 594 (2023) (No. 21-757) (quoting *Carnegie Steel Co. v. Cambria Iron Co.*, 185 U.S. 403, 437 (1902)).

⁹¹ See Dmitry Karshedt et al., *The Death of the Genus Claim*, 35 HARV. J. L. & TECH. 1, 13 (2021); see also *In re Harnisch*, 631 F.2d 716, 719-20 (C.C.P.A. 1980) (explaining the Markush claiming practice).

⁹² See *In re Angstadt*, 537 F.2d 498 (C.C.P.A. 1976) (reversing a USPTO decision to reject a patent despite only 40 working examples being disclosed across a large genus).

⁹³ *Id.* at 503–504.

broad genus claiming. Particularly in the field of biotechnology, the Federal Circuit upheld genus claims against § 112(a) challenges up until the 1990s.⁹⁴

Antibodies were historically patented through functional claiming, a form of genus claiming. Under this approach, an applicant could claim an entire genus of antibodies by claiming the specific target they bound to or the functions they performed.⁹⁵ This was due to the technical challenge of structurally describing a complex molecule like an antibody. Such an endeavor was not how the science was practiced. Rather than building towards a molecular structure, hybridoma technology screened samples through trial and error for a cell line that produces the desired monoclonal antibody. Describing every single species was nearly impossible. In recognition of this difficulty, the USPTO has allowed inventors to deposit complex biological materials in a public depository to supplement written disclosure and demonstrate possession of the invention.⁹⁶ Despite this option, patentees preferred instead to characterize and claim antibodies by their function. For example, this was the case in *Noelle v. Lederman*, where claims were made to a genus of antibodies simply by characterizing the antigen to which they bound.⁹⁷

This practice was tolerated by the courts in part due to the complex nature of the science. But there are issues with functional genus claiming.⁹⁸ Such a claim will include every antibody that binds to a particular epitope or antigen, which

⁹⁴ See, e.g., *Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367 (Fed. Cir. 1986) (upholding a genus claim to monoclonal antibodies used in an immunometric assay method to determine the concentration of an antigen); *In re Wands*, 858 F.2d 731 (Fed. Cir. 1988) (upholding a genus claim to monoclonal antibodies used to detect a hepatitis B antigen because the specification gave guidance and working examples, the PHOSITA's level of skill was high, and the methods required were well known).

⁹⁵ Lemley & Sherkow, *supra* note 58, at 1013–14.

⁹⁶ *Id.* at 1013; see also Thomas D. Denberg & Ellen P. Winner, *Requirements for Deposits of Biological Materials for Patents Worldwide*, 68 DENV. U. L. REV. 229, 242 (1991) (“In addition to the written specification, actual biological material must be deposited if it is not known and readily available to the public or cannot be made or isolated without undue experimentation.”). Merely depositing a compound is not dispositive of disclosure as courts engage in a case-by-case determination of whether the deposit sufficiently demonstrates possession of that which was claimed. See *Enzo Biochem, Inc. v. Gen-Probe Inc.*, 323 F.3d 956, 967 (Fed. Cir. 2002) (describing the scope of genus claim deposits as a question of fact).

⁹⁷ 355 F.3d 1343, 1349 (Fed. Cir. 2004).

⁹⁸ See *id.* at 1348–49 (discussing issues with functional claiming for antibodies but noting that “[A]s long as an applicant has disclosed a ‘fully characterized antigen,’ either by its structure, formula, chemical name, or physical properties, or by depositing the protein in a public depository, the applicant can then claim an antibody by its binding affinity to that described antigen.”).

might broadly cover over a million molecules.⁹⁹ This raises anticipation concerns. If a single species out of the million antibodies within the genus claim is previously known, the claim would violate novelty.¹⁰⁰ A patentee could attempt to avoid these issues by narrowing the functional claim, such as by claiming an antibody by the epitope it bound to instead of the antigen.¹⁰¹

In 1999, the USPTO acknowledged the technical challenges of characterizing antibodies and carved out a specific exception for antibodies from the usual rule.¹⁰² The exception stated that “[a]n applicant may also show that an invention is complete by disclosure of sufficiently detailed relevant identifying characteristics which provide evidence that applicant was in possession of the claimed invention, i.e., complete or partial structure, other physical and/or chemical properties, *functional characteristics when coupled with a known or disclosed correlation between function and structure*, or some combination of such characteristics.”¹⁰³ Some offered functional characteristics included “a sequence, structure, binding affinity, binding specificity, molecular weight, and length.”¹⁰⁴ All of these allowances recognized the fact that defining antibodies by their underlying structure or genetic sequencing was simply not practical before high-throughput genetic sequencing methods became routine.¹⁰⁵

Patentees did not know precisely how antibodies worked, only that they did, posing an enablement problem.¹⁰⁶ In *Hybritech Inc. v. Monoclonal Antibodies, Inc.*, though the patentee taught others how to identify, make, and use the claimed antibodies, the trial court found insufficient enablement and invalidated

⁹⁹ *Centocor Ortho Biotech, Inc. v. Abbott Lab’s*, 636 F.3d 1341, 1352 (Fed. Cir. 2011) (describing the task of finding a single antibody within the claimed set as trying to find one key on “a ring with a million keys on it”).

¹⁰⁰ *See Nichols Inst. Diagnostics, Inc. v. Scantibodies Clinical Lab’y, Inc.*, 195 F. App’x 947, 951–52 (Fed. Cir. 2006) (finding claims anticipated due to prior disclosure of an antibody with the claimed bindings).

¹⁰¹ Lemley & Sherkow, *supra* note 58, at 1015.

¹⁰² Revised Interim Guidelines for Examination of Patent Applications Under the 35 U.S.C. §112, P1 “Written Description” Requirement; Request for Comments, 64 Fed. Reg. 71427, 71435 (Dec. 21, 1999) (“[T]here is an inverse correlation between the level of skill and knowledge in the art and the specificity of disclosure necessary to satisfy the written description requirement.”).

¹⁰³ *Id.* (emphasis added).

¹⁰⁴ *Id.* at 71439.

¹⁰⁵ Lemley & Sherkow, *supra* note 58, at 1015.

¹⁰⁶ *See id.* at 1016–17.

the patent.¹⁰⁷ The Court of Appeals for the Federal Circuit reversed.¹⁰⁸ The court held that it would be unreasonable to demand perfectly precise calculations of characteristics such as affinity.¹⁰⁹ Instead, the court focused on whether “the claims, read in light of the specification, *reasonably* apprise those skilled in the art and *are as precise as the subject matter permits.*”¹¹⁰ In the view of the Federal Circuit, the subject matter did not allow for exact precision and therefore the relevant inquiry was whether undue experimentation was required for one skilled in the art to make and use the claimed invention.¹¹¹ This focus on whether “undue” experimentation was required to “make and use” the invention was affirmed in *In re Wands*.¹¹²

Years later, even after techniques to uncover the genetic sequence or structures were proven, patent applicants were reluctant to claim antibodies by structure.¹¹³ Such a narrow claim to a single antibody would be easy to design around, as minor changes that preserved function could enable a competitor to copy the invention while avoiding infringement. This narrow protection would be a worse outcome for the patentee than a trade-secret protection route, due to the enabling specification that teaches the original antibody. Some patentees attempted to craft specific claims while covering trivial variations by including homology percentages in their claims, which set a percentage of similarity to the original claimed sequence that would still be covered.¹¹⁴ However, the USPTO required that claims to homologous groups of proteins would need to disclose the degree of acceptable sequence variations specifically, so as to delineate the metes and bounds of the claim in terms of structure.¹¹⁵ This posed a challenge, as changing even one sequence of an

¹⁰⁷ 623 F. Supp. 1344, 1352–1357 (N.D. Cal. 1985), rev’d, 802 F.2d 1367 (Fed. Cir. 1986).

¹⁰⁸ *Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1367 (Fed. Cir. 1986).

¹⁰⁹ *Id.* at 1384–85.

¹¹⁰ *Id.* at 1385 (emphasis added).

¹¹¹ *Id.* at 1384.

¹¹² 858 F.2d at 737.

¹¹³ See, e.g., Lemley & Sherkow, *supra* note 58, at 1016 (“Instead, [applicants] filed patents on some combination of functional elements, including an antibody’s antigen, its epitope, and the binding affinity and avidity of the antibody to its target.”).

¹¹⁴ See Christopher M. Holman, *Protein Similarity Score: A Simplified Version of the Blast Score as a Superior Alternative to Percent Identity for Claiming Genuses of Related Protein Sequences*, 21 SANTA CLARA COMPUT. HIGH TECH. L.J. 55, 71–73 (2004) (discussing homologous proteins, though noting that the relationship breaks down in the case of synthetic sequences generated using technology and likely includes a large number of non-functional proteins or variants that are not homologs but retain function).

¹¹⁵ *Id.* at 67.

antibody might result in a nonfunctional species, risking rejection.¹¹⁶ Functional claiming of antibodies remained the preferred method until recently.

Recently, the exceptional treatment of allowing functional antibody claims has ended. With its decision in *Amgen Inc. v. Sanofi*, the Court unanimously affirmed its distaste for functional claiming of antibodies under the enablement requirement.¹¹⁷ The question to ask now is how actors buffeted by this change in wind can be aided by increasing modeling capabilities to meet the higher enablement and written description standards, and how those standards might change in response to the advances.

C. *Current State of Written Description*

A patent's specification "shall contain a written description of the invention."¹¹⁸ In *Ariad Pharm., Inc. v. Eli Lilly & Co.*, the Federal Circuit stated that the distinctive characteristic of description is disclosure.¹¹⁹ A specification is adequately descriptive when it "reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date."¹²⁰ For the most part, adequate description has two major elements: the enablement requirement and the written description requirement.¹²¹ The enablement requirement ensures the patentee satisfies their obligation to disclose technical knowledge in exchange for being granted a patent, so the public may practice the invention.¹²² The written description requirement forces the patentee

¹¹⁶ See, e.g., *Novozymes A/S v. DuPont Nutrition Bioscis. APS*, 723 F.3d 1336, 1338 (Fed. Cir. 2013) (finding nonfunctional embodiments within the claims and affirming invalidation of a patent).

¹¹⁷ 598 U.S. 594 (2023); Lemley & Sherkow, *supra* note 58, at 1020.

¹¹⁸ 35 U.S.C. § 112.

¹¹⁹ 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc).

¹²⁰ *Id.*

¹²¹ There is also a third "best mode" requirement. However, since the America Invents Act (AIA) was signed into law on September 16, 2011, this requirement has been practically eliminated as it is no longer possible to invalidate a claim as a result of failure to present the best mode. This has resulted in the best mode requirement being seen as a "paper tiger," as it is technically still required but will not result in the invalidation of a granted patent. Gene Quinn, *Patentability: The Adequate Description Requirement of 35 U.S.C. 112*, IPWATCHDOG (June 24, 2017, 9:15 AM), <https://ipwatchdog.com/2017/06/24/patentability-adequate-description-requirement-35-u-s-c-112/id=85039/> [<https://perma.cc/WB6A-S8Z7>].

¹²² See, e.g., *Enzo Biochem, Inc. v. Gen-Probe Inc.*, 323 F.3d 956, 970 (Fed. Cir. 2002) ("[T]he public must receive meaningful disclosure in exchange for being excluded from practicing the invention for a limited period of time."); *Reiffin v. Microsoft Corp.*, 214 F.3d 1342, 1345 (Fed. Cir. 2000) ("The purpose . . . is to ensure that the scope of the right to exclude . . . does not overreach the scope of the inventor's contribution

to demonstrate that she was actually in possession of the invention that is being claimed at the time of filing the patent application.¹²³

Whether a written description satisfies the requirements varies with the nature and scope of the invention as well as the extent of the scientific and technological knowledge at the time of the invention.¹²⁴ The inquiry is a question of fact.¹²⁵ Over the years, courts have developed industry specific standards for enablement.¹²⁶ On one hand there are “predictable” arts like electrical and mechanical engineering, which require less disclosure as they are rooted in “well defined, predictable factors.”¹²⁷ Because it is predictable what will occur when circuits are combined, or how much thermodynamic power a newly designed engine will produce, courts have been comfortable with accepting a single embodiment to enable a broad claim.¹²⁸ On the other hand, inventions in more “unpredictable” arts such as organic chemistry will require more specific and detailed disclosures to avoid the risk of forcing undue experimentation.¹²⁹

While the USPTO appears to continue to grant broad chemical genus claims as a matter of course,¹³⁰ federal courts have been increasingly hostile to genus claims under 35 U.S.C. §112(a) for failure to enable or describe the full scope

to the field of art as described in the patent specification.”). *See also* Pfaff v. Wells Elecs., Inc., 525 U.S. 55, 63 (1998) (“[T]he patent system represents a carefully crafted bargain that encourages both the creation and the public disclosure of new and useful advances in technology, in return for an exclusive monopoly for a limited period of time.”).

¹²³ *See In re Barker*, 559 F.2d 588, 592 n.4 (C.C.P.A. 1977) (“[T]he ‘essential goal’ of the description of the invention requirement is to clearly convey the information that an applicant has invented the subject matter which is claimed.”).

¹²⁴ *Capon v. Eshhar*, 418 F.3d 1349, 1357 (Fed. Cir. 2005).

¹²⁵ *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563 (Fed. Cir. 1991).

¹²⁶ Sean B. Seymore, *The Enablement Pendulum Swings Back*, 6 Nw. J. TECH. & INTELL. PROP. 278, 282 (2008).

¹²⁷ *Id.*; *see also In re Vaeck*, 947 F.2d 488, 496 (Fed. Cir. 1991) (stating that the disclosure required for a claimed genus of diverse and poorly understood microorganisms is greater than the disclosure required for “predictable” inventions with a mechanical or electrical element).

¹²⁸ *See Spectra-Physics, Inc. v. Coherent, Inc.*, 827 F.2d 1524, 1533 (Fed. Cir. 1987); *In re Cook*, 439 F.2d 730, 735 (C.C.P.A. 1971); *In re Vickers*, 141 F.2d 522, 527 (C.C.P.A. 1944).

¹²⁹ *Schering Corp. v. Gilbert*, 153 F.2d 428, 433 (2d Cir. 1946) (finding that organic chemistry is an experimental science where results are often “uncertain, unpredictable and unexpected”); *see also Genentech, Inc. v. Novo Nordisk A/S*, 108 F.3d 1361, 1367–68 (Fed. Cir. 1997) (explaining that the claimed invention is an unpredictable technology, and the enabling disclosure must be specific and useful).

¹³⁰ Sean B. Seymore, *Patenting the Unexplained*, 96 WASH. U. L. REV. 707, 729 (2019) (stating that such claims are “ubiquitous in the chemical and pharmaceutical arts”).

of the claimed invention, particularly for biotechnology and chemistry patents.¹³¹ The Court of Appeals for the Federal Circuit has invalidated genus patents by pointing to inadequate guidance in a specification to translate across the full scope of a genus; an excessive amount of experimentation required to parse through the genus; and the lack of precise structural information in the specification to limit the metes and bounds of the genus.¹³² Several of these decisions have resulted in jury verdicts of over a billion dollars being overturned.¹³³ The trend has been that biotechnology, chemical, and pharmaceutical genus claims lose in court.¹³⁴ Legal scholars have labeled this the “full-scope” enablement standard and view it as reflecting a shift from a practical focus on whether the disclosure enables others to make and use the claimed invention, to a fruitless endeavor for the exact boundaries of the invention.¹³⁵ The fear is that functional genus claims are essential for pharmaceutical patent protection—and this new “full-scope” enablement standard effectively kills genus claim patents and guts the protection that the pharmaceutical industry has become reliant upon.¹³⁶

D. *Amgen Inc. v. Sanofi and Genus Claiming*

In *Amgen Inc. v. Sanofi*, the Court took up the enablement question of the degree to which a patentee must show exactly which species within a genus will work as intended.¹³⁷ The claims at issue involved antibodies that lower LDL cholesterol.¹³⁸ Amgen owned the 8,829,165 and 8,859,741 patents which claimed

¹³¹ See Karshstedt et al., *supra* note 91, at 22.

¹³² *Id.*; see also *AbbVie Deutschland GmbH & Co., KG v. Janssen Biotech, Inc.*, 759 F.3d 1285, 1301 (Fed. Cir. 2014) (citing *Enzo Biochem, Inc. v. Gen-Probe Inc.*, 323 F.3d 956, 964 (Fed. Cir. 2002)) (“It is true that functionally defined claims can meet the written description requirement if a reasonable structure-function correlation is established, whether by the inventor as described in the specification or known in the art at the time of the filing date. However, the record here does not indicate such an established correlation. Instead, AbbVie used a trial and error approach to modify individual amino acids in order to improve the IL-12 binding affinity. Moreover, the . . . patents do not describe any common structural features of the claimed antibodies. The asserted claims attempt to claim every fully human IL-12 antibody that would achieve a desired result . . . whereas the patents do not describe representative examples to support the full scope of the claims.”).

¹³³ *Juno Therapeutics, Inc. v. Kite Pharma, Inc.*, 10 F.4th 1330, 1332 (Fed. Cir. 2021); *Idenix Pharms. LLC v. Gilead Scis. Inc.*, 941 F.3d 1149, 1153 (Fed. Cir. 2019).

¹³⁴ See Karshstedt et al., *supra* note 91, at 4.

¹³⁵ *E.g., id.*; Brief for the Petitioners, *supra* note 90, at 8–10.

¹³⁶ See Karshstedt et al., *supra* note 91, at 62–64.

¹³⁷ 598 U.S. 594 (2023).

¹³⁸ *Id.*

all antibodies that bind to the PCSK9 protein and thus lower LDL levels by blocking PCSK9 from binding to the LDL receptors.¹³⁹ After Amgen sued Sanofi for patent infringement, the District Court for the District of Delaware granted Sanofi judgement as a matter of law, finding Amgen's claims invalid for lack of enablement.¹⁴⁰ On appeal, the Federal Circuit affirmed, signaling their support for the "full-scope" enablement standard by holding that the patents required undue experimentation to obtain antibodies fully within the scope of the claims.¹⁴¹

In order to determine whether "undue" experimentation was required for a PHOSITA to practice the invention, the Federal Circuit applied the following *Wands* factors:¹⁴²

- (1) The quantity of experimentation necessary
- (2) The amount of direction or guidance presented
- (3) The presence or absence of working examples
- (4) The nature of the invention
- (5) The state of the prior art
- (6) The relevant skill of those in the art
- (7) The predictability or unpredictability of the art, and
- (8) The breadth of the claims

While Amgen argued that the no undue experimentation was required due to the embodiments disclosed being sufficiently structurally representative for fulfilling the written description requirement, Sanofi claimed there were millions of potential antibodies that might fall within the genus and require undue experimentation.¹⁴³ Sanofi pointed to the lack of guidance, the unpredictability of antibody generation, and the substantial degree of trial and error that would be required. The court sided with Sanofi, focusing on the large number of possible candidates within the scope of the claims and the lack of guidance to narrow

¹³⁹ *Id.*

¹⁴⁰ *Amgen Inc. v. Sanofi*, No. CV 14-1317-RGA, 2019 WL 4058927 (D. Del. Aug. 28, 2019), *aff'd*, 987 F.3d 1080 (Fed. Cir. 2021), *aff'd*, 598 U.S. 594 (2023).

¹⁴¹ *Amgen, Inc. v. Sanofi*, 987 F.3d 1080 (Fed. Cir. 2021), *aff'd*, 598 U.S. 594 (2023).

¹⁴² *Id.* at 1084–85.

¹⁴³ *Id.* at 1085.

the field that necessitated a large quantity of experimentation. In discussing the unpredictability of the field of science, the court noted that translating an antibody's amino acid sequence into a three-dimensional structure is still not possible, and that a substitution within the sequence can alter the function.¹⁴⁴ Thus, seemingly the only way to discover undisclosed but claimed embodiments would be through substantial and expensive trial and error.

The Supreme Court granted certiorari to address the question whether Amgen's '165 and '741 patents satisfied the enablement requirement of 35 U.S.C. §112(a), such that the invention was described "in such full, clear, concise, and exact terms as to enable any person skilled in the art . . . to make and use the [invention]."¹⁴⁵ Writing for a unanimous Supreme Court, Justice Gorsuch affirmed the Federal Circuit's "full-scope" standard.¹⁴⁶ A specification may call for "a reasonable amount of experimentation to make and use a patented invention. What is reasonable in any case will depend on the nature of the invention and the underlying art."¹⁴⁷ What is not allowed is a claim that monopolizes an entire class of antibodies by function simply by disclosing twenty-six antibodies by their amino acid sequences.¹⁴⁸

The Court's opinion cited *O'Reilly v. Morse, The Incandescent Lamp Patent* and *Holland Furniture Co. v. Perkins Glue Co.* as examples of prior enablement jurisprudence where overbroad claims were paired with insufficient disclosure.¹⁴⁹ In *Morse*, the claim was too broad and covered all means of telegraphic communication, while the specification did not describe how to make or use them all.¹⁵⁰ In *Incandescent Lamp*, the patentees only possessed an incandescing conductor made of carbonized paper, yet tried to claim "every fibrous and textile material."¹⁵¹ Such a claim might have been permissible if there was disclosure of a "quality common" to the claimed fibrous and textile substances that made

¹⁴⁴ *Id.* at 1087.

¹⁴⁵ *Amgen*, 598 U.S. at 599 (quoting 35 U.S.C. §112(a)).

¹⁴⁶ *Id.* at 610.

¹⁴⁷ *Id.* at 612.

¹⁴⁸ *Id.* at 613–15.

¹⁴⁹ *O'Reilly v. Morse*, 56 U.S. 62 (1853); *Consol. Elec. Light Co. v. McKeesport Light Co. (The Incandescent Lamp Patent)*, 159 U.S. 465 (1895); *Holland Furniture Co. v. Perkins Glue Co.*, 277 U.S. 245 (1928).

¹⁵⁰ *Morse*, 56 U.S. at 113–17.

¹⁵¹ *The Incandescent Lamp Patent*, 159 U.S. at 472–73.

them “peculiarly” adapted to incandescent lighting.¹⁵² In *Holland Furniture*, the claim was to a starch glue and the specification described a key ingredient in terms of its “use or function” rather than its “physical characteristics or chemical properties.”¹⁵³ The Court took issue with the fact that “elaborate experimentation” was required from one attempting to use the discovery as claimed and described functionally.¹⁵⁴

The Court focused on the extreme breadth of Amgen’s claims. When a patent “claims an entire class of processes, machines, manufactures, or compositions of matter, the patent’s specification must enable a person skilled in the art to make and use the entire class. In other words, *the specification must enable the full scope* of the invention as defined by its claims. The more one claims, the more one must enable.”¹⁵⁵ The Supreme Court has affirmed the Federal Circuit’s shift of the enablement inquiry from a question of whether *making and using* the invention will require undue experimentation to whether *defining* the full scope of the invention, by experimenting with potentially every species within the genus, will require undue experimentation. The intent seems to be to limit genus claims to species that work, or at the very least limit the genus such that it would not take a prohibitively long time to test every single species within the genus. The Court has signaled a desire for the patentees to do the work to narrow down the genus with some principle before applying for a patent, rather than seeking to claim potentially millions of compounds based on function.

Though this full scope view of enablement has prevailed, USPTO guidelines post-Amgen state that the *Wands* factors still control.¹⁵⁶ The view of the USPTO is that enablement turns on the degree of experimentation required by the specification and whether it is “reasonable.”¹⁵⁷ Yet in *Baxalta Inc. v. Genentech, Inc.*, the Federal Circuit relied on the “full scope” test from *Amgen* to affirm a

¹⁵² *Id.* at 472.

¹⁵³ *Holland Furniture*, 277 U.S. at 256.

¹⁵⁴ *Amgen Inc. v. Sanofi*, 598 U.S. 594, 610 (2023) (citing *Holland Furniture*, 277 U.S. at 257).

¹⁵⁵ *Id.* (emphasis added).

¹⁵⁶ Adoption of Updated WIPO Standard ST.26; Revision to Incorporation by Reference, 88 Fed. Reg. 34089 (May 26, 2023).

¹⁵⁷ See Eileen McDermott, *USPTO Says Wands Still Controls Post-Amgen in New Enablement Guidelines*, IPWATCHDOG (Jan. 9, 2024, 6:30 PM), <https://ipwatchdog.com/2024/01/09/uspto-says-wands-still-controls-post-amgen-new-enablement-guidelines/id=171784/> [https://perma.cc/W2FA-N9PM].

district court decision of invalidity for lack of enablement.¹⁵⁸ Baxalta's patent covered millions of antibodies, while the specification disclosed just eleven amino acid sequences. Like in *Amgen*, the court took issue with the fact that nothing in the specification taught a PHOSITA how to identify antibodies that fell within the claim limitations other than by repeating a brute force trial-and-error process.¹⁵⁹ There was no way for a PHOSITA to "predict" which antibodies would perform the claimed functions.

With *Amgen Inc. v. Sanofi*, the Supreme Court has backed a strict, higher bar for enablement, especially for functional genus claims pertaining to antibodies where potentially millions of compounds are claimed with minimal disclosure. When a novel drug target is discovered, it is likely a naturally occurring phenomenon that cannot be patented, as it already exists inside the body of a person.¹⁶⁰ Discovering a novel target that elicits a desired pharmacological effect is analogous to discovering properties of electricity in *Morse*,¹⁶¹ or BRCA genes in *Myriad*,¹⁶² or the pre-modified bacteria in *Chakrabarty*,¹⁶³ all of which were unpatentable. Discovering such natural phenomena is a valuable contribution to society, but granting a broad patent to all applications of that discovery would "shut the door" on future innovation and inventions that may improve upon the initial disclosure.¹⁶⁴ Such a broad claim without similarly broad disclosure is impermissible. What may be patented is a specific application of said natural phenomenon, like the twenty-six antibodies disclosed in the specifications in *Amgen*, or the telegraph as one method of electromagnetic communication in

¹⁵⁸ 81 F.4th 1362 (Fed. Cir. 2023).

¹⁵⁹ *Id.* at 1366.

¹⁶⁰ See 35 U.S.C. § 101. The framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent eligible applications of those concepts is as follows. First, determine whether the claims at issue are directed to a patent-ineligible concept. If so, then consider the elements of each claim both individually and "as an ordered combination" to determine whether additional elements "transform the nature of the claim" into a patent-eligible application. *Mayo Collaborative Servs. v. Prometheus Lab'ys, Inc.*, 566 U.S. 66, 78–79 (2012); accord *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1375 (Fed. Cir. 2015). This second step has also been described as a search for an "inventive concept," an element or combination of elements sufficient to ensure that the patent amounts to significantly more than a patent upon the ineligible concept itself. *Mayo*, 566 U.S. at 72.

¹⁶¹ *O'Reilly v. Morse*, 56 U.S. 62, 62 (1853).

¹⁶² *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 576 (2013).

¹⁶³ *Diamond v. Chakrabarty*, 447 U.S. 303 (1980).

¹⁶⁴ *Morse*, 56 U.S. at 113.

Morse. The unpredictable nature of the science and protection against minor variations warrant some broader scope of protection than the four corners of the specification, but this is countervailed by the interests against precluding the field from future improvement and the reciprocity of the patent bargain. With these policy underpinnings in mind, the next part examines how advancement in predictive simulation might affect claiming and enablement.

III FOLDED ENABLEMENT

Thus, the Court has signaled its dissatisfaction with broad functional genus claims particularly pertaining to antibodies that offer little to no instruction for a PHOSITA to narrow the genus. Parties working in drug development may feel limited to specific compounds in their claims and therefore vulnerable to minor variations. Advancements in simulation technology utilizing AI may offer a solution. Though functional claiming of antibodies is effectively voided, increased modeling capabilities will enable scientists to both predict the structures of the compounds claimed and hypothesize a genus of molecules that have similar functions.

These advancements may directly address the concerns raised by the Court relating to functional genus claiming of antibodies. In *Amgen*, the Court noted that antibody science was unpredictable and that scientists cannot “always accurately predict exactly how trading one amino acid for another will affect an antibody’s structure and function.”¹⁶⁵ It also took issue with the lack of guidance given to narrow the large breadth of the claims.¹⁶⁶ When an actor designs a drug around a novel target beyond the protein folding horizon, they will be able to not only disclose the specific structures of the species that they synthesized and tested, but also have ways to narrow down the potential genus of compounds that bind to that target. They also may be able to simply disclose hundreds of species in their specification. *In silico* simulation can be used to screen and filter for prior disclosures to avoid anticipation, for nonfunctional species to avoid enablement issues, for any other characteristics that might make a species an unattractive candidate for drug development, and even to generate a proposed procedure to

¹⁶⁵ *Amgen Inc. v. Sanofi*, 598 U.S. 594, 600 (2023).

¹⁶⁶ *Id.* at 614 (describing Amgen’s approach to enablement as “little more than [] research assignments.”).

synthesize the remaining species. The question of nonobviousness may be looming, but application of this technology towards a novel target may be enough for courts.

The resulting patent application might look like a specific disclosure of twenty-six antibodies that were produced and tested alongside a genus claim consisting of merely 300 species that have been simulated to be found as viable but not preferable alternatives. Or it might look like a specific disclosure of 326 antibodies that were simulated to be the best candidates to bind to a particular target, with experimental validation on twenty-six of the group. The characteristics evaluated by the program to narrow down the genus could be fully disclosed as guidance as per the second *Wands* factor.

Both hypothetical claims would likely meet the full scope enablement standard that is the law following *Amgen*, even though the *Wands* factors will take into account the advances in simulative capabilities and the science. Courts will recognize that the skill of those in the art has risen, that the art has become more predictable, and consider the state of the prior art in considering whether undue experimentation will be required. Narrowing the claimed genus would address the major concern in *Amgen* and help the court find that undue experimentation is not required. To get around anticipation or obviousness objections, patentees may structure their claims as applications of these compounds as a means of binding to newly discovered targets.

A. *Claim Complexity*

Rather than enabling patentees to claim compounds structurally, AI-enabled advancements in simulation technology may have the opposite result. If the technical capability to filter a broad library of compounds based on functional criteria exists, it may also sufficiently enable a PHOSITA to define the full scope of a functionally claimed genus without undue experimentation. Courts may be willing to accept functional claiming of an antibody genus by a patentee that provides sufficient narrowing criteria and disclaims nonfunctional species. The question would be whether the burden of sorting through an expansive genus to clarify the bounds of a claim should be placed on the patentee or on the public.

An inventor has no incentive to disclose any more than is required by law.¹⁶⁷ Any disclosure that is not claimed is dedicated to the public.¹⁶⁸ It may be that a heightened burden on the inventor will increase the costs of innovation. This may slow the pace of invention and dissemination of knowledge. However, there are benefits to imposing the burden on the patentee to clarify the scope of a claim. In a competitive industry like pharmaceuticals, actors will be both patentees and patent readers. Having clear patent claims will allow readers to design around the patent to improve upon the inventions of their competitors.¹⁶⁹ This would stimulate competition, an integral goal of the patent system. If a competitor is left to sift through a functionally claimed genus, they may be met with uncertainty when deciding whether to utilize a compound at the outer fringes of the claim. This leaves the competitor with three unfavorable options. They may try to negotiate a license, which leaves them at the mercy of the patentee. They may simply choose to abandon the attempt, which may deprive the public of innovation. Finally, they may attempt to find relief through litigation, such as an action to invalidate the patent or find noninfringement. This is a costly process that should be avoided if possible. While it is important to protect a patentee from infringement by trivial variations, the burden for the practicing public to narrow a functionally claimed genus must not be too great.¹⁷⁰

Another potential issue is the increasing complexity of claims. Claiming compounds functionally has the benefit of simplicity. It is possible that the kind of structural claiming enabled by simulation technology greatly raises the information

¹⁶⁷ Jeanne C. Fromer, *Patent Disclosure*, 94 IOWA L. REV. 539, 594 (2009).

¹⁶⁸ The dedication rule states when a patentee discloses but does not claim subject matter in a patent, the unclaimed matter is dedicated to the public. The rule is based on the idea that the patentee has control over drafting of the claims, and if they disclose but omit to claim certain subject matter, they are deemed to have waived the right to capture the disclosed matter under the doctrine of equivalents. *See Johnson & Johnson Assocs. Inc. v. R.E. Serv. Co.*, 285 F.3d 1046 (Fed. Cir. 2002) (per curiam).

¹⁶⁹ Fromer, *supra* note 167, at 596 (analogizing to a multi-party prisoner's dilemma, where all parties would be better off with more effective disclosure as long as there is no individual defection).

¹⁷⁰ *See* Clarisa Long, *Information Costs in Patent and Copyright*, 90 VA. L. REV. 465, 495–96 (2004) (“Owners know more about their property than do observers. . . . [R]ules that force owners publicly to disclose and convey information, such as by defining the boundaries and more general attributes of the good, can increase overall social welfare. Such rules may lower information costs for observers (which will be a large number of people), while increasing information costs for owners (which will be a small number of people for any given good). Information disclosure rules are efficient so long as they lower net costs to observers by more than they raise net costs to owners.”).

costs of patent readers when deciphering the claim. Readers may require access to certain computer programs. The group having “ordinary skill in the art” may be exceedingly small, limited to those with expertise in computational biology.

Presently, biochemical patent claims are inaccessible to many. While individual inventors may be disproportionately affected by rising information costs than those under the umbrella of large firms with deep pockets, the typical pharmaceutical patentee is not an inventor working out of her garage. The average skill required to understand and make use of a pharmaceutical patent is already high. Claiming compounds structurally may raise the complexity of reading claims, resulting in lowered access for some, but with a net positive effect. The practicing public will have more definite notice of what is claimed by the patent, spurring innovation by allowing competitors to design around the patentee. Parties with the resources to compete in the pharmaceutical market will adapt to reading the more complex claims. In the end, the twin goals of innovation and access will continue to be met.

B. Means Plus Function Plus Simulation

In response to the movement away from functional claiming of antibodies, Professors Mark Lemley and Jacob S. Sherkow proposed a middle ground involving means-plus-function claiming.¹⁷¹ 35 U.S.C. §112(f) provides the statutory basis.¹⁷² Despite explicitly permitting functional claiming, a §112(f) claim is actually substantially narrowed in scope.¹⁷³ Such a claim is not construed to cover every means of performing the claimed function, and is instead limited “only to those disclosed in the patent’s specification and equivalents thereof.”¹⁷⁴ As applied to antibodies, this serves as an intermediary between broad, purely functional claims and narrow species claims. A claim for means of binding to a target antigen accompanied with a limited specification would not be found invalid for written description or enablement as it would only be construed to cover the exact species that are disclosed in the specification.

¹⁷¹ Lemley & Sherkow, *supra* note 58, at 1055–61.

¹⁷² 35 U.S.C. § 112(f). “An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.”

¹⁷³ *In re Hyatt*, 708 F.2d 712, 714–15 (Fed. Cir. 1983).

¹⁷⁴ Lemley & Sherkow, *supra* note 58, at 1056–57.

The fight then is over what constitutes an “equivalent” and what test should be applied to accused infringers. *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.* says there is equivalence if the accused and claimed thing perform “substantially the same function in substantially the same way to obtain the same result.”¹⁷⁵ The traditional aim is to capture later-developed equivalents that are unknown at the time of applying for the patent. Though unlikely, it is possible that two structurally different antibodies have the same function: they bind to the same epitope, have the same binding affinity, have the same avidity, and thus perform substantially the same function in substantially the same way to obtain the same result. It may be a question of the degree of scrutiny that is applied to the measurements of these characteristics to find equivalence.

The species within the disclosure cover literal infringement. There is a separate doctrine of equivalents (DoE) that would apply as well. For means-plus-function claims, this DoE applies in two circumstances: where function is similar but not identical, and where the equivalent did not exist at the time the patent issued.¹⁷⁶ For a precise science such as antibodies, the first application would not apply. Function would have to be identical to be covered as binding to the same antigen at a different epitope should be sufficiently different. There is the possibility then that means-plus-function equivalence applies DoE onto the equivalent structures covered by literal infringement.¹⁷⁷ Lemley and Sherkow argue this strategy can capture structurally different antibodies that share functional characteristics while being sufficiently narrow to pass under the full scope enablement standard. The basis for written description – preventing gun jumping and late claiming – will be supported because structures must be disclosed when filing, so patentees will need to identify and possess the antibodies before claiming.

But the view is different on the other side of the protein folding horizon. Patentees would be able to identify and disclose a significant number of species within the specification. Means-plus-function claiming enabled with sophisticated simulation may wind up with hundreds of disclosed species, and allowing claims

¹⁷⁵ *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 35 (1997) (citing *Union Paper-Bag Mach. Co. v. Murphy*, 97 U.S. 120 (1878)). Equivalence is tested not against the claim as a whole but goes element by element. *Id.* at 29–30. Antibody claims tend to not be in multielement format.

¹⁷⁶ *Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc.*, 145 F.3d 1303, 1310–11 (Fed. Cir. 1998).

¹⁷⁷ John N. Kandara, Note, *Application of the Doctrine of Equivalents to Means Plus Function Claims: WMS Gaming Inc. v. International Game Technology*, 50 DUKE L.J. 887, 916 (2000).

to extend to equivalents may wind up crowding out the field for future innovators. It is conceivable that within the hundreds of disclosed species, some may be strategically added not for their value as viable drug development candidates, but to widen the net of equivalents so as to fend off undiscovered improvements. Courts will likely want to narrow what is covered under equivalents by having a high standard for similarity. Compounds will be screened based on characteristics such as binding epitope, binding affinity, avidity, among others. To encourage improvements in a mature field, courts may want to rule that in order for a compound to infringe on an equivalent, it must match every characteristic to an extraordinarily high degree.

C. How Much is Enough?

Advanced molecular simulation will enable actors to run extensive screenings and simulations of compounds at minimal costs. This raises the question of how much patentees should be expected to do in order to claim a compound. Would it be proper to allow a claim to a genus of 10,000 antibodies as long as a computer has generated a “recipe” to synthesize each one, and simulated the interactions with a target epitope with a positive outcome? Should even a 99.9% confidence in *in silico* reliability be enough? While requiring some degree of physical validation may serve to ensure that the public is not swindled out of a proper patent bargain, could such a requirement ultimately be an undue burden on inventors that will ultimately stifle innovation?

The labor in creating a list of compounds may be relatively trivial. The scientific endeavor to advance protein folding simulation is a worldwide communal effort and the fruits of that endeavor should be a commons to be enjoyed by all. While there may be valuable work in discovering a novel target, the work to screen existing databases generated through common effort is not proportionate to a monopoly on 10,000 antibodies for use in binding to a specific epitope. Such a grant might fence off the field and block others when only a select few antibodies will be used in clinical trials and ultimately only one may possibly make it into a drug. Within the 9,999 other antibodies that were screened and deemed to be inferior choices, there may be one that is superior in different circumstances such as use at

high altitudes, or on women.¹⁷⁸ Or there may simply be one that was erroneously predicted to have an unfavorable characteristic but in reality, is superior. Precluding others from experimenting with the remainder of the genus may deprive society of valuable advancements.

With that being said, an inventor deserves to have exclusivity and protection for their invested efforts. That protection should account for trivial variations so that infringers cannot avoid liability with minimal effort. Without the guarantee of protection against follow-on actors, few will want to undertake the costly process of developing a pharmaceutical compound and obtaining FDA approval to bring it to market. Adding a requirement that a patentee not only successfully synthesize the full genus that they claim but validate that each species functions as predicted might be a prohibitively expensive and tip the scales on the cost-benefit of innovation. As future courts are faced with these difficult questions, they should maintain the balance between twin goals of innovation and access. Innovators must be protected so that they continue to have an incentive to progress science and the useful arts. The bounds of patent claims must be clear so that the public has proper access to improve upon the invention.

CONCLUSION

Protein folding and related technologies are developing at an exponential rate. We may soon cross the horizon into a world where the molecular mysteries of complex proteins are made clear for researchers. Despite the history of functional claiming of antibodies and genus claiming, courts have transitioned into a full scope view of enablement after *Amgen Inc. v. Sanofi*. This status quo may make it difficult for pharmaceutical actors to obtain protection against minor variations of their inventions. Advancements in protein folding and interaction may offer the solution. Modeling capabilities will enable actors to structurally define not only the compounds that they are using in physical trials, but also any functional equivalents within the entire theoretical universe of molecules. This will allow patentees to meet the full scope standard enough to protect against variations and equivalents.

¹⁷⁸ Women and in particular women of color have been underrepresented in clinical research. This has consequences for women's health as diseases and treatments can affect men and women differently. While progress has been made to increase representation in clinical trials, there is far more to be done. Allison M. Whelan, *Unequal Representation: Women in Clinical Research*, 106 CORNELL L. REV. ONLINE 87 (2021).

There is a risk that this trivializes the enablement standard and allows inventors to tie up too much in return for too little.

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CLARIFYING THE *DE MINIMIS* DOCTRINE IN COPYRIGHT LAW

BEN TAUBER*

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* J.D., New York University School of Law, 2025; B.S. in Foreign Service, Georgetown University, 2022. I would like to thank the Notes Committee of the NYU Journal of Intellectual Property and Entertainment Law for their thoughtful comments and suggestions. I am especially grateful to Professor Jeanne Fromer and Professor Benjamin E. Marks for inspiring and helping to develop this note. I would also like to thank my family and friends for their constant encouragement and support, and for pretending to be interested when I talk about copyright law.

INTRODUCTION¹

U.S. copyright law derives its authority from Article I, Section 8 of the Constitution (the “IP Clause”), which grants to Congress the power to assign copyrights in order to “promote the Progress of Science and useful Arts.”² The primary goal of the Clause, and therefore of copyright law, is to safeguard the public benefit that results from the production of creative works.³ In doing so, the clause recognizes that artists must be incentivized to create through the ability to protect their works.⁴

Central to these dual principles is a market failure. Expressive works are costly to produce, involving significant expenditures of time, intellectual and creative effort, and, yes, money.⁵ However, they are incredibly cheap to reproduce. The digital age has made copying especially trivial; entire works can be copied in a couple of mouse clicks with little-to-no loss in quality.⁶ Therefore, without protections for expressive works, rampant reproduction would drive the costs of these works down to the marginal cost of copying (essentially zero).⁷ Without being able to recoup the costs of creating a work, most creatives would likely not bother to create in the first place.⁸ By providing artists, authors, and other creatives exclusive rights in their works, copyright law creates a market for the works that would otherwise not exist, thereby incentivizing creation.

¹ Unless otherwise noted, this Note omits all internal alterations, citations, footnotes, and quotation marks in quoted text. For purposes of consistency, the term “*de minimis*” is italicized throughout this note.

² U.S. CONST. art. I, § 8, cl. 8.

³ See *Twentieth Century Music Corp. v. Aiken*, 422 U.S. 151, 156 (1975) (“But the ultimate aim [of copyright law] is . . . to stimulate artistic creativity for the general public good.”); *Fox Film Corp. v. Doyal*, 286 U.S. 123, 127 (1932) (“The sole interest of the United States and the primary object in conferring the [copyright] monopoly lie in the general benefits derived by the public from the labors of authors.”).

⁴ See *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 429 (1984) (“[Copyright law] is intended to motivate the creative activity of authors and inventors by the provision of a special reward.”).

⁵ See William M. Landes & Richard A. Posner, *An Economic Analysis of Copyright Law*, 18 THE J. OF LEGAL STUD. 325, 326–28 (1989).

⁶ Marybeth Peters, *The Challenge of Copyright in the Digital Age*, 9 REVISTA LA PROPIEDAD INMATERIAL [REV. PROP. INMATERIAL] 59, 59–60 (2006) (Colom.).

⁷ Landes & Posner, *supra* note 5, at 328.

⁸ *Id.*

However, copyright law requires a balance to be struck between too little and too much protection. Too little protection, and works would not get created because the prices of works would not justify the costs of creation. Too much protection, and works would not get created because the fear of getting sued over the smallest instances of accidental appropriation would make the costs of creation too high.⁹ For this reason, copyright law does not prevent every instance of copying. For example, the doctrine of *scènes à faire* excludes “incidents, characters or settings which are as a practical matter indispensable, or at least standard, in the treatment of a given topic” from copyright protection,¹⁰ and the doctrine of fair use allows authors to engage in limited copying of protected works for “criticism, comment, news reporting, teaching . . . scholarship, or research.”¹¹ In this vein, courts have long recognized a doctrine known as *de minimis*—short for *de minimis non curat lex*, or “the law does not concern itself with trifles.”¹² In the copyright context, the *de minimis* doctrine stands for the principle that there are instances of copying that are so minimal or inconsequential that they are not legally actionable.¹³

The current state of the *de minimis* doctrine, however, is messy, to say the least. Federal copyright law contains no mention of the doctrine, and the Supreme Court has not even addressed its existence, let alone its metes and bounds. Accordingly, the *de minimis* doctrine in its current form is a patchwork of judicial interpretation, fracturing along circuit borders.

The current legal patchwork contributes to widespread uncertainty regarding the doctrine, raising questions of exactly what it is and what it covers. While circuit splits necessarily lead to uncertainty, circuit splits in copyright law are especially concerning, as “creating inconsistent rules among the circuits would lead to different levels of protection in different areas of the country, even if the same alleged infringement is occurring nationwide.”¹⁴

⁹ *Id.* at 332.

¹⁰ *Alexander v. Haley*, 460 F. Supp. 40, 45 (S.D.N.Y. 1978).

¹¹ 17 U.S.C. § 107.

¹² *De minimis non curat lex*, MERRIAM-WEBSTER, <https://www.merriam-webster.com/dictionary/de%20minimis%20non%20curat%20lex> [<https://perma.cc/P87S-PYXL>](last visited Nov. 13, 2024).

¹³ Julie D. Cromer, *Harry Potter and the Three-Second Crime: Are We Vanishing the De Minimis Defense from Copyright Law?*, 36 N.M. L. REV. 261, 262 (2006).

¹⁴ *Seven Arts Filmed Ent. Ltd. v. Content Media Corp.*, 733 F.3d 1251, 1256 (9th Cir. 2013).

The goal of this note is to provide a general survey of the current state of the doctrine while addressing what a unified *de minimis* framework could look like. First, this note outlines two conceptual grounds on which courts base the *de minimis* doctrine: the concept of “legal copying”—which implicates the doctrine of substantial similarity—as well as the concept of “trivial uses” of copyrighted works. This note argues that these concepts share a unifying “improper purpose” rationale: that a copier is liable only if the appropriation implicates the copyright holder’s legally protected copyright interests.

I then apply these concepts to a proposed two-part framework, utilizing it to address two current points of contention in copyright law. The first concerns the role of observability in substantial similarity analysis. Contrary to copyright law orthodoxy, the Second Circuit holds that copying a visual work in its entirety, but sufficiently obscuring it within a new work, constitutes non-actionable *de minimis* copying. As a component of substantial similarity, the observability doctrine rests on legally shaky grounds and may make it more difficult for plaintiffs to establish actionable infringement. The concept of “trivial use” may therefore be a more appropriate legal ground on which to base the observability doctrine. The second split concerns whether the *de minimis* doctrine may be applied to instances of sound recording infringement, often seen in cases of music sampling. The Sixth Circuit, well in the minority, holds that samples are *per se* infringing. This note argues, in accordance with the Ninth Circuit, that the Sixth Circuit approach is based on a poor understanding of the *de minimis* doctrine. Finally, this note concludes with a brief review of the general state of the *de minimis* doctrine among the several circuits as well as thoughts on what the future of the doctrine could look like.

I

RELATION OF THE *DE MINIMIS* DOCTRINE TO LEGAL COPYING

A plaintiff seeking to prove copyright infringement in the United States usually must establish two components. First, he must establish that copying actually occurred. In most circuits, however, this is not enough. The plaintiff must also establish that what was taken was substantial enough to be legally actionable.¹⁵ In other words, there must be “substantial similarity” between the two works.

¹⁵ See *Peters v. West*, 692 F.3d 629, 633 (7th Cir. 2012) (outlining the requirements of different circuits).

As this note will discuss, the *de minimis* doctrine in copyright law has been poorly defined and inconsistently applied in the several circuits. One thing on which most courts agree, however, is that the doctrine is fundamentally linked to the concept of “legal” or “actionable” copying, and thereby to the concept of substantial similarity. At bottom, the term “*de minimis*” has been understood to mean copying “in fact” that nevertheless does not rise to the level of actionable—or “legal”—copying.

The Second Circuit, for instance, utilizes a two-part test for proving copyright infringement.¹⁶ The first part requires establishing that the work was actually copied, either by direct evidence of copying or indirectly through showing that the defendant had access to the plaintiff’s work as well as similarities between the two works that are probative of copying.¹⁷ Upon establishing actual copying, the plaintiff must still establish that the copying at issue arises to an actionable level by showing that the defendant’s work is substantially similar to the plaintiff’s work. Substantial similarity, in turn, “requires that the copying is quantitatively and qualitatively sufficient” to support a conclusion of actionable copying.¹⁸ *Qualitative* sufficiency turns on whether the defendant’s work copies the protected expression of the plaintiff’s work rather than unprotectable ideas. This can be done either by determining whether an ordinary observer would regard the works as essentially the same, or by more discerningly conceptualizing the works at different levels of abstraction and filtering out unprotectable components before comparing what is left.¹⁹ *Quantitative* sufficiency turns on how much of the plaintiff’s work was copied. The Second Circuit defines *de minimis* as copying that “has occurred to such a trivial extent as to fall below the *quantitative* threshold of substantial similarity.”²⁰ An artist engaging in *de minimis* (i.e. non-actionable) copying therefore takes so little of a copyrighted work that the artist’s work is not

¹⁶ *Laureyssens v. Idea Grp., Inc.*, 964 F.2d 131, 139–40 (2d Cir. 1992).

¹⁷ Because copyright law only prevents the act of copying, these similarities “must be so striking as to preclude the possibility that plaintiff and defendant independently arrived at the same result.” *Arnstein v. Porter*, 154 F.2d 464, 468 (2d Cir. 1946).

¹⁸ *Ringgold v. Black Ent. Television, Inc.*, 126 F.3d 70, 75 (2d Cir. 1997).

¹⁹ *Laureyssens*, 964 F.2d at 141; *see generally* *Nichols v. Universal Pictures Corp.*, 45 F.2d 119 (2d Cir. 1930) (originating the abstraction test).

²⁰ *Ringgold*, 126 F.3d at 74 (emphasis added).

substantially similar to the work from which he copied, making the work non-infringing.²¹

The Ninth Circuit's copyright infringement framework differs slightly from the Second Circuit's. Nevertheless, it also understands *de minimis* as copying that does not rise to the level of substantial similarity. Similar to the Second Circuit, a plaintiff proving copyright infringement in the Ninth Circuit must demonstrate actual copying, either through direct evidence or by showing access as well as "similarities probative of copying."²² The plaintiff then must establish that the works are substantially similar, both "extrinsically" and "intrinsically."²³ The "extrinsic" test mirrors the Second Circuit's "abstraction-filtration" test for qualitative similarity: it dissects the two works to their "constituent elements" and compares whether these elements share objective similarities.²⁴ The "intrinsic" test mirrors the Second Circuit's "ordinary observer" test: it asks whether the ordinary person would find the "total concept and feel" of the two works to be substantially similar.²⁵ Although the Ninth Circuit test does not have an explicit quantitative component, the amount of copying still plays a role in determining substantial similarity through the "intrinsic" component. Accordingly, the Ninth Circuit defines *de minimis* copying as copying that is "so meager and fragmentary that the average audience member would not recognize the appropriation," resulting in a lack of substantial similarity between the works at issue.²⁶

Not all circuits recognize a separation between actual and legal copying, however. In the Eighth Circuit, for instance, substantial similarity need only be shown to establish actual copying in the absence of direct evidence. In other words, if a plaintiff can show (1) ownership of a valid copyright and (2) direct evidence of copying, then the defendant is liable for infringement, regardless of the degree of similarity between the works.²⁷ The Seventh Circuit utilizes this framework as

²¹ *But see* 4 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 13.03[A][2][a] (Matthew Bender rev. ed. 2023) ("However, even if the similar material is quantitatively small, if it is qualitatively important, the trier of fact may properly find substantial similarity.").

²² *Rentmeester v. Nike, Inc.*, 883 F.3d 1111, 1117 (9th Cir. 2018).

²³ *Id.* at 1118.

²⁴ *Williams v. Gaye*, 895 F.3d 1106, 1119 (9th Cir. 2018).

²⁵ *Id.*

²⁶ *Bell v. Wilmott Storage Servs., LLC*, 12 F.4th 1065, 1074–75 (9th Cir. 2021).

²⁷ *See Frye v. YMCA Camp Kitaki*, 617 F.3d 1005, 1008 (8th Cir. 2010); *Cy Wakeman, Inc. v. Nicole Price Consulting, LLC*, 284 F. Supp. 3d 985, 990 (D. Neb. 2018).

well.²⁸ It is no surprise, therefore, that these circuits have not formally recognized a *de minimis* doctrine in copyright law.²⁹

Alexander v. Take-Two Interactive Software, Inc. shows how these circuits refuse to grant judgments for defendants on grounds of *de minimis* copying. In this case, the U.S. District Court for the Southern District of Illinois addressed, *inter alia*, the question of whether a video game company’s copying of a tattoo artist’s copyrighted design on a digital rendering of wrestler Randy Orton constituted *de minimis* use.³⁰ After acknowledging the absence of Seventh Circuit precedent on the existence of a *de minimis* defense, the court refused to recognize the defense, doubting its general viability “[g]iven the overlap between the defense and actionable copying, which Alexander is not required to prove to sustain her case in this circuit”³¹

There is an argument that the Seventh and Eighth Circuits get it right—that there is no separate “legal copying” requirement to establish infringement, and therefore no *de minimis* defense. The Copyright Act, after all, essentially provides that defendants are strictly liable for copyright infringement unless they can establish fair use.³² This argument is myopic, however. The rule that infringement occurs only upon a finding of legal copying is well established in copyright law dating to the mid-1800s.³³ Because the “legally protected interest” of a copyright

²⁸ See *Peters v. West*, 692 F.3d 629, 633–34 (7th Cir. 2012) (“[P]roving the basic tort of infringement [in the Seventh Circuit] simply requires the plaintiff to show that the defendant had an actual opportunity to copy the original . . . and that the two works share enough unique features to give rise to a breach of the duty not to copy another’s work.”).

²⁹ In addition to the Seventh and Eighth Circuits, the Courts of Appeals for the Fifth, Tenth, D.C., and Federal Circuits have not formally recognized a *de minimis* defense to infringement. However, because the Fifth and Tenth Circuits distinguish between actual and legal copying, *de minimis* likely plays an implicit role in these circuits as a term for an insufficient showing of legal copying, as it does in the Second and Ninth Circuits. See *Armour v. Knowles*, 512 F.3d 147, 152 (5th Cir. 2007); *Jacobsen v. Deseret Book Co.*, 287 F.3d 936, 942–43 (10th Cir. 2002).

³⁰ 489 F. Supp. 3d 812, 823 (S.D. Ill. 2020).

³¹ *Id.* But see *Isringhausen Imp., Inc. v. Nissan N. Am., Inc.*, No. 10-CV-3253, 2011 WL 6029733, at *20 (C.D. Ill. Dec. 5, 2011) (declining motion to strike defendant’s affirmative defense that “[a]ny use by Infiniti of Isringhausen’s copyright is a *de minimis* use where the average audience would not recognize the appropriation due to the lack of substantial similarity between the works.”).

³² See Patrick R. Goold, *Is Copyright Infringement a Strict Liability Tort?*, 30 BERKELEY TECH. L.J. 305, 309 (2015).

³³ *VMG Salsoul, LLC v. Ciccone*, 824 F.3d 871, 880–81 (9th Cir. 2016) (citing 4 NIMMER & NIMMER, *supra* note 21, § 13.03[A][2][a] (2013)).

holder lies in his ability to profit from the original and creative elements of his copyrighted work, an appropriative work does not infringe if it does not impact the “lay public’s approbation” of the original work’s creative expression.³⁴ Accordingly, a substantial similarity test is necessary to assess whether a new work is so different from an original work that the lay public cannot recognize the appropriation: “[i]f the public does not recognize the appropriation, then the copier has not benefitted from the original artist’s expressive content. Accordingly, there is no infringement.”³⁵ Moreover, the presence of fair use in the Copyright Act evinces a Congressional intention to provide for liability only if a defendant’s copying crosses a threshold of impropriety. The concept of legal copying merely draws upon what fair use doctrine has established to be true: that copyright law is not immune from normative determinations of what makes copying legally actionable.³⁶

Therefore, the distinction between factual and legal copying is grounded in a proper understanding of copyright law. And with recognition of legal copying necessarily comes a recognition of *de minimis* copying as the absence of such. Because courts have relied on the doctrine of substantial similarity to address the question of what and how much needs to be copied for an infringement to be actionable, substantial similarity is inextricably linked to the *de minimis* doctrine.³⁷

II

EXTENDING *DE MINIMIS* TO “TRIVIAL USE”

A. Overview

Some circuits, including the Ninth, view the term “*de minimis*” as merely signifying a lack of substantial similarity.³⁸ However, it is perhaps more accurate to say that substantial similarity is a manifestation of the general *de minimis* principle as applied to copyright law. Absent specific indication to the contrary, every law is undergirded by the principle that trifling violations are not actionable.³⁹ The

³⁴ *Id.* at 881.

³⁵ *Id.*; see also *Newton v. Diamond*, 388 F.3d 1189, 1193 (9th Cir. 2004) (“To say that a use is *de minimis* because no audience would recognize the appropriation is thus to say that the use is not sufficiently significant.”).

³⁶ See *Goold*, *supra* note 32, at 310.

³⁷ Indeed, much of the uncertainty surrounding the *de minimis* doctrine involves questions of when and how to find substantial similarity. See *infra* parts V-VI.

³⁸ *Bell v. Wilmott Storage Servs., LLC*, 12 F.4th 1065, 1076–77 (9th Cir. 2021).

³⁹ See *Wisconsin Dep’t of Revenue v. William Wrigley, Jr., Co.*, 505 U.S. 214, 231 (1992).

Copyright Act provides no such indication. Therefore, while substantial similarity analysis is one way of actualizing this principle, the *de minimis* maxim is not necessarily restricted to instances where the amount of copying was insubstantial. Indeed, the maxim may be applied as it is applied in other legal contexts: to dismiss cases involving injuries “not only small but also indefinite, so that substantial resources would have to be devoted to determining whether there was any loss at all.”⁴⁰ While the main thrust of the *de minimis* doctrine concerns a lack of substantial similarity, the Court of Appeals for the Second Circuit has also argued that *de minimis* in copyright law “can mean what it means in most legal contexts: a technical violation of a right so trivial that the law will not impose legal consequences.”⁴¹ Whether *de minimis* applies in this context, however, is a subject of disagreement between the Second and Ninth Circuits.

Because the Ninth Circuit views *de minimis* as merely a lack of substantial similarity, it does not consider the *de minimis* doctrine to properly cover uses of copyrighted works that are technically infringing, but overall trivial or inconsequential in effect.⁴² For example, in *Design Data Corp. v. Unigate Enterprise, Inc.*, the Court of Appeals for the Ninth Circuit overturned the district court’s finding that the defendant’s intentional download of the plaintiff’s computer program was *de minimis* because there was no evidence that the defendant installed or used the program.⁴³ The circuit court stated: “In light of the overwhelming thrust of authority, which upholds liability even under circumstances in which the use of the copyrighted work is of minimal consequence, it was error to grant summary judgment on the basis that UE’s download of SDS/2 constituted a *de minimis* infringement.”⁴⁴

The Court of Appeals for the Ninth Circuit derives this interpretation from its reading of federal copyright law: “[c]opyright is a creature of statute, and the only rights that exist under copyright law are those granted by statute

⁴⁰ Hessel v. O’Hearn, 977 F.2d 299, 303 (7th Cir. 1992).

⁴¹ Ringgold v. Black Ent. Television, Inc., 126 F.3d 70, 74 (2d Cir. 1997). The court also considered the applicability of *de minimis* to fair use doctrine, but concluded that it is inappropriate due to the lack of a “precise threshold below which the [third fair use] factor is accorded decisive significance.” *Id.* at 75–76.

⁴² See *Bell*, 12 F.4th at 1076 (“[A]mong the several potential meanings of the term *de minimis*, the defense should be limited largely to its role in determining either substantial similarity or fair use.”).

⁴³ 847 F.3d 1169, 1173 (9th Cir. 2017).

⁴⁴ *Id.* at 1172–73.

[N]owhere in the [Copyright] Act [of 1976]’s numerous and detailed provisions is there any exception for the *de minimis* use of a concededly infringing work, i.e., for a ‘technical violation.’ The Act defines a copyright infringer as anyone who violates *any* of the exclusive rights of the copyright owner.”⁴⁵

This understanding of copyright law is overly formalistic and fails to account for *de minimis* as a judicial filter for frivolous copyright claims. It is true that the 1976 Act largely wrote the common law of copyright out of existence.⁴⁶ Nevertheless, it is not true that the Act contains the beginning, middle, and end of all American copyright law. For example, the Act does not dictate how to assess whether a use has infringed on an author’s copyright; consequently, several circuit courts have devised their own judicial tests for determining infringement.⁴⁷ Courts may properly step in and supplement their own reasoning when a statute is ambiguous or fails to explain an aspect of the law. *De minimis* comfortably falls within this prerogative. Contrary to the Ninth Circuit’s assertion, a broader understanding of *de minimis* does not create a new right, nor does it supersede what the Act defines as a copyright infringer. *De minimis* simply stands for the principle that there are some instances of technical copying that do not rise to the level of infringement. While much of this principle is exercised through substantial similarity analysis, the principle naturally extends to trivial use as well. As Judge Pierre Leval of the Second Circuit elegantly puts it:

Trivial copying is a significant part of modern life. Most honest citizens in the modern world frequently engage, without hesitation, in trivial copying that, but for the *de minimis* doctrine, would technically constitute a violation of law. We do not hesitate to make a photocopy of a letter from a friend to show to another friend, or of a favorite cartoon to post on the refrigerator. Parents in Central Park photograph their children perched on José de Creeft’s Alice in Wonderland sculpture. We record television programs aired while we are out, so as to watch them at a more convenient hour. Waiters at a restaurant sing “Happy Birthday” at a patron’s table. When we do such things, it is not that we are breaking the law but unlikely to be sued given the high cost of litigation. Because

⁴⁵ *Bell*, 12 F.4th at 1079–80.

⁴⁶ 17 U.S.C. § 301.

⁴⁷ *See supra* part II; *Peters v. West*, 692 F.3d 629, 633 (7th Cir. 2012) (collecting cases).

of the *de minimis* doctrine, in trivial instances of copying, we are in fact not breaking the law. If a copyright owner were to sue the makers of trivial copies, judgment would be for the defendants. The case would be dismissed because trivial copying is not an infringement.⁴⁸

The Ninth Circuit's rigid approach makes infringers out of average people engaging in everyday activities and empowers copyright trolls. According to the Ninth Circuit, someone who prints out a copyrighted picture on the internet to put in a personal scrapbook may but for the grace of the copyright owner be sued for infringement. If that person's fair use argument fails, she may be held liable and forced to pay statutory damages. Indeed, in *Bell v. Wilmott Storage Services, LLC*, something very similar happened. The Court of Appeals for the Ninth Circuit found that the hosting of a copyrighted image on a server violated the copyright holder's public display right even though "the image was only accessible to those users who conducted a reverse image search⁴⁹ . . . or those who knew the precise address of the image database archiving the photograph."⁵⁰ In doing so, it overturned a district court's finding that the defendant's actions constituted *de minimis* infringement on grounds of triviality. In other words, the defendant in this case was liable for infringement for "publicly displaying" an image inaccessible to almost every person on Earth. In fact, the defendant was unaware that the image was on its server at all.⁵¹

To explain the absurdity of this outcome by non-internet analogy, imagine a copyrighted painting hangs on a wall behind a locked door in a restaurant's dining room.⁵² No one can see the painting, and the restaurant owner does not even know the painting is there. The painting can be viewed only if someone (a) somehow finds the key that unlocks the door, or (b) uses a device that tells the user where every copy of an image is in the world upon the user telling the device the exact image to look for, then finds the painting amid the multitude of copies. According to the

⁴⁸ On *Davis v. The Gap, Inc.*, 246 F.3d 152, 172–73 (2d Cir.2001).

⁴⁹ In a conventional image search, a user inputs a term into a search engine and receives a list of images that match the term. In a reverse image search, a user inputs an image and receives a list of locations on the internet that contain a copy of the image or a similar but slightly modified one. In other words, to locate the protected image on the server in question, someone had to already have a copy of the protected image.

⁵⁰ 12 F.4th at 1069–70.

⁵¹ *Id.* at 1070.

⁵² Assume, for the purposes of this analogy, that the first sale exception does not apply and that the hanging of the painting implicates the copyright holder's public display right.

Ninth Circuit's reasoning, this should result in liability for the restaurant owner. This patently ridiculous outcome cannot be the regime that Congress intended to create in passing the Copyright Act: one in which every person must get a license for even the most trivial uses of copyrighted material or risk being sued. And a thorough application of the *de minimis* doctrine empowers courts to do more than shrug their shoulders and rigidly apply the text of the Act.

B. Justifications

In allowing for trivial uses of copyrighted material, the Second Circuit delivers much more natural results. For instance, in *Knickerbocker Toy Co. v. Azrak-Hamway International, Inc.*, the Court of Appeals for the Second Circuit relied on the trivial use understanding of *de minimis* to reject a toy manufacturer's infringement claim against a competitor who printed a copyrighted picture of the manufacturer's product for use as an in-office sample.⁵³ In *American Geophysical Union v. Texaco, Inc.*, the Court of Appeals for the Second Circuit suggested that photocopying for individual use may not constitute infringement under the *de minimis* doctrine.⁵⁴ Judge Leval has argued that a private person using a video tape recorder to time-shift a TV program "for a one-time noncommercial viewing" engages in mere *de minimis* copying.⁵⁵ And in a one-off case out of the Fifth Circuit, the District Court for the Southern District of Texas ruled that the unauthorized display of a single advertisement that accidentally remained in one store (out of 23,000) for less than one month after the expiration of the parties'

⁵³ 668 F.2d 699, 703 (2d Cir. 1982). The Court of Appeals for the Ninth Circuit has confusingly attempted to reconcile *Knickerbocker* with its *de minimis* jurisprudence, suggesting that "*Knickerbocker* may be read to hold only that Azrak's 'use' of Knickerbocker's protected image in its mockup amounted only to *de minimis*, i.e., non-actionable, copying after considering the relative non-significance of the ... protected image, compared to the principal claim that Azrak had copied Knickerbocker's toy, which the evidence plainly refuted." *Bell*, 12 F.4th at 1078. While the court argued that "[t]his interpretation of *Knickerbocker* would better align the Second Circuit with every other circuit that has applied the *de minimis* principle in copyright," *id.*, this interpretation seemingly agrees that the "non-significance," or triviality, of the copying allowed a finding of *de minimis* infringement despite Azrak's copying of Knickerbocker's entire protected image.

⁵⁴ 60 F.3d 913, 916 (2d Cir. 1994).

⁵⁵ Pierre N. Leval, *Nimmer Lecture: Fair Use Rescued*, 44 UCLA L. REV. 1449, 1457 (1997).

licensing agreement was “so trivial as to fall below the threshold required for actionable copying.”⁵⁶

Congress itself has recognized that some trivial forms of copying are not actionable. Stubbornly, however, it has tried to fit this conclusion within the confines of fair use. But doing so is like trying to fit a square peg in a round hole. In the Senate and House Reports accompanying the Copyright Act of 1976, for instance, Congress explicitly acknowledged “the making of a single copy [in braille] or phonorecord by an individual as a free service for a blind person” as an example of fair use.⁵⁷ Why exactly this constitutes fair use is a mystery, however. For one, mere translation into braille, without more, is not transformative for purposes of fair use; “[s]ince the [Copyright] Act of 1870, it had been clear that translation was among the rights (now called ‘derivative’) that belong exclusively to the author.”⁵⁸ As for the second fair use factor, the Congressional Reports do not make any distinction between braille translations of unpublished and published works, or of “creative” and “factual” works.⁵⁹ The third fair use factor is of even less help, as the Congressional Reports contemplate the translation of an entire work.⁶⁰ Presumably, Congress’ determination hinges on the fourth fair use factor, evidenced by its emphasis on the braille translation as a “free service.”⁶¹ But this does not paint a complete picture, as the Senate Report also states that the

⁵⁶ *Straus v. DVC Worldwide, Inc.*, 484 F. Supp. 2d 620, 640 (S.D. Tex. 2007). This case illustrates the value of kicking these kinds of claims out at the door rather than subjecting them to an ill-fitting fair use analysis.

⁵⁷ S. REP. NO. 94-473, at 66 (1975) [hereinafter Senate Report]; see H.R. REP. NO. 94-1476, at 73 (1976) [hereinafter House Report]; see also *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 455 n.40 (1984) (endorsing the example).

⁵⁸ *Leval*, *supra* note 55, at 1458 n.33; see also *Andy Warhol Found. for the Visual Arts, Inc. v. Goldsmith*, 598 U.S. 508, 529 (2023) (“[A]n overbroad concept of transformative use, one that includes any further purpose, or any different character, would narrow the copyright owner’s exclusive right to create derivative works.”). While translating a work into braille serves a “noble” purpose in that it makes the work accessible to the visually impaired, noble purpose alone does not “transform” a work for fair use purposes. *Authors Guild, Inc. v. HathiTrust*, 755 F.3d 87, 101 (2d Cir. 2014). *But see id.* at 102 (“[P]roviding access to the print-disabled is still a valid purpose under Factor One even though it is not transformative.”).

⁵⁹ See *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 586 (1994) (discussing the second fair use factor).

⁶⁰ See *id.* at 586–87 (discussing the third fair use factor).

⁶¹ See Senate Report, *supra* note 57, at 66.

making of multiple free copies for the same purpose would not constitute fair use.⁶² While at least one later court has more generously applied the fair use factors to works made accessible to the print-disabled,⁶³ the determining factor in the Congressional Reports seems to be the *number* of copies made. This is supported by the Senate's additional determination that "a single copy reproduction of an excerpt from a copyrighted work by a calligrapher for a single client" would not constitute infringement.⁶⁴ But the Copyright Act does not carve out an exception for single copies, in the fair use provision nor anywhere else.⁶⁵ Therefore, if making a single braille translation for a blind person is not an infringement, the trivial use application of the *de minimis* doctrine much better explains why that is the case.⁶⁶

Implicit in the trivial use application of the *de minimis* doctrine is the same understanding underlying the substantial similarity application: that "the manner of copying might impinge so little on the copyright owner's legitimate interests" as to be nonactionable.⁶⁷ It is crucial to remember that copyright law is designed to protect an author's interest in personal gain—both monetarily and reputationally—from her creative work. Copyright law generally recognizes that some forms of infringement are not actionable because they do not implicate these legally protected interests. While this is most commonly seen through the doctrines of fair use and substantial similarity,⁶⁸ "trivial" *de minimis* use is but another extension of the same principle.⁶⁹ The making of a singular free copy of a copyrighted work, while not necessarily fair use, may nonetheless be so trivial so as to not implicate the original author's protected copyright interests.

⁶² *Id.* But see *HathiTrust*, 755 F.3d at 103 (weighing the fourth factor in favor of defendants because of the insignificance of royalties generated through the sale of books manufactured in specialized formats for the blind).

⁶³ See *HathiTrust*, 755 F.3d at 101–03.

⁶⁴ Senate Report, *supra* note 57, at 67.

⁶⁵ *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 465 (1984) (Blackmun, J., dissenting); see *Bell v. Wilmott Storage Servs., LLC*, 12 F.4th 1065, 1080 (9th Cir. 2021) ("[C]rucially, the Act is agnostic as to the use of the copy once it is made; the unlicensed copying itself *is* the violation.").

⁶⁶ Leval, *supra* note 55, at 1458 n.33.

⁶⁷ 2 NIMMER & NIMMER, *supra* note 21, § 8.01[G].

⁶⁸ See *supra* part II.

⁶⁹ See *Regents of the Univ. of Minn. v. Applied Innovations, Inc.*, 685 F. Supp. 698, 711 (D. Minn. 1987), *aff'd*, 876 F.2d 626 (8th Cir. 1989) ("Defendant's competitive, commercial use of the copyrighted materials is more than a *diminimus* [sic] infringement.").

Accordingly, the Ninth Circuit approach is out of step with both Congressional understanding and a common-sense approach to copyright law. A proper application of the *de minimis* doctrine requires acknowledging that it covers trivial uses of whole copyrighted material.

C. *A Note on Accounting for Triviality Through Damages*

It may be argued that triviality is already properly accounted for by the damages component of copyright law. 17 U.S.C. § 504 lays out two potential remedies for copyright infringement. Primarily, a copyright owner may recover the “actual damages suffered by him or her as a result of the infringement.”⁷⁰ However, if the copyright owner cannot establish a “causal connection between the alleged infringement and some loss of anticipated revenue,”⁷¹ then he may only recover statutory damages “in a sum of not less than \$750 or more than \$30,000 as the court considers just.”⁷² Accordingly, the Copyright Act contemplates a scenario where infringement has been established but the harm to the copyright owner cannot be calculated.

However, there are several reasons why section 504 cannot adequately account for trivial uses of copyrighted works. First, the justification for awarding statutory damages is not the same as that for finding *de minimis* infringement. Damages are levied on those guilty of infringement, while someone who engages in *de minimis* copying is by definition not an infringer. Statutory damages accounts for actionable injuries that are difficult to quantify, while the *de minimis* doctrine accounts for injuries that are so trivial to not be legally actionable.⁷³ Second, because plaintiffs have a right to a jury trial on the amount of statutory damages awarded under section 504(c),⁷⁴ resolving all cases of trivial use at the damages stage risks wasting

⁷⁰ 17 U.S.C. § 504(b).

⁷¹ *Dash v. Mayweather*, 731 F.3d 303, 313 (4th Cir. 2013) (quoting *Thoroughbred Software Int’l, Inc. v. Dice Corp.*, 448 F.3d 352, 358 (6th Cir. 2007)).

⁷² 17 U.S.C. § 504(c).

⁷³ *See Hessel v. O’Hearn*, 977 F.2d 299, 304 (7th Cir. 1992) (“The maxim *de minimis non curat lex* is often . . . used in a broader sense, to denote types of harm, often but not always trivial, for which the courts do not think a legal remedy should be provided); *cf. G.M. Sign, Inc. v. Elm St. Chiropractic, Ltd.*, 871 F. Supp. 2d 763, 769 (N.D. Ill. 2012) (distinguishing generally between nominal damages and the *de minimis* doctrine).

⁷⁴ *Feltner v. Columbia Pictures Television, Inc.*, 523 U.S. 340, 355 (1998).

significant judicial resources on essentially insignificant matters.⁷⁵ The *de minimis* doctrine exists broadly to prevent the devotion of substantial resources to litigation whose costs outweigh the benefits.⁷⁶ Third, the amount of money rewarded by the statutory damages provision is not nominal. Even the statutory minimum of \$750 can be a significant sum to an individual defendant. Someone who engages in *de minimis* copying should not have to pay damages to remedy a wholly insignificant injury; statutory damages are not a consolation prize for copyright owners who experienced trivial harm.

III PROPOSED FRAMEWORK

As a whole, *de minimis* is a doctrine designed to identify cases of non-actionable copying before, and differently from, a fair use inquiry. Because *de minimis* analysis “must balance the interests protected by the copyright laws against the stifling effect that overly rigid enforcement of these laws may have on the artistic development of new works,”⁷⁷ it should be fact-sensitive, with an eye towards two principal considerations. First, courts should look at the degree to which the plaintiff’s work was copied by the defendant. This consideration overlaps completely with substantial similarity analysis, and is merely a way of verbalizing the principle that an appropriative work that is not substantially similar to the work it appropriates is non-infringing. Second, courts should determine whether the defendant’s use of the plaintiff’s work implicates the plaintiff’s legally protected copyright interests. As part of this determination, courts may examine how the plaintiff’s work manifests in the defendant’s work. This prong is aimed at fully actualizing the inherent principle of *de minimis* as a legal concept: that the law will not address trivial injuries.

This framework is not meant to represent anything more than a very low bar to establishing infringement. Substantial considerations of whether certain technically infringing uses are infringing as a matter of law are properly addressed through fair use analysis. However, as previously established, there are instances

⁷⁵ Cf. *Ward v. Flagship Credit Acceptance LLC*, No. CV 17-2069, 2020 WL 759389, at *7 (E.D. Pa. Feb. 13, 2020) (discussing the impact of *de minimis* class action recoveries on judicial resources).

⁷⁶ *Hessel*, 977 F.2d at 303.

⁷⁷ *Bridgeport Music, Inc. v. Dimension Films*, 230 F. Supp. 2d 830, 840 (M.D. Tenn. 2002), *rev’d on other grounds*, 410 F.3d 792 (6th Cir. 2005).

where the fair use factors do not result in a correct outcome, or where the alleged infringement is so trivial to not merit such an inquiry. It is in this zone that the *de minimis* doctrine has a proper role.

IV ON “OBSERVABILITY” IN SUBSTANTIAL SIMILARITY ANALYSIS

The use of quantitative sufficiency in *de minimis* analysis raises a question of how exactly quantitative sufficiency is determined. Are courts to only look at how much of the plaintiff’s work was taken, or may they also examine the quantity of copied material in the defendant’s work? Most circuit courts that have addressed the question, including the Court of Appeals for the Second Circuit, have definitively stated that what matters for substantial similarity is the significance of the copying as to the plaintiff’s work.⁷⁸ Indeed, common sense dictates that “no plagiarist” should be able to “excuse the wrong by showing how much of [the plaintiff’s] work he did not pirate.”⁷⁹ A rule to that effect would allow a plagiarist to escape copyright liability by burying significant copied material within his own, lengthy work. However, the *de minimis* doctrine as practiced in the Second Circuit contains an element that seemingly goes against this rule.

A. *The Second Circuit Test*

The defining *de minimis* case in the Second Circuit is *Ringgold v. Black Entertainment Television, Inc.*, in which the Court of Appeals for the Second Circuit considered whether a work of art appearing in the background of a sitcom

⁷⁸ See, e.g., *King v. Innovation Books*, 976 F.2d 824, 829–30 (2d Cir. 1992); *Newton v. Diamond*, 388 F.3d 1189, 1195 (9th Cir. 2003); *Jacobsen v. Deseret Book Co.*, 287 F.3d 936, 945 (10th Cir. 2002); *Compulife Software Inc. v. Newman*, 959 F.3d 1288, 1302 (11th Cir. 2020). However, in *Dun & Bradstreet Software Servs., Inc. v. Grace Consulting, Inc.*, the Court of Appeals for the Third Circuit addressed the question of whether a consultant’s copying and modification of copyrighted software constituted *de minimis* infringement where the quantitative infringement “amounted to only twenty-seven lines out of 525,000 lines.” 307 F.3d 197, 208 (3d Cir. 2002). Ruling that the copying was not *de minimis*, the court looked at the qualitative importance of the copied elements both to the original work and the infringing work, noting that the original software would not work without the elements copied by the defendant, and that the defendant’s infringing software would not work without the copied lines of code. The court supported its analysis by citing *Harper & Row Publishers, Inc. v. Nation Enterprises*, which looked at the “qualitative value of the copied material, both to the originator and to the plagiarist” in a fair use context. 471 U.S. 539, 564–66 (1985).

⁷⁹ *Sheldon v. Metro-Goldwyn Pictures Corp.*, 81 F.2d 49, 56 (2d Cir. 1936) (Learned Hand, J.); see also *Harper & Row*, 471 U.S. at 565 (“A taking may not be excused merely because it is insubstantial with respect to the *infringing* work.”).

episode for a total of 26.75 seconds constituted *de minimis* use.⁸⁰ Although it agreed that courts are to refer to the quantity of the plaintiff's work taken in determining substantial similarity, the *Ringgold* court nevertheless incorporated into its *de minimis* analysis an "observability" component for infringement of visual works, which looks at "the length of time the copied work is observable in the allegedly infringing work and such factors as focus, lighting, camera angles, and prominence."⁸¹ Since *Ringgold*, the observability doctrine in the Second Circuit has expanded. Courts in the Second Circuit now recognize several additional observability factors, including recognizability by a lay observer of the plaintiff's work,⁸² distance at which the plaintiff's work is perceived,⁸³ whether the work is in the foreground or background,⁸⁴ and whether and to what extent the "dialogue, action, and/or camera work in the secondary work calls the viewer's attention to the copyrighted work."⁸⁵ Courts in the Second Circuit have also applied observability factors to cases of sound recording and musical composition infringement.⁸⁶

B. *The Ninth Circuit Approach*

The Court of Appeals for the Ninth Circuit has never directly considered whether observability is a proper component of analyzing the substantial similarity of visual works. Arguably, the court has implicitly rejected the observability doctrine, holding that *de minimis* only applies "to the amount or substantiality of the copying—and not the extent of the defendant's use of the infringing work."⁸⁷ Where the *Ringgold* court assessed whether the poster at issue was sufficiently observable to cross the threshold of substantial similarity, the Ninth Circuit instead sees "no place" for a *de minimis* inquiry where the "degree of copying [is] total."⁸⁸

⁸⁰ 126 F.3d 70, 76 (2d Cir. 1997).

⁸¹ *Id.* at 75.

⁸² *Kelley v. Morning Bee, Inc.*, No. 1:21-CV-8420-GHW, 2023 WL 6276690, at *6 (S.D.N.Y. Sept. 26, 2023) (citing *Ringgold*, 126 F.3d at 77; *Sandoval v. New Line Cinema Corp.*, 147 F.3d 215, 218 (2d Cir. 1998)).

⁸³ *Id.* (citing *Sandoval*, 147 F.3d at 218).

⁸⁴ *Id.* (citing *Gottlieb Dev. LLC v. Paramount Pictures Corp.*, 590 F. Supp. 2d 625, 632 (S.D.N.Y. 2008)).

⁸⁵ *Id.* (citing *Ringgold*, 126 F.3d at 73; *Gottlieb Dev.*, 590 F. Supp. 2d at 632).

⁸⁶ *See TufAmerica, Inc. v. WB Music Corp.*, 67 F. Supp. 3d 590, 598 (S.D.N.Y. 2014).

⁸⁷ *Bell v. Wilmott Storage Servs., LLC*, 12 F.4th 1065, 1076 (9th Cir. 2021).

⁸⁸ *Id.* at 1074. The infringing work in *Bell*, however, was an exact copy of the plaintiff's copyrighted picture uploaded on the defendant's website. It remains to be seen what the court's substantial similarity analysis would be in a case like *Ringgold*. *See Seltzer v. Green Day, Inc.*, 725 F.3d 1170 (9th Cir. 2013) (addressing defendant's unauthorized use of plaintiff's illustration in a video backdrop only on fair use grounds).

However, it may be that the Ninth and Second Circuits use different language to ultimately get to the same place.⁸⁹ Like the Ninth Circuit's intrinsic test for substantial similarity, the Second Circuit's observability doctrine also asks whether the "average lay observer" would recognize the appropriation.⁹⁰ And the Ninth Circuit's "total concept and feel" test can conceivably incorporate observability principles. Indeed, in *VMG Salsoul v. Ciccone*, the Court of Appeals for the Ninth Circuit concluded that the defendant's sampling of a copyrighted sound recording constituted *de minimis* infringement in part because the sample was "transposed" and "overlaid ... with sounds from many other instruments," and was therefore "easy to miss."⁹¹ It is true that the court also accounted for the fact that the sample was only 0.23 seconds long,⁹² and it is therefore unclear whether the court would have held differently had a longer portion of the plaintiff's song been sampled. Nevertheless, the court undoubtedly incorporated factors relating to "aural observability" in its analysis, suggesting that its approach is not entirely unfriendly to the observability doctrine.

C. *Challenges and Outcomes of the Observability Doctrine*

Under the observability doctrine, a defendant's work that furtively incorporates a plaintiff's entire copyrighted work may still be held non-infringing.⁹³ Although the observability doctrine is now established Second Circuit precedent,⁹⁴ the *Ringgold* court seems to have invented it out of whole cloth, citing no legal basis for its existence. Indeed, where legal precedent has established that courts may only look at the significance of copying in relation to the plaintiff's work to determine substantial similarity, a doctrine that contemplates how visually

⁸⁹ Cf. *Peters v. West*, 692 F.3d 629, 633 (7th Cir. 2012) (describing a "pseudo-conflict" in substantial similarity doctrine where "outcomes do not appear to differ" despite seemingly conflicting verbiage).

⁹⁰ *Sandoval v. New Line Cinema Corp.*, 147 F.3d 215, 218 (2d Cir. 1998).

⁹¹ 824 F.3d 871, 879–80 (9th Cir. 2016).

⁹² *Id.* at 879.

⁹³ See, e.g., *Sandoval*, 147 F.3d at 218 (finding *de minimis* use of plaintiff's copyrighted pictures in defendant's film); *Gottlieb Dev. LLC v. Paramount Pictures Corp.*, 590 F. Supp. 2d 625, 632 (S.D.N.Y. 2008) (finding *de minimis* use of plaintiff's copyrighted pinball machine in defendant's film).

⁹⁴ The Sixth Circuit also employs *Ringgold*'s observability doctrine. See *Gordon v. Nextel Commc'ns*, 345 F.3d 922, 924 (6th Cir. 2003).

important the plaintiff's work is within the defendant's work explicitly goes the other way.⁹⁵

One challenge of the observability doctrine is its unique applicability to visual (and perhaps aural) works. The *Ringgold* court provides no justification for why it singles out visual works as subject to this different standard. It is true that such factors simply do not translate to instances of entire literary works copied into other literary works, or appropriation of computer code. But difficulty of application is not a good reason for applying different tests to different kinds of works; in fact, it is a good reason for doing the opposite.

It is also true, however, that visual works have unique properties with unique considerations. It is much easier for a copyrighted painting to be significantly obscured within a movie than it is for a copyrighted essay to be significantly obscured within a book. Instances of visual work infringement as seen in *Ringgold* and *Sandoval* are also much more likely to be incidental (and accidental) than a comparative instance of literary work infringement. This provides some justification for having a test that is more forgiving to the defendant in these cases.⁹⁶

In any event, the observability doctrine adds uncertainty and burden brought on by producing an even more fact-sensitive, case-by-case determination of substantial similarity. While plaintiffs generally must establish that a potentially infringing work is substantially similar to theirs, a plaintiff in the Second Circuit must additionally establish that the plaintiff's work was sufficiently observable to a lay audience viewing the defendant's work—even if the defendant undisputedly appropriated the plaintiff's entire work. In doing so, the plaintiff must not only show that the two works are substantially similar, but that the defendant's *use* of the plaintiff's copyrighted material is substantially similar.

For instance, in *Solid Oak Sketches, LLC, v. 2K Games, Inc.*, the District Court for the Southern District of New York held that a video game's display

⁹⁵ Fair use doctrine allows courts to consider defendants' applications of plaintiffs' works through the first factor, which examines the degree to which the defendant transformed the plaintiff's original work. *See* Andy Warhol Found. for the Visual Arts, Inc. v. Goldsmith, 598 U.S. 508, 527–29 (2023). However, substantial similarity doctrine contains no such provision.

⁹⁶ It may also be the case that copyright law is simply stricter for certain kinds of works. *Cf. id.* at 527 (describing fair use as a concept whose “application may very well vary depending on context”) (quoting *Google LLC v. Oracle Am., Inc.*, S. Ct. 1183, 1197 (2021)).

of copyrighted tattoos on in-game renderings of professional basketball players constituted *de minimis* infringement.⁹⁷ Although the tattoos were rendered in their entirety, their display was “small and indistinct,” “out of focus,” and indiscernible due to the “quick and erratic movements” of the player characters.⁹⁸ The case therefore turned not on the qualitative or quantitative copying of the plaintiff’s work, but on the defendants’ use of the copyrighted tattoos.⁹⁹

How exactly a plaintiff goes about establishing substantially similar use is unclear. Courts addressing this component as a matter of law at the motion-to-dismiss or summary judgment phases have no clear guidelines for how to determine observability—which factors to consider or prioritize. Indeed, as observability is a fact-sensitive inquiry, no one factor is dispositive in every case. For instance, “the length of time the copied work is observable” seems to play a primary role in observability analysis,¹⁰⁰ but courts in the Second Circuit have determined that even very brief displays of plaintiffs’ works may be actionable when the works are “conspicuously displayed.”¹⁰¹ What is the outcome, then, when a copyrighted work appears in a film for no more than three seconds, in the background, but brightly lit and in focus? Two different judges may reasonably reach two different conclusions. Moreover, because “a higher quantity of copying is required to support a finding of substantial similarity” when the plaintiff’s work is not “wholly original,”¹⁰² two copyrighted works displayed at the exact same level of observability in a defendant’s work may nevertheless differ as to whether their respective uses are *de minimis*.

Substantial similarity analysis has long been used to determine how much of a plaintiff’s copyrighted work appears in a defendant’s work, and whether what was taken constitutes a significant part of the original work. Simply put, it determines whether a plaintiff’s work was actionably copied by the defendant. If a potentially

⁹⁷ 449 F. Supp. 3d 333, 345 (S.D.N.Y. 2020).

⁹⁸ *Id.*

⁹⁹ *Id.* (“No reasonable fact finder could conclude that Plaintiff has carried its burden of proving that Defendants’ use of the copyrighted material was substantially similar to Plaintiff’s copyrighted work.”).

¹⁰⁰ See *Ringgold v. Black Ent. Television, Inc.*, 126 F.3d 70, 75 (2d Cir. 1997); *Gottlieb Dev. LLC v. Paramount Pictures Corp.*, 590 F. Supp. 2d 625, 632 (S.D.N.Y. 2008) (finding *de minimis* use where, *inter alia*, plaintiff’s copyrighted work appears in the plaintiff’s film “for no more than a few seconds at a time”).

¹⁰¹ See, e.g., *Fioranelli v. CBS Broad. Inc.*, 551 F. Supp. 3d 199, 225–27 (S.D.N.Y. 2021); *Hirsch v. CBS Broad. Inc.*, No. 17 CIV. 1860 (PAE), 2017 WL 3393845, at *5 (S.D.N.Y. Aug. 4, 2017) (collecting cases).

¹⁰² *Nihon Keizai Shimbun, Inc. v. Comline Bus. Data, Inc.*, 166 F.3d 65, 71 (2d Cir. 1999).

infringing work copies an artist's entire work, substantial similarity necessarily exists between them. While *de minimis* can be understood partly as a lack of substantial similarity, that understanding cannot support an inquiry that analyzes how a plaintiff's work appears in an infringing work. If the Second Circuit's observability doctrine is to rest on solid legal ground, it must be grounded in something other than substantial similarity.

D. Resolution Through the Proposed Framework

The Second Circuit's observability doctrine—while poorly grounded in principles of substantial similarity—finds a natural home within the above-proposed framework, which incorporates a broader understanding of the *de minimis* doctrine to encompass trivial copying that does not implicate the copyright holder's legally protected interests. In other words, two identical “uses” of a copyrighted work (in terms of quantitative and qualitative taking) may vary as to whether they are *de minimis* depending not on the degree of substantial similarity (which in this case would be equal) but rather on how they implicate the original author's protected interests through the work's observability in the appropriating works. While it may be legally unorthodox to look at the extent of use in a defendant's work to determine substantial similarity, it makes perfect sense to do so if one is trying to discern whether a certain use of copyrighted material only trivially implicates a copyright owner's legally protected interests. A pinball machine in the background of a scene may not be fair use, but it is certainly trivial enough to not implicate the copyright owner's interest in benefitting from his unique design. A picture accidentally hosted on a high-inaccessible web address may not be fair use, but it is certainly trivial enough to not implicate the photographer's interest in ensuring people associate the picture with him.

Utilizing this framework also ameliorates the problem related to uncertainty. Of course, the case-by-case nature of all substantial similarity determinations makes it impossible to draw a clear line between what copying is substantially similar and what is not. However, removing the additional dimension of observability from the purview of substantial similarity adds more consistency to that doctrine. Moreover, rather than getting bogged down in legally unstable notions of “substantially similar use,” the proposed framework gives plaintiffs a more coherent idea of where their case stands and what they must establish to clear the *de minimis* threshold.

V THE “SAMPLING” CIRCUIT SPLIT

A. *The Sixth Circuit Stance*

Another question raised by the *de minimis* doctrine is whether it can be applied to cases of infringement involving music sampling. In *Bridgeport Music, Inc. v. Dimension Films*, the Court of Appeals for the Sixth Circuit evaluated whether the use of a sample from a sound recording in a rap song constituted *de minimis* infringement where “a two-second sample from the guitar solo was copied, the pitch was lowered, and the copied piece was ‘looped’ and extended to 16 beats.”¹⁰³ Despite agreeing in principle with the district court’s finding of *de minimis* infringement, the Court of Appeals for the Sixth Circuit nevertheless found for the plaintiff, holding that the *de minimis* doctrine (and substantial similarity analysis as a whole) does not apply to infringements of copyrighted sound recordings.¹⁰⁴

The Court of Appeals for the Sixth Circuit primarily based its rationale on its reading of section 114 of the Copyright Act of 1976, which defines the scope of exclusive rights in sound recordings. Section 114(b) states in part:

The exclusive right of the owner of copyright in a sound recording [to prepare derivative works based upon the copyrighted work] is limited to the right to prepare a derivative work in which the actual sounds fixed in the sound recording are rearranged, remixed, or otherwise altered in sequence or quality. The exclusive rights of the owner of copyright in a sound recording [to reproduce the copyrighted work in copies or phonorecords and prepare derivative works based upon the copyrighted work] do not extend to the making or duplication of another sound recording that consists *entirely* of an independent fixation of other sounds, even though such sounds imitate or simulate those in the copyrighted sound recording.¹⁰⁵

As the court reasoned, because section 114(b) gives a sound recording owner the exclusive right to rearrange, remix, or otherwise alter the sounds fixed in the recording—and because the text only draws a line at an *entirely* independently

¹⁰³ 410 F.3d 792, 796 (6th Cir. 2005).

¹⁰⁴ *Id.* at 798.

¹⁰⁵ 17 U.S.C. § 114(b) (emphasis added).

created soundalike—the sound recording owner therefore “has the exclusive right to sample his own recording.”¹⁰⁶ Moreover, being that “the only way to infringe on a sound recording is to re-record sounds from the original work,” any re-recording is guaranteed to be substantially similar because it is an exact copy of the original.¹⁰⁷

The court provided other, more values-based reasons for its conclusion. For one, sampling necessarily appropriates something of value, no matter how minuscule the sample or how buried it is in the new song.¹⁰⁸ Sampling allows producers to avoid hiring studio musicians, thereby threatening the ability of musicians to make a living.¹⁰⁹ Secondly, even if cost is not a factor, a producer may still believe that the inclusion of a certain sample would add to a record some material creative element that would not exist in the sample’s absence.¹¹⁰ Moreover, because sampling lifts sounds directly from the copyrighted medium, sampling is more of a “physical taking rather than an intellectual one.”¹¹¹ Finally, the fact that sampling requires conscious intent to appropriate a copyrighted recording suggests that the *de minimis* doctrine, which is largely meant to weed out cases of incidental copying, is less appropriate in cases of sound recording infringement.¹¹²

The Court of Appeals for the Sixth Circuit’s holding that plaintiffs alleging sound recording infringement need only establish actual copying to succeed on their claims represents a clear departure from how courts have approached every other category of infringement, standing in stark contrast to the established understanding that actionable infringement requires the allegedly infringing work

¹⁰⁶ *Bridgeport*, 410 F.3d at 800–01.

¹⁰⁷ *See id.* at 801 n.13 (quoting Jeffrey R. Houle, *Digital Audio Sampling, Copyright Law and the American Music Industry: Piracy or Just a Bad “RAP”?*, 37 LOY. L. REV. 879, 896 (1992)). *But see* *Newton v. Diamond*, 388 F.3d 1189, 1195 (9th Cir. 2004) (“The practice of music sampling will often present cases where the degree of similarity is high. Indeed, unless the sample has been altered or digitally manipulated, it will be identical to the sampled portion of the original recording. Yet . . . if the similarity is only as to nonessential matters, then a finding of no substantial similarity should result.”).

¹⁰⁸ *Bridgeport*, 410 F.3d at 801–02.

¹⁰⁹ *See* Christopher D. Abramson, *Digital Sampling and the Recording Musician: A Proposal for Legislative Protection*, 74 N.Y.U. L. REV. 1660, 1668 (1999).

¹¹⁰ *See Bridgeport*, 410 F.3d at 802.

¹¹¹ *Id.*

¹¹² *See id.* at 801.

to be substantially similar to the work from which it appropriates.¹¹³ It is no surprise, therefore, that courts outside the Sixth Circuit have largely declined to follow *Bridgeport*'s rule.¹¹⁴

B. *The Ninth Circuit Stance*

In *VMG Salsoul*, the Court of Appeals for the Ninth Circuit explicitly declined to follow *Bridgeport*, creating a circuit split. The court based its argument on four grounds. As an initial matter, the rule that infringement occurs only upon a finding of substantial similarity is well established in copyright law.¹¹⁵

Second, nothing in section 114 of the Copyright Act suggests an intention to expand the scope of exclusive rights granted to sound recording copyright owners beyond those granted to owners of other copyrights. If anything, section 114(b) is intended to *limit* the rights of a sound recording copyright owner.¹¹⁶ Indeed, the portion of section 114(b) interpreted by the *Bridgeport* court begins by stating what a sound recording copyright owner's derivative works right is *limited* to.¹¹⁷ The text continues by outlining where a sound recording copyright owner's exclusive rights "*do not extend*."¹¹⁸

That section 114 limits, rather than expands, the scope of sound recording copyrights is confirmed by the legislative history of the Copyright Act. The House Report clarifies the approach of the Act as "set[ting] forth the copyright owner's exclusive rights in broad terms in section 106, and then to provide various limitations, qualifications, or exemptions in the 12 sections that follow. Thus, everything in section 106 is made subject to sections 107 through 118, and must be read in conjunction with those provisions."¹¹⁹ It makes little sense to read an expansion of rights into a provision that clearly limits them. Taken as a whole, section 114(b) merely stands for the principle that a sound recording copyright

¹¹³ See *Peters v. West*, 692 F.3d 629, 633 (7th Cir. 2012) (collecting cases).

¹¹⁴ *VMG Salsoul, LLC v. Ciccone*, 824 F.3d 871, 886 (9th Cir. 2016) (collecting cases); see also *Batiste v. Lewis*, 976 F.3d 493, 506 (5th Cir. 2020) ("*Bridgeport* has been widely criticized.").

¹¹⁵ *VMG Salsoul*, 824 F.3d at 880-81; see *supra* part II.

¹¹⁶ *VMG Salsoul*, 824 F.3d at 881-83.

¹¹⁷ 17 U.S.C. § 114(b).

¹¹⁸ *Id.* (emphasis added).

¹¹⁹ House Report, *supra* note 57, at 61.

owner's rights do not extend beyond the actual sounds fixed in the recording to the underlying composition.

Third, the *Bridgeport* court's interpretation of section 114(b) rests on a logical fallacy. The court relied on the provision that a sound recording copyright owner's rights *do not* extend to "another sound recording that consists *entirely* of an independent fixation of other sounds" to conclude that a sound recording copyright owner's rights must extend to all sound recordings that *do not* consist entirely of an independent fixation of other sounds.¹²⁰ It is logically fallacious to infer the inverse of a conditional from the conditional. The correct inference to make from the provision is that if a sound recording copyright owner's rights extend to a potentially infringing work, then that work does not entirely consist of an independent fixation of other sounds.¹²¹ This inference is not the same as the court's inference. The correct inference merely restates section 114(b)'s instruction: sound recording copyright holders cannot claim that independently created "soundalikes" infringe on their copyright. It does not logically follow that *all* sound recordings that are *not* completely independently created are therefore *per se* infringing. Indeed, some of them may be protected by the same principles of substantial similarity delimiting every other exclusive right granted by the Copyright Act.¹²²

Lastly, the *Bridgeport* court's value propositions rest on a flawed understanding of copyright law. By arguing that sampling appropriates something of value by "free riding" on the work of musicians, the court extended the protective reach of copyright to the effort an artist expends on her art. But copyright law does no such thing. Copyright law protects only the expressive aspects of a copyrighted

¹²⁰ See *Bridgeport Music, Inc. v. Dimension Films*, 410 F.3d 792, 800–01 (6th Cir. 2005).

¹²¹ The logical equivalent to a conditional statement is not the inverse, but the contrapositive. Imagine the statement, "if the sky is blue, then it is not raining." The inverse of this statement is, "if the sky is not blue, then it is raining." But that is not necessarily true. It may merely be cloudy out, or it may be nighttime. The contrapositive of the original statement is, "if it is raining, then the sky is not blue." This is necessarily true and can be logically inferred from the original statement. In this case, the section 114(b) provision can be phrased in if→then form as: "if a sound recording consists entirely of an independent fixation of sounds, then the sound recording copyright owner's rights do not extend to it." Phrased succinctly: "If entirely independent, then no rights." The *Bridgeport* court fallaciously inferred the inverse: "If not entirely independent, then rights." The correct inference is the contrapositive: "If rights, then not entirely independent."

¹²² See House Report, *supra* note 57, at 106 ("Thus, infringement takes place whenever all *or any substantial portion* of the actual sounds that go to make up a copyrighted sound recording are reproduced in phonorecords . . .") (emphasis added).

work, not the “fruit of the [artist]’s labor.”¹²³ If what is taken from a copyrighted work is so insubstantial as to not appropriate the work’s expressive aspects, the taking is not actionable.

C. *Relation to the Proposed Framework*

The Court of Appeals for the Ninth Circuit’s argument is more persuasive because it rests on more principled understandings of statutory interpretation, logical reasoning, and the goals of copyright law. Section 114 merely defines the scope of a sound recording copyright, much like section 113 defines the scope of a copyright in pictorial, graphic, and sculptural works.¹²⁴ Neither provision eases the burden of a copyright owner to prove substantial similarity. The fact that section 114 does not create a carve-out for substantial similarity is of no consequence. Substantial similarity is nowhere to be found in the Copyright Act; it is a judicial test established to examine whether an instance of alleged copying falls within copyright law’s proscriptive bounds. That does not make the doctrine any less legitimate.

The same principles underlying the proposed framework that apply to all other instances of infringement apply to infringements of sound recordings; sound recording copyright owners have the same legally protected interests as any other copyright owner.¹²⁵ At bottom, courts must determine whether an instance of sound recording infringement implicates these interests. They should do so both by conducting a substantial similarity analysis as well as by determining whether the infringed recording appears in the new work in a more-than-trivial way.

CONCLUSION

The following hypothetical illustrates the current state of the *de minimis* doctrine. Imagine that you are a photographer taking a picture of a city park. In the background of the picture, partially obscured by a crowd of people, is a sculptor’s copyrighted sculpture. You did not intend to capture the sculpture—it just happened to be in the frame. You publish and sell your picture. Upon seeing your picture, the

¹²³ See *Feist Publ’ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 349 (1991).

¹²⁴ 17 U.S.C. § 113.

¹²⁵ See 4 NIMMER & NIMMER, *supra* note 21, § 13.03[A][2][b] (“[T]he practice of digitally sampling prior music to use in a new composition should not be subject to any special analysis: to the extent that the resulting product is substantially similar to the sampled original, liability should result.”).

sculptor sues you for copyright infringement and requests a bench trial. If you are being sued in Illinois or Missouri, the district court will likely find that infringement has occurred, as direct evidence of copying can be seen by the clear presence of the sculpture in your picture. Your only recourse, then, is fair use, which would likely turn on whether your picture “transforms” the sculpture as well as the effect on the market for the sculpture (or licensed photographs of the sculpture). If you are being sued in California, the district court may find that the two works have a different “total concept and feel,” and are therefore not substantially similar. If you are being sued in New York, the district court may first determine whether the presence of the sculpture meets the quantitative threshold for actionable copying by referring to observability factors. The partial obscurity as well as the lack of focus on the sculpture may lead to a finding of *de minimis* copying. If the sculpture is sufficiently observable, the court may nevertheless determine that the unintentional inclusion of the sculpture is *de minimis* on trivial use grounds, as it does not implicate the protected interests of the sculptor. Of course, the court may also find non-infringement on fair use grounds. In this hypothetical, Second Circuit jurisprudence provides you with three potential off-ramps to liability. The Ninth Circuit (at least definitively) provides two. The Seventh and Eighth Circuits provide only one.

While some apparent circuit splits—like the difference in approach regarding observability—are perhaps more illusory than concrete, it is nevertheless the case that the in-flux status of the *de minimis* doctrine is resulting in an inconsistent application of copyright law across the circuits. The framework proposed by this note attempts to alleviate the confusion regarding the proper scope of the *de minimis* doctrine, while providing concrete prongs for its application.

Overall, a broad understanding of the *de minimis* doctrine has a proper role in copyright law as a defense against infringement, in accordance with copyright law’s central balancing act of encouraging creation without crossing a line into draconian over-restriction. A proper *de minimis* framework is not a mere technicality. It should affirmatively guard the gates of copyright law, ensuring that lawsuits go forward only if the copying at issue has improperly harmed what copyright law is meant to protect: the incentive structures that foster artistic creation. Principles of observability and trivial use are welcome judicial tools to filter out cases that do not surmount this bar.

While the *de minimis* doctrine should be applied broadly, it should also be applied rarely. *De minimis* should not be an easy workaround to a comparatively more difficult fair use inquiry. Both doctrines have unique roles within copyright law, serving different functions at different stages of analysis. Moreover, the *de minimis* doctrine should not turn establishing actionable copying into an onerous affair. Instead, *de minimis* should be used to dispose of the uncommonly raised “[q]uestions that never need to be answered,”¹²⁶ which nevertheless sometimes find their way into courtroom doors.

Unfortunately, the only ways to definitively harmonize the interrelated concepts of substantial similarity, legal copying, and *de minimis* use across the circuits are (a) for Congress to amend the Copyright Act, or (b) for the Supreme Court to rule on the correct application of copyright law. Neither possibility seems especially likely. Courts should therefore take it upon themselves to expand their understanding of the *de minimis* doctrine in copyright law to properly account for the its full scale and scope. In the meantime, it is useful to clarify the doctrine by understanding exactly where and how its fault lines manifest, so that plaintiffs in different circuits are aware of their obligations and defendants are aware of the protections afforded to them.

¹²⁶ Leval, *supra* note 55, at 1457.