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PROVING COPYING

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ABSTRACT

Proof that a defendant actually copied from a copyrighted work is a critical part of a claim for copyright infringement. Indeed, absent such copying, there is no infringement. The most common method of proving copying involves the use of circumstantial evidence, consisting of proof that a defendant had “access” to the protected work, and a showing of “similarities” between the copy and the protected work. In inferring copying from the combination of such evidence, courts have for many decades developed a framework known as the “inverse ratio rule,” which allows them to modulate the level of proof needed on access based on the level of similarity, and vice-versa. While analytically sound, the inverse ratio rule has proven to be a persistent source of confusion among some courts, most prominently the

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Ninth Circuit, causing some to misapprehend the very nature of the inquiry into copying as well as the manner in which circumstantial evidence operates. This Article explains how the inverse ratio rule emanates from crucial insights about the manner in which circumstantial evidence operates, wherein multiple inferences are combined to enhance the probative value of evidence that is inconclusive in isolation. This flexible formula builds on the notion of a combined narrative that is a hallmark of all circumstantial evidence. The Article unpacks the theoretical and normative logic behind the inverse ratio rule to show how it is essential to circumstantial proof of copying, reveals how purported rejections of the doctrine by courts have been driven by a basic misunderstanding of the manner in which circumstantial inferences interact, and concludes by drawing broader insights about the interplay of copyright and evidence law.

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INTRODUCTION

The test for copyright infringement has long been plagued by confusion. The modern framework was formulated three-quarters of a century ago when creative, technological, and legal conditions were considerably different.¹ It has nevertheless withstood the test of time and continues to guide courts around the country.² Distilled to its basics, the framework embodies two prongs. In the first, commonly referred to as “factual copying,” the plaintiff must show that the defendant appropriated (that is, copied) expression from the protected work.³ In the second, variously described as “improper appropriation,” “wrongful copying,” or “substantial similarity” of protected expression, the judge or jury assesses the substantiality of that appropriation to determine whether it rises to the level of an infringement.⁴ As in some other areas of intellectual property law dating back to the Founding Era, Congress never set forth an infringement test, leaving this vital aspect of copyright law to judicial development.⁵

1. The seminal articulation of the test is traced back to the Second Circuit’s 1946 decision in *Arnstein v. Porter*. See 154 F.2d 464, 468 (2d Cir. 1946). While a few pre-*Arnstein* cases did deploy elements of its formulation, they did so in a largely piecemeal manner. See Shyamkrishna Balganesh, *The Questionable Origins of the Copyright Infringement Analysis*, 68 STAN. L. REV. 791, 843 (2016).

2. See, e.g., *Dawson v. Hinshaw Music Inc.*, 905 F.2d 731, 733 (4th Cir. 1990) (describing *Arnstein* as “the source of modern theory”); Balganesh, *supra* note 1, at 795.

3. *Arnstein*, 154 F.2d at 468 (describing the test as showing “that defendant copied from plaintiff’s copyrighted work”). For more recent uses of this phrase, see *Armour v. Knowles*, 512 F.3d 147, 152 (5th Cir. 2007) (per curiam); *Compulife Software Inc. v. Newman*, 959 F.3d 1288, 1301 (11th Cir. 2020); *Blehm v. Jacobs*, 702 F.3d 1193, 1199 (10th Cir. 2012); *Johnson v. Gordon*, 409 F.3d 12, 18 (1st Cir. 2005).

4. See *Arnstein*, 154 F.2d at 468 (requiring a showing that the copying “went so far as to constitute improper appropriation”); *Zalewski v. Cicero Builder Dev., Inc.*, 754 F.3d 95, 100 (2d Cir. 2014) (using “wrongful copying” for the prong); *Johnson*, 409 F.3d at 18 (describing the prong as “wrongful copying”); *Sid & Marty Krofft Television Prods., Inc. v. McDonald’s Corp.*, 562 F.2d 1157, 1162 (9th Cir. 1977) (using the term “substantial similarity”); *Yurman Design, Inc. v. Paj, Inc.*, 262 F.3d 101, 110 (2d Cir. 2001) (using the term “substantial similarity” for the prong).

5. See Peter S. Menell, *The Mixed Heritage of Federal Intellectual Property Law and Ramifications for Statutory Interpretation*, in INTELLECTUAL PROPERTY AND THE COMMON LAW 63, 67-68, 75 (Shyamkrishna Balganesh ed., 2013) (noting that the courts developed and evolved infringement standards using the general purpose of copyright law, “(‘the encouragement of learning’), common law experimentation, and pragmatism,” and the modern

The improper appropriation prong has attracted the bulk of judicial and scholarly attention.⁶ Originally conceptualized as an unguided, intuitive assessment to be made by the jury, courts have struggled to align the law with copyright's overarching goals.⁷ This task has only been rendered more difficult by copyright law's institutional setting, namely, the role of the jury in assessing whether the appropriation was improper or substantial,⁸ and perceptual differences between lay and expert observers, especially in specialized and technical fields such as computer software and music.⁹

In contrast to improper appropriation, the factual copying prong of the test has received far less attention from both courts and

Copyright Act (the 1976 Act) took note of the judicial role in developing infringement standards and perpetuated jurisprudential evolution of such standards (footnote omitted) (quoting the Copyright Act of 1790 preamble).

6. The literature on this prong is voluminous. See, e.g., Daniel Gervais, *Improper Appropriation*, 23 LEWIS & CLARK L. REV. 599, 600 (2019); Amy B. Cohen, *Masking Copyright Decisionmaking: The Meaninglessness of Substantial Similarity*, 20 U.C. DAVIS L. REV. 719, 723 (1987); Pamela Samuelson, Essay, *A Fresh Look at Tests for Nonliteral Copyright Infringement*, 107 NW. U. L. REV. 1821, 1825 (2013); Mark A. Lemley, *Our Bizarre System for Proving Copyright Infringement*, 57 J. COPYRIGHT SOC'Y U.S.A. 719, 719 (2010); Shyamkrishna Balganes, *The Normativity of Copying in Copyright Law*, 62 DUKE L.J. 203, 206 (2012); Oren Bracha, *Not De Minimis: (Improper) Appropriation in Copyright*, 68 AM. U. L. REV. 139, 141 (2018).

7. See, e.g., *Dawson*, 905 F.2d at 733 (“[O]bedience to the undisputed principles of copyright law and the policy underlying the ordinary observer test requires ... orientation of the ordinary observer test to the works’ intended audience, permitting an ordinary lay observer characterization of the test only where the lay public fairly represents the works’ intended audience.”); *Folio Impressions, Inc. v. Byer Cal.*, 937 F.2d 759, 766 (2d Cir. 1991) (“[S]ince only some of the design enjoys copyright protection, the observer’s inspection must be more discerning.”).

8. See *Arnstein*, 154 F.2d at 473 (describing improper appropriation as “an issue of fact which a jury is peculiarly fitted to determine”).

9. See Shyamkrishna Balganes & Peter S. Menell, *The Use of Technical Experts in Software Copyright Cases: Rectifying the Ninth Circuit’s “Nutty” Rule*, 35 BERKELEY TECH. L.J. 663, 673 (2020) (explaining how the Second Circuit in *Computer Associates International, Inc. v. Altai, Inc.*, 982 F.2d 695, 713 (2d Cir. 1992), recognized the need for expert testimony to enable jurors to assess similarity and most other circuits have followed its lead and highlighting that the Ninth Circuit is a notable exception). The Fourth Circuit in *Dawson* firmly rejected the approach of refusing to permit expert testimony in a music case, noting that “only a reckless indifference to common sense would lead a court to embrace a doctrine that requires a copyright case to turn on the opinion of someone who is ignorant of the relevant differences and similarities between two works.” 905 F.2d at 735. The court replaced the “ordinary observer” with the “intended audience” of the work and permitted the fact-finder to rely on expert testimony. See *id.* at 736.

scholars. This is despite the reality that as a factual determination, it implicates matters of proof and thereby intersects with the basic principles and rules of evidence that inform the adjudication process.¹⁰ Insofar as this prong has invited greater scrutiny; it has been in relation to its intersection with the more contentious improper appropriation determination, and rarely ever on its own terms.¹¹

As with most matters of proof, courts recognized early on that factual copying could be established through either direct evidence or circumstantial proof.¹² Direct evidence usually involved a defendant's admission or on rare occasion, an eyewitness account of the appropriation.¹³ When factual copying was disputed by a defendant, courts invariably resorted to circumstantial evidence and, applying common sense, assessed the possibility of inferring such copying from the circumstances surrounding the defendant's conduct in relation to the protected work.¹⁴ The jurisprudence soon came to recognize two such points of inference for circumstantial proof of copying: (i) proof that the defendant had access to the protected work, and (ii) similarities between the defendant and the plaintiff's works.¹⁵

10. See *infra* notes 12-19 and accompanying text.

11. The most probing and influential account of this relationship to date is Alan Latman, "Probative Similarity" as Proof of Copying: Toward Dispelling Some Myths in Copyright Infringement, 90 COLUM. L. REV. 1187, 1188 (1990).

12. This proposition was considered unexceptional by the nineteenth century. See EATON S. DRONE, A TREATISE ON THE LAW OF PROPERTY IN INTELLECTUAL PRODUCTIONS 428 (Boston, Little, Brown & Co., 1879) (noting that when a defendant denies copying "[a] comparison of the two works will then be made with the aid of such direct or circumstantial evidence as may be available"). For early cases using circumstantial evidence to prove copying, see *W.H. Anderson Co. v. Baldwin L. Pub. Co.*, 27 F.2d 82, 85 (6th Cir. 1928); *Blackburn v. S. Cal. Gas Co.*, 14 F. Supp. 553, 554 (S.D. Cal. 1936); *Kustoff v. Chaplin*, 120 F.2d 551, 559 (9th Cir. 1941); *Gingg v. Twentieth Century-Fox Film Corp.*, 56 F. Supp. 701, 705 (S.D. Cal. 1944); *Harold Lloyd Corp. v. Witwer*, 65 F.2d 1, 4 (9th Cir. 1933).

13. See *Arnstein*, 154 F.2d at 473 (discussing an "admission" as exemplary of such direct evidence). For a rare instance where a court relied on the account of witnesses about the process through which the work at issue was prepared, see *W.H. Anderson Co.*, 27 F.2d at 85 (discussing the testimony of witnesses who described how the printing of the defendant's work had been set up in the press).

14. See DRONE, *supra* note 12, at 428 (noting the importance of such evidence to the question).

15. See *Harold Lloyd Corp.*, 65 F.2d at 39 (McCormick, J., dissenting); *Shipman v. R.K.O. Radio Pictures, Inc.*, 100 F.2d 533, 537 (2d Cir. 1938). The crystallization into distinct points of inference occurred in *Arnstein*. See 154 F.2d at 468.

Recognizing the inferential nature of the inquiry based on circumstantial evidence, courts developed a sliding scale of proof between the two points of inference, which came to be known as the “inverse ratio rule.”¹⁶ Under this sliding scale approach, greater evidence of access required lesser proof of similarity, and vice versa, for a court to draw an inference of factual copying from the circumstances.¹⁷ In situations where the evidence showed a defendant to have had unequivocal, easy, or extensive access to the plaintiff’s work, a lower degree of similarity was needed to infer factual copying.¹⁸ Further, when the similarity between the works was extensive, courts lowered the requisite amount of proof needed for access, and at its extreme dispensed with looking for proof of access altogether when the similarity was “striking.”¹⁹

Over time, this basic set of evidentiary rules needlessly generated confusion in its application. Some courts misunderstood the very nature of the circumstantial evidence inquiry and applied the sliding scale erroneously to allow a lower level of improper appropriation, the second infringement prong, upon a showing of greater proof of access.²⁰ This confusion was undoubtedly caused by courts’ misunderstanding of the role of similarity in the two prongs of the infringement test, a misunderstanding fueled by some courts’ use of the term “substantial similarity” for both types of similarity.²¹

16. For the earliest judicial usage of the term, see *Morse v. Fields*, 127 F. Supp. 63, 66 (S.D.N.Y. 1954); see also David Aronoff, *Exploding the “Inverse Ratio Rule,”* 55 J. COPYRIGHT SOC’Y U.S.A. 125 (2008) (criticizing the rule). As we show later, Aronoff’s criticism was erroneous.

17. See *Morse*, 127 F. Supp. at 66 (“[W]hen access is established a lesser degree of similarity is required.”); *Rentmeester v. Nike, Inc.*, 883 F.3d 1111, 1124 (9th Cir. 2018) (“The inverse ratio rule provides that the stronger the evidence of access, the less compelling the similarities between the two works need be in order to give rise to an inference of copying.... [and] the more compelling the similarities supporting an inference of copying, the less compelling the evidence of access need be.”).

18. See *Rentmeester*, 883 F.3d at 1124.

19. See, e.g., *Ferguson v. Nat’l Broad. Co.*, 584 F.2d 111, 113 (5th Cir. 1978) (“If the two works are so strikingly similar as to preclude the possibility of independent creation, ‘copying’ may be proved without a showing of access.”).

20. See *Sid & Marty Krofft Television Prods., Inc. v. McDonald’s Corp.*, 562 F.2d 1157, 1172 (9th Cir. 1977); *Steinberg v. Columbia Pictures Indus., Inc.*, 663 F. Supp. 706, 714 (S.D.N.Y. 1987) (“As defendants have conceded access to plaintiff’s copyrighted illustration, a somewhat lesser degree of similarity suffices to establish a copyright infringement than might otherwise be required.”).

21. See *Krofft*, 562 F.2d at 1172; *Steinberg*, 663 F. Supp. at 714. Professor Latman

Whereas in establishing factual copying, the similarity was merely to enable an inference of copying in improper appropriation it was to judge the legality of such copying once factual copying was found to exist. In a similar vein, some other courts thought it absurd that the sliding scale could—in theory—allow a case to move forward when there was no evidence of similarity at all but based entirely on heightened proof of access—again without a fuller recognition of the way in which the inference was meant to operate.²²

The matter came to a head in 2020 when the Ninth Circuit issued an en banc opinion in *Skidmore v. Led Zeppelin* “rejecting the inverse ratio rule” and purporting to “join the majority of circuits” that had already done so.²³ Misperceiving the confusion and uncertainty that the rule had brought to the question as well as the holdings of other circuits, the Ninth Circuit abrogated the inverse ratio rule entirely.²⁴ Some lawyers and copyright scholars have since celebrated the Ninth Circuit’s repeal of the rule, reasoning that it put to rest several decades of analytical inconsistency, which had done little more than make it easier for copyright plaintiffs to establish factual copying and move to the improper appropriation prong of the infringement inquiry.²⁵ Unfortunately, the *Skidmore* decision and its advocates misunderstand the factual copying prong.

This Article shows that the rejection of the inverse ratio rule in its entirety is based on a fundamental misunderstanding of the manner in which inferential proof and circumstantial evidence operate. Unlike direct evidence, circumstantial evidence operates by requiring the fact-finder to draw an inference from a fact that is

diagnosed the conflation problem and proposed use of the term “probative” similarity for the assessment of similarity embodied in the factual copying prong. See Latman, *supra* note 11, at 1188-91, 1204-11, 1214.

22. See, e.g., *Arc Music Corp. v. Lee*, 296 F.2d 186, 187 (2d Cir. 1961).

23. 952 F.3d 1051, 1056 (9th Cir. 2020) (en banc).

24. *Id.* at 1066-68.

25. See, e.g., Eileen McDermott, *Ninth Circuit Alters Its Approach to Assessing Copyright Infringement in Ruling for Led Zeppelin*, IP WATCHDOG (Mar. 9, 2020, 3:04 PM), <https://www.ipwatchdog.com/2020/03/09/ninth-circuit-alters-its-approach-to-assessing-copyright-infringement-in-ruling-for-led-zeppelin/id=119710/> [<https://perma.cc/54M7-WLVU>] (noting how many in the copyright community were pleased with the decision); Sarah Bro, *Ninth Circuit Shows Led Zeppelin a Whole Lotta Love in ‘Stairway’ Copyright Win*, NAT’L L. REV. (Mar. 25, 2020), <https://www.natlawreview.com/article/ninth-circuit-shows-led-zeppelin-whole-lotta-love-stairway-copyright-win#google-vignette> [<https://perma.cc/5BYW-KRCE>].

contextually related to the conclusion sought.²⁶ Being inferential in nature, circumstantial evidence is therefore strongly tied to a probability or likelihood of a conclusion (rather than to a certainty).²⁷

Central to such likelihood is the concept of probative value in evidence law.²⁸ Probative value refers to the degree to which a piece of evidence makes a conclusion—through the inference—more or less likely.²⁹ Circumstantial proof of a conclusion works by combining inferences from a sequential chain of facts that can account for the conclusion.³⁰ Each of these facts and circumstances obviously has a different probative value with regard to the final conclusion being sought.³¹ Even when each is independent vis-à-vis the conclusion being proven, the probative values of the sequential facts often depend on each other (referred to as “conditional probative value”) reflecting the sequential and analytical logic underlying the inferences themselves.³² When this occurs, the cumulative inference towards the final conclusion derives from the combination of the probative values of the individual facts presented as proof and the inferences drawn from them.³³ A fact that may be of minimal probative value on its own as an inference towards the conclusion may thus gain significant probative value towards that same conclusion in the presence of other facts.³⁴ In other words, circumstantial proof often depends on a combination of inferences from facts that may each independently be of minimal probative value in isolation but become more probative and possibly conclusive when assessed in combination with the other facts.

26. See Latman, *supra* note 11, at 1192.

27. See *id.* at 1192-93, 1204.

28. Richard D. Friedman, *A Close Look at Probative Value*, 66 B.U. L. REV. 733, 734-35 (1986) (understanding probative value in terms of probability theory).

29. See *id.*

30. See ARTHUR P. WILL, *A TREATISE ON THE LAW OF CIRCUMSTANTIAL EVIDENCE* 464-65 (Phila., T. & J.W. Johnson & Co., 1896); ALEXANDER M. BURRILL, *A TREATISE ON THE NATURE, PRINCIPLES, AND RULES OF CIRCUMSTANTIAL EVIDENCE, ESPECIALLY THAT OF THE PRESUMPTIVE KIND, IN CRIMINAL CASES* 156-68 (2d ed. 1859).

31. See Friedman, *supra* note 28, at 738-39.

32. The classical work recognizing this is Richard D. Friedman, *Conditional Probative Value: Neoclassicism Without Myth*, 93 MICH. L. REV. 439 (1994). For a critique, see Dale A. Nance, *Correspondence, Conditional Probative Value and the Reconstruction of the Federal Rules of Evidence*, 94 MICH. L. REV. 419, 450-53 (1995).

33. See, e.g., Nance, *supra* note 32.

34. See Friedman, *supra* note 32, at 447-50.

It is this combinatorial approach to inferences and probative value that explains the inverse ratio rule as a mechanism of circumstantial proof of actual copying. Access and similarity represent sequential points of inference from the chain of behavior ordinarily associated with copying. A defendant must have access to the protected work, thereupon engage in an act of reproduction, thereby resulting in the production of a copy that is similar. Thus, access and similarity have their individual probative values conditionally related to each other, and it is the strength of their combined inference that allows a court to assess whether actual copying by the defendant was more likely than not. By combining two circumstantial inference points (access and similarity), the law strengthens inferential accuracy by allowing for the strength or weakness of one to be offset by the other and vice versa. Thus emerges the inherent logic behind the inverse ratio rule.

In a similar vein, the striking similarity variant of the rule derives from related basic principles of circumstantial evidence. Even though reluctant to permit courts to readily draw one inference entirely from another—known as the rule against “inference upon inference”—evidence law permits such cascaded inferences to be drawn when the strength of the evidence relating to the original fact (from which the first inference is to be drawn) is sufficiently robust, that is, tantamount to an actual fact.³⁵ The striking similarity doctrine is little more than a mechanism of cascaded inferences being used to prove copying. And in conformity with the working of evidence principles, copyright law permits such proof only when the evidence of similarity is so strong as to effectively eliminate all possible alternate explanations for its existence.³⁶

Therefore, copyright law’s inverse ratio rule, draws on common intuitions embodied in the working of the fundamental principles of inferential reasoning and evidence law. The *Skidmore* court was inattentive in rejecting the rule in a misguided effort to raise the bar for proving copying in a particular case. In so doing, the court

35. See L. JONATHAN COHEN, *THE PROBABLE AND THE PROVABLE* 68-73 (1977); RICHARD EGGLESTON, *EVIDENCE, PROOF AND PROBABILITY* 35, 39-40, 237-40 (Robert Stevens, William Twining & Christopher McCrudden eds., 2d ed. 1983).

36. *Arnstein v. Porter*, 154 F.2d 464, 468 (2d Cir. 1946) (“If evidence of access is absent, the similarities must be so striking as to preclude the possibility that plaintiff and defendant independently arrived at the same result.”).

confused the nature of the inquiry and moved copyright law in the Ninth Circuit away from a rational basis and common sense approach that has long been followed in other circuits. By examining the briefing and oral argument, we trace how the court was misled into reaching dubious logical conclusions and an astounding misreading of out-of-circuit authority. The sliding scale approach to proving copying continues to rule in other circuits, including the Second Circuit, where it was first developed.³⁷ Ironically then, the rejection of the rule was mistaken both as a matter of analytical logic as well as precedent—a surprising and troubling combination.

Much of the confusion surrounding the inverse ratio rule might have been avoided if scholars—and courts—had simply paid attention to the manner in which the rules and principles of evidence operate within copyright law as well as general principles of evidence law. While copyright is certainly a specialized domain with its own statutory and nonstatutory prescriptions, copyright adjudication in federal courts ultimately relies on the transsubstantive laws of procedure and evidence. Judges adjudicating copyright cases would do well to ask whether, when, and how to deviate from those rules when special considerations distinctive to copyright cases arise but otherwise pay attention to the general and well-worn precepts that apply across legal domains.

Part I unpacks the evidentiary logic underlying the inverse ratio rule to show how it embodies a sensible analytical framework. This framework is drawn from the operation of elemental principles of evidence relating to circumstantial evidence. Part II traces the origins of the inverse ratio rule and its evolution over the course of the twentieth century leading up to its rejection by the Ninth Circuit in *Skidmore*. Part III then argues that the misunderstanding of the inverse ratio rule was a result of copyright scholarship and jurisprudence insufficiently engaging the law of evidence in thinking about the process through which infringement claims are adjudicated. Looking to other doctrinal puzzles in copyright adjudication

37. See, e.g., *Jorgenson v. Epic/Sony Recs.*, 351 F.3d 46, 56 (2d Cir. 2003) (“There is an inverse relationship between access and probative similarity such that ‘the stronger the proof of similarity, the less the proof of access is required.’” (quoting 4 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 13.03[D], at 13-77 (2002))).

suggests that expressly considering evidence law considerations holds valuable lessons for copyright law and case management.

I. THE EVIDENTIARY LOGIC OF THE INVERSE RATIO RULE

Distilled to its basics, copyright law's inverse ratio rule posits an inverse relationship between the strength of the evidence of a defendant's access to the protected work and the degree of similarity between the result of the defendant's actions (namely, the defendant's copy) and the protected work. As one recent court described it:

The inverse ratio rule provides that the stronger the evidence of access, the less compelling the similarities between the two works need be in order to give rise to an inference of copying. On the flip side, the more compelling the similarities supporting an inference of copying, the less compelling the evidence of access need be. Indeed, if the similarities are "striking" enough—that is, highly unlikely to have been the product of independent creation—such similarities can be sufficient on their own to establish that the defendant must have had access to the plaintiff's work.³⁸

As should be apparent, the inverse ratio rule operates as a mechanism of inference to show the existence of factual copying through proof of circumstances that make such copying more likely than not. While circumstantial evidence is today a common feature of adjudication, its core features are commonly overlooked. This Part unpacks the evidentiary logic of the inverse ratio rule by situating it within the working of circumstantial proof more generally. Section A begins by disaggregating "copying" to show how copyright law's idea of factual copying embodies two separate epistemic dimensions. Section B then uses the logic of circumstantial proof to show that factual copying can be inferred from different circumstances that occur along the sequence of events constitutive of such copying. Section C introduces the idea of probative value and its conditional nature to reveal how the interplay between two inference points generates and justifies the inverse ratio rule.

38. *Rentmeester v. Nike, Inc.*, 883 F.3d 1111, 1124 (9th Cir. 2018).

A. Copying as Act and Result

As the Supreme Court axiomatically declared more than half a century ago, “[a]bsent copying, there can be no infringement of copyright.”³⁹ Given the centrality of the reproduction right to copyright, that statement remains largely true to this day.⁴⁰ Proof of copying—a factual question—is essential to a successful claim of copyright infringement.⁴¹ Despite this reality, the nature of copying as a factual question remains significantly underanalyzed.

When, as a factual matter, copyright law speaks of “copying” as an essential component of infringement, that term connotes two connected but nevertheless epistemically distinct ideas, each of which is relevant to the law. The first idea is that the act of copying must have taken place: the defendant must have engaged in actions that are described as appropriative in nature, wherein expression from the protected work was taken.⁴² The related second idea is that the result of such copying must produce a copy: the act of copying must result in the production of a copy of some aspects of the copyrighted work.⁴³ Both aspects underlie copyright law’s notion of actual or factual copying, even though they are often seen as a singular concept.

The act-dimension is encapsulated in the fundamental principle that independent creation is a complete defense to infringement.⁴⁴ Meaning, if the defendant is able to establish that the putative copy was independently produced—that is, without any recourse to the protected work—no infringement can exist. In other words, if the

39. *Mazer v. Stein*, 347 U.S. 201, 218 (1954); *see also* *Indep. Film Distrib., Ltd. v. Chesapeake Indus., Inc.*, 250 F.2d 951, 953 (2d Cir. 1958); *Hayden v. Chalfant Press, Inc.*, 281 F.2d 543, 548 (9th Cir. 1960); *Herbert Rosenthal Jewelry Corp. v. Kalpakian*, 446 F.2d 738, 741 (9th Cir. 1971); *Masquerade Novelty, Inc. v. Unique Indus., Inc.*, 912 F.2d 663, 672 (3d Cir. 1990); *Murray Hill Pub’ns, Inc. v. Twentieth Century Fox Film Corp.*, 361 F.3d 312, 317 (6th Cir. 2004).

40. *See, e.g.*, *Compulife Software Inc. v. Newman*, 959 F.3d 1288, 1301 (11th Cir. 2020).

41. *Id.*

42. *See Arnstein v. Porter*, 154 F.2d 464, 468-69 (2d Cir. 1946).

43. *Id.*

44. *Feist Pub’ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 345-46 (1991); *see also* *Skidmore v. Led Zeppelin*, 952 F.3d 1051, 1064 (9th Cir. 2020) (en banc) (“[I]ndependent creation is a complete defense to copyright infringement.”); *Design Basics, LLC v. Signature Constr., Inc.*, 994 F.3d 879, 887 (7th Cir. 2021); *Rentmeester v. Nike, Inc.*, 883 F.3d 1111, 1117 (9th Cir. 2018).

defendant's expression was produced without the act of copying, for example, through independent creation, there simply is no factual copying.⁴⁵

The result-dimension is, in turn, captured by the requirement that the copying must produce a "copy" for it to amount to infringement.⁴⁶ That copy must, in other words, comply with the law's fixation requirement.⁴⁷ If a defendant engages in the act of appropriating expression from a protected work but the act does not produce a copy that is fixed in a tangible medium of expression, then factual copying does not exist. This is true regardless of how extensive and clear the defendant's act of appropriation itself is. Furthermore, some courts require that the copied material be copyright protected.⁴⁸

Neither dimension is a mere formality; instead, they both go to core normative ideas underlying the working of copyright. The emphasis on independent creation is fundamental to the structure of exclusivity that copyright law revolves around, which distinguishes it from patent law and renders it a wrong-based regime.⁴⁹ Such independent creation is seen to inject a much-needed breathing space into the world of speech by ensuring that expression, even when identical to protected content, is not unduly stifled.⁵⁰ Indeed, it is for this reason that some see independent creation and copyright protection as two sides of the same coin.⁵¹

45. See *Procter & Gamble Co. v. Colgate-Palmolive Co.*, 199 F.3d 74, 78 (2d Cir. 1999) (analyzing how as a logical matter independent creation and the act of copying are mutually exclusive).

46. 17 U.S.C. § 106(1) (2022) (granting owners the exclusive right to "to reproduce the copyrighted work in copies").

47. *Id.* § 101 (definition of "copies").

48. This is primarily in the First Circuit, where the actual copying requirement is limited to examining whether the defendant copied material from the work that is actually protected. See, e.g., *Johnson v. Gordon*, 409 F.3d 12, 18 (1st Cir. 2005).

49. For theoretical defenses of independent creation and its role in copyright, see ABRAHAM DRASSINOWER, WHAT'S WRONG WITH COPYING? 57 (2015); Shyamkrishna Balganes, *The Obligatory Structure of Copyright Law: Unbundling the Wrong of Copying*, 125 HARV. L. REV. 1664, 1669 (2012); Henry E. Smith, *Intellectual Property as Property: Delineating Entitlements in Information*, 116 YALE L.J. 1742, 1810-11 (2007).

50. For an autonomy-based defense of independent creation, which treats copyright infringement without it as compelled speech, see DRASSINOWER, *supra* note 49, at 57.

51. *Id.*

The rationale for copyright's emphasis on the "copy" is of even greater relevance to the evidentiary question. Liability for an unauthorized reproduction arises only when it results in a "copy." A defining feature of such a copy is that it must be fixed for more than just a transitory period, meaning that the copy must subsist in a "sufficiently permanent or stable" form.⁵² The purpose of this fixation requirement, as scholars have long pointed out, is principally evidentiary.⁵³ In situations where the copying does not result in a fixation of the expression, courts are forced to rely exclusively on descriptions (and testimony) of the copying as evidence, which is cumbersome.⁵⁴ By thus insisting that copying produce a copy, and that definitionally such copy must be fixed, the law's very idea of copying (as a factual matter) embodies a crucial evidentiary dimension.

Rarely ever are the act- and result-dimensions of factual copying disaggregated. All the same, unbundling them is critical to appreciating how factual copying is proven through the use of circumstantial evidence. When copyright law speaks of factual copying as a prerequisite for infringement, it is insisting on proof of both the act of copying as well as the result of such copying. This dual meaning of copying obviously complicates the manner in which it is to be proven in situations where there is no direct evidence (such as an admission, video evidence, or eyewitness testimony) of the question. And it is from this dual meaning that the inverse ratio rule emerges, when inferences are to be drawn from surrounding facts to establish both aspects of copying.

52. 17 U.S.C. § 101 ("A work is 'fixed' in a tangible medium of expression when its embodiment in a copy ... is sufficiently permanent or stable to permit it to be perceived, reproduced, or otherwise communicated for a period of more than transitory duration.").

53. See, e.g., Douglas Lichtman, *Copyright as a Rule of Evidence*, 52 DUKE L.J. 683, 730 (2003) (noting how the argument that fixation is "motivated by evidentiary concerns" is widespread); Lydia Pallas Loren, *Fixation as Notice in Copyright Law*, 96 B.U. L. REV. 939, 959 (2016).

54. Loren, *supra* note 53, at 959 (describing the abuse this could result in); Tyler T. Ochoa, *Copyright, Derivative Works and Fixation: Is Galoob a Mirage, Or Does the Form(Gen) of the Alleged Derivative Work Matter?*, 20 SANTA CLARA COMPUT. & HIGH TECH. L.J. 991, 1024 (2004) (noting how because of fixation "[w]e don't have to worry about copyright owners infiltrating a private party in someone's home or deposing the arranger's family and friends to obtain evidence of copyright infringement").

B. Inferring Factual Copying

Circumstantial evidence, often referred to as indirect evidence, is evidence of facts or circumstances that are related to the fact intended to be proven, from which that fact can be inferred.⁵⁵ The fact to be proven is often referred to as the *probandum* or “principal fact” and the facts or circumstances that are proven and from which the principal fact can be inferred are called the “evidentiary facts.”⁵⁶ What sets circumstantial evidence apart is the reality that the move from evidentiary facts to the principal fact is one of inference rather than proof.

Inference is an “intermediate process of reasoning,” one that entails rational judgment.⁵⁷ This is certainly not to suggest that it is subjective in nature but rather that it is a matter of belief rather than knowledge. The inferences underlying circumstantial evidence are drawn from common human experience and recurring patterns of behavior, cause-effect, and correlation seen in practice, which strengthen (or weaken) one’s belief.⁵⁸ Circumstantial evidence thus entails inference from one fact to another; all the same, the nature of the connection between such facts follows a finite set of patterns. One leading nineteenth-century treatise on circumstantial evidence classified the relationship into three general categories: “causes,” “concomitants,” and “effects.”⁵⁹ Although somewhat imprecise, the classification captures the sequenced nature of the inferential process relating to an occurrence, proof of which is being sought.

The term “causes” captures the set of background conditions that make the fact to be proven more likely to occur. The category should, however, be understood to encompass not just causes in the strict sense but also antecedent conditions that make the occurrence

55. See WILL, *supra* note 30, at 15; WILLIAM WILLS, AN ESSAY ON THE PRINCIPLES OF CIRCUMSTANTIAL EVIDENCE 19 (Alfred Wills ed., 6th ed. 1912); ALEXANDER M. BURRILL, A TREATISE ON THE NATURE, PRINCIPLES AND RULES OF CIRCUMSTANTIAL EVIDENCE, ESPECIALLY THAT OF THE PRESUMPTIVE KIND, IN CRIMINAL CASES 4 (N.Y.C., Baker, Voorhis, & Co. 1868).

56. BURRILL, *supra* note 55, at 5-6.

57. *Id.* at 5; see also WILLIAM WILLS, AN ESSAY ON THE PRINCIPLES OF CIRCUMSTANTIAL EVIDENCE ILLUSTRATED BY NUMEROUS CASES 15-16 (Phila., T. & J.W. Johnson, 3d London ed. 1853) (pointing out how such reasoning is generally absent in situations involving direct evidence, where intuition is at play).

58. BURRILL, *supra* note 55, at 12-22.

59. *Id.* at 13-14.

likely, even if they did not “cause” it in a strict legal sense. A good example is a motive for an action. While a motive is certainly not a cause of an action, it nevertheless informs the set of circumstances making the action likely and is in that sense circumstantially relevant.⁶⁰ “Concomitants” refers to facts with a cause common to the occurrence to be proven, such that the presence of one allows an inference of the other. The possession of a rare bottle of poison, when the same poison was used in a crime, is a good example here. This is probably the most expansive category of inferential proof. Finally, the category of “effects” covers the results of the occurrence, regardless of whether they are legally consequential. The “smoking gun” is an obvious example of this category, in as much as the idiom conveys an example of a weapon used in a crime showing signs of immediate prior use, that is, the smoke being the result of the weapon having just been fired.⁶¹

Returning to the act of copying from a work, we can break down the sequence of events constitutive of copying into relatively discrete components. To begin with, copying from a protected work requires the copier to have an awareness of the protected work. With such awareness of the work, the copier then engages in an act of appropriation that entails physically replicating some aspect of the protected work. And finally, the appropriation results in an outward manifestation, which is the copy itself. As should be obvious, each of these discrete components lines up with the individual categories of inference commonly deployed for circumstantial proof of copying.

Being aware of the work is a necessary condition for copying to have taken place. And the best objective manifestation of such awareness is proof of the defendant’s access to the work. While access does not, of course, conclusively establish that the defendant was aware of the work, it nevertheless makes it more probable that this was in fact the case. Evidence of facts that occurred in parallel

60. For a general account of motives and emotions as evidence of conditions in the law, see 2 JOHN H. WIGMORE, *EVIDENCE IN TRIALS AT COMMON LAW* 416 (James H. Chadbourn ed., 1979); see also David P. Leonard, *Character and Motive in Evidence Law*, 34 *LOY. L.A. L. REV.* 439, 439-40 (2001).

61. See H.C. UNDERHILL, *A TREATISE ON THE LAW OF CRIMINAL EVIDENCE* 215-16 (3d ed. 1923) (offering the example of a “smoking pistol” as circumstantial proof of a killing based on result).

with the defendant's appropriative behavior generate an inference of such behavior having taken place. Such concomitant evidence is particularly difficult to come by, especially in situations where the artifacts deployed by the defendant for the appropriation (for example, copying equipment) are not limited to the act of copying the protected work. All the same, it is conceivable that such evidence could exist. An example might be a defendant's ownership of a unique copying device that is shown to have been used in the replication/appropriation.⁶² Finally, evidence of the result of such copying—which lies in the production of the copy—is seen in the similarity between the protected work and the defendant's copy. This parallelism is illustrated in the table below.

Table: Points of Circumstantial Inference in Factual Copying

Nature of Inference	Component of Factual Copying	Point of Circumstantial Inference
Condition	Awareness of the protected work	Proof of access
Concomitant	Replicating content in the protected work	Evidence of appropriative behavior
Result	Creation of a copy	Similarity between copy and protected work

It is crucial to recognize that despite there being a sequence of events underlying factual copying that corresponds to the commonly deployed categories of inference, as an analytical matter each point of inference operates independently. In other words, each element of proof—be it a condition, concomitant, or result—is capable on its own of generating an inference as to the fact meant to be proven, that is, factual copying.⁶³ Now it may well be that in practice

62. An example here might be a reproduction carried out by a defendant in his own unique handwriting, which can be identified as originating in the defendant.

63. For an early recognition of this reality, see *Arnstein v. Porter*, 154 F.2d 464, 468 (2d

the strength of each individual inference is too weak to stand on its own; yet, that does not impact the analytical logic of each point of inference. In other words, as a matter of pure logic and deduction, evidence of antecedent conditions (access) directly generates an inference of factual copying, as does evidence of result (similarity). This point is easy to overlook in light of the sequenced nature of the inference points. Yet, what it means is that proof of factual copying that relies on circumstantial evidence does not—as a matter of pure deductive logic—necessitate points of inference from all three categories/types. Instead, one or more will often dominate the inferential process depending on context.

We now turn to the connection between the dual meaning of copying that the law adopts and the working of inference points. Because the law's understanding of copying even as a factual matter means both the act of copying (appropriation) as well as its result (the copy), it implicitly demands that both dimensions be proven by a plaintiff seeking to establish factual copying. Consequently, even though as a purely analytical matter each of the three potential points of inference involving copying (that is, condition/concomitant/result) is able to generate a likelihood that copying occurred, the law's dual meaning of copying now accords inference from result a special place and thus independent salience. As a purely logical matter, therefore, each of the three potential points of inference was independently sufficient to establish copying while none was individually necessary; the law alters this in relation to similarity, which it makes independently necessary. Without evidence of similarity, copyright law refuses to allow an inference of factual copying even when alternative bases for that inference may exist.⁶⁴

Very importantly, this insistence on the inference being drawn from the similarity is not the same as requiring that similarity be shown to exist as an independent component of the analysis.⁶⁵ For

Cir. 1946) (“[C]ircumstantial evidence—usually evidence of access—from which the trier of the facts may reasonably infer copying.”).

64. *Id.* (“Of course, if there are no similarities, no amount of evidence of access will suffice to prove copying.”). *Arnstein* did not, of course, offer a fuller explanation for this rationale. All the same, it is worth noting that under the Copyright Act of 1909, which contained the relevant law at the time, the creation of a “copy” was already considered integral to a finding of infringement. See *White-Smith Music Publ’g Co. v. Apollo Co.*, 209 U.S. 1, 16-17 (1908) (finding there to be no infringement when no copy was made of the work).

65. For an effort to advance this idea, see 3 WILLIAM F. PATRY, PATRY ON COPYRIGHT § 9:91

the latter to hold true, it would have to be established based on an independent preponderance of evidence, that is, more probable than not. Instead, the law merely requires that some similarity exist so as to be part of the circumstantial proof that generates the inference of copying.⁶⁶ In other words, similarity needs to merely be a point of inference.

Circumstantial evidence of the defendant's appropriative behavior has historically been rare, and therefore, courts have almost never placed significant reliance on this factor to draw their inferences. Somewhat recently, however, this category has been implicitly rejuvenated in infringement lawsuits involving internet downloads, where a defendant's act of copying is inferred from their ownership and use of a computer with a unique identification (IP address) that is shown to have been used in the copying.⁶⁷ Courts have become increasingly willing to accept such evidence as circumstantially sufficient for proof of copying when combined, of course, with the existence of an identical (or similar) copy.⁶⁸

In short then, the basic precepts of circumstantial evidence carry over rather seamlessly to the proof of factual copying, with the one all-important modification noted previously relating to inference from similarity. Courts typically infer factual copying from two or more points: the similarity of the copy (to the original) and additional evidence that goes to show the existence of relevant background conditions to the copying (access) or proof of the defendant having engaged in the replication involved (appropriative behavior).

(2022).

66. *Arnstein*, 154 F.2d at 468 ("If there is evidence of access and similarities exist, then the trier of the facts must determine whether the similarities are sufficient to prove copying.").

67. This generally occurs in what are known as BitTorrent copyright infringement lawsuits, involving the use of BitTorrent streams that allow a data file to be broken down into innumerable packets and then downloaded. Plaintiffs in these cases identified unique IP (Internet Protocol) addresses that were used for the downloads and then initiated infringement lawsuits against the owners of these addresses with the inference that the owners had themselves engaged in the downloads. See Sean B. Karunaratne, Note, *The Case Against Combating BitTorrent Piracy Through Mass John Doe Copyright Infringement Lawsuits*, 111 MICH. L. REV. 283, 284-85 (2012); Stefan Mentzer & Michael La Marca, *Joinder and Early Discovery in BitTorrent Copyright Infringement Lawsuits*, 33 CARDOZO ARTS & ENT. L.J. 89, 89-91 (2015).

68. See, e.g., *Malibu Media, LLC v. Ling*, 80 F. Supp. 3d 1231, 1242 (D. Colo. 2015); *Malibu Media, LLC v. Flanagan*, No. 2:13-CV-5890, 2014 WL 2957701, at *2 (E.D. Pa. July 1, 2014).

When this occurs, factual copying is said to have been established through circumstantial evidence.

C. The Similarity-Access Relationship

As understood today, the inverse ratio rule to prove copying embodies three interrelated propositions: (1) weak evidence of access may be compensated for by greater similarity, (2) minimal similarity between the works may be offset by strong evidence of access, and (3) extensive similarity may at times allow a court to dispense with proof of access altogether, while the opposite is not permitted, that is, access without any similarity is fatal to the question of copying.⁶⁹ Propositions (1) and (2) identify an inverse inferential relationship between the evidence of similarity and access, while (3) in turn takes that inverse relationship further and allows for one inference to be drawn from another, but only ever in one direction.⁷⁰

Each of these ideas has strong and hitherto unappreciated foundations in the principles of evidence law, which this Section develops.

1. Probative Value and Probability

Central to the law of evidence is the basic principle of “probative value,” which is understood as “[t]he degree to which one fact tends to make probable another posited fact.”⁷¹ It is thus seen as a fundamentally “relational concept” and as describing the “strength with which evidence supports an inference to a given conclusion.”⁷² Unlike the legal concept of relevance, which is a binary concept in evidence law—that is, a piece of evidence is either relevant or irrelevant, with no middle ground—probative value is a question of degree and as such requires the exercise of the fact-finder’s judgment.⁷³ The probative value of a piece of evidence is therefore a

69. For a concise statement of all three propositions, see *Rentmeester v. Nike, Inc.*, 883 F.3d 1111, 1124 (9th Cir. 2018).

70. *See id.* at 1117.

71. *Probative Value*, BLACK’S LAW DICTIONARY (11th ed. 2019).

72. Ronald J. Allen & Michael S. Pardo, *The Problematic Value of Mathematical Models of Evidence*, 36 J. LEGAL STUD. 107, 108 n.2 (2007).

73. *See* FED. R. EVID. 401.

function of “how much” the evidence makes a particular explanation more (or less) likely.⁷⁴

In the conventional view, the probative value of a piece of evidence is measured using what is known as the “likelihood ratio,” which relies on probability theory and integrates it with the manner in which a fact-finder’s belief structure operates.⁷⁵ The likelihood ratio for a piece of evidence (E) in establishing a proposition/conclusion (C) is the ratio of the probability of that conclusion given the evidence, $P(E | C)$ to the probability of the opposite (or | negation) of that conclusion given the same evidence, $P(E | \text{not } C)$.⁷⁶ This is often mathematically represented as: *Probative Value (PV) = $P(E | C) : P(E | \text{not } C)$* .⁷⁷

As should be obvious from this understanding of probative value, the probability of an event having occurred given the evidence in question, that is, $P(E | C)$, directly influences the probative value of that piece of evidence.⁷⁸ Or put another way, as the probability of the event having occurred given the evidence increases, so does the probative value. Returning to copyright law’s rules relating to proof of copying reveals how this might work.

Insofar as the proposition/conclusion sought to be established is actual copying, the law—as we have seen—identifies two independent points of inference for that conclusion to be reached circumstantially: access and similarity. Consider access first. Evidence of access may include evidence that the defendant heard (or saw) the protected musical work once, prior to the alleged act of copying.⁷⁹

74. 2 JOHN HENRY WIGMORE, A TREATISE ON THE ANGLO-AMERICAN SYSTEM OF EVIDENCE IN TRIALS AT COMMON LAW § 12, at 156 (2d ed. 1923); see also Friedman, *supra* note 32, at 444.

75. The classical exposition in the realm of evidence law is Richard O. Lempert, *Essay, Modeling Relevance*, 75 MICH. L. REV. 1021, 1025 (1977). For more literature on the likelihood ratio, see VIC BARNETT, *COMPARATIVE STATISTICAL INFERENCE* 306 (1999); David H. Kaye, *Likelihoodism, Bayesianism, and a Pair of Shoes*, 53 JURIMETRICS 1, 3 (2012); David H. Kaye, *Digging into the Foundations of Evidence Law*, *Review*, 115 MICH. L. REV. 915, 923 (2017) (reviewing MICHAEL J. SAKS & BARBARA A. SPELLMAN, *THE PSYCHOLOGICAL FOUNDATIONS OF EVIDENCE LAW* (2016)); David H. Kaye, *Quantifying Probative Value*, 66 B.U. L. REV. 761, 763 (1986). See generally Anders Nordgaard & Birgitta Rasmusson, *The Likelihood Ratio as Value of Evidence—More than a Question of Numbers*, 11 LAW, PROBABILITY & RISK 303 (2012); Louis Kaplow, *Likelihood Ratio Tests and Legal Decision Rules*, 16 AM. L. & ECON. REV. 1 (2014).

76. See Lempert, *supra* note 75, at 1025.

77. See *id.*

78. See *id.* at 1025-26.

79. See, e.g., Balganes, *supra* note 1, at 802.

Alternately, it may consist of evidence that the defendant heard the protected musical work fifty times, ascertained on the basis of digital records.⁸⁰ A basic understanding of probability tells us that the probability of copying given a single hearing is less than the probability of copying given multiple hearings; and conversely that the probability of no copying with multiple hearings reduces in comparison to the probability of no copying with a single hearing. Consequently, evidence of access based on hearing a work fifty times is of greater probative value than evidence of access based on a single hearing, to the question of actual copying.⁸¹ The stronger the evidence of access, the greater is its probative value to actual copying.⁸²

The same is true of similarity: a 10 percent expressive similarity between the content of two literary works has a lower probability of being the result of copying, and is thus of less probative value than a situation where the expressive similarity is 85 percent. When the two works are identical, that is, when their similarity is 100 percent, the probability of it having resulted from copying is at its highest and the probative value of such evidence is therefore at its highest.⁸³

2. *Conditional Probative Value and the Combinatorial Approach to Inference*

Probative value is a question of the degree to which a piece of evidence makes a conclusion more plausible. All the same, the probative value of a piece of evidence under certain circumstances also embodies a conditional property.⁸⁴ Known as “conditional probative value” (an offshoot of “conditional relevance”⁸⁵), the idea is

80. See, e.g., *id.*

81. See, e.g., *id.* at 795, 802; Lempert, *supra* note 75, at 1025.

82. See Balganesch, *supra* note 1, at 795, 805.

83. See Lempert, *supra* note 75, at 1025-26. Of course, this is short of there being evidence (from the defendant, usually) that both works originated in a common source or material that was not original to the protected work alone.

84. See Friedman, *supra* note 32, at 447.

85. For early identifications of the idea of conditional relevance, see EDMUND M. MORGAN, BASIC PROBLEMS OF EVIDENCE 45 (1962). See generally Dale A. Nance, *Conditional Relevance Reinterpreted*, 70 B.U. L. REV. 447 (1990). Conditional relevance today finds itself in the Federal Rules of Evidence. FED. R. EVID. 104(b). For criticism of the idea, see generally Vaughn C. Ball, *The Myth of Conditional Relevancy*, 14 GA. L. REV. 435 (1980); Ronald J.

that the probative value of some kinds of evidence is entirely contextual and depends on proof of a predicate condition.⁸⁶ When the predicate condition is introduced and proven, the proffered evidence has greater probative value than it does in situations where that predicate is altogether absent.⁸⁷ An example of conditional probative value comes from the evidentiary rules relating to authentication.⁸⁸ Under these rules, a piece of evidence gains probative value—and is admissible—only upon proof that it is what its proponent claims it to be.⁸⁹ Thus, a letter purporting to contain a defendant's acknowledgement of a matter is of probative value only if it can be shown to have been written by the defendant. If it is shown to have originated in someone other than the defendant, the letter loses probative value in relation to the defendant's admission and its consequences.⁹⁰ The probative value of the proffered fact (the letter) is conditional upon proof of the predicate fact (its having been written by the defendant).⁹¹

In short then, the idea of conditional probative value recognizes the existence of a relationship between two facts. Now, each of those facts might have its own probative value, with each entailing an inference. In other words, establishing a predicate fact is likely to itself be a matter of its own probative value.⁹² And when this occurs, the probative value of the predicate fact interacts with—and influences—the probative value of the proffered fact.⁹³ To illustrate this with our earlier example involving an authentication: establishing

Allen, *The Myth of Conditional Relevancy*, 25 LOY. L.A. L. REV. 871 (1992).

86. See Friedman, *supra* note 32, at 447; Richard D. Friedman, Correspondence: Reply, *Refining Conditional Probative Value*, 94 MICH. L. REV. 457, 458 (1995); Dale A. Nance, Correspondence, *Conditional Probative Value and the Reconstruction of the Federal Rules of Evidence*, 94 MICH. L. REV. 419, 419 (1995). The Supreme Court, too, has endorsed the idea in principle. See *Old Chief v. United States*, 519 U.S. 172, 185 (1997) ("The probative worth of any particular bit of evidence is obviously affected by the scarcity or abundance of other evidence on the same point." (quoting 22 C. WRIGHT & K. GRAHAM, FEDERAL PRACTICE AND PROCEDURE § 5250, at 546-47 (1978))).

87. See Friedman, *supra* note 32, at 458.

88. FED. R. EVID. 901(a) ("To satisfy the requirement of authenticating or identifying an item of evidence, the proponent must produce evidence sufficient to support a finding that the item is what the proponent claims it is.").

89. See *id.*

90. See *id.*

91. See Friedman, *supra* note 32, at 458.

92. See *id.* at 454-55.

93. See *id.* at 454.

that the letter was written by the defendant is itself likely to be a matter of proof and thus carry its own probative value.⁹⁴ A fact-finder might be presented with a defendant's other letters to carry out a comparison of the handwriting. Thus, proof of this fact—that is, that the letter was written by the defendant—is invariably a probabilistic assessment involving an inference, which in turn influences the probative value of the letter on the question of it representing a defendant's acknowledgment.

The more complicated—and relevant for our purposes—question is the proof required to establish a predicate fact, which in turn informs the probative value of the proffered fact. As generally understood, the predicate fact must be accompanied by proof “sufficient to support a finding” that it exists.⁹⁵ While this sufficiency, which corresponds to its probative value, may seem to be an independent variable, in practice it is intricately tied to the nature of the proffered fact.⁹⁶ In some situations, the proffered fact is of low probative value on its own, such that the proof of the predicate fact needs to be high. Examples include communications and messages that are taken to require a “greater degree of authentication.”⁹⁷ On the other hand, some documents—described as “self-authenticating”—are produced and created in a manner that accords them higher probative value on their own, and accordingly a significantly lesser degree proof is demanded of the predicate fact.⁹⁸

In many situations involving interrelated facts, the line between predicate and proffered fact is often unclear. In other words, there might well be situations where two facts, both of which are offered as proof of a proposition, reinforce each other such that each of their probative values is conditional on the other.⁹⁹ It is this form of

94. *See id.* at 451-52.

95. FED. R. EVID. 104(b).

96. *See* Nance, *supra* note 85, at 450.

97. *See, e.g.*, Griffin v. State, 19 A.3d 415, 424 (Md. 2011); State v. Jones, 318 P.3d 1020 (Kan. Ct. App. 2014); Tienda v. State, 358 S.W.3d 633, 646 (Tex. Crim. App. 2012).

98. FED. R. EVID. 902 (listing evidence that is self-authenticating).

99. Indeed, the earliest identification of a conditional relationship between two pieces of evidence identified this. MORGAN, *supra* note 85, at 45-46 (“[t] often happens that upon an issue as to the existence of fact C, a combination of facts A and B will be highly relevant but that either without the other will have no relevance.”); *see also* Nance, *supra* note 85, at 449 (“In such situations, the basic requirement of relevance means that the admissibility of evidence of either fact A or fact B must be conditioned upon some form of showing of the other.”).

two-directional conditionality that is at the heart of the two inference points commonly used to prove actual copying.¹⁰⁰ In these situations, the “sufficien[cy]” of proof required to establish each fact needs to be understood in the aggregate, rather than as attaching to each individual fact.¹⁰¹ The evidence of each fact “must be considered together with other evidence that pertains to the ultimate proposition.”¹⁰² Thus, while each fact in isolation might be of weak probative value when considered individually, when taken in combination together, their probative value increases dramatically because they each operate as the predicate for the other.¹⁰³ And owing to this combinatorial approach to such conditionally related facts, a higher probative value on one allows for a lower probative value on the other, and vice versa.¹⁰⁴

This combinatorial approach has long been understood as the established method of understanding how different elements of circumstantial evidence work together in service of a final conclusion. One nineteenth-century treatise on circumstantial evidence described the approach as follows:

A single isolated fact or circumstance might be no evidence; two or three more taken together might not make evidence in the eye of the law; but a multitude of slight facts taken together as true might make evidence that would warrant a jury in finding a verdict of guilty in the most serious cases....

....

It is not true, however, that each and every of the minor circumstances introduced to sustain these ultimate facts must be proven with the same degree of certainty. Some of these circumstances may fail of proof altogether, and be discarded from consideration by the jury, yet the ultimate fact to establish which they were presented may be shown beyond a reasonable doubt.¹⁰⁵

100. See MORGAN, *supra* note 85, at 45-46.

101. Nance, *supra* note 85, at 450 (noting how one piece of evidence “together with the other evidence” can satisfy the condition).

102. *Id.* at 451.

103. *Id.*

104. See *id.*

105. WILL, *supra* note 30, at 463, 465-66.

Metaphors commonly used to describe this combinatorial approach include a cable with multiple strands, some of which are weak, yet the cable as a whole remains strong in the aggregate, or a “bundle of rods.”¹⁰⁶

Further, the combinatorial approach looks not just to the “number” of individual circumstances from which inferences are to be drawn but also to the “weight” (or strength) of the inferences that may be drawn therefrom, recognizing that in the sequence, not all individual inferences are likely to be of equal strength.¹⁰⁷ Such “weight” is a crucial consideration since it is the aggregate that matters in proving the ultimate question, thus allowing for a weak inference from one circumstance to be offset by a stronger one from another, when each fact/circumstance is “independent” of the other.¹⁰⁸ Another leading treatise on circumstantial evidence described this mechanism as follows:

The *weight* of the individual circumstances ... is constantly found to vary in every combination presented by evidence; some facts affording only a slight presumption of the truth of the hypothesis; others, that stronger degree which is sufficient to establish it, unless weakened, rebutted, or destroyed by opposing facts; others, more rarely, reaching that high grade of efficacy denominated *conclusiveness*.... The most common application of the epithet “conclusive,” is to the *final* effect of a number of facts taken *together*, and constituting a body of evidence; producing a degree of persuasion or assurance.¹⁰⁹

An example illustrates the idea. Assume that in a civil trial for the action of wrongful death (rather than a criminal murder trial), the plaintiff seeks to establish that the defendant caused the death of the victim. Focusing on a civil claim allows us to set the appropriate standard of proof as the preponderance of evidence, which is the standard used in copyright infringement claims that are civil in nature.¹¹⁰ Among other evidence, the plaintiff’s case contains three

106. *Id.* at 466.

107. BURRILL, *supra* note 30, at 156.

108. *Id.* at 156, 159.

109. *Id.* at 160.

110. For an interesting overview of the two standards and their coevolution, see John Leubsdorf, *The Surprising History of the Preponderance Standard of Civil Proof*, 67 FLA. L.

pieces of circumstantial evidence: (a) the cause of the victim's death was a gunshot wound (cause of death), (b) the defendant was present in the same room as the victim at the time of death (presence), and (c) the defendant holds a valid handgun permit (permit). The probative values of each of these three facts, in relation to the conclusion (that the defendant caused the death by gunshot), are interrelated, such that while each is a proffered fact for that conclusion, each also operates as a predicate fact to support the probative value of the others. Absent proof of the cause of death, the permit and presence are of minimal probative value; absent the permit, the cause of death and presence are of lower value in tying the defendant to the death; and absent the defendant's presence, the mere existence of a permit and the cause of death are similarly of lower value. The three facts reinforce each other to build a combined narrative.

Now, if the proof of one of these three facts is weak, say, the defendant's presence in the room, it can be offset by greater evidence of the other components of the narrative—as long as the combination is sufficiently robust to draw the appropriate inference towards the conclusion. Weak proof of the defendant's physical presence (for example, a partial footprint) when combined with strong evidence of the permit (for example, a permit for a specific type of gun) and the cause of death (for example, the gunshot having come from a specific gun) generates the same combined inference.¹¹¹ This is the basic logic behind the combinatorial approach to circumstantial evidence.

This allows us to now make sense of the central idea behind the inverse ratio rule. Proof of access and similarity between the works each independently operates as a proffered fact to establish the legal conclusion of actual copying.¹¹² At the same time, each also

REV. 1569 (2015); see also Jon O. Newman, *Beyond "Reasonable Doubt,"* 68 N.Y.U. L. REV. 979 (1993) (providing an overview of the criminal standard of proof and its working in the appellate process); Mark Schweizer, *The Civil Standard of Proof—What Is It, Actually?*, 20 INT'L J. EVID. & PROOF 217, 217-19 (2016); Kevin M. Clermont, *Death of Paradox: The Killer Logic Beneath the Standards of Proof*, 88 NOTRE DAME L. REV. 1061, 1065-67, 1087 (2013).

111. For an account of different types of circumstantial evidence that might be combined together in a narrative to establish a core proposition, see 1 WIGMORE, *supra* note 74, § 43, at 263.

112. See 4 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 13D.08[B][2], at 13D-75 (Matthew Bender, rev. ed. 2022).

operates as a predicate fact for the other such that one without the other is ordinarily of insufficient probative value on the ultimate conclusion, that is, copying.¹¹³ When both are present, it is the sufficiency of their combination that is relevant for the purposes of that conclusion.¹¹⁴ Now, if proof of one is weak, the focus on the combination asks what it is to be combined with to generate a sufficiently robust putative inference pertaining to the conclusion.¹¹⁵ Because the law allows only two principal points of inference on circumstantial proof of copying (access and similarity), the robustness of that inference cannot come from other pieces of circumstantial proof.¹¹⁶ It must instead simply come from the other (of the two).¹¹⁷ And this is what is meant by the requirement that weakness of proof relating to one (access or similarity) can be offset by strong evidence of the other—so as to render the combined inference as to the ultimate fact sufficiently robust.¹¹⁸

Thus, if a plaintiff is able to establish no more than that the defendant was a member of a library that owned the protected work, this fact (of access) is of minimal probative value to the question of copying unless there is some similarity between the defendant's copy and the protected work. Now, if that similarity is significant—assume 70 percent—the extent of that similarity offsets the weak evidence of access so as to allow for a combined inference of actual copying. On the other hand, if the two works show a minimal amount of similarity—say 10 percent—that evidence is on its own of limited probative value unless accompanied by proof that the defendant had significant access to the protected work. If the plaintiff is able to establish that the defendant specifically owned a copy of the work and kept it in his personal library or if the library records reveal that the defendant specifically borrowed the library copy of the plaintiff's work, that fact enhances the probative value of the similarity in combination and allows for an inference of copying.

113. *See id.* § 13D.08[C][4][b], at 13D-82-83.

114. *See id.* § 13D.08[B][2], at 13D-75.

115. *See id.* § 13D.08[C][4][b], at 13D-82-83.

116. *See id.*

117. *See id.*

118. *See id.*

In short then, the probative value of each of access and similarity is conditional on proof of the other such that their combined probative value—which is the only one that matters—is stronger than the probative value of the weaker of the two and sufficient to support the inference as to copying.¹¹⁹ Of course, it need not be the case that one is weaker and the other stronger; it might well be that each is of independently sufficient probative value so as to produce a robust inference in the aggregate.¹²⁰ The inverse ratio rule merely makes room for the possibility when this is not present, and thus does little more than emphasize the combinatorial approach to probative value.¹²¹

3. Cascaded Inferences from Similarity

The combinatorial approach accounts for the core of the inverse ratio rule, which allows for a sliding scale of proof on the two main points of inference needed to establish factual copying through circumstantial evidence.¹²² It does not on its own, however, account for the allowance that the law makes—as an extreme application of the inverse ratio rule—for situations where the fact-finder is presented with no proof of access but overwhelming evidence of similarity. In these situations, referred to as situations of “striking similarity,” the law allows the fact-finder to make a finding of factual copying directly, disregarding the absence of evidence relating to access.¹²³

Thus, hypothetically, if a defendant produces a novel that is identical (that is, 100 percent similar) to the plaintiff’s protected original work and does not point to a common prior source for such similarity, the plaintiff will need to do no more than establish such similarity for a fact-finder to conclude that the defendant had copied

119. *See id.*

120. *See id.*

121. *See id.*

122. *See id.* § 13D.08[B][2], at 13D-75.

123. *See Arnstein v. Porter*, 154 F.2d 464, 468-69 (2d Cir. 1946) (“In some cases, the similarities between the plaintiff’s and defendant’s work are so extensive and striking as, without more ... to justify an inference of copying.”); *Bouchat v. Balt. Ravens, Inc.*, 241 F.3d 350, 356 (4th Cir. 2001); *Gaste v. Kaiserman*, 863 F.2d 1061, 1068 (2d Cir. 1988); *Baxter v. MCA, Inc.*, 812 F.2d 421, 423 (9th Cir. 1987); *Ferguson v. Nat’l Broad. Co.*, 584 F.2d 111, 113 (5th Cir. 1978).

from the plaintiff. It is of no consequence that the plaintiff is unable to present any evidence that the defendant had access to the novel.¹²⁴ On the face of things, this may seem like little more than a mathematically reductive application of the main inverse ratio rule (that is, moving the ratio from 80:20 to 100:0).¹²⁵ In actuality, however, it does something very different and derives from principles of evidence pertaining to inferences.

Recall that in the traditional formulation, the facts of access and similarity are in combination capable of generating an inference of factual copying.¹²⁶ They each generate an independent inference that when combined together suffices as proof of copying.¹²⁷ All the same, when one element (access or similarity) is absent but proof on the other is significant, things are different.¹²⁸ In these situations, the principles of evidence law recognize that there are circumstances under which the absence of a fact can be compensated for by an additional inference from an existing fact, if the evidence of that fact allows for it.¹²⁹

Commonly referred to as situations of “inference upon inference,” these are situations where the law allows a chain of inferences to be drawn sequentially from one single fact under appropriate circumstances.¹³⁰ Although courts initially developed a norm against drawing one inference from another in trials, the crystallization of this norm into a rule precluding sequential inferences was soon met with significant criticism. Wigmore, in his influential treatise, laid this out rather directly:

124. *But see* *Selle v. Gibb*, 741 F.2d 896, 901 (7th Cir. 1984) (suggesting that even under the striking similarity doctrine, other circumstantial evidence of access must always be present). Later courts have read *Selle* to imply that such access must be present when there is a suspicion of a common prior source, which the court was unable to rule out in that case. *See Ty, Inc. v. GMA Accessories, Inc.*, 132 F.3d 1167, 1170 (7th Cir. 1997) (“What troubled us in *Selle* ... is that two works may be strikingly similar—may in fact be identical—not because one is copied from the other but because both are copies of the same thing in the public domain.”).

125. For a misunderstanding along these lines, see *Arc Music Corp. v. Lee*, 296 F.2d 186, 187 (2d Cir. 1961).

126. *See supra* Part I.C.2.

127. *See supra* Part I.C.2.

128. *See supra* Part I.C.2.

129. *See* 4 NIMMER & NIMMER, *supra* note 112, § 13D.08[B][2], at 13D-75-76.

130. *See generally* LAURENCE JONATHAN COHEN, *THE PROBABLE AND THE PROVABLE* 71 (1977).

It was once suggested that an “inference upon an inference” will not be permitted, *i.e.* that a fact desired to be used circumstantially must itself be established by testimonial evidence; and this suggestion has been repeated by a few Courts, and sometimes actually enforced. There is no such rule; nor can be. If there were, hardly a single trial could be adequately prosecuted. For example, on a charge of murder, the defendant’s gun is found discharged; from this we infer that he discharged it; and from this we infer that it was his bullet which struck and killed the deceased. Or, the defendant is shown to have been sharpening a knife; from this we argue that he had a design to use it upon the deceased; and from this we argue that the fatal stab was the result of this design. In these and innumerable daily instances we build up inference upon inference, and yet no Court ever thought of forbidding it. All departments of reasoning, all scientific work, every day’s life and every day’s trials, proceed upon such data.¹³¹

Following Wigmore, most courts have since moved away from a strong prohibition on such inferences—often described as “cascaded inferences”—and replaced it instead with a variety of more nuanced approaches.¹³² In one, courts demand greater proof of the initial fact from which the multiple inferences are generated; in another, they demand that the first inference be sufficiently robust; and in yet another, they insist that multiple inferences are permitted as long as they are not remote, speculative, conjectural, or tenuous.¹³³ In any event, courts have developed various doctrinal mechanisms to regulate the use of cascaded inferences.

Returning to proof of copying, in situations where the similarity is extensive but there is no proof of access, the law is ready to find copying not because it dispenses with proof of access altogether (or renders it irrelevant). Instead, it does so because that initial fact—that is, the extensive similarity—is seen to be of sufficiently robust probative value on its own to also generate an additional inference

131. 1 WIGMORE, *supra* note 74, § 41, at 258-60 (footnotes omitted).

132. *See, e.g.*, David A. Schum & Anne W. Martin, *Formal and Empirical Research on Cascaded Inference in Jurisprudence*, 17 LAW & SOC’Y REV. 105, 106 (1982) (“A cascaded inference ... is composed of one or more reasoning stages interposed between evidence observable to the fact finder and the ultimate facts-in-issue.”).

133. 29 AM. JUR. 2D EVIDENCE § 214, at 254-56, Westlaw (database updated May 2022) (identifying these methods and the case law deploying each of them).

of access. And that inference of access, when combined with the proof of similarity, allows the court to infer the existence of copying.¹³⁴ Copying is thus inferred from the proof of similarity, the fact of which also generates an inference of access. The inference (of copying) is thus cascaded upon the inference of access and the fact of similarity. And to permit this cascade of inferences, copyright law holds the foundational fact (of similarity) to a higher standard, demanding that it be so strong as to rule out all other alternative explanations, tantamount to a beyond reasonable doubt standard.¹³⁵

A few astute courts have recognized the existence of this cascaded effect, in puzzling over the reasons why the law dispenses with proof of access under certain circumstances. For instance, Chief Judge Posner in one case allowed for an inference of copying from similarity even in the absence of proof of access on the recognition that the process of “inference” was predicated on the recognition that “a similarity that is so close as to be highly unlikely to have been an accident of independent creation *is* evidence of access.”¹³⁶

Crucial to an inference from another inference is a reality that must not be forgotten: the sequence of events. One inference may be appropriately drawn from another only ever when the sequence of events in the chain allows for it. It is for this very reason that the converse of the situation outlined above does not hold true: the law does not infer copying from a heightened proof of access when there is no similarity.¹³⁷ However strong the proof of it may be, mere access cannot generate an inference of similarity because in the sequence of events access as a condition is antecedent to similarity, which is in turn a result.¹³⁸ Hence, a natural corollary to the inverse ratio rule is that the absence of similarity is fatal to a circumstantial inference of copying even when the proof of access is extensive. As we shall see, innumerable courts have missed the basic logic of

134. See 4 NIMMER & NIMMER, *supra* note 112, § 13D.08[B][2], at 13D-75.

135. See, e.g., *Gaste v. Kaiserman*, 863 F.2d 1061, 1068 (2d Cir. 1988) (noting that the standard to be used is that the similarity at issue must have “preclude[d] any reasonable possibility of independent creation” in order for the inference to be drawn (alteration in original)).

136. *Ty, Inc. v. GMA Accessories, Inc.*, 132 F.3d 1167, 1170 (7th Cir. 1997).

137. *Arnstein v. Porter*, 154 F.2d 464, 468 (2d Cir. 1946).

138. See *supra* Part I.B.

cascaded inferences and in the process mistakenly cast unwarranted doubt on the very idea behind the inverse ratio rule.¹³⁹

Now, it might be argued that even if the logical sequence of events does not permit an inference of similarity from proof of access, the law should altogether dispense with the need for similarity in such situations and infer copying directly from proof of access. To see why this is problematic, we return to the dual meaning of copying in copyright.¹⁴⁰ Recall that in copyright law, copying is both an act and a result. And although access might well produce an adequate inference of copying as an act, it sheds little light on the result—that is, there needing to be a copy. Copyright law’s allowance for an inference upon another inference in one direction but not the other (that is, from similarity to access and copying, but not in the opposite direction) is borne out of both logical considerations internal to the nature of the inference as well as the law’s very meaning of copying.

* * *

In summary then, each of the components of the inverse ratio rule derives from well-accepted principles of evidence law and basic logic. The sliding scale of proof between access and similarity originates in the combinatorial approach to sufficiency and the idea of conditional probative value. The corollary to the sliding scale—the striking similarity rule—similarly derives from the principle of cascaded inferences, which also introduces a crucial limit into that corollary and limits its working to one direction. Despite this reality, innumerable courts have struggled to make sense of the rule, often being misled by lawyers (and possibly some scholars) casting doubt on its soundness for strategic reasons.

139. *See, e.g.*, *Arc Music Corp. v. Lee*, 296 F.2d 186, 187 (2d Cir. 1961) (noting that a logical extension of the inverse ratio rule is that it should allow copying to be proved when the proof of access is near-certain but there is no similarity between the works, which is clearly not permitted).

140. *See supra* Part I.A.

II. THE EVOLUTION OF THE INVERSE RATIO RULE

Ever since its origins, copyright law has understood infringement—originally referred to as “piracy”—as revolving around copying.¹⁴¹ As one early treatise put it, “[c]opying or borrowing from a protected work is an essential element of piracy.”¹⁴² Proof of copying thus became a critical part of infringement adjudication, wherein a court had to determine whether the defendant’s actions constituted a violation of one or more of the exclusive rights granted to the proprietor/author of copyright in the work. Copying came to be juxtaposed against the use of commonly available preexisting material, from which the defendant might have produced a similar work, an idea that came to be understood as the act of “independent creation.”¹⁴³ Copying and independent creation developed as binary alternatives around which the wrong of infringement turned.

In an overwhelming majority of early reported decisions, defendants routinely contested allegations of copying by suggesting that they had labored independently to produce an original work of their own.¹⁴⁴ In each of these cases, courts therefore began looking for a workable mechanism with which to differentiate between copying and independent creation based on surrounding circumstances. Similarity—between the works—became the principal piece of circumstantial evidence in this regard.¹⁴⁵ One nineteenth-century copyright law treatise thus observed:

141. See GEORGE TICKNOR CURTIS, A TREATISE ON THE LAW OF COPYRIGHT IN BOOKS, DRAMATIC AND MUSICAL COMPOSITIONS, LETTERS AND OTHER MANUSCRIPTS, ENGRAVINGS AND SCULPTURE AS ENACTED AND ADMINISTERED IN ENGLAND AND AMERICA; WITH SOME NOTICES OF THE HISTORY OF LITERARY PROPERTY 242-44 (Boston, C.C. Little & J. Brown 1847); DRONE, *supra* note 12, at 383.

142. DRONE, *supra* note 12, at 399.

143. For an early development of the idea, see *Cary v. Longman*, 102 Eng. Rep. 138, 139 (1801) (citing *Sayre v. Moore* [Hil. 1785] 1 East. 361). For a theoretical account of independent creation, see DRASSINOWER, *supra* note 49.

144. See, e.g., *Cary*, 102 Eng. Rep. at 139 (citing *Sayre*, 1 East. 361); *id.* at 140 (citing *Trusler v. Murray*, 1 East. 363 (Mich. 1789) (Eng.)); *Matthew v. Stockdale*, [1806] 33 Eng. Rep. 103; *Emerson v. Davie*, 8 F. Cas. 615 (C.C.D. Mass. 1845); see also CURTIS, *supra* note 141, at 258-59.

145. CURTIS, *supra* note 141, at 258; *Emerson*, 8 F. Cas. at 617.

Comparison of the two works is, of course, the test to which the question should be brought. Among the proofs of piracy, upon which the courts have been much in the habit of relying, is the occurrence of the same inaccuracies in the two books; and when the question is, whether the defendant, in preparing his book, had before him and copied or imitated the book of the plaintiff, it is manifest that this kind of evidence is the strongest proof, short of direct evidence, of which the fact is capable.¹⁴⁶

In comparing the two works, the inquiry came to focus on “inaccuracies” and “common errors,” which were especially difficult to explain away as either a coincidence or as having come from a common source.¹⁴⁷ Further, as the above quoted observation reveals, the similarity was seen as allowing for an inference not just of the result of the copying but also of the act of appropriation that produced the result at issue. Courts therefore readily recognized the necessarily inferential nature of the comparison and its orientation as a mechanism of circumstantial evidence. All the same, they did not foreclose buttressing the inquiry with other forms of evidence.¹⁴⁸ Eaton Drone, author of the most influential nineteenth-century copyright treatise, synthesized courts’ approach succinctly:

When the defendant frankly admits the extent to which the plaintiff’s work has been used, and his evidence is accepted as conclusive, the fact [of copying] will thereby be established, and the law determined accordingly.... [When] copying is denied ... [a] comparison of the two works will then be made with the aid of such direct or circumstantial evidence as may be available; and not unfrequently the question will have to be determined solely or chiefly by the internal evidence afforded by such comparison.¹⁴⁹

146. CURTIS, *supra* note 141, at 254-55.

147. *See, e.g.*, *Longman v. Winchester*, [1809] 33 Eng. Rep. 987; 16 Ves. Jun. 269 (finding inaccuracies in a comparison of the two works to conclude that one was copied from the other); *Mawman v. Tegg*, [1826] 38 Eng. Rep. 380; 2 Russ. 385 (relying on extensive similarity to infer copying); *see also* CURTIS, *supra* note 141, at 255-56.

148. DRONE, *supra* note 12, at 428 (noting how courts will use such evidence “as may be available” to them).

149. *Id.*

While additional evidence could be resorted to during this inferential process, similarity remained foundational. Additionally, when the similarity amounted to a “substantial identity” or “striking resemblance,” it generated “a presumption of unlawful copying,” which the defendant then had the burden of overcoming.¹⁵⁰

Over time, evidence of similarity thus came to play a pivotal role in proving the fact of a defendant’s copying. All the same, additional direct or circumstantial evidence could be used to supplement such similarity. And it is in the interaction of similarity with such additional evidence that the inverse ratio rule emerged.

A. *Origins and Crystallization*

The primary form of additional evidence—beyond similarity—that courts came to consider in their inquiry into factual copying was the question of a defendant’s access to the work. Indeed, access was a factor that helped a court make sense of the similarity, because it allowed for an inference that the similarity (if any) was more likely than not the result of copying. In one early Ninth Circuit decision, the court relied heavily on the evidence showing a defendant’s access to the work to conclude that the similarity between the two works could not have been merely coincidental or the product of independent creation.¹⁵¹ A few years later, in *Shipman v. R.K.O. Radio Pictures, Inc.*, the Second Circuit converted this use of access into a principled formulation:

[P]iracy ... include[s] both deliberate and unintentional use. As to this latter element, access becomes important, for then accidental similarity assumes a low degree of probability; and this leads us to conclude that where there is access, there is a high degree of probability that the similarity results from copying and not from independent thought and imagination. Indeed, it might well be said that where access is proved or admitted, there is a presumption that the similarity is not accidental.¹⁵²

150. *Id.* at 400, 634; see also *Daly v. Palmer*, 6 F. Cas. 1132, 1136 (C.C.D.N.Y. 1868) (describing the “substantial identity” test for infringement).

151. *Harold Lloyd Corp. v. Witwer*, 65 F.2d 1, 39 (9th Cir. 1933).

152. 100 F.2d 533 (2d Cir. 1938).

The *Shipman* court then sharpened the point even further: “[I]f there is access, the probability that the similarities are the result of copying, intentional or unintentional, is so high that there is only one pertinent question: are the similarities of matters which justify the infringement claimed?”¹⁵³ Applying that logic to the facts of the case, the court used the “admission of access” to determine the “weight to be given to similarities” between the works.¹⁵⁴

In this formulation, access served to explain the significance of the similarity, thereby strengthening the inference of copying that could be drawn from it. Put another way, the *Shipman* court’s early framing unequivocally identified a relationship of conditional probative value between access and similarity. Evidence of access operated as a factual predicate for the proffered fact of similarity, from which the circumstantial inference of copyright could be drawn.¹⁵⁵ Of course, such similarity was not altogether devoid of probative significance without evidence of access; yet, proof of access significantly enhanced the probative value of such similarity.

Quite notably, in *Shipman* the Second Circuit had said little about the nature of the relationship between access and similarity, beyond noting that proof of access strengthened the inference (of copying) that a court might reasonably draw from the similarity. A decade after *Shipman*, the Supreme Court of California developed the inferential logic one step further in a case involving common law copyright.¹⁵⁶ Relying on *Shipman*’s formulation that proof of access along with a showing of similarity readily favored an inference of copying, the court broke this idea down further, effectively offering up the first statement of the inverse ratio rule: “[w]here there is strong evidence of access, less proof of similarity may suffice. Conversely, if the evidence of access is uncertain, strong proof of similarity should be shown before the inference of copying may be indulged.”¹⁵⁷

In effect, this observation for the first time recognized the reciprocal conditionality underlying access and similarity in their

153. *Id.* at 537.

154. *Id.* at 538.

155. *Id.*

156. *Golding v. R.K.O. Pictures, Inc.*, 221 P.2d 95 (Cal. 1950).

157. *Id.* at 98.

probative values vis-à-vis the inference of copying.¹⁵⁸ Very importantly, the relationship remained centered around similarity, which was the key inference point from which copying was to be inferred. The court reiterated this when it later observed that “[p]roof of access, however, establishes no more than the opportunity to copy and not actual copying.”¹⁵⁹ Nevertheless, when presented with strong proof of access, the court readily drew an inference of actual copying despite there being differences between the works.¹⁶⁰

A few years immediately prior to the California Supreme Court’s formulation, the same idea had been integrated by the Second Circuit into its reformulated test for copyright infringement, presumably relying on *Shipman*. In *Arnstein v. Porter*, where the court developed a bifurcated test for infringement—separating the analysis into factual copying and improper appropriation—it offered the following summary of the manner in which factual copying might be established using circumstantial evidence:

[I]f there are no similarities, no amount of evidence of access will suffice to prove copying. If there is evidence of access and similarities exist, then the trier of the facts must determine whether the similarities are sufficient to prove copying.... If evidence of access is absent, the similarities must be so striking as to preclude the possibility that plaintiff and defendant independently arrived at the same result.¹⁶¹

The first use of the phrase “inverse ratio” occurred a few years later in an opinion by a district court in the same jurisdiction: *Morse v. Fields*.¹⁶² In the case, Judge Irving Kaufman was presented with the argument that the plaintiff could rely on a reduced degree of similarity between the works because it had established access by the defendant.¹⁶³ Judge Kaufman was quick to reject the argument, noting that the plaintiff had merely relied on “circumstantial evidence of access” rather than direct evidence of that factual

158. See *supra* notes 154-59 and accompanying text.

159. *Golding*, 221 P.2d at 99.

160. *Id.* at 100-01.

161. 154 F.2d 464, 468 (2d Cir. 1946).

162. 127 F. Supp. 63, 66 (S.D.N.Y. 1954).

163. *Id.*

predicate.¹⁶⁴ This, to him, revealed no more than a “bare opportunity to copy,” which did not permit the stacking of inferences: that is, of an inference of copying from an inference of access.¹⁶⁵ The inverse ratio rule, in his view, required direct evidence of the predicate fact—access—if it was to supplement the probative value of the proffered fact, that is, similarity.¹⁶⁶ Moving to the scrutiny of similarity, the court then undertook an elaborate analysis of the evidence to conclude that the similarities were the result of the parties’ “use of a common source” rather than actual copying.¹⁶⁷

Morse is a particularly noteworthy decision for a few reasons. First, it highlights the core idea of conditional probative value underlying the inverse ratio rule.¹⁶⁸ Insofar as the predicate fact is itself based on circumstantial evidence (that is, an inference) and not direct evidence, its ability to compensate for the lower probative value of the predicate fact remains dubious. Judge Kaufman’s astute recognition of this distinction carefully melded evidence law principles with the logic of copyright.¹⁶⁹ Second, the opinion showcases how the rule is a two-edged sword, rather than a mere shortcut for plaintiffs, as some have claimed.¹⁷⁰ The plaintiff’s simplistic invocation of the rule moved the judge to scrutinize the probative value of the predicate fact—that is, access—which proved detrimental to the plaintiff’s own case.¹⁷¹ Instead of finding the evidence of access to be strong (and therefore permitting a lesser degree of similarity), the court’s engagement with the probative value of that evidence led it to find the evidence to instead be weak, and a fortiori, require a greater degree of similarity, which was absent. And finally, *Morse* reveals how the rule is to operate in the context of a full factual record, where the court is presented with competing testimony and evidentiary inferences and must collate them together in examining the ultimate legal conclusion, that is, factual

164. *Id.*

165. *Id.*

166. *Id.*

167. *Id.* at 68.

168. *See id.* at 66-67.

169. *See id.*

170. As we shall see, this issue emerged in *Skidmore* most directly, where the Ninth Circuit characterized the rule as the “inverse burden rule” and criticized it for making proof of copying easy for certain categories of works. *See infra* Part III.C.

171. *Morse*, 127 F. Supp. at 69.

copying. Most modern discussion of the rule has focused on its working at the appellate level, by which time the factual record is complete and reviewed secondhand and with deference to the fact-finder.

B. Early Confusion: The Myth of “Rejection”

Following the Second Circuit’s adoption of a new test for copyright infringement in *Arnstein* and its incorporation of the inverse ratio rule into that test, courts soon came to apply the basic idea underlying the rule with few problems. The *Arnstein* decision had proven to be fairly controversial, with a prominent member of the panel—Judge Charles Clark—writing a strongly worded dissent in the case, criticizing the basic framework.¹⁷² Nevertheless, in the immediate aftermath of *Arnstein*, even Judge Clark found the logic of conditional probative value underlying the inverse ratio rule to be altogether unproblematic, in one case observing plainly that “[w]here access is proved ... likenesses between the copyrighted work and the putative piracy may give rise to an inference of plagiarism.”¹⁷³

Given this observation, it is somewhat ironic that it was none other than Judge Clark who would sow the seeds of confusion around the inverse ratio rule a decade later. In *Arc Music Corp. v. Lee*, the plaintiff brought an action asserting infringement of its song by the defendant’s similar song.¹⁷⁴ The lower court had found for the defendant on the basis that the allegedly plagiarized song was independently created.¹⁷⁵ The principal ground of the plaintiff’s appeal was that the lower court had failed to apply the inverse ratio rule or instruct the jury to that effect.¹⁷⁶ In affirming the lower court’s decision, Judge Clark had the following to say about the inverse ratio rule:

In the federal law of copyright we find no such principle.... We fear that counsel with that semantic proclivity natural to our profession have allowed themselves to be seduced by a

172. 154 F.2d 464, 475 (2d Cir. 1946) (Clark, J., dissenting).

173. *Ricker v. Gen. Elec. Co.*, 162 F.2d 141, 142 (2d Cir. 1947).

174. 296 F.2d 186 (2d Cir. 1961).

175. *Id.* at 186.

176. *Id.*

superficially attractive apophthegm which upon examination confuses more than it clarifies. The logical outcome of the claimed principle is obviously that proof of actual access will render a showing of similarities entirely unnecessary. Plaintiff naturally does not go so far; but in an endeavor to supply some limitation, it comes up with a requested charge conflicting and confusing on its face.¹⁷⁷

In this observation, Judge Clark appeared to cast doubt on the logic of the rule—as being confusing—and by suggesting that it would appear to treat proof of access as evidence of copying. Yet even the majority in *Arnstein* conceded that “if there are no similarities, no amount of evidence of access will suffice to prove copying.”¹⁷⁸ Indeed, Judge Clark himself applied this idea in a subsequent case.¹⁷⁹ Thus, even while suggesting that the rule could suggest this outcome, he rather quickly walked it back by acknowledging that the plaintiff was not suggesting this absurd position.¹⁸⁰ He then followed it up with an unequivocal endorsement of the basic logic underlying the rule:

Of course access shown either directly or indirectly is an element of plaintiff’s case. And it is not an unnatural step in inference of fact for ease of access to suggest a deduction of copying when similarity is found. But access will not supply its lack, and an undue stress upon that one feature can only confuse and even conceal this basic requirement.¹⁸¹

Ease of access could, therefore, legitimately result in an inference of copying, in the presence of similarity. Conversely, difficulty (or lack) of access necessitated a stronger inference from similarity for it to amount to evidence of copying.¹⁸²

The irony in Judge Clark’s identification of “confusi[on]” underlying the inverse ratio rule is that it was his own opinion in *Arc Music* that served to confuse the working and applicability of the rule into

177. *Id.* at 187.

178. 154 F.2d 464, 468 (2d Cir. 1946).

179. *Ricker*, 162 F.2d at 142.

180. *Arc Music*, 296 F.2d at 187 (“Plaintiff naturally does not go so far.”).

181. *Id.* at 187-88.

182. *See id.*

the future.¹⁸³ The opinion's supposed "logical outcome" of the rule used to illustrate its flawed nature was an entirely hypothetical construct, which had been eliminated since the very origins of the rule, a reality that Judge Clark himself acknowledged.¹⁸⁴ Nevertheless, the opinion's acerbic invective directed at the rule ("superficially attractive apophthegm")¹⁸⁵ has generated the superficial and overly simplistic idea that *Arc Music* "rejected" the inverse ratio rule.¹⁸⁶ Multiple reasons reveal this to be mistaken.

First, as was just noted, Judge Clark himself acknowledged the logic inherent in allowing proof of access to aid in the inference of copying when offered in support of similarity.¹⁸⁷ Indeed, he treated this interaction as a "[n]atural" inference.¹⁸⁸ Second, in the immediate aftermath of the decision in *Arc Music*, not a single lower court decision citing to it read it as rejecting the inverse ratio rule. To the contrary, they read it as allowing proof of access to buttress the inference that may be drawn from similarity,¹⁸⁹ as merely precluding the use of "access alone" to infer copying,¹⁹⁰ or (somewhat strangely) as rejecting the merger of factual copying and improper appropriation.¹⁹¹ Third, as we shall see, later opinions in the same jurisdiction (the Second Circuit) invoked and applied the inverse ratio rule without any doubt or confusion as to its continuing validity.¹⁹² This

183. *Id.* at 187.

184. *Id.*

185. *Id.*

186. *See, e.g.,* *Skidmore v. Led Zeppelin*, 952 F.3d 1051, 1068 (9th Cir. 2020) (en banc); *Peters v. West*, 692 F.3d 629, 634 (7th Cir. 2012); 3 WILLIAM F. PATRY, PATRY ON COPYRIGHT § 9:91 (2022).

187. *See Arc Music*, 296 F.2d at 187-88.

188. *See id.*

189. *Prestige Floral, Societe Anonyme v. Cal. Artificial Flower Co.*, 201 F. Supp. 287, 293 (S.D.N.Y. 1962); *Herwitz v. Nat'l Broad. Co.*, 210 F. Supp. 231, 234 (S.D.N.Y. 1962).

190. *Burnett v. Lambino*, 204 F. Supp. 327, 335 (S.D.N.Y. 1962); *see Arrow Novelty Co. v. ENCO Nat'l Corp.*, 393 F. Supp. 157, 160 (S.D.N.Y. 1974).

191. *Ideal Toy Corp. v. Fab-Lu, Ltd.*, 261 F. Supp. 238, 240 n.9 (S.D.N.Y. 1966).

192. *See, e.g.,* *Jorgensen v. Epic/Sony Recs.*, 351 F.3d 46, 56 (2d Cir. 2003); *Glover v. Austin*, 289 F. App'x 430, 432 (2d Cir. 2008); *Gal v. Viacom Int'l, Inc.*, 518 F. Supp. 2d 526, 537 (S.D.N.Y. 2007); *Krisko v. Marvel Ent., LLC*, 473 F. Supp. 3d 288, 302 (S.D.N.Y. 2020); *New Old Music Grp., Inc. v. Gottwald*, 122 F. Supp. 3d 78, 85 (S.D.N.Y. 2015); *Price v. Fox Ent. Grp., Inc.*, 499 F. Supp. 2d 382, 386 (S.D.N.Y. 2007); *Glover v. Austin*, 447 F. Supp. 2d 357, 361 (S.D.N.Y. 2006); *Nicholls v. Tufenkian Imp./Exp. Ventures, Inc.*, 367 F. Supp. 2d 514, 522 (S.D.N.Y. 2005); *O'Keefe v. Ogilvy & Mather Worldwide, Inc.*, 590 F. Supp. 2d 500, 515 (S.D.N.Y. 2008); *Michael Grecco Prods., Inc. v. Valuwalk, LLC*, 345 F. Supp. 3d 482, 500 (S.D.N.Y. 2018); *Dominic v. Delaloye*, No. 12-CV-1551, 2012 WL 1339604, at *5 (E.D.N.Y. Apr.

extends not just to appellate court opinions but even to district court opinions that would otherwise be bound by the supposed *Arc Music* “rejection.”¹⁹³

All the same, the myth of *Arc Music*’s “rejection” of the rule soon took on a life of its own, especially among commentators. The leading treatises of the time mistakenly read the opinion as having abrogated the rule, focusing exclusively on Judge Clark’s rhetoric and altogether ignoring his later observation about the natural inference that could be drawn when access and similarity could be shown.¹⁹⁴ In due course, as we shall see, such commentary became a self-fulfilling prophecy—insofar as later courts relied on them for their interpretation of *Arc Music*—to conclude that the opinion had rejected the rule, when it simply did not.¹⁹⁵ And more importantly, later judicial decisions within the Second Circuit (and by the Second Circuit itself) continued to apply the inverse ratio rule.¹⁹⁶

In summary, although *Arc Music* did not reject the inverse ratio rule, it nevertheless successfully injected a degree of confusion and doubt about the rule and its scope. This, in turn, produced a marked reluctance among courts within the Second Circuit to refer to the rule by name, even when substantively willing to deploy its inferential logic.¹⁹⁷ Yet, as we shall see, this had little effect on the diffusion of the rule to other circuits, most prominently the Ninth Circuit.

17, 2012).

193. See, e.g., *Jorgensen*, 351 F.3d at 56; *Glover*, 289 F. App’x at 432; *Gal*, 518 F. Supp. 2d at 537; *Krisko*, 473 F. Supp. 3d at 302; *New Old Music Grp.*, 122 F. Supp. 3d at 85; *Price*, 499 F. Supp. 2d at 386; *Glover*, 447 F. Supp. 2d at 361; *Nicholls*, 367 F. Supp. 2d at 522; *O’Keefe*, 590 F. Supp. 2d at 515; *Michael Grecco Prods.*, 345 F. Supp. 3d at 500; *Dominic*, No. 12-CV-1551, at *5. Also noteworthy here is that Professor Paul Goldstein has also taken the position that *Arc Music* has been consistently misread and was based on a confused understanding of the rule. See 1 PAUL GOLDSTEIN, GOLDSTEIN ON COPYRIGHT § 9.2.1 (3d ed. 2021).

194. See ALAN LATMAN, THE COPYRIGHT LAW: HOWELL’S COPYRIGHT LAW REVISED AND THE 1976 ACT 161 (5th ed. 1979); 4 NIMMER & NIMMER, *supra* note 112, § 13.03[D][B][4], at 13D-77 n.39 (containing the discussion of the inverse ratio rule from the treatise’s 1963 edition).

195. See *infra* Part II.C.

196. See, e.g., *Jorgensen*, 351 F.3d at 56; *Glover*, 289 F. App’x at 432.

197. Courts identify an “inverse relationship” between access and probative similarity but do not denominate their rule the “inverse ratio rule.” See, e.g., *Jorgensen*, 351 F.3d at 56; *Glover*, 289 F. App’x at 432.

C. Inter-Circuit Diffusion: The Ninth Circuit and Beyond

Despite having crystallized as a “rule” in the Second Circuit—albeit with a detour to the California Supreme Court—the inverse ratio rule would see its most significant impact (and eventual demise) outside of the Second Circuit.¹⁹⁸ While it came to be absorbed in a somewhat convoluted manner by the Ninth Circuit, other circuits also embraced the doctrine and its variations in differing degrees.¹⁹⁹ The reception of the rule by other circuits is, therefore, best analyzed by separating out the Ninth Circuit’s reformulation from its treatment in other circuits.

1. The Ninth Circuit’s Error

Scholars have long noted the outsized influence that copyright treatises have had on courts’ understanding and development of copyright doctrine.²⁰⁰ Nowhere is this more apparent than in the story of the inverse ratio rule and the manner in which it came to be transmitted to the Ninth Circuit, following the confusion that Judge Clark had sown in *Arc Music*. Barely two years after that decision, the country’s leading copyright treatise—*Nimmer on Copyright*—attempted to summarize the prevailing state of the rule.²⁰¹ In a paragraph that would come to be quoted by innumerable courts, Mel Nimmer observed:

[E]vidence of striking similarity will permit a finding of copying without proof of access. It is obvious that the converse proposition is not equally valid. That is, clear and convincing evidence of access will not avoid the necessity of also proving substantial similarity since access without similarity cannot create an inference of copying. However, this so-called “Inverse Ratio Rule” although completely rejected by one court, would seem to have some limited validity. That is, since a very high degree of

198. See *Sid & Marty Krofft Television v. McDonald’s Corp.*, 562 F.2d 1157, 1164 (9th Cir. 1977); *Rentmeester v. Nike, Inc.*, 883 F.3d 1111, 1117 (9th Cir. 2018).

199. See *Stromback v. New Line Cinema*, 384 F.3d 283, 293 (6th Cir. 2004).

200. See, e.g., Ann Bartow, *The Hegemony of the Copyright Treatise*, 73 U. CIN. L. REV. 581, 591 (2004).

201. See 4 NIMMER & NIMMER, *supra* note 112, § 13D.08[B][4], at 13D-77 n.39 (containing the discussion of the inverse ratio rule from the treatise’s 1963 edition).

similarity is required in order to dispense with proof of access, it must logically follow that where proof of access is offered, the required degree of similarity may be somewhat less than would be necessary in the absence of such proof. That is not to say that a showing of substantial similarity may ever be avoided. But the striking similarity (*e.g.* word for word) which goes beyond mere substantial similarity, required without proof of access, becomes unnecessary where access is shown.²⁰²

Given the attention that this paragraph has received, it is worth unpacking its key points without the judicial gloss that it came to be embellished with. Most obviously, Mel Nimmer made the mistake of reading *Arc Music* as “reject[ing]” the rule;²⁰³ however, a closer reading would have revealed this to not be the case. All the same, he saw the rule to have “validity.”²⁰⁴ That validity was “limited” only in the sense that the conditional relationship between access and similarity was not reciprocal, but rather unidirectional, as noted previously.²⁰⁵ That is, extensive (“striking”) similarity could dispense with the need to show access, whereas the converse (strong proof of access) would never eliminate the need to show some similarity for the case to move forward.²⁰⁶ Indeed, Judge Clark recognized this to be true, as did *Arnstein*.²⁰⁷ The “limited validity” was therefore in some sense a misnomer because the inverse ratio rule had always embodied this limitation; whereas Nimmer made it sound as though *Arc Music* had introduced the limit.²⁰⁸

All else aside though, Nimmer made one seemingly unintentional—yet, very consequential—choice in language that would steer courts offtrack for several decades. Despite recognizing that the inverse ratio rule was directed at proof of “copying,” in the later part of the paragraph he referenced the degree of similarity as lying along a continuum between “substantial” and “striking,” juxtaposing

202. *Id.* (footnote omitted).

203. *Id.*

204. *Id.*

205. *Id.*

206. *Id.*

207. See *Arc Music Corp. v. Lee*, 296 F.2d 186, 187 (2d Cir. 1961); *Arnstein v. Porter*, 154 F.2d 464, 468-69 (2d Cir. 1946).

208. See 4 NIMMER & NIMMER, *supra* note 112, § 13D.08[B][4], at 13D-77 n.39.

striking similarity against “mere substantial similarity.”²⁰⁹ While Nimmer may have intended the term “mere substantial similarity” to connote nothing more than a lesser degree of similarity between the works for an inference of copying, the term “substantial similarity” had by then come to be recognized as the term of choice for the second stage of the infringement inquiry: that is, improper appropriation.²¹⁰ At this stage of the inquiry, a court was to do more than just assess whether there was copying, but rather judge the legality of such copying as a subjective matter.²¹¹ Despite only ever using the term “substantial similarity” to mean a degree of similarity less than striking but nonetheless sufficient to infer copying, to the less-nuanced reader Nimmer was implying a relationship between proof of access and improper appropriation.²¹² In other words, his language was capable of being read as suggesting an inverse relationship between the degree of proof on access and the amount of similarity needed to assess the legality of the copying. This was well outside the scope of the inverse ratio rule, which had been developed entirely as a rule of evidence and thus limited to the first stage of the inquiry: actual copying.²¹³

More than a decade later, the Ninth Circuit developed its own test for copyright infringement in the well-known case of *Sid & Marty Krofft Television v. McDonald’s Corp.*²¹⁴ Relying on the idea of a bifurcated test seen in the Second Circuit’s *Arnstein* decision, the Ninth Circuit in *Krofft* chose to develop its own two-pronged approach to copyright infringement.²¹⁵ Yet, unlike the *Arnstein* test, both prongs of the *Krofft* formulation focused on improper appropriation or “substantial similarity.”²¹⁶ The first merely deployed objective criteria and was styled the “extrinsic” prong, while the second examined the legality of the similarity from the perspective of a lay observer and was titled the “intrinsic” prong.²¹⁷ Altogether missing from the *Krofft* formulation was the all-important preliminary step

209. *Id.*

210. *Id.*

211. *See id.*

212. *See id.*

213. *See supra* Part I.

214. 562 F.2d 1157 (9th Cir. 1977).

215. *See id.* at 1164.

216. *Id.*

217. *Id.*

of actual copying!²¹⁸ In its place, the Ninth Circuit posited that proof of access would suffice, understood as “an opportunity to view or to copy” the work.²¹⁹

It is important to appreciate the significance of this omission, for it was no mere formality. By eliminating the need for a court to make an inference of actual copying from the evidence of access and similarity, a plaintiff—under the Ninth Circuit’s *Krofft* formulation—could obtain a finding of copyright infringement by showing that the defendant had access to the work and that the similarity between the works was improper (objectively and subjectively).²²⁰ Independent creation, the critical flip side of the actual copying inquiry, found no mention in the court’s lengthy opinion. Thus, if a defendant were found to have some reasonable opportunity to possibly view the protected work, even if based on circumstantial evidence alone, a court’s assessment of similarity was all that was needed to produce a finding of infringement.²²¹ A defendant’s argument as to independent creation was irrelevant, unless it could rebut either access or improper appropriation.²²²

Making matters significantly worse, the Ninth Circuit in *Krofft* decided to apply the logic of the inverse ratio rule to its newly created test.²²³ And rather unfortunately here, it chose to quote and rely on the Nimmer treatise.²²⁴ Whereas the treatise’s use of “substantial similarity” fully retained a separate “copying” in fact step, the *Krofft* court deployed that term—and the treatise’s use of the phrase—to altogether eliminate any inquiry into copying, and instead recognize an inverse relationship between proof of access and the legality of the similarity.²²⁵ As it observed, “where clear and convincing evidence of access is presented, the quantum of proof required to show substantial similarity may ... be lower.”²²⁶ It is difficult to see what the court had in mind because substantial similarity (that is, improper appropriation) is not a question of proof,

218. *See id.*

219. *Id.* at 1172.

220. *See id.*

221. *See id.*

222. *See id.*

223. *Id.*

224. *Id.*

225. *See id.*

226. *Id.*

but rather one of judgment—objective and subjective.²²⁷ In other words, it is hardly a question of fact, and thus the reference to “quantum of proof” is perplexing and mistaken.²²⁸ Perhaps the court had in mind little more than a lowering of the standard for judgment (analogous to the difference in degree between “strict scrutiny” and “rational basis” scrutiny in constitutional law), but if that was indeed the court’s design, it had no connection whatsoever to the evidentiary logic of the inverse ratio rule.²²⁹ As the final bit of icing to its layered cake of accumulated errors, the *Krofft* court recognized that it was disagreeing with *Arc Music*, thus reinforcing the faulty reading of Judge Clark’s opinion.²³⁰

The *Krofft* formulation continues to dominate the Ninth Circuit’s copyright infringement jurisprudence, although courts have modified some minor aspects of its framework.²³¹ Until very recently, its complete elimination of the actual copying requirement and misapplication of the inverse ratio rule produced absurd results in innumerable cases. Exemplary of such absurdity is the court’s decision in *Three Boys Music Corp. v. Bolton*, wherein the pop-musician Michael Bolton was found to have infringed an R&B song of the same name by the Isley Brothers that was released decades before.²³² To arrive at its conclusion, the court first found there was access, on the premise that the Isley Brothers’ song had been played multiple times on radio stations within the geographic region where the defendant had grown up, and that the defendant was a “huge fan” of the Isley Brothers’ music.²³³ The court then moved to the question of substantial similarity and found that there was some minimal similarity between the works, even if only as a “circumstantial case,” and concluded that infringement had been established.²³⁴

227. See Peter F. Gaito Architecture, LLC v. Simone Dev. Corp., 602 F.3d 57, 63-65 (2d Cir. 2010).

228. *Krofft*, 562 F.2d at 1172.

229. For a general overview of the tiers of scrutiny in constitutional law analysis, see Michael Stokes Paulsen, *Medium Rare Scrutiny*, 15 CONST. COMMENT. 397 (1998).

230. See *Krofft*, 562 F.2d at 1172; *supra* Part II.B.

231. See, e.g., *Baxter v. MCA, Inc.*, 812 F.2d 421, 423 (9th Cir. 1987); *Aliotti v. R. Dakin & Co.*, 831 F.2d 898, 902 (9th Cir. 1987); *Shaw v. Lindheim*, 919 F.2d 1353, 1356-57 (9th Cir. 1990).

232. 212 F.3d 477 (9th Cir. 2000).

233. *Id.* at 483-85.

234. *Id.* at 486.

At no point was the defendant able to present a separate argument for independent creation, except to rebut the plaintiff's access and/or substantial similarity.²³⁵ Thus, *Three Boys Music* showcases the absurdity of eliminating an inquiry into actual copying. The case shows that after *Krofft*, a defendant's independent creation was altogether meaningless because access and substantial similarity could determine the case on their own, even when such independent creation was present. While the original inverse ratio rule was directed at displacing the possibility of independent creation (through proof of copying),²³⁶ *Krofft*'s erroneous version allowed for the distinct possibility of independent creation, despite a finding of copyright infringement—an illogical absurdity, to say the least.

In addition to its substantive problem, the *Krofft* formulation also introduced an additional problem into the infringement inquiry when it abandoned the intermediate step of considering factual copying altogether. As noted above, *Krofft* (and its progeny in the Ninth Circuit) replaced the requirement of factual copying with that of "access." On its face, this change merely adopted one (of the two) inference points commonly used as circumstantial proof of copying. Yet, it did much more. In converting access into an element of the infringement test and thus requiring a plaintiff to establish it each time for the case to move forward, the *Krofft* test effectively imbued access with its own standard of proof. Being an element—rather than an inference point—now meant that the plaintiff had to show access by a preponderance of evidence, that is, that its existence was more likely than not.²³⁷ This marked a major shift from the role that access had played in the original inverse ratio rule, where it never had its own standard of proof and operated instead as a component (inference point) of the factual copying element.²³⁸ As this Article illustrates, this elevation of access would prove disastrous in the Ninth Circuit because it implicitly confounded how best to reconcile the seemingly divergent evidentiary burdens. If treated as an independent element—and imbued with the preponderance

235. *See id.*

236. *See supra* Part II.A.

237. *See, e.g.,* *Williams v. Gaye*, 895 F.3d 1106, 1123 n.11 (9th Cir. 2018) (using a jury instruction that noted the plaintiff's burden of "showing by a preponderance of the evidence" that the defendants "had access to the ... copyrighted work").

238. *See supra* Part II.A.

standard—the sliding scale underlying the inverse ratio would now embody an additional threshold for it to operate. Yet, to deny it an independent standard would be at odds with its status as an element. Surprisingly, not one court or commentator recognized this contradiction.

Krofft's erroneous formulation of the inverse ratio rule continued to be applied within the Ninth Circuit for decades. Despite strong criticism in the commentary, and from occasional panels, courts continued to deploy it to lower their standard of scrutiny on substantial similarity upon a showing of access.²³⁹ The absence of a distinct actual copying prong rendered this framing somewhat inevitable because among other things, it also allowed a court to mask its judgment on substantial similarity as a question of proof that was dependent on the evidence seen in the factual record.²⁴⁰ The Ninth Circuit's formulation thus thrived for over four decades with little, if any, modification.

2. Reception and Validation in Other Circuits

Not all circuits readily absorbed the inverse ratio rule in equal measure. Instead, they did so in varying degrees. This somewhat muted and disjointed reception can be accounted for by the confusion surrounding the rule, first sown by *Arc Music* and later entrenched by the Ninth Circuit in *Krofft*.²⁴¹ All the same, very few circuits to have considered the rule have rejected it and numerous courts apply it in conformity with the evidentiary principles on which it was based.

The Seventh Circuit follows the two-step bifurcation between actual copying and improper appropriation developed in *Arnstein*. In its often-cited decision in *Selle v. Gibb*, the court dealt with the doctrine of “striking similarity” and, as part of that discussion, examined the relationship between proof of access and the degree of

239. See, e.g., *Funky Films, Inc. v. Time Warner Ent. Co., L.P.*, 462 F.3d 1072, 1081 (9th Cir. 2006); *Three Boys Music Corp. v. Bolton*, 212 F.3d 477, 485 (9th Cir. 2000); *Shaw v. Lindheim*, 919 F.2d 1353, 1361 (9th Cir. 1990).

240. See *infra* note 245 and accompanying text.

241. See *supra* Part II.C.1.

similarity, the combination of which would allow for an inference of actual copying.²⁴² Thereafter, it endorsed the inverse ratio rule:

At oral argument, plaintiff's attorney analyzed the degree of similarity required to establish an inference of access as being in an inverse ratio to the quantum of direct evidence adduced to establish access. While we have found no authoritative support for this analysis, it seems appropriate. In this case, it would therefore appear that, because the plaintiff has introduced virtually no direct evidence of access, the degree of similarity required to establish copying in this case is considerable.²⁴³

A few years later, Chief Judge Posner endorsed the rule in another opinion, and went to some length to explain its logic, recognizing the inferential nature of circumstantial proof.²⁴⁴ More recently, in *Peters v. West*, the Seventh Circuit noted that while the Ninth Circuit followed the rule, the Second Circuit had "rejected" it, citing to *Arc Music*.²⁴⁵ Nevertheless, the court decided to adopt its own independent position on the rule, noting that it "ha[d] occasionally endorsed something that comes close to this inverse approach" even if its "rule ha[d] not been so explicit" as the Ninth Circuit's.²⁴⁶ In so doing, the court in *Peters* nevertheless expressed reservation about allowing an inference of copying when proof of access was strong but the similarity very weak, preferring instead to allow for varying levels of proof of access based on the extent of the similarity.²⁴⁷ The Seventh Circuit's reluctance to embrace the Ninth Circuit's jurisprudence is indeed understandable and wise, as reflected in the Ninth Circuit's inchoate appreciation of the factual copying requirement and its application of the inverse ratio rule to the improper appropriation prong of the infringement analysis.²⁴⁸

The Sixth Circuit recognized the inverse ratio rule in its 1999 decision in *Ellis v. Diffie*, observing that the "stronger the similarity

242. 741 F.2d 896, 901 (7th Cir. 1984).

243. *Id.* at 903 n.4.

244. *Ty, Inc. v. GMA Accessories, Inc.*, 132 F.3d 1167, 1170 (7th Cir. 1997).

245. 692 F.3d 629, 634 (7th Cir. 2012).

246. *Id.*

247. *Id.* at 635 ("Notably, however, we have never endorsed the other side of the inverse relation.").

248. *See supra* Part II.C.1.

between the two works in question, the less compelling the proof of access needs to be.”²⁴⁹ Later decisions of the court reiterated their support for the rule.²⁵⁰ More recently, however, following the Ninth Circuit’s mistaken abrogation of the rule in *Skidmore*, a panel of the Sixth Circuit expressed doubts about the continuing utility of the rule, noting that it “appear[ed] to be on its last legs.”²⁵¹ Nevertheless, the court chose not to address the question, leaving it for another day when it had occasion to consider the issue more fully.²⁵²

Even though it does not reject the inverse ratio rule, the Eleventh Circuit has declined to require it. On two separate occasions, the Eleventh Circuit reiterated that the rule had “never” been applied in its circuit when raised as a ground on which to challenge a district court’s opinion.²⁵³ On neither occasion did it offer a reason for not applying it, indicating that the circuit’s position is not a considered choice.²⁵⁴

In a similar vein, the Fifth Circuit has refused to make it a mandatory rule. In *Positive Black Talk, Inc. v. Cash Money Records*, the court considered the rule at length, even quoting extensively from out-of-circuit cases that had adopted it to suggest that the rule had significant merit.²⁵⁵ Nevertheless, it ultimately chose not to apply the rule to the case at hand because such application could not form a valid basis for reversing the jury given that the rule had not been “explicitly adopted” by a prior decision.²⁵⁶ A later district court opinion in the circuit seems to have read *Positive Black Talk* as endorsing the rule, by referencing the rule and opinion without additional discussion, thereby suggesting that the rule informed its analysis of the similarity.²⁵⁷

249. 177 F.3d 503, 507 (6th Cir. 1999).

250. See, e.g., *Murray Hill Publ’ns, Inc. v. Twentieth Century Fox Film Corp.*, 361 F.3d 312, 317 (6th Cir. 2004); *Stromback v. New Line Cinema*, 384 F.3d 283, 293 (6th Cir. 2004).

251. *Enchant Christmas Light Maze & Mkt. Ltd. v. Glowco, LLC*, 958 F.3d 532, 536-37 n.1 (6th Cir. 2020).

252. *Id.* (“But we do not answer them today.”).

253. *Dream Custom Homes, Inc. v. Mod. Day Const., Inc.*, 476 F. App’x 190, 192 (11th Cir. 2012); *Beal v. Paramount Pictures Corp.*, 20 F.3d 454, 460 (11th Cir. 1994).

254. See *Dream Custom Homes*, 476 F. App’x at 192; *Beal*, 20 F.3d at 460.

255. 394 F.3d 357, 371-72 (5th Cir. 2004).

256. *Id.* at 372.

257. *Batiste v. Najm*, 28 F. Supp. 3d 595, 600 n.4 (E.D. La. 2014).

D. The Ninth Circuit Correction and Repudiation

Despite the diffusion of the inverse rule to other circuits around the country, it was in the Ninth Circuit that the rule saw its most extensive usage and reliance.²⁵⁸ And unfortunately, such reliance was of the erroneous version, which conflated the improper appropriation and actual copying components of the inquiry and posited an inverse relationship between access and “substantial similarity” following from the court’s formulation in *Krofft*.²⁵⁹

After struggling with *Krofft*’s erroneous formulation for four decades, the Ninth Circuit corrected itself in 2018, aligning itself with the Second Circuit’s correct version of the inverse ratio rule: one that was premised on the core principles of circumstantial evidence described earlier.²⁶⁰ All the same, this course correction was short-lived. The court failed to remain consistent in its own application of the rule even after that correction. Barely two years later, an en banc opinion of the court in *Skidmore* fully abrogated the doctrine—and its variations, both erroneous and correct.²⁶¹ Misled by observations about the logic motivating the rule and the rule’s status as the doctrine in other circuits, the *Skidmore* court revoked the doctrine altogether, purporting to align copyright jurisprudence with evidence law and the laws of its “sister circuits.”²⁶² As we shall see below, this excision lacked an analytical basis and was altogether unwarranted.

1. The Correction

The Ninth Circuit rectified its application of the inverse ratio rule in a 2018 decision. In *Rentmeester v. Nike*, Jacob Rentmeester sought to invoke the Ninth Circuit’s erroneous version of the inverse ratio rule to support his tenuous assertion that Nike improperly appropriated his photograph of a young Michael Jordan for its advertisements and “Jumpman” logo featured on Nike shoes, clothing,

258. See *supra* Part II.C.1.

259. See *supra* Part II.C.1.

260. *Rentmeester v. Nike, Inc.*, 883 F.3d 1111, 1124 (9th Cir. 2018).

261. See 952 F.3d 1051, 1069 (9th Cir. 2020) (en banc).

262. See *id.*

posters, and other merchandise.²⁶³ Before Michael Jordan emerged as the greatest basketball player in history, Rentmeester captured the college star flying through the air toward a basketball hoop in a staged pose reminiscent of grand jeté, a dramatic ballet movement.²⁶⁴ Life Magazine included the photo as part of a feature in 1984.²⁶⁵ That image was later used by Nike to stage a photograph of Michael Jordan against the Chicago skyline and to develop the iconic Jumpman logo for Nike's highly successful Air Jordan product line.²⁶⁶

Nike conceded factual copying but nonetheless filed a motion to dismiss on the ground that Nike's works were not substantially similar to protected expression as a matter of law.²⁶⁷ Nike asserted, in essence, that Rentmeester's claim boiled down to an unoriginal pose, which is an unprotectable idea.²⁶⁸ And in any event, Rentmeester's copyright garnered only thin protection, which Ninth Circuit law protects only against virtual identity.²⁶⁹ Nike highlighted the many unprotectable elements of Rentmeester's photograph and numerous differences (mood, lighting setting, clothing, scale, stance, color, lighting, and props) between the plaintiff's and defendant's works.²⁷⁰

In resolving Nike's motion to dismiss, the district court looked to the Ninth Circuit decision in *Mattel, Inc. v. MGA Entertainment, Inc.*, relating to the standard for improper appropriation, where the court explained:

If there's a wide range of expression (for example, there are gazillions of ways to make an aliens-attack movie), then copyright

263. No. 15-cv-00113, 2015 WL 3766546, at *1-2 (D. Or. June 19, 2015), *aff'd*, 883 F.3d 1111 (9th Cir. 2018).

264. *Id.* at *1.

265. *Id.*

266. *Id.*

267. See Nike's Motion to Dismiss and Supporting Memorandum, *Rentmeester*, 2015 WL 3766546 (No. 15-cv-00113).

268. *Id.*

269. See *Reece v. Island Treasures Art Gallery, Inc.*, 468 F. Supp. 2d 1197, 1206 n.14 (D. Haw. 2006) ("[I]n cases involving photographs, a '[p]laintiff's copyrights cannot monopolize the various poses used,' and 'can protect only [p]laintiff's particular photographic expression of these poses and not the underlying ideas therefor.'" (quoting *Kisch v. Ammirati & Puris, Inc.*, 657 F. Supp. 380, 382 (S.D.N.Y. 1987))).

270. Nike's Motion to Dismiss, *supra* note 267, at 23-29.

protection is “broad” and a work will infringe if it’s “substantially similar” to the copyrighted work. If there’s only a narrow range of expression (for example, there are only so many ways to paint a red bouncy ball on blank canvas), then copyright protection is “thin” and a work must be “virtually” identical to infringe.²⁷¹

Applying this framework as well as general principles of filtering out unprotectable elements of the plaintiff’s work, the district court concluded that very little of the selection and arrangement of elements in Rentmeester’s photograph were original and that Nike’s photograph and logo were not substantially similar to the plaintiff’s work.²⁷² On appeal, Rentmeester contended that the district court applied too high a standard by failing to employ the inverse ratio rule.²⁷³ In particular, he asserted that Nike’s concession of access entitled him to a lower similarity threshold on the question of improper appropriation.²⁷⁴ During oral argument, Judge Berzon pressed Rentmeester’s counsel to explain the rationale behind the rule:

Judge Berzon: ... [M]y understanding is that substantial similarity can come in at the stage of whether there was in fact copying and it’s a different substantial similarity essentially and I am not at all sure that the cases that talk about the inverse ratio aren’t talking about that stage because there’s nothing logical at all about the notion that the degree of access, it seems to me that the question of whether there has been a copyright violation ought to deal simply with the actual artworks and I don’t understand why there is a different similarity level depending on how sure you are that it was copied. I mean, even if the cases also say that even if we know that it was copied that they started out with the other picture and then they varied it in various ways, the question is should they vary it enough that they weren’t infringing the copyright. Now, I don’t know what difference it makes what the level of access was. Is there any case that explains that?

271. 616 F.3d 904, 913-14 (9th Cir. 2010) (citation omitted).

272. *Rentmeester*, 2015 WL 3766546, at *4-7.

273. *Rentmeester v. Nike, Inc.*, 883 F.3d 1111, 1124 (9th Cir. 2018).

274. *Id.*

Rentmeester Counsel: Yes, there are many. There is a Ninth Circuit Model Jury Instruction.

Judge Berzon: I know. I want to know what explains the logic of it. What's the logic of it?

Rentmeester Counsel: What you are trying to do with the substantial similarity test is that you don't have direct evidence of copying, so you are trying to assess circumstantial evidence.

Judge Berzon: My understanding is that that is a different point. Because substantial similarity when you are using it that way is a way of trying to figure out whether the copying prong was met. But that's not where we are as I understand it. What we are trying to figure out is as I understand it, even assuming that [Nike's artist] said "Gee, I really like that [Rentmeester's] picture, I would like to have something like it but different in various ways; I like the idea behind this but we're going to do it differently."... [T]hat's enough evidence of the copying prong as I understand it, but it doesn't tell you anything about whether there was a copyright violation. Am I right? Do I have my concepts right?

Rentmeester Counsel: I believe that you are wrong your honor....²⁷⁵

The panel was not persuaded.²⁷⁶ The court's opinion affirming dismissal, authored by Judge Watford and joined by Judge Berzon, clarified that the inverse ratio rule focuses solely on assessing factual copying and does not affect the standard applied in assessing improper appropriation.²⁷⁷

Rentmeester thus rectified the Ninth Circuit's understanding of the inverse ratio rule. Indeed, it represents one of the clearest formulations of the rule offered by a court to date. The Ninth Circuit declined to grant en banc review and, perhaps recognizing the Ninth Circuit's conflation of standards for factual copying and improper

²⁷⁵ Oral Argument at 6:44-8:54, *Rentmeester*, 883 F.3d 1111 (No. 15-835509), <https://www.ca9.uscourts.gov/media/video/?20170711/15-35509/> [<https://perma.cc/M4L8-9JDS>].

²⁷⁶ See *Rentmeester*, 883 F.3d at 1125.

²⁷⁷ *Id.* at 1124-25. Judge Owens concurred in these aspects of the opinion. See *id.* at 1127-28 (Owens, J., concurring in part and dissenting in part).

appropriation, *Rentmeester* did not raise this issue in his petition for a writ of certiorari.²⁷⁸ He apparently did not see the panel opinion creating a circuit split.²⁷⁹ *Rentmeester* instead focused exclusively on the scope of protection for photography.²⁸⁰

Perhaps out of concern for the rule that only the en banc court can overrule prior panel decisions, *Rentmeester* unwittingly contributed to the eventual demise of the inverse ratio rule entirely. Instead of explicitly clarifying the rule and admitting that prior opinions—beginning with *Krofft*—had made an error in their understanding and application of the rule, the court in *Rentmeester* did no more than just apply its correct formulation of the rule to the dispute at hand.²⁸¹ In other words, in overt and direct terms, the court did little to correct the mistakes of its predecessors or indeed to overrule prior precedent to the contrary. As such then, its intervention portrayed the rule as having been inconsistently—rather than erroneously—applied in the Ninth Circuit. In turn, this seemed to lend credence to the myth that the rule as a whole was confusing and devoid of sound reason—a myth that would influence the Ninth Circuit sitting en banc for a few years. As we will see below, the en banc court in *Skidmore* interpreted the law of sister circuits to be at odds with the *Rentmeester* panel decision, but in a surprising direction.

2. Public Disagreement

Less than a month after *Rentmeester*, a different panel of the Ninth Circuit handed down its decision in *Williams v. Gaye*, a case involving the alleged copying by musicians Robin Thicke and Pharrell Williams in their composition “Blurred Lines” of legendary songwriter and recording artist Marvin Gaye’s “Got to Give It Up.”²⁸² Following an infringement verdict and large damages recovery,²⁸³ the defendant appealed.²⁸⁴ Despite *Rentmeester* having

278. See generally Petition for Writ of Certiorari, *Rentmeester v. Nike, Inc.*, 139 S. Ct. 1375 (2018) (No. 18-728).

279. See *id.*

280. *Id.* at 5.

281. See *Rentmeester*, 883 F.3d at 1124.

282. See generally Special Verdict, *Williams v. Gaye*, 2015 WL 4479500 (C.D. Cal. Mar. 10, 2015) (No. 13-06004), ECF No. 320.

283. See *id.* at *147-49.

284. See generally Notice of Cross-Appeal, *Williams*, 2015 WL 4479500 (C.D. Cal. Jan. 14,

clarified the application of the inverse ratio rule a few weeks earlier, a majority of the panel invoked the erroneous version of the rule that *Krofft* had propagated in affirming the lower court's decision: "[o]ur inverse ratio rule provides that the stronger the showing of access, the lesser the showing of substantial similarity is required."²⁸⁵ The panel went on to characterize the inverse ratio rule as "binding precedent" under circuit law, which it was "bound to apply."²⁸⁶

In dissent, Judge Nguyen was quick to point out the error in the majority's conflation of actual copying and improper appropriation.²⁸⁷ Citing to treatise writers who had been critical of the rule, she noted:

Worse still, the majority invokes the oft-criticized "inverse ratio" rule to suggest that the Gayes faced a fairly low bar in showing substantial similarity just because Williams and Thicke conceded access The issue, however, isn't whether Williams and Thicke copied [r]ather, the issue is whether they took too much.²⁸⁸

On its own, this criticism might have been of little moment given how long the Ninth Circuit's erroneous formulation had stood. Yet, a few months after issuing the original opinion in the case, the members of the panel appear to have been made aware of the *Rentmeester* course correction, eliminating the applicability of the inverse ratio rule as part of the improper appropriation inquiry.²⁸⁹ In a surprising move, the *Gaye* panelists—both majority and dissent—withdraw their original opinions and issued amended ones, this time eliminating all reference to the inverse ratio rule!²⁹⁰ Rather than amend the opinion to apply the rule correctly and clarify the state of Ninth Circuit law, the majority chose to excise all mention of the rule.

2016) (No. 13-06004), ECF No. 508.

285. *Williams v. Gaye*, 885 F.3d 1150, 1163 (9th Cir. 2018), *amended and superceded* 895 F.3d 1106 (9th Cir. 2018).

286. *Id.* at 1163 n.6.

287. *See id.* at 1186 (Nguyen, J., dissenting).

288. *Id.* (citation omitted).

289. *See Williams*, 895 F.3d at 1107, 1119-20.

290. *Id.* at 1107, 1115.

This rather public, although muted, disagreement over the rule in the circuit and the panel's seeming acknowledgment of the lack of clarity over the rule, its status within the circuit, and its continuing vitality sowed additional doubt over its basis. It was therefore not surprising that when the next opportunity arose, the Ninth Circuit would seek to revisit the rule in an en banc setting. What was surprising was how they did so.

3. *The Repudiation/Overcorrection*

The course correction effected by *Rentmeester* did not go unnoticed. Soon after the decision, courts within the Ninth Circuit began to incorporate a reformulated inverse ratio rule, which effectively introduced an independent element (of actual copying) into the flawed *Krofft* test. And on this element, they now allowed a plaintiff to rely on weaker proof of similarity when greater access was proven, and vice versa. All the same, not one opinion acknowledged the change that *Rentmeester* had effected, or indeed the error embodied in the original *Krofft* formulation that *Rentmeester* had corrected. The correction was, however, to be short-lived. Less than two years later, the Ninth Circuit overcorrected.²⁹¹

a. *The Skidmore Trial Decision*

Around the time that the *Rentmeester* case was making its way through the district court, a trustee (Michael Skidmore) acting for a trust in the name of Randy Wolfe, a member of the band Spirit, brought an action for copyright infringement against the legendary rock band Led Zeppelin, alleging that the acoustic introductory section of "Stairway to Heaven" infringed Wolfe's composition "Taurus."²⁹² Jimmy Page and Robert Plant, the credited composers of "Stairway to Heaven," denied ever hearing, no less copying, "Taurus."²⁹³

291. See generally *Skidmore v. Led Zeppelin*, 905 F.3d 1116 (9th Cir. 2018).

292. *Id.*

293. See Declaration of James Patrick Page in Support of Motion for Summary Judgment, or in the Alternative, Partial Summary Judgment at 2, *Skidmore v. Led Zeppelin*, No. 2:15-cv-03462-RGK-AGR (C.D. Cal. Feb. 25, 2016), ECF No. 97-2 ("Prior to hearing a recording of *Taurus* in 2014 in connection with this matter, I had never heard *Taurus* or even heard of

One of the key pretrial issues in the case centered on whether the jury would be permitted to hear the original “Taurus” sound recording.²⁹⁴ The defendants contended that the copyright in the “Taurus” musical composition was limited to the lead sheet deposited with the Copyright Office at the time that the work was registered.²⁹⁵ Even though the sound recording reflected the most complete evidence of what Wolfe composed, and the Ninth Circuit had allowed a pre-1972 sound recording to be played at trial in the *Bolton* case,²⁹⁶ Judge Klausner barred use of the “Taurus” sound recording at trial.²⁹⁷ As a result, Skidmore’s counsel could not play the “Taurus” sound recording at trial as part of its effort to prove factual copying or improper appropriation, and the parties’ musical experts were limited to the lead sheet in demonstrating Wolfe’s musical composition and offering their views about the similarity between “Taurus” and “Stairway to Heaven.”²⁹⁸

At trial, Skidmore introduced both direct and circumstantial evidence of the defendant’s access to “Taurus,” including documentary and testimonial evidence that the bands performed in succession on a few occasions and that Jimmy Page owned the Spirit album containing “Taurus.”²⁹⁹ Page and Plant asserted that they independently created “Stairway to Heaven” and that any similarity to “Taurus” was attributable to the use of a descending chromatic line chord progression and arpeggios, common musical elements found in numerous popular songs that predated “Taurus.”³⁰⁰

it.”); Declaration of Robert Anthony Plant in Support of Motion for Summary Judgment or, in the Alternative, Partial Summary Judgment at 2, *Skidmore*, No. 2:15-cv-03462-RGK-AGR, ECF No. 97-3.

294. See generally Defendant’s Notice of Motion and Motion in Limine No. 3 to Exclude *Taurus* Audio Recordings; Memorandum of Points and Authorities in Support, *Skidmore*, No. 2:15-cv-03462-RGK-AGR (C.D. Cal. Mar. 15, 2016), ECF No. 136.

295. See *id.* at 5.

296. See *Three Boys Music Corp. v. Bolton*, 212 F.3d 477, 486 (9th Cir. 2000).

297. See Pretrial Conference at 1, *Skidmore*, No. 2:15-cv-03462-RGK-AGR (C.D. Cal. Apr. 25, 2016), ECF No. 202 (granting Motion in Limine to exclude recordings of “Taurus”; “the only *Taurus* recordings properly presented to the jury are those that are strictly limited to the *Taurus* musical composition as transcribed in the copyrighted 1967 transcription”).

298. See *id.*

299. See generally Reporter’s Transcript of Jury Trial, Day 6 at 1217-31, *Skidmore*, No. 2:15-cv-03462-RGK-AGR (C.D. Cal. June 22, 2016), ECF No. 280.

300. See *infra* note 305 and accompanying text; Reporter’s Transcript of Jury Trial, Day 5, Vol. 1 at 1005, 1022, 1122, *Skidmore*, No. 2:15-cv-03462-RGK-AGR.

Over Skidmore's objection, Judge Klausner declined to provide an inverse ratio instruction to the jury.³⁰¹ Nonetheless, the jury concluded that Page and Plant had access to "Taurus" prior to composing "Stairway to Heaven,"³⁰² but resolved the case in the defendants' favor on the ground that the plaintiff had not proven improper appropriation—that is, substantial similarity of protected expression—under the Ninth Circuit's extrinsic test.³⁰³

b. The Ninth Circuit Panel Decision

Skidmore's appeal focused primarily on the district court's refusal to let the jury hear the "Taurus" sound recording.³⁰⁴ The appellate brief devoted just three of the fifty-eight pages of argument to the contention that the lower court failed to give a proper inverse ratio rule instruction.³⁰⁵ After all, the jury found for the plaintiff on access, which is tantamount to factual copying in the Ninth Circuit.³⁰⁶ Skidmore nonetheless sought to get an inverse ratio instruction for the purpose of proving improper appropriation.³⁰⁷ *Rentmeester* had not yet been decided, and Skidmore wanted to take advantage of the Ninth Circuit's conflation of factual copying and improper appropriation.³⁰⁸ Skidmore pointed the court to the Ninth Circuit Model Instruction 17.16, noting the commentary in the supplemental instruction stating "the access and substantial similarity elements of infringement are 'inextricably linked' by an inverse ratio rule."³⁰⁹ Skidmore also challenged the district court's jury

301. See Final Jury Instructions, *Skidmore v. Led Zeppelin*, No. 2:15-cv-03462-RGK-AGR (C.D. Cal. June 23, 2016), Document 273; Appellant's Opening Brief at 54, *Skidmore*, 905 F.3d 1116 (9th Cir. 2018) (No. 16-56057).

302. See *Skidmore*, 905 F.3d at 1124.

303. See *id.*

304. See Appellant's Opening Brief, *supra* note 301, at 11.

305. See *id.* at 53-55.

306. See *id.*

307. See *id.*

308. Skidmore's opening brief was filed on March 18, 2017. See generally Appellant's Opening Brief, *supra* note 301. The *Rentmeester* decision would not be handed down until nearly a year later, on February 27, 2018. See generally *Rentmeester v. Nike, Inc.*, 883 F.3d 1111 (9th Cir. 2018).

309. See Appellant's Opening Brief, *supra* note 301, at 54 (quoting U.S. Courts for the Ninth Circuit, Manual of Model Civil Jury Instructions 17.16 (2017)).

instruction relating to the scope of copyright protection for selection and arrangement of musical elements.³¹⁰

In response, Led Zeppelin focused much of its brief on defending the district court's exercise of its discretion to limit Skidmore to the "Taurus" deposit copy and bar use of the sound recording at trial.³¹¹ With regard to the noninfringement verdict, Led Zeppelin responded first by emphasizing that Skidmore failed to prove similarity between protectible elements of the works.³¹² As regards the district court's refusal to provide an inverse ratio instruction, Led Zeppelin contended that the inverse ratio rule applies only if the evidence establishes "a high degree of access," and Skidmore had failed to make such a showing.³¹³ Hence, the district court's exercise of discretion to not provide such an instruction was not reversible error. Led Zeppelin also argued that Skidmore waived his objection to the selection and arrangement jury instruction, and in any case, any such error was harmless.³¹⁴

Although briefed prior to the *Rentmeester* decision being rendered, the *Skidmore* Ninth Circuit oral argument took place two weeks after another panel issued the *Rentmeester* correction.³¹⁵ The *Skidmore* panel was troubled by various aspects of the trial court's handling of the case, leading it to vacate the jury verdict and remand for a new trial.³¹⁶

The panel's handling of the inverse ratio controversy reflected *Rentmeester's* "clarified" framework.³¹⁷ The panel explained that an inverse ratio instruction only came into play on the factual copying prong and not the improper appropriation one.³¹⁸ The jury did not reach the question of factual copying because it found in its application of the extrinsic test that any similarity was not substantial; therefore the panel ruled that the inverse ratio rule did not come

310. *See id.* at 59-65.

311. *See* Combined Answering and Opening Brief at 34-58, *Skidmore*, 905 F.3d 1116 (Nos. 16-56057 & 16-56287).

312. *See id.* at 59-60.

313. *Id.* at 60-62 (citing *Rice v. Fox Broad. Co.*, 330 F.3d 1170, 1178 (9th Cir. 2003)).

314. *See id.* at 63-67.

315. *Skidmore* was argued on March 12, 2018, and filed on September 28, 2018. *Skidmore v. Led Zeppelin*, 905 F.3d 1116 (9th Cir. 2018), *reh'g en banc granted*, 925 F.3d 999 (9th Cir. 2019).

316. *See id.* at 1116-17.

317. *See id.* at 1130.

318. *See id.*

into play “and any error in not including it was harmless.”³¹⁹ The panel elided the fact that the special verdict form, similar to the *Krofft* decision, focused exclusively on access and did not actually frame the ultimate factual copying question. The appellate court implicitly rectified *Krofft*'s (and the lower court's special verdict form's omission of factual copying) by directing the lower court on remand to consider whether to provide an inverse ratio instruction on the question of factual copying.³²⁰ Because there was “substantial evidence of access” in the case, the panel instructed the district court to consider whether the evidence of access warranted an inverse ratio rule instruction at the new trial.³²¹

On the lead sheet issue, the panel ruled that the “Taurus” deposit copy, rather than any sound recording from which it was transcribed, defined the scope of the copyright.³²² Its analysis focused on jurisprudence interpreting the 1909 Act and distinguished the Ninth Circuit's decision in *Three Boys Music Corp. v. Bolton*,³²³ upholding playing of a pre-1978 sound recording as evidence at trial.³²⁴ The court also rejected policy arguments favoring use of the sound recording as evidence of the musical composition.³²⁵ Notwithstanding this ruling on the scope of the “Taurus” copyright, the panel ruled that Skidmore should have been permitted to play the “Taurus” sound recording in front of the jury for the limited purpose of assessing Jimmy Page's demeanor in denying that “Taurus” influenced his composition of the acoustic introduction to “Stairway to Heaven.”³²⁶

The panel decision revealed a deep fissure in Ninth Circuit copyright jurisprudence and flaws in the lower court's case management. The publicity surrounding the case—owing to Led Zeppelin's place in the rock 'n roll pantheon and the iconic stature of “Stairway to

319. *See id.*

320. *See id.* at 1137.

321. *See id.* at 1130 (comparing cases where the inverse ratio rule was not used because claims of access were based on speculation with cases where the rule was used because access was conceded).

322. *See id.* at 1135.

323. 212 F.3d 477, 486-87 (9th Cir. 2000) (noting that the sound recording was played at trial for purposes of evaluating substantial similarity).

324. *See Skidmore*, 905 F.3d at 1132-33.

325. *Id.* at 1134.

326. *See id.* at 1135-36.

Heaven”—further shone a spotlight on flaws in Ninth Circuit law.³²⁷ Led Zeppelin filed for rehearing by the panel or rehearing en banc, with strong support from a broad range of musicians, composers, producers, and music publishing and recording industry players.³²⁸ Skidmore also petitioned for limited rehearing or rehearing en banc as well, recognizing the panel’s limitation on the use of the “Taurus” sound recording solely for purposes of assessing access would make it nearly impossible to prevail on remand.³²⁹ The Ninth Circuit granted en banc review but without setting forth specific questions.³³⁰

c. The En Banc Proceeding

The Ninth Circuit ordered the en banc case to be heard on the basis of the parties’ briefing to the original panel.³³¹ On the inverse ratio issue, Skidmore’s appellate brief was nearly worthless. Having been drafted prior to the *Rentmeester* decision, its main point—that Skidmore was entitled to an instruction that the inverse ratio rule applied to both factual copying and improper appropriation—had already been rejected by another Ninth Circuit panel.³³² Led Zeppelin’s brief contended that the inverse ratio rule applies only if the evidence establishes “a high degree of access,” and Skidmore

327. See ASSOCIATED PRESS, *Led Zeppelin ‘Stairway to Heaven’ Case Goes Back to Trial*, N.Y. TIMES (Sept. 28, 2018), <https://www.nytimes.com/2018/09/28/arts/music/led-zeppelin-stairway-to-heaven.html> [<https://perma.cc/DM2H-B4RC>]; Eriq Gardner, *Appeals Court Revives Copyright Case over Led Zeppelin’s “Stairway to Heaven,”* HOLLYWOOD REP. (Sept. 28, 2018, 10:20 AM), <https://www.hollywoodreporter.com/business/business-news/appeals-court-revives-copyright-case-led-zeppelins-stairway-heaven-1147848/> [<https://perma.cc/CW22-BVZM>].

328. See Petition for Panel Rehearing and Rehearing En Banc at 1-2, *Skidmore v. Led Zeppelin*, 952 F.3d 1051 (9th Cir. 2020) (Nos. 16-56057 & 16-56287); Motion of 123 Songwriters, Composers, Musicians, and Producers, along with NSAI and SONA, for Leave to File Amicus Curiae Brief in Support of Defendants for Panel Rehearing and Rehearing En Banc at 1, *Skidmore*, 952 F.3d 1051 (Nos. 16-56057 & 16-56287); Motion for Leave to File Brief Amici Curiae of the Recording Industry Association of America and the National Music Publishers Association in Support of the Petition for Rehearing En Banc at 1-2, *Skidmore*, 952 F.3d 1051 (Nos. 16-56057 & 16-56287).

329. See Appellant’s Petition for Limited Panel Rehearing/Rehearing En Banc at 4, *Skidmore*, 952 F.3d 1051 (No. 16-56057).

330. See Order, *Skidmore*, 952 F.3d 1051 (No. 16-56057), ECF No. 90.

331. See *id.*

332. See *Rentmeester v. Nike, Inc.*, 883 F.3d 1111, 1124 (9th Cir. 2018).

had failed to do so.³³³ Hence, the district court's exercise of discretion to not provide such an instruction was not reversible error. Led Zeppelin did not question the soundness of the inverse ratio rule nor suggest that other circuits had abandoned it. Making matters worse, the court did not permit parties to file updated briefs.³³⁴

Two amicus briefs called for wholesale rejection of the inverse ratio rule. One, filed on behalf of the Recording Industry Association of America (RIAA) and the National Music Publishers' Association (NMPA), stated that the "Second, Seventh, and Eleventh Circuits have recognized [that] this rule 'confuses more than it clarifies,'" quoting *Arc Music*.³³⁵ The brief failed to point out that the Second Circuit continues to apply the inverse ratio rule on the factual copying prong (as has always been the proper interpretation) and the Seventh Circuit retains the rule.³³⁶ The brief also neglected to distinguish between the factual copying and improper appropriation prongs, emphasizing that a high degree of access should not result in a lower standard of proof of substantial similarity.³³⁷ Even though the brief was drafted after the Ninth Circuit's *Rentmeester* decision, it somewhat surprisingly avoided noting how that decision had rectified the very problem it was identifying.

A second brief, filed by a group of nineteen law professors led by Professor Mark Lemley, also asked the court to "abandon" the inverse ratio rule altogether.³³⁸ Mischaracterizing out-of-circuit precedent as having rejected the rule, it asked the Ninth Circuit to join its "sister circuits" in this effort.³³⁹ As we have seen, it is hardly the case that other circuits have abandoned the rule. Further, the

333. See Combined Answering and Opening Brief, *supra* note 311 (citing *Rice v. Fox Broad. Co.*, 330 F.3d 1170, 1178 (9th Cir. 2003)).

334. Skidmore's counsel specifically requested the Ninth Circuit to clarify the scope of the en banc proceeding, which the court declined to do. See Appellant Skidmore's Letter for Clarification of Scope of Rehearing En Banc, *Skidmore*, 952 F.3d at 1051; Order, *Skidmore*, 952 F.3d 1051 (9th Cir. June 11, 2019) (No. 16-56057).

335. See Brief Amici Curiae of the Recording Industry Association of America and the National Music Publishers Association in Support of Defendants-Appellees on En Banc Rehearing at 3, *Skidmore*, 952 F.3d 1051 (Nos. 16-56057 & 16-56287), ECF No. 120-2 (quoting *Arc Music Corp. v. Lee*, 296 F.2d 186, 187 (2d Cir. 1961)).

336. *Id.* at 7-8.

337. See *id.* at 7.

338. See Brief Amici Curiae of 19 Intellectual Property Professors in Support of Petitioner Led Zeppelin at 2, 7-8, *Skidmore*, 952 F.3d 1051 (Nos. 16-56057 & 16-56287), ECF No. 106-1.

339. See *id.* at 8.

brief was based on a fundamental misunderstanding of the way in which circumstantial evidence works. Treating “access” as a separate requirement, the brief made the altogether unreasoned argument that once proof of access makes factual copying plausible, “it does not influence the strength of the inference of copying at all” and should therefore drop out of the picture, requiring courts to focus exclusively on the similarities between the works.³⁴⁰

The illogicality of this position cannot be overstated. As we demonstrated in Part I, proof of access is of significant probative value precisely when similarities exist between the works because then it contributes—directly—to the narrative about copying. While the brief ridiculed the rule and suggested that more—or less—proof on an issue was without “mean[ing]” by offering a series of off-topic hypotheticals, not once did it recognize the manner in which inferences combine together, during proof by circumstantial evidence.³⁴¹

During oral argument before the en banc panel, the court asked Led Zeppelin’s lawyer to address the inverse ratio rule and its continuing validity in the Ninth Circuit. Despite acknowledging the court’s clarification in *Rentmeester*, his answer merely reiterated the erroneous view of the amicus briefs discussed above: that the rule deserved to be rejected as it had been in other circuits.³⁴² In her

340. *Id.* at 6.

341. *Id.* at 14. Many of the brief’s faulty arguments were drawn from two commentators who have long been critical of the inverse ratio rule. See 3 PATRY, *supra* note 65; Aronoff, *supra* note 16. Much like many courts and scholars, these commentators do not appreciate the working of circumstantial evidence. Patry, in particular, makes the following erroneous observation:

While it is true that one cannot copy something to which one does not have access, it is also true that one can have complete access to a copyrighted work (indeed have it pasted on the wall of your office when creating your own work) but not copy that work. No degree of access necessarily leads to any degree of copying. The inverse ratio theory is based on a false postulate.

3 PATRY, *supra* note 65, § 9:34 (footnote omitted). The fallacy here should be obvious. Patry assumes a *causal* relationship between access and copying. Yet, access is certainly not a cause of copying. Having access to a work does not make copying more likely. All the same, access is a *necessary condition* for copying. As an antecedent condition, it thus allows for an inference to be drawn as to copying when other evidence points in that direction. Inferential logic need not be causal. The parallel is motive. Having a motive to do something is certainly not causally related to doing it—that is, it does not cause it to be done. All the same, when other evidence points to such a causal connection, motive—as an antecedent condition—buttresses that inference. For an excellent account, see John H. Wigmore, *Circumstantial Evidence in Poisoning Cases*, 6 MEDICO-LEGAL J. 292, 306 (1888).

342. Transcript of Oral Argument, *Skidmore*, 952 F.3d 1051 (9th Cir. 2020) (No. 16-56057).

opinion for the majority, Judge McKeown unfortunately did just this.

Addressing the plaintiff's jury instruction challenges in the case, the majority opinion traced the evolution of the inverse ratio rule within the Ninth Circuit, acknowledging the error that had originated in *Krofft*, as well as its confusing terminology.³⁴³ Yet, it chose not to correct *Krofft*, the source of confusion for this rule and the very basis for the circuit's problematic test for infringement. The majority recognized that while the panel in *Rentmeester* had corrected the circuit's application of the rule, the controversy in *Gaye* had nevertheless sown further doubt over the rule and its utility.³⁴⁴ Putting this inconsistency and confusion together with academic commentary criticizing the rule, the court expressed its own rationale to be skeptical of the rule.³⁴⁵

According to the majority, the rule unfairly advantaged more popular works that were likely to be more widely distributed. Because innumerable works could be easily disseminated on the internet, this enabled plaintiff-owners of such works to establish access (to them, by a defendant) rather easily, thereby lowering the requisite similarity for them to establish actual copying under the inverse ratio rule.³⁴⁶ Given this reduced burden for such works, the majority characterized the rule as the "inverse burden rule" to connote its disparate treatment of widely disseminated, that is, popular works.³⁴⁷ Coupled with the confusion and inconsistency seen in the circuit's application of the rule, this unfairness was sufficient for the majority to abrogate the rule, purporting to join its "sister circuits" in this rejection.³⁴⁸

Now, as we have seen, other circuits—including the Second—have not, as even rudimentary cite-checking would have revealed, abrogated the rule.³⁴⁹ Further, the confusion and inconsistency that the court was reacting to was entirely a creation of the Ninth Circuit, and had thankfully failed to make its way into other

343. *Skidmore*, 952 F.3d at 1065-67.

344. *Id.* at 1067-68.

345. *Id.* at 1068-69.

346. *Id.*

347. *Id.* at 1069.

348. *Id.*

349. *See supra* Part II.C.2.

circuits' more streamlined application of the rule to the issue of actual copying. More importantly, *Rentmeester* had done an admirable job of eliminating much of that confusion and distilling the rule down to its analytical core. This then leaves the court's own reasons for rejecting the rule—the “inverse burden” rationale—which unfortunately does not withstand scrutiny either.³⁵⁰

The whole premise of the court's “inverse burden” argument was that popular works were more likely to be widely disseminated, thus making it easy for plaintiffs basing their claims on such works to establish “access,” which would in turn reduce the amount of similarity needed to prove copying.³⁵¹ Yet, in what sense this is “unfair” remains unclear. To the court, the unfairness was because “nothing in copyright law suggests that a work deserves stronger legal protection simply because it is more popular or owned by better-funded rights holders.”³⁵² The court's search for absolute parity between works of all kinds is altogether misplaced, and indeed has never been how copyright law works. Nowhere does copyright law promise to treat all works in identical manner. Factual works are treated differently from highly imaginative works, which are in turn treated differently from derivative works, and so on.³⁵³ The unique doctrinal wrinkles that attach to each category make an infringement claim easy to establish in each instance. That is hardly a problem; it is instead a key feature of copyright law. An evidentiary rule advantaging popular works is no more problematic than a rule advantaging highly creative works over factual ones. In some sense, this functions as an added incentive for the creator. Indeed, to the extent that dissemination in its widest form is one of the stated goals of the copyright system, providing “stronger” protection to widely disseminated works by making it easier to establish their infringement is an integral aspect of copyright law.

As technological advances expand access to nearly all types of works of authorship, copyright infringement analysis integrates

350. See *Skidmore*, 952 F.3d at 1069.

351. *Id.* at 1068.

352. *Id.*

353. See Balganes, *supra* note 6, at 203, 221 (observing how the infringement analysis embodies an intermediate step wherein decision makers fix the standard of scrutiny applicable to a work based on protectable content).

that shift into its infringement tests. With the *Rentmeester* correction, this shift in no way limits the defendant's ability to prove that any similarity does not constitute improper appropriation.

In the end, the Ninth Circuit's unwillingness to allow fresh briefing on the issue, notwithstanding the intervening *Rentmeester* decision, produced a poorly reasoned decision. The court was all too ready to end the inverse ratio rule in the circuit, owing in large part to the confusion and uncertainty seen in the court's application of the rule within the jurisdiction, and a poorly researched law professor's brief portraying a façade of scholarly and judicial consensus around the problems underlying the rule.

d. Aftermath

In addition to its decision to jettison the inverse ratio rule altogether despite the *Rentmeester* correction, and entirely on the basis of faulty analysis and briefing, the Ninth Circuit's en banc decision in *Skidmore* can be faulted for failing to address the real long-standing issues plaguing its copyright jurisprudence. Much as it purported to join its "sister circuits," the Ninth Circuit rendered itself an outlier on the inverse ratio rule.³⁵⁴

Further, its faulty discussion of out-of-circuit case law has since prompted other courts—most prominently the Sixth Circuit—to re-evaluate its own reliance on the inverse ratio rule. In one recent case, the court was asked to apply the rule and stated:

More fundamental problems lie with the "inverse-ratio rule." ... [I]t does not appear that this circuit has meaningfully relied on the rule, ... in any binding precedent.... In any event, the "inverse-ratio rule" appears to be on its last legs. Fearing that the rule has little use in the modern, "digitally interconnected world" in which "the concept of 'access' is increasingly diluted," the Ninth Circuit recently abrogated the rule in its circuit, "join[ing] the majority of [its] sister circuits that have considered the inverse-ratio rule and have correctly chosen to excise it from copyright analysis." ... The only circuit it identified as still endorsing the inverse-ratio rule is ours.... So questions remain

354. See *Skidmore*, 952 F.3d at 1079 ("[W]e take the opportunity to reject the inverse ratio rule.").

whether the inverse-ratio rule applies (or should apply) in our circuit. But we do not answer them today.³⁵⁵

The Sixth Circuit failed to cite-check the Ninth Circuit's assertions about sister circuit law.³⁵⁶ The court's error in *Skidmore* is thus likely to have an impact beyond the Ninth Circuit. Only time, however, will reveal the full extent of that impact. Perhaps the greatest casualty of the *Skidmore* debacle is that the Ninth Circuit missed a rare opportunity to address the real problems plaguing its copyright infringement jurisprudence. In a concurring opinion, one member of the court went to great length to detail this missed opportunity,³⁵⁷ which goes to show how the en banc majority might have been better off spending its efforts correcting other aspects of the infringement analysis.

E. Nuanced Application: The U.K. High Court

While U.S. courts and commentators have failed to appreciate the basic logic of circumstantial evidence underpinning the inverse ratio rule, courts in other jurisdictions appear to have had few such problems. In *Sheeran v. Chokri*, the Chancery Division of the U.K. High Court invoked and applied the logic of the inverse ratio rule principle with care and sophistication.³⁵⁸ The case involved an allegation of copyright infringement made by Sam Chokri against the well-known musician and songwriter Ed Sheeran.³⁵⁹ Central to Chokri's claim was the contention that Sheeran had copied from Chokri's work, and the court rightly noted that the question of "copying" was "at the heart th[e] case."³⁶⁰ The claim of copying was based entirely on circumstantial evidence, and relied on three bases:

355. *Enchant Christmas Light Maze & Mkt. Ltd. v. Glowco, LLC*, 958 F.3d 532, 536-37 n.1 (6th Cir. 2020) (alterations in original).

356. *See id.*

357. *Skidmore*, 952 F.3d at 1079-80 (Watford, J., concurring). These include the Ninth Circuit's confusing and loose standards relating to improper appropriation: the "total concept and feel" framework, the uncritical protection for compilations of unprotectable elements, and its lenient acceptance of experts engaging in "selective reduction" of musical transcriptions. *Id.*

358. *See Sheeran v. Chokri* [2022] EWHC 827 (Ch) IL-2018-000095, [7]-[13] (Eng.).

359. *Id.* at [1]-[6].

360. *Id.* at [7].

(1) the similarity between the musical works, (2) Sheeran's access to the protected work, and (3) Sheeran's prior behavior, which Chokri alleged showed a pattern of borrowing music from other songs.³⁶¹ In a persuasive opinion, the court closely examined the combined inference that it could draw from the evidence and rejected the copying claim.³⁶²

Writing for the court, Justice Zacaroli set out its approach to combining the inferences at issue. And while the opinion did not reference the inverse ratio rule by name, its description of the relevant rule bears all the hallmarks of that rule:

In every case, it must be a question of fact and degree whether the extent of the alleged infringer's access to the original work, combined with the extent of the similarities, raises a sufficient possibility of copying to shift the evidential burden. Where, for example, the original work was highly individual or intricate, and the alleged infringing work was very close to it, then only limited evidence of access may be sufficient in order to shift the burden. The same would not be true, on the other hand, where the original work was simple and involved relatively common elements.³⁶³

The court's reference to "combined" inferences and the idea that evidence of access could be "limited" when the degree of similarity was great is a clear and direct statement of the inverse ratio rule.

The court then proceeded to examine the evidence on each of the three circumstantial bases for the claim of copying. Justice Zacaroli first undertook an elaborate examination of the musical similarities and dissimilarities between the works and the parties' competing accounts of how they came to be.³⁶⁴ He then proceeded to examine the evidence of access, which consisted of the allegedly infringed song being played on the radio, the manner in which it was otherwise publicized, and evidence of common friends who were alleged to have shared the music with Sheeran.³⁶⁵ Again, the court unpacked components of the evidence at each stage of the analysis to

361. *Id.* at [7]-[13].

362. *See id.* at [207]-[221].

363. *Id.* at [25].

364. *Id.* at [29]-[77].

365. *Id.* at [78]-[99].

set out the strength of the inference that each produced, to conclude that the evidence of access—taken as a whole—was “at best speculative.”³⁶⁶ On the final basis of prior acts of copying, the court was again discerning. In examining the evidence showing that Sheeran “referenced and credited other writers,” which was introduced to show his propensity to copy, the court found it to be of minimal “probative value,” concluding instead that “the fact that someone is in the habit of openly recognising and crediting the work of others makes it *less* likely that they would set out to steal the creative work of others.”³⁶⁷

Putting all this together, Justice Zacaroli then “st[ood] back” from the individual details of the evidence and examined the big picture, combining the inferential elements drawn from different parts of the evidence.³⁶⁸ And upon doing this, he concluded that the case for copying was weak and thus found for Sheeran.³⁶⁹

A few things are noteworthy in Justice Zacaroli’s astute and judicious analysis. First, even though he relies on the inverse ratio rule, Justice Zacaroli does not rely on a precise sliding scale. To the contrary, his approach merely recognized the need for judgment and common sense, which rendered it sufficiently convincing.³⁷⁰ Second, his scrutiny of the evidentiary record with a fine-toothed comb is commendable not just for its attention to detail, but for its effort to relate each element of that scrutiny to the putative final conclusion: that is, the question of copying. Nowhere in the analysis does he treat an intermediate conclusion as relevant for its own sake. And third, recognizing the inferential nature of the inquiry—which focuses on the question of copying—he does not limit himself to the questions of access and copying. Instead, in keeping with the well-worn ideas of circumstantial evidence, which suggest looking to *all* aspects of an incident, he considers other pieces of evidence that could be potentially probative of copying, such as past behavior and a pattern of conduct. While he eventually found them to be unhelpful, his willingness to recognize their utility evinces a recognition and regard for the manner in which circumstantial evidence works,

366. *Id.* at [146].

367. *Id.* at [150].

368. *Id.* at [201].

369. *Id.*

370. *See id.* at [184].

without the artificial limits that U.S. courts have imposed by limiting circumstantial evidence of copying to access and similarity.

The U.K. Chancery Division's *Sheeran* opinion vividly illustrates how the inverse ratio rule ought to be deployed in practice, with an appreciation for the role and significance of circumstantial evidence. Devoid of its fancy nomenclature and controversial origins, the rule played a crucial role in the court's finding of noninfringement. And in doing so, it aptly revealed—almost in direct rebuttal to the Ninth Circuit—that the rule need not favor plaintiffs and render the proof of copying easier. When appropriately and conscientiously applied, it operates as a balanced rule grounded in cogent logic and common sense.

III. INTEGRATING COPYRIGHT AND EVIDENCE LAW

The account just provided of the inverse ratio rule and its problematic invocation and application among some courts is reflective of a problem that is seen more broadly in much of copyright adjudication: the reluctance of courts to integrate into copyright adjudication the myriad rules and principles of procedure and evidence that they routinely deploy in other contexts.

The problem dates back to the very origins of the modern test for copyright infringement. As is well known, the seminal *Arnstein* test for copyright infringement—which continues to remain the nationwide standard, but for *Krofft* in the Ninth Circuit—was the product of a deep disagreement over the standard for summary judgment reflected in Rule 56 of the then newly developed Federal Rules of Civil Procedure.³⁷¹ In an effort to avoid having much of the adjudication decided on summary judgment, the author of the *Arnstein* majority opinion chose to treat aspects of the inquiry as pure questions of fact to be determined by a jury.³⁷² In the years since, while courts have gradually whittled away at the rigidity of this classification and become more willing to decide infringement claims on motions for summary judgment (and motions to dismiss), some

371. Balganesch, *supra* note 1, at 796 (describing how disagreement over the then-new Rule 56 of the Federal Rules of Civil Procedure influenced the *Arnstein* court in its framing of the infringement standard).

372. *Id.* at 831-48.

circuits have nevertheless adhered to the original formulation and actively forbidden this practice.³⁷³

Perhaps more troubling than its connection to summary judgment, the *Arnstein* framework also framed evidentiary rules for the copyright infringement analysis entirely out of whole cloth, with no reference at all to the age-old principles and concepts of evidence law.³⁷⁴ A prime example here is the framework's prohibition on the use of expert testimony on the improper appropriation prong of the inquiry, regardless of the subject matter at issue and its complexity.³⁷⁵ The inquiry instead insists that the question be turned over to a jury without any guidance, so that their subjective reaction to the works (and their similarity) can be ascertained.³⁷⁶ Again, this prohibition has proven to be deeply problematic as the nature of copyrightable subject has come to encompass some forms of expression, such as computer software, that lay juries cannot comprehend without expert assistance.³⁷⁷

While judicial and scholarly confusion surrounding the inverse ratio rule may not have been driven by the same type of strategic concerns that the *Arnstein* framework sought to put into place, it nevertheless is part of the same pattern. Federal courts need to recognize that copyright adjudication is not exceptional and ought to apply general rules and adjectival formulations that have long been developed for federal adjudication. The rules and principles of evidence remain a core part of that body of law, and thus demand more rational integration into the framework for copyright adjudication.

However, evidence law presents copyright adjudication with two mutually reinforcing structural realities that render its integration into copyright somewhat different from the manner in which the

373. Again, most notorious is the Ninth Circuit, which actively forbids courts from deciding the second prong of the test—the intrinsic prong—as a matter of law. *See, e.g.,* *Rentmeester v. Nike, Inc.*, 883 F.3d 1111, 1118 (9th Cir. 2018) (“Only the extrinsic test’s application may be decided by the court as a matter of law.”).

374. *See* 154 F.2d 464, 468 (2d Cir. 1946).

375. *See id.* (categorically holding that on the second prong “expert testimony [is] irrelevant”).

376. *Id.*

377. *See, e.g.,* *Antonick v. Elec. Arts, Inc.*, 841 F.3d 1062, 1066-67 (9th Cir. 2016) (refusing to allow the use of expert testimony during a comparison of computer software code); *see also* Balganeshe & Menell, *supra* note 9.

rules of procedure might work therein. First, while the Federal Rules of Evidence (FRE) codify much of the law of evidence, modern evidence law also embodies principles and ideas—about inferential logic and the nature of fact-finding—that do not find their way into those rules.³⁷⁸ They instead operate at the level of *principles*, but are nevertheless constructive and influential in a variety of different ways.³⁷⁹ In addition, the rules themselves are replete with delegations of authority to courts to decide evidentiary issues on a discretionary basis, thus rendering them much more like standards rather than bright-line rules.³⁸⁰ The process of integrating evidence law into copyright must therefore be sensitive to both of these features, which can nevertheless be suitably harnessed towards the improvement of copyright adjudication. In keeping with these features, this Part looks at how the *rules* of evidence and evidentiary *principles* can guide copyright adjudication.

A. Rule-Based Integration

Ever since they were brought into effect in 1975, the FRE have provided federal courts with a uniform set of evidentiary rules for them to use in “virtually all” federal proceedings.³⁸¹ Produced over seven years by a Supreme Court-appointed committee, the FRE are detailed, yet not comprehensive in their coverage. The FRE declares its overarching purpose as ensuring that every proceeding is administered “fairly,” avoiding “unjustifiable expense and delay,” and “promot[ing] the development of evidence law.”³⁸² Its end is described as “ascertaining the truth and securing a just determination.”³⁸³

Rule 1101 of the FRE makes clear that the FRE is to apply to all proceedings before all federal courts, including specifically in “civil cases and proceedings” without significant exception.³⁸⁴ Federal copyright adjudication brought under the federal copyright statute

378. See Paul F. Rothstein, *The Proposed Amendments to the Federal Rules of Evidence*, 62 GEO. L.J. 125, 125 (1973).

379. *Id.*

380. *Id.*

381. *Id.*

382. FED. R. EVID. 102 (discussing the purpose of these rules).

383. *Id.*

384. FED. R. EVID. 1101.

is thus clearly within the coverage of the FRE. Despite this reality, the framework for adjudicating copyright infringement claims deviates in various ways from the FRE, or at the very least pays scant attention to the guidance offered therein. Much of this is perhaps because that framework was crafted decades before the FRE came into existence, and courts have unfortunately been reluctant to revisit it in the years since. A few FRE rules in particular deserve special mention.

1. *The Exclusion of Expert Testimony (Rule 702)*

The modern test for copyright infringement divides the inquiry into two stages: factual copying and improper appropriation.³⁸⁵ The former examines whether the defendant copied from the plaintiff, while the latter assesses the propriety (or legality) of such copying, once found to exist.³⁸⁶ While the framework allows a court to use expert testimony to guide the inquiry on the first stage, it at the same time expressly forbids the jury from obtaining any expert testimony on the second stage.³⁸⁷ The original rationale for this discrepancy appears to have been the belief that any expert testimony on the second prong would serve to cloud the jury's subjective reaction to the work.³⁸⁸ Further, while the prohibition originated in less rigid terms, it has since been converted into a hard rule by courts over the years.³⁸⁹ As originally contemplated, therefore, the framework as applied today disallows any use of experts on improper appropriation. The jury is meant to react to the works in an unguided manner, regardless of whether they understand its meaning (for example, a work in a foreign language).

385. *Arnstein v. Porter*, 154 F.2d 464, 467-69 (2d Cir. 1946).

386. *Id.*

387. *Id.*

388. *See id.*

389. *Id.* at 473 (“Expert testimony of musicians may also be received, but it will in no way be controlling on the issue of illicit copying, and should be utilized only to assist in determining the reactions of lay auditors.”). As this observation makes clear, *Arnstein* never sought to fully prohibit the use of expert testimony on the improper appropriation prong. Later courts, unfortunately, read it that way. *See Comput. Assocs. Int’l, Inc. v. Altai, Inc.*, 982 F.2d 693, 713 (2d Cir. 1992) (reading *Arnstein* to have not permitted expert testimony on the second prong).

The absurdity of this position has not been lost on scholars.³⁹⁰ Nor indeed on some courts.³⁹¹ When computer software came to be included as copyrightable subject matter, courts around the country developed a new framework for assessing infringing in relation to such works wherein they modified the general rule to allow juries to receive expert testimony on such software.³⁹² Yet, in so doing they indirectly reified the prohibition in relation to other subject matter.³⁹³

Courts adjudicating copyright infringement often acknowledge that expert testimony would be helpful but find themselves bound by the prohibition of the framework just described. The irony here is that the FRE expressly allows a court to allow an expert to testify if it “will help the trier of fact to understand the evidence.”³⁹⁴ It is precisely in relation to complicated subject matter where juries will have a hard time understanding the evidence that expert testimony is most useful. By vesting courts with the discretion to thus determine the utility of expert testimony, the FRE thus moves away from any bright-line prohibition of the kind contemplated by the infringement framework. And yet, no court has embraced that discretion, except in relation to computer software, with the notable exception of the Ninth Circuit.³⁹⁵ Rule 702 would call for the hard prohibition to be lifted, and perhaps converted into a default (even if not done away with) that a court could move away from when the jury can assess the works on their own.³⁹⁶

2. *Limits on Limiting Instructions (Rules 105 and 403)*

Rule 105 of the FRE allows a court to admit evidence for one purpose but not for another and thus “restrict the evidence to its proper scope and instruct the jury accordingly.”³⁹⁷ It thus embodies what is known as a “limiting instruction” wherein a jury is given some evidence but allowed to use it for one purpose and then

390. See, e.g., Balganesch & Menell, *supra* note 9.

391. See, e.g., *Antonick v. Elec. Arts, Inc.*, 841 F.3d 1062, 1067 n.4 (9th Cir. 2016).

392. *Altai*, 982 F.2d at 713.

393. *Id.*

394. FED. R. EVID. 702(a).

395. See, e.g., *Antonick*, 841 F.3d at 1067 n.4.

396. See FED. R. EVID. 702.

397. FED. R. EVID. 105.

expressly prohibited from using it for other purposes.³⁹⁸ All the same, the official comments make clear that the rule can be of limited utility and that courts must weigh the “availability and effectiveness” of this practice before deploying it.³⁹⁹ The comments suggest that when such limiting instructions are futile, the court should disallow such evidence altogether under Rule 403 for “unfair prejudice.”⁴⁰⁰ Further, the scholarly commentary is extensive, showing limiting instructions to be of little value in requiring juries to keep evidence out of their consideration.⁴⁰¹

Despite the conversation and debate about limiting instructions in the world of evidence law, copyright law routinely deploys such instructions in relation to expert testimony. Such testimony is permitted (and helpful) on one prong, but forbidden (even though helpful) on another. Insofar as a jury is empowered to adjudicate the first prong, courts are thus forced to rely on limiting instructions. Alternatively, they choose to decide the first prong on summary judgment in order to avoid this dilemma.

A more logical route for courts to go—embracing the directions of the FRE—is for them to recognize the futility of limiting instructions and to modify the sequence and/or structure of the infringement inquiry in appropriate ways. Possibilities include eliminating all expert testimony from the jury’s consideration when the subject matter is simple, reversing the sequence of a jury’s determination, allowing expert testimony to be used by a jury on the second prong as well, or at its extreme empaneling two independent juries with one for each prong. Again, what matters is less the particular solution that courts develop and more that they recognize (1) the deficiencies of limiting instructions and (2) the discretion that the FRE gives them to compensate for these deficiencies when they determine particular evidence to be helpful/prejudicial.

398. See generally Note, *The Limiting Instruction—Its Effectiveness and Effect*, 51 MINN. L. REV. 264 (1966); Roselle L. Wissler & Michael J. Saks, *On the Inefficacy of Limiting Instructions*, 9 LAW & HUM. BEHAV. 37 (1985).

399. FED. R. EVID. 105, advisory committee’s note to 1972 proposed rules (“The availability and effectiveness of this practice must be taken into consideration in reaching a decision whether to exclude for unfair prejudice under Rule 403.”).

400. *Id.*

401. See, e.g., David Alan Sklansky, *Evidentiary Instructions and the Jury as Other*, 65 STAN. L. REV. 407, 408-09 (2013) (noting how the dominant view is that such instructions “do not work” and critiquing it to argue that they work “imperfectly”).

B. Principle-Based Integration

Independent of the formal *rules* embodied in the FRE, evidence law also embodies a set of *principles* that are perhaps of even greater import to copyright adjudication.⁴⁰² Unlike evidentiary rules, these principles often take color and content from common sense intuitions about proof and causation.⁴⁰³ All the same, because they are not formally codified in a single source, they are to be seen in different doctrinal domains and in judicial decisions grappling with mechanisms of proof therein. The intuitions about circumstantial proof and the role of inferences that inform the inverse ratio rule and the striking similarity doctrine, for instance, originate in such evidentiary principles.⁴⁰⁴ The inverse ratio rule is far from exhausting the domain of relevant evidentiary principles for copyright adjudication.

1. Understanding Circumstantial Proof

Circumstantial—or indirect—proof, as noted previously, is a staple of the landscape in almost all areas of law requiring proof. Copyright adjudication is no exception. Yet circumstantial evidence is qualitatively different from direct evidence, which requires courts to appreciate the manner in which it is to be deployed in their fact-finding. Because the hallmark of circumstantial evidence is the process of *inferential reasoning*, courts using such evidence need to understand the obvious connection between inferences and probative value to offer clear reasons for their inferences. Instead, a more common—and erroneous—practice sees them treat conclusions from inferences as equivalent to proving individual elements of a multi-element doctrine, thus invoking the standard of proof commonly deployed for civil trials, that is, the preponderance of evidence standard.⁴⁰⁵

402. For a general account of the distinction, see Mitchell N. Berman, *How Practices Make Principles, and How Principles Make Rules* (Univ. Pa. L. Sch. Pub. L. Rsch. Paper, Paper No. 22-03, 2022), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4003631 [<https://perma.cc/57YB-SFXD>].

403. *Id.* at 44.

404. *See supra* Part I.

405. *See, e.g.*, *Sid & Marty Krofft Television Prods., Inc. v. McDonald's Corp.*, 562 F.2d 1157, 1172 (9th Cir. 1977) (noting how when clear and convincing evidence of access is

The problem here is, of course, that inference-based circumstantial proof is scalar rather than binary and thus operates on a continuum.⁴⁰⁶ This is why it is common to speak of the *strength* of an inference. Yet, focusing on proof of individual elements is treated as a binary determination: either the plaintiff has proven something based on the preponderance standard or not. And this is where the Ninth Circuit's approach to infringement, originating in *Krofft*, committed an error of epic proportions in failing to understand the circumstantial role that access plays in the process. When *Krofft* converted access from being a basis for a court to draw an inference towards actual copying into a freestanding element of the infringement analysis, it effectively stripped access of its inferential role altogether.⁴⁰⁷ Instead, courts now have to prove the existence of access, to the standard of a preponderance of evidence. It thus replaced the scalarity of access with a binary requirement. Again, a clearer appreciation of the basics of circumstantial proof would have likely prevented this.

2. *The Best Evidence Principle*

It has long been a fundamental precept of evidence law that a fact-finder must be presented with the "best evidence" available on an issue when making a determination.⁴⁰⁸ As commonly understood today, the precept is viewed primarily through the lens of the best evidence rule, embodied in Rule 1002 of the FRE, which is limited to documents.⁴⁰⁹ It provides that when the contents of a document are to be proven, an "original ... is required."⁴¹⁰ Underlying the rule is the idea that the original is always the best evidence of the content, which a fact-finder should have access to.

presented the quantum of proof required to show substantial similarity may be lower than when access is shown merely by a preponderance of the evidence); *Florentine Art Studio, Inc. v. Vedet K. Corp.*, 891 F. Supp. 532, 535 (C.D. Cal. 1995) (concluding that plaintiff "failed to prove [the] elements [of access and similarity] by a preponderance of the evidence").

406. For general accounts of the distinction between scalar and binary directives, see Kevin M. Clermont, *Rules, Standards, and Such*, 68 BUFF. L. REV. 751, 770 (2020) ("Binary propositions are those that are true or false ... [s]calar propositions can take intermediate values."); Larry Alexander, *Scalar Properties, Binary Judgments*, 25 J. APPLIED PHIL. 85 (2008).

407. See *supra* notes 146-50 and accompanying text.

408. See Dale A. Nance, *The Best Evidence Principle*, 73 IOWA L. REV. 227, 227 (1988).

409. FED. R. EVID. 1002.

410. *Id.*

Yet, as some scholars have convincingly shown, the principle underlying the rule is a fundamental axiom of all evidence law that a party has an obligation to present—and a court a duty to consider—the “best reasonably available evidence” on an issue when making a decision.⁴¹¹ Indeed, in this argument the nature of the adversarial process demands a greater enforcement of this principle, so as to ensure that parties’ strategic behavior does not interfere with a court’s ability to discern the truth.⁴¹²

Of course, determining what constitutes the “best” evidence in a situation is a heavily contextual determination, especially in light of the countervailing concern that some kinds of evidence might cause undue prejudice. All the same, this kind of a contextual inquiry allows a court to evaluate the idea of “best” not just in terms of the formal comparison of prejudice and probative value but also the types of burdens—evidentiary and otherwise—that parties routinely face when seeking to prove the existence of a fact. Indeed, it is precisely such a contextual determination that under the “best reasonably available evidence” principle that copyright law would stand to benefit from.⁴¹³

A controversial issue that arose in some recent copyright infringement cases involves the type of evidence a plaintiff should be able to rely on to prove infringement of a musical work.⁴¹⁴ Copyright law today draws an important distinction between a musical work, understood as the underlying composition, and a sound recording, which is a fixation of the music “sounds” in a tangible medium.⁴¹⁵ The wrinkle is, however, that while the Copyright Act of 1976 protects both categories of works independently, the preceding statute, the Act of 1909, protected only musical works. Plaintiffs who produced both musical compositions and sound recordings under the old statute are thus limited in their protection. The more troubling evidentiary question is, however, when plaintiffs who are limited in their protection to the underlying musical work seek to establish infringement by relying on the sound recording *as evidence* of the work at trial.

411. Nance, *supra* note 408, at 238.

412. *Id.* at 234-44.

413. *Id.* at 238.

414. *See, e.g.*, Skidmore v. Led Zeppelin, 905 F.3d 1116, 1132-33 (9th Cir. 2018) (en banc).

415. 17 U.S.C. § 102(a) (2022).

The distinction here should be obvious. When reliance is placed on the sound recording in such situations, it is not in an effort to gain protection for the sound recording. It is instead in an effort to offer the sound recording as evidence of the musical work rather than as the work in itself. Most courts to have considered the issue have formulaically examined the question of protectability under the statute and ruled that allowing such reliance would be too prejudicial to the defendant in light of the lack of protection for sound recordings.⁴¹⁶

Yet, this reasoning does not capture the import of the best evidence principle. As has been pointed out, in numerous situations of musical creativity, the sound recording is in fact the best available evidence of the musical work. This is so especially when the artist is not formally trained in musical notation and chooses to compose and record simultaneously. In these situations, categorically disallowing the introduction of the sound recording both disadvantages a segment of artists and deprives the court of the best evidence of the work *as created*. Again, a more appropriate approach would be to look beyond the formal categories of the 1909 Act, which is the usual basis for a court's assessment of prejudice on the question, and consider what would facilitate greater accuracy in the overall adjudicatory process, the core insight of the best evidence principle.

CONCLUSION

Over the course of the last century, copyright law has undoubtedly grown more complex and technical. The proliferation of new subject matter such as computer software, as well as the emergence of new technological means of creation and dissemination, have both been responsible for this reality. This burgeoning complexity has, in turn, forced many courts and scholars into treating the subject (of copyright) as a specialized domain with its own set of rules and principles. While this exceptionalism has facilitated greater expertise within the field, it has at the same time imposed blinders on courts' (and scholars') engagement with copyright doctrine, at times

416. Defendants' Memorandum of Law in Support of Their First Motion in Limine, *Griffin v. Sheeran*, No. 17-cv-5221, 2019 WL 2604571 (S.D.N.Y. May 21, 2019).

making them ignore the basic reality that copyright law adjudication draws on fundamental features of the overall legal system, including its procedural and evidentiary mechanisms.

The recent confusion over copyright law's inverse ratio rule can be seen as a direct consequence of this exceptionalism. The doctrine originated in an era when federal courts readily recognized the seamlessness between copyright adjudication and other forms of federal litigation, allowing them to draw on the basic ideas and principles of evidence to shape the process through which plaintiffs might prove copying as a requirement of the copyright infringement action. Recognizing the fundamentally inferential nature of circumstantial proof and the manner in which the probative values of individual pieces of evidence combine together in the construction of such proof, the rule emerged to simultaneously affirm and guide the basic subjectivity of the inferential process. It was never intended as a rigid mathematical formula but instead as a rough heuristic for courts to process the inferences that they were making during the process. And to this end, it drew on basic insights from the principles of circumstantial evidence that have long been deployed in innumerable other contexts.

As access and similarity developed as the principal points of inference for circumstantial proof of copying, the inverse ratio rule allowed courts to maintain the critical distinction between treating them as independent bases of inference and treating them as elements of the *prima facie* case. In allowing courts to use them as bases of inference, it also enabled them to overcome the rigidity and complexity of the standard of proof demanded of elements, which would have been fundamentally counterproductive to the inferential process. Unfortunately, in due course many courts—most notably, the Ninth Circuit—failed to appreciate the significance and analytical logic of this distinction. Notwithstanding that court's growing copyright docket, it has failed to grasp the core logic behind the inverse ratio rule—first by applying the rule to improper appropriation and not solely to factual copying, and most recently by abrogating the rule entirely. This process was accelerated and facilitated in no small measure by copyright scholars, who also failed to engage with ideas and principles from evidence law, and focused too narrowly on the working of copyright doctrine and its consequences. The process reached an unfortunate crescendo in the Ninth Circuit's

Skidmore case, where the court rather carelessly abrogated the rule in the mistaken belief that it was joining other courts around the country and reintroducing much needed coherence into the process of proving copying. Sadly, as we have shown, neither was true.

Even if abrogated by name in one circuit, the inverse ratio rule continues to operate as intended in other circuits—both by name and under other related designations—where it has proven to have none of the problems that its critics have attributed to it. To the contrary, in those jurisdictions it continues to allow courts to better integrate the insights of evidence law into copyright, much against the trend of copyright exceptionalism. Only time will tell whether such integration can buck the growing trend towards copyright exceptionalism. For now, the inverse ratio rule remains a reminder of the obvious benefits of integration.