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Copyright and the Creative Process

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Copyright is typically described as a mechanism for encouraging the production of creative works. On this view, copyright protection should be granted to genuinely creative works but denied to non-creative ones. Yet that is not how the law works. Instead, almost anything—from test answer sheets to instruction manuals to replicas of items in the public domain—is deemed creative and therefore eligible for copyright protection. This is the consequence of a century of copyright doctrine assuming that artistic creativity is incapable of measurement, unaffected by personal motivation, and incomprehensible to novices and experts alike. Recent neuroscientific research contradicts these assumptions. It turns out that creativity can be partially measured, that authorial intent is critical to creative production, and that expertise and creative output are highly correlated. If copyright law's goal is truly to promote creativity, it should define that foundational concept to accord with scientific fact.

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INTRODUCTION

What is copyright for? In contrast to some other areas of the law, there is overwhelming agreement on this question. Copyright protection is meant to foster creative expression.[1] Hence the settled doctrine that a work must be "creative" to be eligible for copyright protection.[2]

The consensus that creativity is copyright's *raison d'être* quickly disintegrates when the conversation turns to defining that concept. In 1991, the U.S. Supreme Court affirmed as a matter of constitutional law that copyrightable works must manifest some "creative spark," but it provided scant guidance on how to discern that ineffable glimmer, except to say that most works do possess it.[3] Lower courts have been unable or unwilling to fill in the details. Ignoring information that seems obviously germane to the creativity inquiry—authorial intent, the work's reception in the relevant artistic community, or the work's deviation from convention—courts effectively abandon the field altogether, crediting a defendant's actual or proposed reproduction of a work as a dispositive testament to its creativity.[4] Seeing the depths to which the creativity requirement has sunk, some call for abandoning it altogether.[5]

The main reason for the creativity criterion's impoverishment is a belief—indeed, a faith—in the almost magical quality of the creative

1 Dastar Corp. v. Twentieth Century Fox Film Corp., 539 U.S. 23, 37 (2003) (noting that copyright and patent laws were "designed to protect originality or creativity"); Eldred v. Ashcroft, 537 U.S. 186, 223 (2003) (Stevens, J., dissenting) (arguing that copyright law is "intended to encourage the creativity of 'Authors'" (quoting U.S. CONST. art. I, § 8, cl. 8)); Joseph P. Fishman, *Creating Around Copyright*, 128 HARV. L. REV. 1333, 1335 (2015) ("On the standard account, copyright protections exist primarily in order to promote creativity.").

2 *See* Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 346 (1991).

3 *See id.* at 345.

4 *E.g.*, Balt. Orioles, Inc. v. Major League Baseball Players Ass'n, 805 F.2d 663, 669 n.7 (7th Cir. 1986); *see* 1 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 2.01[B][1] (2019).

5 *See* Aaron X. Fellmeth, *Uncreative Intellectual Property Law*, 27 TEX. INTELL. PROP. L.J. 51, 55 (2019); Brian L. Frye, *Against Creativity*, 11 N.Y.U. J.L. & LIBERTY 426, 427–28 (2017); Dennis S. Karjala, *Copyright and Creativity*, 15 UCLA ENT. L. REV. 169, 171–72 (2008); Michael J. Madison, *Beyond Creativity: Copyright as Knowledge Law*, 12 VAND. J. ENT. & TECH. L. 817, 848 (2010).

process. So conceived, the creative process is wholly and necessarily subjective, impervious to description or measurement by objective criteria. A corollary position warns of aesthetic prejudice. Because there are no objective benchmarks available to keep them honest, judges and juries will lend an undesirable bias to any attempt to rigorously evaluate artistic creativity, unfairly favoring some kinds of artworks over others. As a result, creativity is mostly presumed rather than proven in copyright cases.

Until recently, psychology offered little evidence to shake the legal view that the creative process is unknowable. For a long time, the discipline ignored creativity altogether.[6] When psychologists turned to the subject in the mid-twentieth century, their method was usually to interview select creative individuals, most of whom (quite understandably) possessed limited ability to articulate the origins, stimuli, and processes of their own artistic production.[7]

This state of affairs has changed thanks to the techniques and tools of neuroscience. The last decade witnessed an explosion of neuroscientific research on creativity.[8] Inquiries into the biology of creative thought, which now represent a large share of all psychological studies of creativity,[9] bring new insights into the creative process, insights that clash with the uninformed guesses of a century's worth of copyright jurisprudence. This Article examines these new findings and takes seriously their implications for copyright law. Surveying an exciting and productive decade of relevant

6 Jack A. Chambers, *Beginning a Multidimensional Theory of Creativity*, 25 PSYCH. REPS. 779, 779 (1969) ("About the only thing agreed on [in the 1950s] was that creativity involved the development of something unique.").

7 Perhaps as a result, legal academics greeted attempts to leverage psychological research in the service of a more specific creativity requirement with skepticism. *See, e.g.*, Michael Steven Green, *Copyrighting Facts*, 78 IND. L.J. 919, 935 (2003) (criticizing the search for some "appropriate psychological element" in evaluating the creativity requirement); Eva E. Subotnik, *Originality Proxies: Toward a Theory of Copyright and Creativity*, 76 BROOK. L. REV. 1487, 1531 (2011) (doubting that courts should try to "dissect[] the internal processes of the creative mind"); Marc K. Temin, *The Irrelevance of Creativity:* Feist*'s Wrong Turn and the Scope of Copyright Protection for Factual Works*, 111 PA. ST. L. REV. 263, 279 (2006) (calling for an end "to fruitless discussions of the nature of . . . creativity"); Russ VerSteeg, *Rethinking Originality*, 34 WM. & MARY L. REV. 801, 839 (1993) ("An adequate neurological explanation [of creativity] is simply unavailable, given our present limited understanding of the physiology of the cerebral cortex.").

8 Mathias Benedek, Alexander P. Christensen, Andreas Fink & Roger E. Beaty, *Creativity Assessment in Neuroscience Research*, 13 PSYCH. AESTHETICS, CREATIVITY & ARTS 218, 219 (2019) (estimating that seventy percent of all articles in this burgeoning field have been published since 2010).

9 Rex E. Jung & Oshin Vartanian, *Introduction*, *in* THE CAMBRIDGE HANDBOOK OF THE NEUROSCIENCE OF CREATIVITY 1, 3 (Rex E. Jung & Oshin Vartanian eds., 2018) (calculating that in 2015 neuroscientific studies comprised fifteen percent of all psychological studies of creativity).

neuroscientific research, it advocates replacing entrenched legal misunderstandings with sounder and subtler descriptions of the creative process.

What the research shows is that creative activity has certain hallmarks—and that these hallmarks are disregarded in contemporary copyright law. Neuroscience confirms that creative works are the product of a particular process that involves lengthy planning, deliberation, and focus. Yet copyright law blinds itself to information on the creative *process*, judging creativity by exclusive reference to the final *product*—the allegedly creative work itself—and repeatedly insisting that even accidental and unconscious conduct can be creative. All available psychological evidence finds that artistic innovation demands a working knowledge of a relevant domain's prior art, but courts avoid comparing an artistic domain's extant works to the work at issue. Even though the science reveals that experts recognize creative breakthroughs in the moment and agree in their assessments of a work's creativity, expert testimony is considered so idiosyncratic as to be unreliable and unwelcome in copyright creativity determinations.

By enhancing our understanding of the creative process, neuroscience can offer guideposts for redefining copyright's creativity standard. It cannot provide a complete blueprint. Creative thought is too complex a cognitive activity to be fully elucidated by today's technologies for recording changes in blood flow and measuring fluctuations of electrical activity in the brain. Time and its passage place another limit on neuroscience's present utility to the law of copyright and creativity. Neuroscientists study creative behaviors as they happen in laboratory settings, but copyright disputes often involve projects completed in the distant past. It is impossible to use neural imaging to see what occurred in an author's mind years before she seeks to vindicate her intellectual property rights in court.[10] But the point is not to use neuroscientific evidence to decide individual cases; the point is to improve the doctrine governing those cases.

Even if neuroscience cannot be used to decide individual cases, it does offer valuable insights for restructuring the creativity requirement. For all the agreement around copyright's intended service to creative production, solid evidence of copyright law's incentive effects is notoriously hard to come by.[11] Neuroscience offers

10 *But see* Mark Bartholomew, *Neuromarks*, 103 MINN. L. REV. 521, 552–54 (2018) (discussing use of neural evidence in individual trademark cases).

11 *See* George L. Priest, *What Economists Can Tell Lawyers About Intellectual Property: Comment on Cheung*, *in* 8 RESEARCH IN LAW AND ECONOMICS: THE ECONOMICS OF PATENTS AND COPYRIGHTS 19, 21–23 (John Palmer & Richard O. Zerbe, Jr. eds., 1986); Wendy J. Gordon, *A Property Right in Self-Expression: Equality and Individualism in the Natural Law of*

lawmakers and legal theorists a promising alternative: redirect our attention to the mental processes that generate artistic output in the first place; then use our understanding of those processes to assess and revise the legal rules meant to foster creativity. This Article instantiates that alternative.

The Article begins by setting the current doctrinal scene. As Part I explains, creativity and independent creation are copyright law's two conditions for originality, described as the "*sine qua non* of copyright."[12] Yet, as interpreted by the courts, the creativity condition has become vanishingly small. This was not always the case. Not unlike the exacting creativity requirement currently applied in the related field of patent law, copyright's creativity requirement once had some real teeth.[13] It lost that bite through neither accident nor neglect, but through the force of three assumptions about the creative process grounded more in ideology than in fact. The first of these assumptions holds that authorial intent is irrelevant because creativity is both an inherently personal process, resistant to external appraisal, and a quality that can manifest without personal volition. According to the second assumption, artistry, unlike the inventive output regulated by patent law, does not rely on domain-specific expertise and, therefore, should not be compared against previous work in the same domain. Finally, the third assumption maintains that attempts to evaluate creativity can only enact the evaluator's personal taste, leading courts to reject expert evidence of an author's relationship to her particular artistic domain. The end result of these assumptions is a creativity filter that allows almost everything to pass through.

Part II shows how the major assumptions of copyright's creativity jurisprudence have been upended by the latest evidence on how the creative process actually works. Psychologists posit that creativity occurs in systems involving not only (1) the individual artist, but (2) the techniques and conventions of the relevant domain (e.g., hip-hop music or comic books), as well as (3) the reactions of that domain's gatekeepers and trusted authorities. Neuroscience has uncovered important dimensions of these three essential variables: individual, domain, and field. For the individual author, we know that intent is key. Rather than being irrelevant, motivation is highly correlated with creative success: to generate something creative, you need to want to generate something creative. With respect to domain, understanding

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Intellectual Property, 102 YALE L.J. 1533, 1573–76 (1993); Mark A. Lemley, *Faith-Based Intellectual Property*, 62 UCLA L. REV. 1328, 1334–35 (2015).

12 Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 345 (1991).

13 *See* Oren Bracha, *The Ideology of Authorship Revisited: Authors, Markets, and Liberal Values in Early American Copyright*, 118 YALE L.J. 186, 204 (2008); Joseph P. Fishman, *Originality's Other Path*, 109 CALIF. L. REV. 861, 863–65 (2021).

what came before is critical because creativity depends on evaluating new concepts against a benchmark of existing standards. Lastly, as to field, experts offer more than their personal tastes; they can consistently detect and appreciate creative activity in a way that individuals with less experience in the relevant domain cannot.

Part III turns from the descriptive to the normative, detailing how the creativity requirement should be recalibrated in light of recent neuroscientific discoveries. A handful of legal scholars argue for the requirement's complete abolishment, but a meaningful creativity standard supplies critical benefits. It can help fulfill copyright's constitutional mission of furthering innovation in science and the arts as well as improve the structure and sequencing of judicial decision making in copyright adjudications. To realize these benefits, however, courts' application of the creativity requirement must change. Three doctrinal reforms—investigating artistic motivation, considering prior art, and receiving expert testimony as to a work's departures from what came before—are proposed.

I. CREATIVITY IN COPYRIGHT LAW

The creativity requirement represents a massive paradox at the heart of copyright law. On the one hand, statements as to the centrality of creativity to copyright protection are omnipresent.[14] According to the U.S. Supreme Court, the "ultimate aim" of copyright law is "to stimulate artistic creativity for the general public good."[15] Hearing this message, lower courts repeatedly describe the promotion of creativity as copyright law's guiding purpose.[16] In alignment with the courts, most theoretical examinations of copyright contend that its primary mission is to promote creativity.[17] To this end, the law requires every

14 *See, e.g.*, Warner Bros. Inc. v. ABC, Inc., 720 F.2d 231, 240 (2d Cir. 1983) ("It is a fundamental objective of the copyright law to foster creativity."); Abraham Drassinower, *A Note on Incentives, Rights, and the Public Domain in Copyright Law*, 86 NOTRE DAME L. REV. 1869, 1869 (2011) ("The idea that the purpose of copyright law is to provide incentives for creativity is among the most fundamental and most established ideas in North American copyright discourse.").

15 Twentieth Century Music Corp. v. Aiken, 422 U.S. 151, 156 (1975).

16 *See* Kelly v. Arriba Soft Corp., 336 F.3d 811, 820 (9th Cir. 2003) ("The Copyright Act was intended to promote creativity, thereby benefitting the artist and the public alike."); SmithKline Beecham Consumer Healthcare, L.P. v. Watson Pharms., Inc., 211 F.3d 21, 29 (2d Cir. 2000) (stating that "[t]he pertinent purpose of the copyright laws" is "to encourage the production of creative works by according authors a property right in their works").

17 *See* Shyamkrishna Balganesh, *Privative Copyright*, 73 VAND. L. REV. 1, 2 (2020) ("[C]ourts, scholars, and legislators identify copyright's primary purpose as the inducement of creativity."); Julie E. Cohen, *Creativity and Culture in Copyright Theory*, 40 U.C. DAVIS L. REV. 1151, 1192 (2007) ("No one wants to be against creativity, and if copyright equals creativity then no one wants to be against copyright.").

copyrightable work to be "original," and every work must demonstrate creativity in order to be considered original.[18]

On the other hand, for all its supposed importance, the creativity requirement is a paper tiger. To say that the creativity requirement is modest would be an understatement. In officially proclaiming a creativity threshold for copyright protection, the Supreme Court only announced that the work must "entail a minimal degree of creativity."[19] "To be sure," the Court went on to note, "the requisite level of creativity is extremely low; even a slight amount will suffice. The vast majority of works make the grade quite easily, as they possess some creative spark, 'no matter how crude, humble or obvious' it might be."[20] The creativity requirement is rarely used to deny a plaintiff's claim of copyright infringement.[21]

Why has the creativity requirement fallen into this paradox? Why not raise the creativity bar, as some legal scholars have suggested, so that it is doing work to actually incentivize authors?[22] Alternatively, if the current creativity requirement does little to no work, why not jettison it altogether?[23]

The reasons why these paths to resolving the paradox have not been taken have to do with judicial understandings of the nature of creativity itself. Judges believe artistic creativity is incapable of measurement. Part of this insistence on creativity's ineffable nature stems from an assumption that the creative process is necessarily subjective, preventing efforts to measure expressive attempts against some kind of external benchmark.[24] Relatedly, there is a belief that moments of artistic ideation occur suddenly and often subconsciously, rendering questions of motivation or intent inapplicable to the creativity calculus.[25]

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18 Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 345 (1991). The other requirement of originality is that the work must be independently created by the author, i.e., not simply copied from other works. *Id.*

19 *Id.* at 348.

20 *Id.* at 345 (quoting 1 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 1.08[C][1] (2019)).

21 *See infra* Section I.A.

22 *See* Jeffrey L. Harrison, *Rationalizing the Allocative/Distributive Relationship in Copyright*, 32 HOFSTRA L. REV. 853, 867–79 (2004); Joseph Scott Miller, *Hoisting Originality*, 31 CARDOZO L. REV. 451, 485–94 (2009); Gideon Parchomovsky & Alex Stein, *Originality*, 95 VA. L. REV. 1505, 1523–42 (2009); *see also* Roberta Rosenthal Kwall, *Originality in Context*, 44 HOUS. L. REV. 871, 884 (2007) (recommending a heightened creativity standard for works to earn special moral rights protections).

23 *See* sources cited *supra* note 5.

24 *See infra* Section I.C.

25 *See infra* Section I.B.

Despite these beliefs, judges cannot abandon the creativity requirement altogether. According to the Supreme Court, the text of the Constitution mandates some form of creativity prerequisite for copyright protection.[26] In addition, copyright's take on creativity is sometimes lauded for its democratic posture. By maintaining a minimal eligibility threshold that equates mere personality with creativity, copyright law manages to avoid charges of elitism and celebrate everyone's creative potential.[27]

The end result of these suppositions about the creative process is a vague, all-access definition of creativity that does no work when it comes to the incentives of authors and artists. The rest of this Part describes the current operation of the creativity requirement as well as the assumptions behind that requirement in more detail. Part II examines how these assumptions actually match the latest neuroscientific discoveries involving creative thought.

A. "Substantively Impotent" Test

Ill-defined, the creativity requirement for copyright protection remains inchoate, anchored only by words and phrases describing just how skimpy this requirement is. In announcing a formal creativity requirement in 1991, the Supreme Court used terms like "minimal," "low," "slight," and "modicum."[28] According to another court, "just a scintilla of creativity" will do.[29]

The creativity requirement is rarely used to deny a plaintiff's claim of copyright infringement. Courts do their best to avoid any scrutiny of the requirement, hastily determining that the bare minimum of needed imagination exists and then moving on to other legal issues. Rather than putting any teeth into the requirement, judges award copyright protection to works that are entirely conventional,[30] as well as ones that are completely accidental.[31] It is hard to argue to that the

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26 Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 363 (1991) ("As a constitutional matter, copyright protects only those constituent elements of a work that possess more than a *de minimis* quantum of creativity.").

27 *See infra* Section I.D.

28 *Feist*, 499 U.S. at 345–46, 362.

29 *See, e.g.*, Luck's Music Libr., Inc. v. Ashcroft, 321 F. Supp. 2d 107, 118 (D.D.C. 2004) (citing *Feist*, 499 U.S. at 346), *aff'd*, 407 F.3d 1262 (D.C. Cir. 2005).

30 One court reversed a lower court for denying copyright in a set of management training workbooks that the lower court considered "aggressively vapid" and filled with only "platitudinal business speak." *See* Situation Mgmt. Sys. v. ASP Consulting Grp., 535 F. Supp. 2d 231, 239, 241 (D. Mass. 2008), *vacated and remanded sub nom.* Situation Mgmt. Sys., Inc. v. ASP. Consulting LLC, 560 F.3d 53 (1st Cir. 2009).

31 *See* Alfred Bell & Co. v. Catalda Fine Arts, Inc., 191 F.2d 99, 105 (2d Cir. 1951) ("Having hit upon . . . a variation unintentionally, the 'author' may adopt it as his and copyright it."); Time Inc. v. Bernard Geis Assocs., 293 F. Supp. 130, 143 (S.D.N.Y. 1968)

requirement is furthering copyright law's ultimate goal of spurring artistic creativity when its application in actual cases represents the kind of test that everyone passes. Scholars describe the creativity requirement as "substantively impotent,"[32] "uncertain and confused,"[33] and playing "little or no useful role in copyright analysis."[34]

Courts go to great lengths to avoid denying copyright protection to a work for lack of creativity. Less than inspired song lyrics, like repetition of the phrase "uh-oh," have been considered sufficiently creative.[35] Even when elements of a work are identical to another work, judges take pains to downplay glaring similarities that augur against creativity. When pop diva Mariah Carey was accused of infringing another artist's song, Carey maintained the other artist's song was insufficiently creative to enjoy copyright protection.[36] In support, she noted that a seven-note sequence in the first measure of the song was identical to the first measure of the folk song "For He's a Jolly Good Fellow."[37] The Ninth Circuit rejected Carey's argument, reasoning that the first measure could be creative in the musical genre of R&B even if it was uncreative in folk music.[38]

This is not to say that the creativity requirement can never influence the outcome of a copyright case. There is a certain zone where someone's attempt to create is not creative enough to warrant copyright protection—otherwise the Supreme Court's pronouncement of a creativity requirement would be fatuous. But this zone only occupies the "narrowest and most obvious limits."[39] Most famously, in the case of *Feist Publications, Inc. v. Rural Telephone Service Co.*, the Supreme Court denied copyright protection for a telephone directory listing names, addresses, and phone numbers by alphabetical order.[40]

(deeming recording of Kennedy assassination sufficiently creative even if there was no indication that the camera operator planned for or anticipated that his camera would record the images that it did).

32 Madison, *supra* note 5, at 830.

33 Dale P. Olson, *Copyright Originality*, 48 MO. L. REV. 29, 31 (1983).

34 Karjala, *supra* note 5, at 171. For an argument that even if the minimalist creativity requirement does little to actually restrict what can be copyrighted, it communicates a salutary respect for the personal nature of artistic expression, see Jeanne C. Fromer, *Expressive Incentives in Intellectual Property*, 98 VA. L. REV. 1745, 1807–10 (2012).

35 Santrayll v. Burrell, 39 U.S.P.Q.2d 1052, 1054 (S.D.N.Y. 1996); *see also* Tin Pan Apple Inc. v. Miller Brewing Co., 30 U.S.P.Q.2d 1791, 1794 (S.D.N.Y. 1994) (finding rap song lyrics "Hugga-Hugga" and "Brrr" sufficiently creative).

36 Swirsky v. Carey, 376 F.3d 841, 851 (9th Cir. 2004).

37 *Id.*

38 *See id.* at 850.

39 ABS Ent., Inc. v. CBS Corp., 908 F.3d 405, 422 (9th Cir. 2018) (quoting Bleistein v. Donaldson Lithographing Co., 188 U.S. 239, 251 (1903)).

40 Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 363 (1991).

"[T]here is nothing remotely creative about arranging names alphabetically in a white pages directory," the Court explained.[41] Copyright has also been denied for lack of creativity for random number generation,[42] a single sentence posted to a listserv,[43] and a chart listing horse racing statistics in a functional grid.[44]

Yet such cases are the exceptions that prove the rule. Only in situations where it is difficult to discern any degree of choice or selection in the plaintiff's work is there the possibility for a judgment that creativity is lacking.[45] In *Feist*, the Court deemed the alphabetical ordering of names insufficiently creative because such ordering was "universally observed," "so commonplace that it has come to be expected as a matter of course," and "practically inevitable."[46] Likewise, the terse listserv post asking about an accounting firm's billing practices and the grid listing dates and betting amounts for horse races arguably had few ways to be alternately composed.[47]

Creativity surely means more than making a choice between two options. In the popular imagination, creativity refers to acts of extraordinary talent.[48] For their part, courts use phrases like "creative judgment[],"[49] "intellectual conception,"[50] "intellectual invention,"[51]

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41 *Id.*

42 Mitel, Inc. v. Iqtel, Inc., 124 F.3d 1366, 1374 (10th Cir. 1997).

43 Stern v. Does, 978 F. Supp. 2d 1031, 1042 (C.D. Cal. 2011), *aff'd sub nom.* Stern v. Weinstein, 512 F. App'x 701 (9th Cir. 2013).

44 Victor Lalli Enters., Inc. v. Big Red Apple, Inc., 936 F.2d 671, 673 (2d Cir. 1991).

45 *See* 2 WILLIAM F. PATRY, PATRY ON COPYRIGHT § 3:39 (2021), Westlaw PATRYCOPY; *compare* Experian Info. Sols., Inc. v. Nationwide Mktg. Servs. Inc., 893 F.3d 1176, 1185 (9th Cir. 2018) (holding compilation of names and addresses in commercial database sufficiently creative because "Experian's employees choose from multiple and sometimes conflicting sources, and they use their judgment in selecting which names and addresses to include in the database"), *with* ATC Distrib. Grp., Inc. v. Whatever It Takes Transmissions & Parts, Inc., 402 F.3d 700, 707 (6th Cir. 2005) (denying copyright for auto parts numbers when "there is only one reasonable way to express the underlying idea").

46 *Feist*, 499 U.S. at 363.

47 *Stern*, 978 F. Supp. 2d at 1042–43 (rejecting poster's argument that post could have been written in different ways); *Victor Lalli Enters.*, 936 F.2d at 673 ("[H]e arranges factual data according to 'purely functional grids that offer no opportunity for variation.'"). Copyright was denied for random number generation because it was "arbitrary," i.e., it involved no selection at all. *See Mitel*, 124 F.3d at 1373–74.

48 Phillip McIntyre, *Creativity and Cultural Production: A Study of Contemporary Western Popular Music Songwriting*, 20 CREATIVITY RSCH. J. 40, 40 (2008). Psychologists largely agree on a similar definition of creativity as requiring something that is new and appropriate to the circumstances. *See* Dean Keith Simonton, *Taking the U.S. Patent Office Criteria Seriously: A Quantitative Three-Criterion Creativity Definition and Its Implications*, 24 CREATIVITY RSCH. J. 97, 97 (2012).

49 Rogers v. Koons, 960 F.2d 301, 304 (2d Cir. 1992).

50 Burrow-Giles Lithographic Co. v. Sarony, 111 U.S. 53, 59 (1884).

51 *Id.* at 60.

"true artistic skill,"[52] and "intellectual production"[53] to describe creativity. At the same time, however, they are extremely generous in considering works that are the product of very few intellectual choices as creative. Seemingly uncreative works—from an exact miniature copy of an existing sculpture[54] to a standardized test answer sheet[55] to instruction manuals[56] to the use of arrows and placement of text in a catalog to highlight particular products[57]—are routinely deemed sufficiently creative.

Moreover, once one closely examines the few cases where the quantum of creativity has been deemed insufficient, it becomes clear that many of these cases rely heavily on a different part of copyright doctrine: the idea/expression dichotomy. Copyright law prohibits the protection of ideas; only the expression of those ideas is subject to copyright.[58] If an idea can be expressed in only one or just a few ways, then even the expression may not be copyrighted.[59]

Cases involving words and short phrases illustrate how it is often the dichotomy and not the creativity requirement that is relied on to deny copyright protection. It is black-letter law that copyright in individual words and short phrases is prohibited.[60] Sometimes the prohibition is justified by reference to the creativity requirement. For example, an attempt to assert copyright in envelopes printed with phrases like "TELEGRAM," "GIFT CHECK," and "PRIORITY MESSAGE" was rebuffed for lacking "the minimal degree of creativity necessary."[61] Similar reasoning prevented copyright in the listserv post mentioned above.[62] But a closer look reveals that, despite the mention of creativity, these cases were actually decided on the grounds that the

52 L. Batlin & Son, Inc. v. Snyder, 536 F.2d 486, 491 (2d Cir. 1976).

53 Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 347 (1991) (quoting *Burrow-Giles*, 111 U.S. at 60).

54 Alva Studios, Inc. v. Winninger, 177 F. Supp. 265, 267 (S.D.N.Y. 1959).

55 Harcourt, Brace & World, Inc. v. Graphic Controls Corp., 329 F. Supp. 517, 523–24 (S.D.N.Y. 1971).

56 Eagle Servs. Corp. v. H2O Indus. Servs., Inc., 532 F.3d 620, 622–23 (7th Cir. 2008).

57 Decker Inc. v. G & N Equip. Co., 438 F. Supp. 2d 734, 743 (E.D. Mich. 2006).

58 17 U.S.C. § 102(b) (2018) ("In no case does copyright protection for an original work of authorship extend to any idea . . . ."); *see* Baker v. Selden, 101 U.S. 99, 102 (1879).

59 *See Baker*, 101 U.S. at 103.

60 37 C.F.R. § 202.1(a) (2020).

61 Magic Mktg., Inc. v. Mailing Servs. of Pittsburgh, Inc., 634 F. Supp. 769, 772 (W.D. Pa. 1986).

62 Stern v. Does, 978 F. Supp. 2d 1031, 1042 (C.D. Cal. 2011) (stating that the listserv post "displays no creativity whatsoever"), *aff'd sub nom.* Stern v. Weinstein, 512 F. App'x 701 (9th Cir. 2013).

brief expressions at issue could not be separated from the idea they conveyed.[63]

The point here is that a large portion of the few cases denying protection for lack of creativity can be more adequately described as cases invoking the bar against copyright in ideas.[64] This leaves a very small number of cases that truly withhold copyright protection due to lack of creativity, testifying to the modern creativity requirement's toothless nature. If you can only find a handful of cases denying copyright protection for lack of creativity despite the existence of some sort of creativity requirement for over a century,[65] and many of those cases actually depend on an area of copyright doctrine separate from the creativity requirement, then the creativity requirement is hardly worth describing as a requirement at all.

B. Art and the Subjective

Courts have adopted this minimalist conception of the creativity requirement out of a belief that creativity is impossible to measure.[66]

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63 *See id.* ("Plaintiff merely requested factual information: whether anyone on the listserv had a bad experience with a certain forensic accounting firm—and one employee in particular—regarding overbilling and the churning of client files. His single sentence conveys precisely this idea and no more. As Plaintiff's expression of his idea is indistinguishable from the idea itself, it is not entitled to copyright protection."); *Magic Mktg.*, 634 F. Supp. at 772 ("[C]lichéd language and expressions communicating an idea which may only be conveyed in a more or less stereotyped manner are not copyrightable."). At other times, courts explicitly cite the idea/expression dichotomy and not the creativity requirement to deny protection to short phrases. *See, e.g.*, Hutchins v. Zoll Med. Corp., 492 F.3d 1377, 1384–85 (Fed. Cir. 2007); N.Y. Mercantile Exch., Inc. v. IntercontinentalExchange, Inc., 389 F. Supp. 2d 527, 541–43 (S.D.N.Y. 2005), *aff'd*, 497 F.3d 109 (2d Cir. 2007); Perma Greetings, Inc. v. Russ Berrie & Co., 598 F. Supp. 445, 448–49 (E.D. Mo. 1984).

64 Equating brevity with a lack of creativity does not always make sense. It can take real intellectual conception to come up with a catchy headline or poignant sentence. JANE C. GINSBURG & ROBERT A. GORMAN, COPYRIGHT LAW 21 (2012) ("A short phrase may in fact be very creative . . . ."); Justin Hughes, *Size Matters (or Should) in Copyright Law*, 74 FORDHAM L. REV. 575, 578 (2005) ("[I]t is fundamentally disingenuous to use the originality requirement as the doctrinal bar against copyright protection of titles, names, and short phrases. Many very small expressions positively leap over the low threshold of originality we have established in copyright law.").

65 *See infra* note 71.

66 Copyright scholarship offers an additional justification for the minimal nature of the creativity requirement. Paul Goldstein argues that copyright's goal is to produce "abundant information," which makes a restrictive creativity requirement undesirable. PAUL GOLDSTEIN, GOLDSTEIN ON COPYRIGHT § 2.2.1.1 (3d ed. 2021), Westlaw GOLDCOPY. He contrasts copyright's low creativity threshold with patent law's stricter eligibility requirements, which are geared to efficiency and innovation as opposed to sheer abundance. *Id.* It is unclear, however, why progress should be evaluated quantitatively for artistic works and qualitatively for scientific works. There is such a thing as diminishing

If the creative process is unavoidably subjective, understandable only to the artist herself and perhaps not even to her, then the courts should avoid tying the creativity requirement to evidence of authorial intention. Instead of interrogating a question for which there is no probative evidence, courts should simply presume creativity in all but the rarest of cases.

This view is best represented by Oliver Wendell Holmes's influential majority opinion in the case of *Bleistein v. Donaldson Lithographing Co.*[67] The 1903 case, which involved the copyrightability of poster art advertising a traveling circus,[68] sets an extremely low bar for satisfying the originality requirement and an extremely generous view of human creativity. As described by Justice Holmes, the creative process is natural, inevitable, and found in everyone: "Personality always contains something unique. It expresses its singularity even in handwriting, and a very modest grade of art has in it something irreducible, which is one man's alone."[69]

This is a far different description of creative thought than the one in the popular imagination. Most people consider something creative by virtue of its statistical infrequency.[70] Yet Justice Holmes rejected the popular definition for the courts, at least in part, because creativity is so difficult to evaluate. His description of creativity as inherently personal signaled a belief that creativity is not susceptible to outside measurement. Because artistic works cannot be judged in any objective fashion, copyright law had to impose a subjective standard of originality.[71]

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returns from high numbers of expressive works. *See* MARTIN SKLADANY, BIG COPYRIGHT VERSUS THE PEOPLE 3 (2018). For more on the constitutional and prudential concerns with the quantitative view, see *infra* subsection III.A.1.

67 188 U.S. 239 (1903).

68 *Id.* at 248.

69 *Id.* at 250.

70 *See* Naama Mayseless, Ayelet Eran & Simone G. Shamay-Tsoory, *Generating Original Ideas: The Neural Underpinning of Originality*, 116 NEUROIMAGE 232, 232 (2015).

71 With its assertion that almost any work that was not an identical copy of another was deserving of copyright protection, *Bleistein* marked a departure from previous cases evaluating copyrightability. Earlier decisions had already staked out an originality requirement, *see* Diane Leenheer Zimmerman, *The Story of* Bleistein v. Donaldson Lithographic Company: *Originality as a Vehicle for Copyright Inclusivity*, *in* INTELLECTUAL PROPERTY STORIES 77, 96 (Jane C. Ginsburg & Rochelle Cooper Dreyfuss eds., 2006) ("Originality as a constitutional requirement for copyright was not born in *Bleistein*."), but this requirement demanded some ingenuity on the part of the author. A decade earlier, before Justice Holmes's arrival, the Supreme Court denied copyright to product labels, explaining that a work had to be "founded in the creative powers of the mind" to enjoy protection. Higgins v. Keuffel, 140 U.S. 428, 431 (1891) (quoting Trade-Mark Cases, 100 U.S. 82, 94 (1879)). Likewise, lower courts in this earlier era required something more for the originality requirement than the "personality" found in mere handwriting. *E.g.*,

Bleistein and its progeny insist that creativity is subjective. One might assume that this stance would have led courts to examine the artist's own mindset for evidence of creativity. Even if the court's measurement of a work's creativity against some objective scale is improper, consideration of the artist's own subjective beliefs during the creative process might help provide at least some data for the creativity assessment courts must engage in under *Feist*. If someone sets out to be creative, maybe it is more likely that they will succeed in being creative.

We see such analyses in other legal regimes. Scrutiny of mental state is a central component of many if not most areas of the law, from determining mens rea for different crimes to looking for the presence or absence of a particular state of mind in tort law (e.g., actual malice in a defamation case). In trademark law, consideration of the defendant's intent helps determine the central issue in the infringement analysis: likelihood of confusion. Even though the defendant's mental state seems somewhat orthogonal to the main issue of whether consumers are likely to be confused by the defendant's activities, courts reason that evidence of a desire to confuse correlates strongly enough with success at confusing people to make such evidence highly probative.[72] Several areas of copyright law, outside of the evaluation of creativity, take pains to scrutinize the motivations of the parties.[73]

Despite all of these areas of willingness to consider evidence of mental state, copyright doctrine insists that any inquiry into the

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Yuengling v. Schile, 12 F. 97, 100 (C.C.S.D.N.Y. 1882) (granting copyright in a beer advertisement because the work had "obvious artistic qualities" and was "a work of the imagination"); *see also* Bracha, *supra* note 13, at 204 (describing a "strand of originality cases" in the 1800s that "not only recognized an originality requirement, but also showed willingness to fill it with meaningful content"). *Bleistein* rejected these earlier precedents, shifting the originality requirement from an active gatekeeper for what was eligible for copyright to a porous filter that catches almost nothing in its net.

72 *See* 4 J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 23:124 (5th ed. 2021), Westlaw MCCARTHY ("[I]t is not often that a business person intentionally sets out to divert sales from a competitor by confusing customers, yet is so inept that it fails to achieve its goal.").

73 A finding that a defendant intended a design feature to avoid an infringement claim is construed as strong evidence that two works are not substantially similar. *See, e.g.*, Past Pluto Prods. Corp. v. Dana, 627 F. Supp. 1435, 1444 (S.D.N.Y. 1986). A defendant may be accused of bad faith and, hence, undeserving of copyright's fair use defense, if he intended to deprive the plaintiff of the value of her copyright. *See, e.g.*, NXIVM Corp. v. Ross Inst., 364 F.3d 471, 478–79 (2d Cir. 2004). The plaintiff's mental state can also be relevant for determining ownership of a copyrightable work. To be joint authors, the parties must have intended to be joint authors. *See, e.g.*, Foster v. Lee, 93 F. Supp. 3d 223, 228 (S.D.N.Y. 2015) ("[T]he authors must 'entertain in their minds the concept of joint authorship.'" (quoting Childress v. Taylor, 945 F.2d 500, 508 (2d Cir. 1991))).

motivations of an author is improper when evaluating originality.[74] Objections to such inquiries are longstanding. In 1945, Judge Jerome Frank sounded the alarm against using a would-be author's intentions to determine if his changes to an existing work were sufficient to be considered original. Like Justice Holmes, Judge Frank's objection stemmed from concerns over the inability of outsiders to understand the creative process. "It is not easy to ascertain what is intended and what [is] inadvertent in the work of genius," he explained.[75] "That a man is color-blind may make him a master of black and white art; a painter's unique distortions, hailed as a sign of his genius, may be due to defective muscles."[76]

Six years later, Judge Frank reaffirmed his position in the case of *Alfred Bell & Co. v. Catalda Fine Arts, Inc.*[77] In that case, the plaintiff asserted copyright in mezzotint engravings of paintings from the late eighteenth and early nineteenth centuries.[78] Mezzotinting involves using a roughened metal plate to make a print of another work.[79] Judge Frank deemed the engraved reproductions copyrightable, explaining that originality "means little more than a prohibition of actual copying."[80] Even though the plaintiff's avowed goal was to reproduce the original paintings as accurately as possible, because the mezzotinting process could not produce perfect replicas, the plaintiff could not be accused of "actual copying."[81] The fact that the subtle changes and imperfections in the mezzotinted works the plaintiff sought to protect were unintentional did not matter to Judge Frank. "[E]ven if their substantial departures from the paintings were inadvertent, the copyrights would be valid," he explained.[82] Judge Frank even speculated that mistakes made when translating a literary work from one language to another would similarly be eligible for copyright protection.[83]

Judge Frank's call to ignore consideration of artist motivations echoes throughout more modern cases. In a case involving

74 *See* MARSHALL A. LEAFFER, UNDERSTANDING COPYRIGHT LAW § 2.06, at 63 (6th ed. 2014) ("[S]o long as the work contains the required original elements, courts will not look to the intended purpose of the work or the audience to whom it is directed.").

75 Chamberlin v. Uris Sales Corp., 150 F.2d 512, 513 n.4 (2d Cir. 1945).

76 *Id.*

77 191 F.2d 99 (2d Cir. 1951).

78 Alfred Bell & Co. v. Catalda Fine Arts, 74 F. Supp. 973, 974–75 (S.D.N.Y. 1947), *aff'd*, 191 F.2d 99 (2d Cir. 1951).

79 *Id.* at 975.

80 *Alfred Bell & Co.*, 191 F.2d at 103 (quoting Hoague-Sprague Corp. v. Frank C. Meyer Co., 31 F.2d 583, 586 (E.D.N.Y. 1929)).

81 *Id.* at 104–05.

82 *Id.* at 105.

83 *Id.* at 105 n.25.

promotional photographs taken of copyrighted toys, the holder of copyrights in the toys maintained that because the photographer intended the photos for the "'purely utilitarian function' of identifying products for consumers," the photographs were ineligible for copyright protection.[84] The court rejected this argument, explaining that the "purpose of the photographs" was irrelevant to the originality analysis.[85] For another court analyzing the copyrightability of photographs of automobile transmission parts for a catalog, it did not matter how the plaintiff thought about its design process or that it embarked on its catalog project with no creative conception in mind.[86] This discounting of the importance of artistic mindset can be found in the frequent incantation in modern copyright decisions that it is the ultimate product that matters for the creativity requirement, not the process that led to that product.[87]

The assumption that creativity is detached from motivation reaches its apotheosis in judicial discussion of works that are the

84 *See* Schrock v. Learning Curve Int'l, Inc., 586 F.3d 513, 520 (7th Cir. 2009) (quoting Brief for Appellee at 37, *Schrock*, 586 F.3d 513 (No. 08-1296)).

85 *Id.* (citing Bleistein v. Donaldson Lithographing Co., 188 U.S. 239, 251–52 (1903); SHL Imaging, Inc. v. Artisan House, Inc., 117 F. Supp. 2d 301, 311 (S.D.N.Y. 2000)); *see also* FragranceNet.com, Inc. v. FragranceX.com, Inc., 679 F. Supp. 2d 312, 324 n.4 (E.D.N.Y. 2010) (citing *Bleistein*, 188 U.S. at 251) (noting that commercial motivation for creation of images "has no bearing on their copyrightability").

86 *See* Whatever It Takes Transmission & Parts, Inc. v. Cap. Core, Inc., No. 2:10-CV-72, 2013 WL 12178585, at *7 (S.D. Ohio Mar. 22, 2013). Examinations of authorial intent have not been favored by scholars discussing the creativity requirement either. Some reason that because copyright infringement is a strict liability offense, authorial intentions should be irrelevant in determining originality. *See* Margot E. Kaminski & Guy A. Rub, *Copyright's Framing Problem*, 64 UCLA L. REV. 1102, 1161–62 (2017) ("It seems inconsistent with existing copyright law to place significant weight on intent during creation."); Jessica Litman, *The Public Domain*, 39 EMORY L.J. 965, 1001 (1990); Russ VerSteeg, *Intent, Originality, Creativity and Joint Authorship*, 68 BROOK. L. REV. 123, 132–33 (2002) (arguing that intent of author should not be dispositive in determining originality).

87 ABS Ent., Inc. v. CBS Corp., 908 F.3d 405, 419 (9th Cir. 2018) ("[T]he process used to create the derivative work is seldom informative of originality in the copyright sense."); Meshwerks, Inc. v. Toyota Motor Sales U.S.A., Inc., 528 F.3d 1258, 1268 (10th Cir. 2008) ("[I]n assessing the originality of a work for which copyright protection is sought, we look only at the final *product*, not the process . . . ."); Situation Mgmt. Sys. v. ASP Consulting Grp., 535 F. Supp. 2d 231, 241 (D. Mass. 2008) ("That a particular design was the product of a creative choice does not render the design copyrightable; rather, the focus of the inquiry remains whether the ultimate product of that choice is entitled to protection."), *vacated and remanded on other grounds sub nom.* Situation Mgmt. Sys., Inc. v. ASP. Consulting LLC, 560 F.3d 53 (1st Cir. 2009); *see also* Cruz v. Cox Media Grp., 444 F. Supp. 3d 457, 465–66 (E.D.N.Y. 2020) (suggesting that authorial purpose is irrelevant in photography cases); Roberta Rosenthal Kwall, *Inspiration and Innovation: The Intrinsic Dimension of the Artistic Soul*, 81 NOTRE DAME L. REV. 1945, 2012 (2006) ("Historically, the discourse on authors' rights in the United States has emphasized the externalized product of creativity at the expense of the underlying process.").

product of accident. There would seem to be no need to grant copyright protection to accidental creations under the incentive theory. After all, an author or artist who creates inadvertently cannot be said to have been incentivized by the law. Given that copyright protection imposes costs on downstream actors by blocking them from using someone else's copyrighted materials, a strong argument can be made for excluding accidental creations from the benefits of copyright protection.

Nevertheless, the law is quite clear that accidental works of art not only satisfy the creativity requirement, but they receive just as much protection and benefit as works that were the conscious products of artistic genius. In *Alfred Bell*, Judge Frank shared a story from the ancient Greek philosopher Plutarch. According to the story, "A painter, enraged because he could not depict the foam that filled a horse's mouth from champing at the bit, threw a sponge at his painting; the sponge splashed against the wall—and achieved the desired result."[88] The implication of the story seems to be that artistic products of accident are just as deserving of copyright as any other work eligible for copyright protection. In accord, courts today routinely mention that copyright protection applies to accidental steps and unconscious choices.[89] As the leading copyright treatise explains, "The independent effort that constitutes originality may be inadvertent and still satisfy the requirements of copyright."[90]

C. Creativity Without Context

At the same time that the creativity requirement eschews subjective inquiry into authorial motives, it also refuses to objectively scrutinize the author's creative capabilities. Courts rarely examine what came before in the relevant artistic arena to probe a work's innovative force. Instead, only the work at issue is scrutinized with little to no attention to its predecessors. Just as the mantra of "product, not process" allows courts to ignore evidence of artist motivation (or lack

88 *Alfred Bell & Co.*, 191 F.2d at 105 n.23.

89 *E.g.*, *Meshwerks*, 528 F.3d at 1268 (emphasizing that copyright applies to "the accidental or spontaneous artist"). This is not to say that other varieties of intellectual property law deny protection for all somewhat inadvertently successful outputs. *See generally* Sean B. Seymore, *Serendipity*, 88 N.C. L. REV. 185 (2009). But the willingness to recognize and reward unintentional creations with no other action from the rights holder is unique to copyright law. *See, e.g.*, Bentley v. Sunset House Distrib. Corp., 359 F.2d 140, 145 (9th Cir. 1966) ("Where the 'design' of a design patent is dictated primarily by functional or mechanical requirements and any pleasing aesthetic effect is only an inadvertent by-product, the design patent is invalid.").

90 1 NIMMER & NIMMER, *supra* note 4, § 2.01[B][1].

thereof), there is an accompanying focus on "product, not predecessors" that limits consideration of relevant prior art.[91]

Take the Third Circuit's decision to reverse both the Copyright Office as well as the court below to award copyright in "a rectangular object having a stone-like appearance and a verse inscribed on the face."[92] Even though the verse was copied word for word from the public domain, the court of appeals deemed the object original, giving the author creative credit for presenting the verse in a particular font and capitalizing the first letter of each word.[93] The court offered no comparison to other garden sculptures or sculptures in general to support its decision that the author had added "her own imaginative spark" to the work.[94]

Copyright law's refusal to consider prior art in evaluating creativity stands in sharp contrast to the related field of patent law. Patent law has its own threshold requirements for protection that implicate creativity, most importantly a requirement that a patentable invention cannot be obvious to a person having ordinary skill in the pertinent art.[95] In determining the contours of nonobviousness, courts often refer to the necessity of assessing inventive creativity.[96] Unlike their investigation of copyright matters, courts insist that the nonobviousness standard demands objective evaluation, tethering the requirement to various information about other works in the relevant domain.[97] To meet patent law's creativity threshold, the inventor must distinguish herself from what has come before.

The difference in judicial willingness to assess artistic versus scientific creativity is intentional. It stems from the assumption that

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91 Analysis of prior art is sometimes undertaken in evaluating a separate requirement for copyright eligibility: independent creation. *See, e.g.*, Acuff-Rose Music, Inc. v. Jostens, Inc., 155 F.3d 140, 144 (2d Cir. 1998) ("[T]he district court reasonably concluded that the prior usage of the saying was sufficiently widespread as to make it exceedingly unlikely . . . that [the plaintiff] had, in fact, independently created the phrase.").

92 *See* Kay Berry, Inc. v. Taylor Gifts, Inc., 421 F.3d 199, 202 (3d Cir. 2005).

93 *Id.* at 202, 207.

94 *See id.* at 207; *see also, e.g.*, Mattel, Inc. v. Goldberger Doll Mfg. Co., 365 F.3d 133, 134–35 (2d Cir. 2004) (reversing district court holding that face, lips, and eyes of Barbie doll were so common as to be uncopyrightable: "The proposition that standard or common features are not protected is inconsistent with copyright law").

95 Graham v. John Deere Co., 383 U.S. 1, 14 (1966).

96 For example, the Federal Circuit explains that nonobviousness requires the exercise of more than "ordinary creativity." *See* Intercontinental Great Brands LLC v. Kellogg N. Am. Co., 869 F.3d 1336, 1346 (Fed. Cir. 2017).

97 The scope and content of relevant prior art, the level of ordinary skill in the prior art, the differences between the claimed invention and the prior art, and the invention's role in resolving long felt but unsolved needs are all part of the nonobviousness inquiry. *Graham*, 383 U.S. at 17.

scientific creativity is calculable while artistic creativity is not.[98] Even Justice Holmes was relatively sanguine about the ability of judges to assess the creativity of scientists and inventors; it was *artistic* creativity that he believed unsuited to objective comparisons.[99]

Today's creativity analyses often include cautionary language about how a work's "aesthetic or educational value is not readily apparent to a person trained in the law."[100] Noting that "judges can make fools of themselves pronouncing on aesthetic matters," Judge Richard Posner took pains to describe "artistic originality" as a particular kind of question that judges could not assess.[101] "Artistic originality indeed might inhere in a detail, a nuance, a shading too small to be apprehended by a judge," he said.[102]

If a judge strays by comparing a work to the relevant prior art and finding insufficient difference, she is reprimanded. When a federal district court departed from the norm and determined that a photograph of a Skyy vodka bottle against a plain white background lacked adequate creativity, it was reversed by the Ninth Circuit.[103] The district court compared the photograph to the original bottle, finding the photograph insufficiently creative because any differences between the original bottle and the version in the photograph would be

98 Courts are aware of the divergence between patent and copyright when it comes to creative standards. *See* Balt. Orioles, Inc. v. Major League Baseball Players Ass'n, 805 F.2d 663, 668 n.6 (7th Cir. 1986); Alfred Bell & Co. v. Catalda Fine Arts, Inc., 191 F.2d 99, 102 (2d Cir. 1951). Hence, unlike other areas of difference between the two intellectual property regimes, one cannot describe this schism as inadvertent or unexamined. *See* Mark Bartholomew & John Tehranian, *An Intersystemic View of Intellectual Property and Free Speech*, 81 GEO. WASH. L. REV. 1, 84–86 (2013) (describing path-dependent treatment of exceptions for free expression in different intellectual property regimes).

99 *See* Amelia Smith Rinehart, *Holmes on Patents: Or How I Learned to Stop Worrying and Love Patent Law*, 98 J. PAT. & TRADEMARK OFF. SOC'Y 896, 909 (2016). As Barton Beebe has chronicled, Justice Holmes was not alone in believing that aesthetic efforts, in contrast to functional ones, were not susceptible to measurement or reason. Beebe shows that this belief that "one simply could not reason about the aesthetic" can be traced back to the Founding Era. Barton Beebe, Bleistein*, the Problem of Aesthetic Progress, and the Making of American Copyright Law*, 117 COLUM. L. REV. 319, 340–41 (2017).

100 *Balt. Orioles*, 805 F.2d at 669 n.7.

101 Gracen v. Bradford Exch., 698 F.2d 300, 304 (7th Cir. 1983).

102 *Id.*; *see also* George S. Chen Corp. v. Cadona Int'l, Inc., 266 F. App'x 523, 526 (9th Cir. 2008) (Fletcher, J., dissenting) ("[T]he Copyright Act does not allow copyright registrations to be invalidated on nothing more than a failure to conform to a particular judge's idiosyncratic notions of creativity."). Copyright scholarship makes similar claims about the inability to measure artistic creativity. *See, e.g.*, Jane C. Ginsburg, *The Concept of Authorship in Comparative Copyright Law*, 52 DEPAUL L. REV. 1063, 1085–88 (2003); Clarisa Long, *Information Costs in Patent and Copyright*, 90 VA. L. REV. 465, 488 (2004).

103 Ets-Hokin v. Skyy Spirits, Inc., No. C 96-3690, 1998 WL 690856 (N.D. Cal., Sept. 28, 1998), *rev'd*, 225 F.3d 1068 (9th Cir. 2000).

undetectable to a jury.[104] Rather than approving the district court's comparison of the photograph against the most important item of prior art—the bottle itself—the Ninth Circuit faulted the district court for ignoring precedent simply holding that almost any photograph is per se creative.[105] Another federal appellate court criticized the court below for comparing the work at issue (workplace training materials) to similar informational works and finding the content to be "obvious" and merely "common-sense."[106] "[A] work's entitlement to copyright protection does not depend in any way upon the court's subjective assessment of its creative worth," it chastised.[107]

D. Copyright Populism

By defining creativity synonymously with personality, courts hearing copyright cases enact an egalitarian vision of the creative process. Under the current definition, described by many commentators as "democratic,"[108] admission to the society of copyright holders is not a meritocracy.[109] In fact, thanks to the lackadaisical approach to creativity, copyright may be the easiest of all property rights to legally acquire.[110]

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104 *Id.* at *7.

105 *Ets-Hokin*, 225 F.3d at 1077.

106 Situation Mgmt. Sys. v. ASP Consulting Grp., 535 F. Supp. 2d 231, 239–41 (D. Mass. 2008), *vacated and remanded on other grounds sub nom.* Situation Mgmt. Sys., Inc. v. ASP. Consulting LLC, 560 F.3d 53 (1st Cir. 2009).

107 *Situation Mgmt. Sys.*, 560 F.3d at 60 (first citing Bleistein v. Donaldson Lithographing Co., 188 U.S. 239, 251 (1903); and then citing Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 345 (1991)).

108 *E.g.*, Annemarie Bridy, *Coding Creativity: Copyright and the Artificially Intelligent Author*, 2012 STAN. TECH. L. REV. 5, 6 (describing *Bleistein* as a "democratizing recalibration"); Alan L. Durham, *The Random Muse: Authorship and Indeterminacy*, 44 WM. & MARY L. REV. 569, 617 (2002) (applauding *Alfred Bell*'s "'democratized,' nonjudgmental approach" (quoting Peter Jaszi, *Toward a Theory of Copyright: The Metamorphoses of "Authorship,"* 1991 DUKE L.J. 455, 485 (1991))); Louise Harmon, *Law, Art, and the Killing Jar*, 79 IOWA L. REV. 367, 370 n.13 (1994) (describing *Bleistein* as "a sweeping democratization of the concept of art"); Justin Hughes, *The Photographer's Copyright—Photograph as Art, Photograph as Database*, 25 HARV. J.L. & TECH. 339, 369 (2012) ("*Bleistein* provided American law with an originality threshold low enough that all can enter, giving us a deeply egalitarian, democratic copyright law that has neither place nor need for the creative genius."); Lloyd L. Weinreb, *Copyright for Functional Expression*, 111 HARV. L. REV. 1149, 1241 (1998) (asserting that *Bleistein*'s "[e]schewing any criterion of value except what people are prepared to pay . . . . has the appeal of the democratic.").

109 *See* Gregory N. Mandel, *To Promote the Creative Process: Intellectual Property Law and the Psychology of Creativity*, 86 NOTRE DAME L. REV. 1999, 2013 (2011) ("To the extent that potential creators are aware of copyright's minimalist creativity standard, the copyright reward will be viewed more as simply providing a reward for task performance.").

110 *See* Parchomovsky & Stein, *supra* note 22, at 1509–10.

Because the law is so accepting of everyone's creative potential, expertise is not particularly favored or recognized when applying the creativity standard. Evidence of the author's skill or training in the art are ignored.[111] Contrasting authors with inventors, a late nineteenth-century court explained that the latter term implies the use of more than "only ordinary skill" whereas the former requires little skill as evidenced by the "multitude of books [that] rest safely under copyright."[112] More modern decisions hold that the amateur status of photographers and videographers is no barrier to passing the creativity threshold.[113] After the *Feist* decision instructed that mere "sweat of the brow" does not render something creative,[114] courts took pains to emphasize that the author's skill in the art did not impact their creativity determinations.[115]

The substitute for undemocratically taking into account individual authorial capabilities in the creativity analysis is to rely on market forces. Rather than privileging some personal expressions over others, on its face, the current requirement is equally generous to professionals and amateurs. If someone had the financial motive to replicate your work, that is proof enough that your work is creative. The leading treatise on copyright maintains that if someone copies off you, it must mean that what you did was creative: "[O]ne may initially posit that, if any author's independent efforts contain sufficient skill to motivate another's copying, there is *ipso facto* a sufficient *quantum* of originality to support a copyright."[116] Along the same lines, the

111 *See, e.g.*, L. Batlin & Son, Inc. v. Snyder, 536 F.2d 486, 491 (2d Cir. 1976); Decker Inc. v. G & N Equip. Co., 438 F. Supp. 2d 734, 741 (E.D. Mich. 2006) (stating that "mere demonstration of physical skill or special training is insufficient for copyright protection"). Patent law takes the opposite approach, considering the educational level of the inventor in evaluating whether the inventive activity would have been obvious to a person having ordinary skill in the relevant art. *See* Daiichi Sankyo Co. v. Apotex, Inc., 501 F.3d 1254, 1256 (Fed. Cir. 2007).

112 Henderson v. Tompkins, 60 F. 758, 764 (C.C.D. Mass. 1894). The court listed various lowbrow works found to enjoy copyright, including a dramatic scene of someone being rescued from a speeding train and a comic song called "Slap, Bang, Here We Are Again!" to show that "the courts have not undertaken . . . to measure carefully the degree of originality, or literary skill[,] or training involved." *See id.*

113 *See* Cruz v. Cox Media Grp., 444 F. Supp. 3d 457, 462, 465 (E.D.N.Y. 2020); Time Inc. v. Bernard Geis Assocs., 293 F. Supp. 130, 142–43 (S.D.N.Y. 1968).

114 *See* Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 359–60 (1991).

115 *See, e.g.*, ABS Ent., Inc. v. CBS Corp., 908 F.3d 405, 419 (9th Cir. 2018) ("The remastering engineer's application of 'intensive, skillful, and even creative labor . . . does not guarantee its copyrightability.'" (quoting Meshwerks, Inc. v. Toyota Motor Sales U.S.A., Inc., 528 F.3d 1258, 1268 (10th Cir. 2008))); Alcatel USA, Inc. v. DGI Techs., Inc., 166 F.3d 772, 789 (5th Cir. 1999) ("[N]o amount of time, labor, skill, and money can bestow copyright eligibility on a work that is devoid of creativity.").

116 1 NIMMER & NIMMER, *supra* note 4, § 2.01.

Bleistein decision instructs that originality of a combination of expressive elements "is sufficiently shown by the desire to reproduce them without regard to the plaintiffs' rights."[117] More modern courts adopt the same logic. For example, the label on Pledge furniture polish was deemed copyrightable because a rival polish manufacturer intentionally used a similar label.[118] We can see how this approach is in keeping with the democratic view of the creativity requirement. By judging creativity only through the economic incentives of others to copy, courts appear to maintain their aesthetic neutrality.

If expertise makes one no more likely to be creative, it also makes one no more capable of assessing creativity in others. In *Bleistein*, Justice Holmes bolstered the case for a minimalist creativity standard with a closing prudential argument that still shapes the contours of copyright law over a century later. He maintained that even if a court were somehow capable of assessing creativity, the dangers of aesthetic discrimination were not worth the risk:

> It would be a dangerous undertaking for persons trained only to the law to constitute themselves final judges of the worth of pictorial illustrations, outside of the narrowest and most obvious limits. At the one extreme some works of genius would be sure to miss appreciation. Their very novelty would make them repulsive until the public had learned the new language in which their author spoke. It may be more than doubted, for instance, whether the etchings of Goya or the paintings of Manet would have been sure of protection when seen for the first time. At the other end, copyright would be denied to pictures which appealed to a public less educated than the judge. Yet if they command the interest of any public, they have a commercial value—it would be bold to say that they have not an aesthetic and educational value—and the taste of any public is not to be treated with contempt.[119]

Because the twin mysteries of artistic genius and mass appeal must always remain somewhat opaque to judges, the argument goes, it is better to simply allow all but the most egregious copyists to claim the "creative" mantle.

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117 Bleistein v. Donaldson Lithographing Co., 188 U.S. 239, 252 (1903).

118 *See* Drop Dead Co. v. S. C. Johnson & Son, Inc., 326 F.2d 87, 93 (9th Cir. 1963); *see also, e.g.*, Balt. Orioles, Inc. v. Major League Baseball Players Ass'n, 805 F.2d 663, 669 n.7 (7th Cir. 1986) ("That the Players' performances possess great commercial value indicates that the works embody the modicum of creativity required for copyrightability."); Amplex Mfg. Co. v. A.B.C. Plastic Fabricators, Inc., 184 F. Supp. 285, 288 (E.D. Pa. 1960) ("If it be argued that these drawings contain an extremely small degree of skill and originality, the answer would seem to be that so long as they contain enough skill and originality to justify another's copying them, contrary to copyright notice against such copying, such copying will be enjoined.").

119 *Bleistein*, 188 U.S. at 251–52.

Justice Holmes was not just singling out judges as somehow failing to recognize innovative art at the time it is made. Throughout the opinion, he dropped references to various European artistic masters,[120] revealing his own erudition as well as the limits of his supposedly self-deprecatory stance. Justice Holmes knew that he, and many other judges, actually knew quite a lot about art. His position was that *no one* could appreciate artistic contributions in their own time, necessarily implicating art world experts as well as judges and everyone else. By articulating a view of experts as always behind the creativity curve, Justice Holmes walled off informed outsiders from offering help to judges trying to decide whether something was creative or not.

The modern creativity requirement displays the same judicial antipathy to aesthetic expertise. Despite *Bleistein*, some older cases relied on the opinion of art world experts to assess originality.[121] Newer cases decline to rely on expert testimony to certify originality.[122] Judges invoke various strategies to exclude or discount such testimony. One tactic is to conflate the two separate requirements for originality—independent creation and creativity—by faulting an expert for failing to disprove independent creation and then using that failure to reject their creativity analysis.[123] Another move is to reprimand the expert for applying too high of a creativity standard (e.g., novelty) in order to ignore their testimony.[124] Judges also reject expert testimony on creativity for usurping the role of the trier of fact. As one court explained in justifying its exclusion of experts on both sides of a case involving jewelry designs, expert testimony on "the subjects of originality and creativity . . . [is] analogous to having expert witnesses testify in a personal injury action that a party's conduct was negligent."[125]

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120 *Id.* at 249, 251.

121 *See* Hearn v. Meyer, 664 F. Supp. 832, 838–39 (S.D.N.Y. 1987) (discussing Alva Studios, Inc. v. Winninger, 177 F. Supp. 265, 267 (S.D.N.Y. 1959)).

122 *See, e.g.*, Paul Morelli Design, Inc. v. Tiffany & Co., 200 F. Supp. 2d 482, 487 (E.D. Pa. 2002). An exception to this general rejection or discounting of expert testimony on creativity comes in cases involving computer software. *See, e.g.*, Bus. Mgmt. Int'l, Inc. v. Labyrinth Bus. Sols., LLC, No. 05 Civ. 6738, 2009 WL 790048, at *17–18 (S.D.N.Y. Mar. 24, 2009); Lotus Dev. Corp. v. Paperback Software Int'l, 740 F. Supp. 37, 56 (D. Mass. 1990).

123 *See* Olem Shoe Corp. v. Wash. Shoe Co., No. 09-23494-CIV, 2011 WL 6202282, at *11–12 (S.D. Fla. Dec. 1, 2011), *aff'd*, 591 F. App'x 873 (11th Cir. 2015).

124 *See* Lotus Dev. Corp. v. Borland Int'l, Inc., 831 F. Supp. 202, 218 (D. Mass. 1993), *rev'd on other grounds*, 49 F.3d 807 (1st Cir. 1995), *aff'd by an equally divided court*, 516 U.S. 233 (1996) (per curiam); Covington Fabrics Corp. v. Artel Prods., Inc., 328 F. Supp. 202, 204 (S.D.N.Y. 1971).

125 *Paul Morelli Design*, 200 F. Supp. 2d at 487. In a recent case that evaluated whether the rock anthem "Stairway to Heaven" infringed on an earlier song called "Taurus," a two-judge dissent touted expert testimony on Taurus's creativity. Skidmore v. Led Zeppelin,

Skepticism of domain-specific expertise is also evident in the Supreme Court's recent *Star Athletica* decision.[126] Like *Bleistein*, *Star Athletica* interrogates the threshold requirements for copyright protection. The case involved a determination of copyrightability for so-called "useful articles."[127] For these articles, the law imposes an additional hurdle beyond consideration of originality. Not only must the useful article be original, but the creative expression at issue must be conceptually separable from the useful part of the work.[128] Without such a requirement, the fear is that copyright protection would provide the author with a lengthy monopoly over the utilitarian aspects of a work that are better addressed by the patent system.[129]

The *Star Athletica* Court rejected several tests developed by lower courts for making this separability determination. Many of these tests required the outside perspective of some authoritative source to discern separability. One test relied on the judgment of art world elites.[130] A different test favored by the Second Circuit asked whether the claimed "design elements can be identified as reflecting the designer's artistic judgment exercised independently of functional influences."[131] Other separability tests asked if outside audiences would understand the design element, stripped of its functional aspects, as art.[132] The Court needed to resolve the disagreement between separability tests, some of which relied on outside resources—art experts, the artist herself, or audiences—to inform when an

952 F.3d 1051, 1084 (9th Cir. 2020) (en banc) (Ikuta, J., concurring in part and dissenting in part) ("Second, the evidence introduced at trial was sufficient for the court to instruct the jury on this principle. Both of Skidmore's experts testified that Section A of *Taurus* was original and creative and gave *Taurus* a distinct and memorable sound."), *cert. denied*, 141 S. Ct. 453 (2020) (mem.); *see also id.* at 1085 n.6 (contending that the concurrence's denigrating of the creativity of Taurus "would come as a surprise to the experts who opined on *Taurus*—and indeed, would likely surprise any talented composer"). But a nine-judge majority was unconvinced that the expert opinion should have any effect, concluding that a jury instruction explaining that the protectable aspects of "Taurus" had to be created independently and "by use of at least some minimal creativity" was all that was needed. *Id.* at 1071 (majority opinion).

126 Star Athletica, L.L.C. v. Varsity Brands, Inc., 137 S. Ct. 1002 (2017).

127 *Id.* at 1007.

128 *Id.*

129 *See* Jeanne C. Fromer & Mark P. McKenna, *Claiming Design*, 167 U. PA. L. REV. 123, 135 (2018) ("Congress intended the separability requirement to distinguish applied art from industrial design, making copyright protection potentially available for the former but channeling the latter to design or utility patent protection.").

130 *See* Kieselstein-Cord v. Accessories by Pearl, Inc., 632 F.2d 989, 994 (2d Cir. 1980) (highlighting expert testimony that belt buckle designs at issue "rise to the level of creative art").

131 Brandir Int'l, Inc. v. Cascade Pac. Lumber Co., 834 F.2d 1142, 1145 (2d Cir. 1987).

132 Pivot Point Int'l, Inc. v. Charlene Prods., Inc., 372 F.3d 913, 923 (7th Cir. 2004).

article's design feature can be separated from its utilitarian function and thereby eligible for copyright protection.

The Court panned all of these approaches, citing to *Bleistein* in support of a separability determination that avoids any outside aesthetic assessment at all, whether from art experts, audiences, or the author herself.[133] Instead, the Court offered its own test where a feature of a useful article can be copyrightable if (1) the judge can look at it and identify some two- or three-dimensional qualities and (2) the judge can imagine the feature apart from the useful article.[134] Outside expertise is not a part of the new approach to separability. In response to a challenge from Justice Breyer, who contended that the Court's new test would lead to "the copyrighting of shovels," Justice Thomas, the majority opinion's author, confidently stated that he, or any other judge, would know "a shovel as a shovel" "even if displayed in art gallery" and would not find such a shovel copyrightable.[135]

These two copyright validity cases, *Bleistein* and *Star Athletica*, decided a century apart, are actually quite similar. Like *Bleistein*, *Star Athletica*'s discomfort with using any sort of objective benchmark to evaluate aesthetic progress reflects the influence of creative populism. No outside evidence can help a court determine separability, including whether the feature at issue should be imagined as having its own independent existence. Both decisions abjure consideration of context, relying on general judicial sensibilities rather than an appreciation of the milieu in which the creative activity takes place. Both cases articulate a vision of creative activity that does not allow for the input of experts in the relevant artistic domain.[136]

In sum, copyright's creativity test does not pick winners and losers. Instead, almost everyone and anything they produce is considered legally creative. Rather than taking into account information on authorial motivations, courts evaluating copyrightability embrace a view of the creative process as swift and haphazard. Proxies that might

133 *Star Athletica*, 137 S. Ct. at 1007, 1015.

134 *Id.* at 1007.

135 *Id.* at 1013 n.2.

136 Both cases also work a dramatic expansion in the number of expressive works that can enjoy copyright protection. *Bleistein*'s weakening of the originality threshold came at the cost of granting copyright protection to the most pedestrian, uncreative works. *Star Athletica*'s definition of separability makes everything separable, threatening to render all design features on useful articles copyrightable. *See* Christopher Buccafusco & Jeanne C. Fromer, Essay, *Forgetting Functionality*, 166 U. PA. L. REV. ONLINE 119, 121 (2017) (complaining that the first part of Justice Thomas's test for separability boils down to "an element of a design counts as a pictorial, graphic, or sculptural feature if it looks like something"); Rebecca Tushnet, *Shoveling a Path After* Star Athletica, 66 UCLA L. REV. 1216, 1223 (2019) (asking, in applying the *Star Athetica* analysis, "how could any object fail to have aesthetic qualities if imagined separately from its function?").

provide useful clues to creativity such as comparisons to the characteristics of representative works in a domain or evidence of a particular author's skill set are ignored. Behind the doctrinal choices to shun expert testimony and information on authorial purpose is a view of creativity as impervious to outside measurement and unknowable to outside parties. The next Part examines how copyright's description of creativity matches the latest findings from neuroscientific study of creative behavior.

II. CREATIVITY: A NEUROSCIENTIFIC VIEW

Intellectual property law is not the only domain concerned with fostering creativity. Policy decisions in pursuit of creativity shape many if not most of the environments in which we live. Businesses design workplaces to unlock innovative thought.[137] Urban planners set city priorities in an effort to attract "the creative class."[138] Teachers adjust their pedagogy to encourage creative thinking in students.[139] Perhaps, then, it is no surprise that psychologists have been attempting to unlock the secrets of the creative process for years.

Most of their time and attention has been focused on understanding the creative process as located in individual authors and artists. But psychologists also believe that creativity must be understood as existing in a larger framework beyond the individual creator.[140] According to Mihaly Csikszentmihalyi's influential systems model, creativity emerges from a dynamic interaction of three elements: (1) the individual: the person (or persons) that produce creative work; (2) the domain: an area of specialized knowledge; and (3) the field: the hierarchy of people and groups who possess deep knowledge of the domain and act as its gatekeepers.[141] Other creativity models build on the essential insights of the systems model, such as its

137 *See* JULIE WAGNER & DAN WATCH, INNOVATION SPACES: THE NEW DESIGN OF WORK 4–6 (2017).

138 Mary Donegan, Joshua Drucker, Harvey Goldstein, Nichola Lowe & Emil Malizia, *Which Indicators Explain Metropolitan Economic Performance Best? Traditional or Creative Class*, 74 J. AM. PLANNING ASS'N 180, 180–81 (2008).

139 *See* Anne Harris & Leon de Bruin, *An International Study of Creative Pedagogies in Practice in Secondary Schools: Toward a Creative Ecology*, 15 J. CURRICULUM & PEDAGOGY 215, 217 (2018).

140 *See* MIHALY CSIKSZENTMIHALYI, CREATIVITY: FLOW AND THE PSYCHOLOGY OF DISCOVERY AND INVENTION 1 (1996) ("[A]n idea or product that deserves the label 'creative' arises from the synergy of many sources and not only from the mind of a single person.").

141 *See id.* at 6.

emphasis on the need to consider the prior art of each relevant domain and the role of the domain's anointed experts.[142]

It is only recently, however, that psychologists have gained a markedly better understanding of the creative process so that these models can actually be tested.[143] Thanks to machines that can reveal neural processes as they happen, researchers now have the ability to observe the biological hallmarks of creative thought. Though by no means offering a complete map of the creative process, these measurements confirm the broad outlines of the systems model and contest the contrasting assumptions undergirding copyright's creativity requirement. At the individual level, motivation to create turns out to be of central importance for creative activity, and accidental production of innovative works is rare. Creativity is domain-specific, challenging copyright law's one-size-fits-all approach and related failure to engage with prior art. A flood of experiments reveals tell-tale neural signs of expertise, which is not only necessary for creative production but for consistently judging the degree to which a new work departs from the conventions of the past.

A. Measuring the Creative Process

Psychologists have been studying creativity for a long time. Much of the early creativity research polled artists themselves, but with little yield.[144] Artists refer to a process that is indescribable, confirming the instinct of legal actors that artistic creativity is impossible to measure. A typical example comes from the experimental composer Leo Ornstein. "I have no theory," he said.[145] "I don't write music out of any pre-conceived theory at all. I just write what I hear. Sometimes as a matter of fact . . . some of the things I've written . . . I wonder why I

142 *See* John Baer & James C. Kaufman, *Bridging Generality and Specificity: The Amusement Park Theoretical (APT) Model of Creativity*, 27 ROEPER REV. 158, 158 (2005); Robert J. Sternberg, *A Triangular Theory of Creativity*, 12 PSYCH. AESTHETICS, CREATIVITY & ARTS 50, 61 (2018).

143 *See* Malinda J. McPherson & Charles J. Limb, *Artistic and Aesthetic Production: Progress and Limitations*, *in* THE CAMBRIDGE HANDBOOK OF THE NEUROSCIENCE OF CREATIVITY, *supra* note 9, at 517, 519 (describing the neuroscience of creative activity as an emerging area of study that only became possible in the past decade thanks to technological advances); Sternberg, *supra* note 142, at 62 ("A conundrum in the field of creativity is that many of the theories, as posed, have been either difficult to disconfirm or simply nondisconfirmable.").

144 *See* Eve A. Forster & Kevin N. Dunbar, *Creativity Evaluation Through Latent Semantic Analysis*, 31 PROC. ANN. MEETING COGNITIVE SCI. SOC'Y 602, 602 (2009) (discussing limitations of early creativity research, including interviews with select creative individuals).

145 *Ornstein's Compositional Styles*, in LEO ORNSTEIN, QUINTETTE FOR PIANO AND STRINGS, OP. 92, xxiii, xxvi (Denise Von Glahn & Michael Broyles eds., 2005).

should have heard what I did. I can't explain it to myself."[146] Or take this pronouncement from Bruce Springsteen: "Creativity is an act of magic rising up from your subconscious."[147] Unable to take artists' recounting at face value, some psychologists resorted to Freudian theory, attributing creative behavior to the sublimation of sexual desires, a view of creativity that has now been discredited.[148]

Yet if talking to and psychoanalyzing artists was a mostly losing proposition, using neuroscience to study the creative process has generated significant insights. These insights have only been possible thanks to recent technological advances.[149] Electroencephalography (EEG) measures rapid changes in the electric and magnetic fields in the brain.[150] Positron emission tomography (PET) uses a radioactive tracer to detect areas of the brain exhibiting higher chemical activity.[151] Most useful has been functional magnetic resonance imaging (fMRI), which records fluctuations in oxygenation and blood flow in the brain, revealing which areas and networks in the brain are activated by different stimuli.[152]

These techniques have been around for years, but greater processing speeds allow for much greater insights into the mechanics of human cognition. Instead of relying on self-reporting, neuroscientists examine the neural activity of artists as they are engaged in creative tasks such as generating a humorous caption for a cartoon, improvising music, or crafting a creative metaphor to capture the meaning of a given adjective.[153] For these experiments, experts in

146 *Id.*; *see also* David Bashwiner, *The Neuroscience of Musical Creativity*, *in* THE CAMBRIDGE HANDBOOK OF THE NEUROSCIENCE OF CREATIVITY, *supra* note 9, at 495, 496–97 (quoting Brahms as describing musical inspiration as "a condition when the conscious mind is in temporary abeyance and the subconscious mind is in control" (quoting ARTHUR M. ABELL, TALKS WITH GREAT COMPOSERS 6 (1955))).

147 David Brooks, *Bruce Springsteen and the Art of Aging Well*, ATLANTIC (Oct. 23, 2020), https://www.theatlantic.com/ideas/archive/2020/10/bruce-springsteen-and-art-aging-well/616826/ [https://perma.cc/2MVS-Z36T]; *see also* Google LLC v. Oracle Am., Inc., No. 18-956, slip op. at 23 (U.S. Apr. 5, 2021) (noting, with approval, witness testimony that the creativity involved in developing application programming interface software was "magic").

148 *See* R. KEITH SAWYER, EXPLAINING CREATIVITY: THE SCIENCE OF HUMAN INNOVATION 15–23 (2d ed. 2012); Chambers, *supra* note 6, at 782.

149 McPherson & Limb, *supra* note 143, at 519.

150 *Id.* at 518.

151 *See* Steven Brown, Michael J. Martinez & Lawrence M. Parsons, *Music and Language Side by Side in the Brain: A PET Study of the Generation of Melodies and Sentences*, 23 EUR. J. NEUROSCIENCE, 2791, 2792–96 (2006) (revealing similarities and differences in anatomies of musical and literary creation).

152 *See* McPherson & Limb, *supra* note 143, at 518.

153 *See* Ori Amir & Irving Biederman, *The Neural Correlates of Humor Creativity*, 10 FRONTIERS HUM. NEUROSCIENCE, Nov. 25, 2016, at 1, 1–2; Roger E. Beaty, Paul J. Silvia & Mathias Benedek, *Brain Networks Underlying Novel Metaphor Production*, 111 BRAIN & COGNITION 163, 164–65 (2016); Siyuan Liu, Ho Ming Chow, Yisheng Xu, Michael G.

the relevant artistic domain independently evaluate the artistic outputs on their relative creativity compared to the group of outputs as a whole. If the experts' evaluations display a sufficient level of consensus, their creativity ratings are considered valid. The outputs can then be ranked on a spectrum of low to high creativity and compared against each participant's neural behavior.[154] The value of such an examination of the creative process lies in uncovering evidence of mental phenomena that we are not aware of or cannot describe ourselves.[155] Because we lack the tools to articulate the creative process as it occurs in our heads, neuroscientific research offers a particularly promising mechanism for understanding this process.

Perhaps the chief revelation from this research has been an ability to measure creative mental activities. Contrary to the central premise of *Bleistein* and a century of copyright creativity jurisprudence, some aspects of the creative process can be objectively quantified. Not every part of the creative process can be tracked and mapped by neuroscientists. But even a partial inventory of this process represents a great leap forward in understanding. A brief description of research on "alpha waves," the physiology of mental imagery, and the connectivity of relevant brain regions illustrates the objective means neuroscientists now offer for describing creative success and failure.

Findings involving alpha waves represent some of "the most consistent findings" in creativity neuroscience.[156] EEG signals oscillate over a variety of frequencies.[157] These frequencies are divided into a series of frequency bands.[158] It is possible to compute the band-specific frequency power for different periods of time and to contrast the power in a specific frequency during a cognitive task and compare this reading to a referent when the task is not being performed.[159]

Erkkinen, Katherine E. Swett, Michael W. Eagle, Daniel A. Rizik-Baer & Allen R. Braun, *Neural Correlates of Lyrical Improvisation: An fMRI Study of Freestyle Rap*, 2 SCI. REPS., Nov. 15, 2012, at 1, 6.

154 *See* Genevieve M. Cseh & Karl K. Jeffries, *A Scattered CAT: A Critical Evaluation of the Consensual Assessment Technique for Creativity Research*, 13 PSYCH. AESTHETICS, CREATIVITY & ARTS 159, 159 (2019). This assessment method has been described as the "gold standard" for reliable creativity research. *Id.*

155 *See* Bashwiner, *supra* note 146, at 512 (emphasizing the value of neuroscience because the mental workings of musical creativity are "too rapid to perceive in real-time" making them "stubbornly inscrutable to science").

156 Simone M. Ritter, Jens Abbing & Hein T. van Schie, *Eye-Closure Enhances Creative Performance on Divergent and Convergent Creativity Tasks*, 9 FRONTIERS PSYCH., July 31, 2018, at 1, 2.

157 Andreas Fink & Mathias Benedek, *EEG Alpha Power and Creative Ideation*, 44 NEUROSCIENCE & BIOBEHAVIORAL REVS. 111, 113 (2014).

158 *Id.*

159 *Id.*

Studies consistently reveal increased activity in the "alpha" EEG frequency band during particular aspects of creative thinking.[160] For example, college students rated "highly creative" by their instructors exhibited higher alpha signals during the inspiration phase (as opposed to the elaboration phase) of a creative writing project, but no such difference existed for the less creative students.[161] More recent research allows for a more fine-grained view of creative ideation by dividing the broad alpha range into several sub-frequencies. Lower frequencies in this range are more likely to apply to general task demands like alertness and attention whereas higher frequencies are more sensitive to specific task requirements like recalling relevant words or numbers from memory.[162] Other studies show relationships between types of alpha activation and a person's subjective rating of their own ideas as original,[163] as well as more successful performance of different creative activities, including improvisational dance.[164] These findings do not tell nearly all of the story when it comes to creative thought. But the "reliable and robust" relationship between alpha power and creative ideation shows that objective measurement of some aspects of creative thought is entirely possible.[165]

Neuroscience also allows us to distinguish between creative and noncreative uses of internal images. Intuitively, we already associate the creative process with the generation of mental imagery. It turns out that the generation of such imagery is critical to visual and nonvisual creativity alike.[166] Not all uses of imagery are creative. For example, merely recollecting previously seen images is not a sign of creative activity. Having a photographic memory might be useful in life, but it does not make someone an artist. Luckily, scientists can distinguish between the neural correlates of new mental images and the signs of retrieving old images from memory. They conclude that

160 MARK A. RUNCO, CREATIVITY: THEORIES AND THEMES: RESEARCH, DEVELOPMENT, AND PRACTICE 78 (2007).

161 *Id.*

162 Fink & Benedek, *supra* note 157, at 113.

163 *See* Roland H. Grabner, Andreas Fink & Aljoscha C. Neubauer, *Brain Correlates of Self-Rated Originality of Ideas: Evidence from Event-Related Power and Phase-Locking Changes in the EEG*, 121 BEHAV. NEUROSCIENCE 224, 228 (2007).

164 *See* Andreas Fink, Barbara Graif & Aljoscha C. Neubauer, *Brain Correlates Underlying Creative Thinking: EEG Alpha Activity in Professional vs. Novice Dancers*, 46 NEUROIMAGE 854, 860 (2009).

165 *See* Fink & Benedek, *supra* note 157, at 119.

166 *See* Laura M. Pidgeon, Madeleine Grealy, Alex H.B. Duffy, Laura Hay, Chris McTeague, Tijana Vuletic, Damien Coyle & Sam J. Gilbert, *Functional Neuroimaging of Visual Creativity: A Systematic Review and Meta-Analysis*, 6 BRAIN & BEHAV., Oct. 2016, at 1, 2; Sarah Shi Hui Wong & Stephen Wee Hun Lim, *Mental Imagery Boosts Music Compositional Creativity*, 12 PLOS ONE, Mar. 15, 2017, at 1, 8.

the brain's imagining of new images "certainly represents a crucial capacity underlying creative thought."[167]

Finally, neuroscience tells us that the stronger the interplay between three particular brain systems, the more creative the person.[168] When the strength of a person's connections in this neural network is measured, that measurement strongly correlates with how someone performs on a test for originality. As researchers recently found, "[A] person's capacity to generate original ideas can be reliably predicted from the strength of functional connectivity within this network, indicating that creative thinking ability is characterized by a distinct brain connectivity profile."[169] For example, the greater the coupling between the brain's default and executive control networks, the better test subjects completed an exercise asking them to suggest uncommon verbs to pair with a given noun.[170] This relationship between connectivity and creativity in creative individuals exists both during and apart from immersion in the creative process.[171]

To those who question how any study can proclaim itself able to separate the creative wheat from the noncreative chaff, it has been

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167 *See* Mathias Benedek, *Internally Directed Attention in Creative Cognition*, *in* THE CAMBRIDGE HANDBOOK OF THE NEUROSCIENCE OF CREATIVITY, *supra* note 9, at 180, 187; Rex E. Jung, Ranee A. Flores & Dan Hunter, *A New Measure of Imagination Ability: Anatomical Brain Imaging Correlates*, 7 FRONTIERS PSYCH., Apr. 18, 2016, at 1, 2. Relatedly, neuroscientists describe a close relationship between divergent thinking success and the amount of detail someone can articulate when describing future events. *See* Donna Rose Addis, Ling Pan, Regina Musicaro & Daniel L. Schacter, *Divergent Thinking and Constructing Episodic Simulations*, 24 MEMORY 89, 94 (2016).

168 The brain systems are the default network, the executive control network, and the salience network. The default network is a collection of regions that is triggered when someone is engaged in a spontaneous thinking process like brainstorming. The executive control network activates when there is a need for someone to focus and test in their minds whether particular ideas could fit the task at hand. The salience network allows for switching between the default and executive control networks. *See* Roger E. Beaty, Paul Seli & Daniel L. Schacter, *Network Neuroscience of Creative Cognition: Mapping Cognitive Mechanisms and Individual Differences in the Creative Brain*, 27 CURRENT OP. BEHAV. SCIS. 22, 22–24 (2019); Beaty et al., *supra* note 153, at 163–64.

169 Roger E. Beaty et al., *Robust Prediction of Individual Creative Ability from Brain Functional Connectivity*, 115 PROCS. NAT'L ACAD. SCIS. U.S. 1087, 1087 (2018).

170 *See* Roger E. Beaty, Alexander P. Christensen, Mathias Benedek, Paul J. Silvia & Daniel L. Schacter, *Creative Constraints: Brain Activity and Network Dynamics Underlying Semantic Interference During Idea Production*, 148 NEUROIMAGE 189, 191–93 (2017). Creativity was assessed through latent semantic analysis, a tool used to measure semantic distance between words. *Id.*

171 Studies find that evidence of greater than average coupling of these networks at rest successfully predicts high performance on divergent thinking tasks. Liang Shi, Jiangzhou Sun, Yunman Xia, Zhiting Ren, Qunlin Chen, Dongtao Wei, Wenjing Yang & Jiang Qiu, *Large-Scale Brain Network Connectivity Underlying Creativity in Resting-State and Task fMRI: Cooperation Between Default Network and Frontal-Parietal Network*, 135 BIOLOGICAL PSYCH. 102, 109 (2018).

shown time and time again that the use of expert panels offers high intra-panel reliability.[172] Regardless of the domain studied, experts in a domain tend to agree in their judgment of expressive works.[173] The same is not true when researchers ask novices to rate artistic output for its creativity.[174]

Nothing I have written thus far should imply that neuroscience can precisely measure creativity or that today's technologies can provide admissible neurological evidence of a particular plaintiff's mental state. Creativity is a complicated mental process that scientists continue to explore. Some parts of creative ideation have moved into sharper focus thanks to neuroscience. Others, like the incubation period needed for some creative insights, are less susceptible to testing in a laboratory setting.[175] Adding to the difficulty, the brain regions studied in these tests of creativity can be involved in many different activities, not just creative expression. With this kind of research there is always the danger of reverse inference—crediting brain activation to a particular cognitive process instead of acknowledging that multiple processes might have prompted the activation.[176]

Nevertheless, the last decade of creativity neuroscience studies provides some valuable lessons. Some stages of the creative process are more amenable to neural study than others, but even a partial understanding of this process is better than none. Reverse inference is a concern, but if applied carefully, it can have significant predictive power and reveal useful correlations that can be further tested.[177]

The main thing to take away from this research is that creativity is not necessarily ineffable, a black box that can never be interrogated. Measurements of alpha waves, mental imagery, and inter-network connectivity do not tell us everything we need to know about creativity, but they do offer objective information about a process that *Bleistein*

172 *See* SAWYER, *supra* note 148, at 41–42.

173 *See* James C. Kaufman, John Baer & Jason C. Cole, *Expertise, Domains, and the Consensual Assessment Technique*, 43 J. CREATIVE BEHAV. 223, 230 (2009) (study showing experts agreeing in their creativity assessments over 90 percent of the time); James C. Kaufman, John Baer, David H. Cropley, Roni Reiter-Palmon & Sarah Sinnett, *Furious Activity vs. Understanding: How Much Expertise Is Needed to Evaluate Creative Work?*, 7 PSYCH. AESTHETICS, CREATIVITY & ARTS 332, 333 (2013).

174 Kaufman, Baer, Cropley, Reiter-Palmon & Sinnett, *supra* note 173. Quantitative methods can also be used to measure creativity as with divergent thinking tests that are scored based on number of responses as well as the statistical rarity of those responses. Sameh Said-Metwaly, Eva Kyndt & Wim Van den Noortgate, *Approaches to Measuring Creativity: A Systematic Literature Review*, 4 CREATIVITY 238, 245 (2017).

175 *See* RUNCO, *supra* note 160, at 37.

176 Russell A. Poldrack, *The Role of fMRI in Cognitive Neuroscience: Where Do We Stand?*, 18 CURRENT OP. NEUROBIOLOGY 223, 223 (2008).

177 Florian Hutzler, *Reverse Inference Is Not a Fallacy Per Se: Cognitive Processes Can Be Inferred from Functional Imaging Data*, 84 NEUROIMAGE 1061, 1061 (2014).

and other copyright decisions assumed had to remain shrouded in mystery. This does not mean that individual plaintiffs should have their brains scanned to reveal if they are sufficiently creative. But it does mean that we should question the underlying premise behind today's lax creativity test: that creativity can never be understood by outsiders.

B. Motivating Individuals

Although courts avoid consideration of authorial motives, there is widespread agreement among psychologists studying creativity that motivation is a key threshold requirement for creativity.[178] Motivation increases artistic skill.[179] Intentional seeking of novelty is critical to creative success.[180] The neuroscientist Antonio Damasio puts motivation at the top of his list for requirements for human creativity.[181]

To the extent the originality threshold is meant to promote creativity, it would seem that it should reward motivated creative behavior and not reward non-creative behavior or behavior that accidentally produces novel artistic output.[182] Psychologists note that motivation results in more creative ideas being generated. Someone who is unmotivated may generate only one solution to the task at hand whereas a motivated artist is likely to generate many, resulting in greater and superior creative production.[183] In other words, motivated artists are more productive and the more productive you are, the greater the chance that you will hit upon some creative ideas in your

178 RUNCO, *supra* note 160, at 92; Panagiotis G. Kampylis & Juri Valtanen, *Redefining Creativity—Analyzing Definitions, Collocations, and Consequences*, 44 J. CREATIVE BEHAV. 191, 198 (2010) (collecting definitions of creativity to show that psychologists agree that creativity is an intentional activity).

179 Alice W. Flaherty, *Homeostasis and the Control of Creative Drive*, *in* THE CAMBRIDGE HANDBOOK OF THE NEUROSCIENCE OF CREATIVITY, *supra* note 9, at 19, 20.

180 Evangelia G. Chrysikou, *The Costs and Benefits of Cognitive Control for Creativity*, *in* THE CAMBRIDGE HANDBOOK OF THE NEUROSCIENCE OF CREATIVITY, *supra* note 9, at 299, 305.

181 Antonio R. Damasio, *Some Notes on Brain, Imagination and Creativity*, *in* THE ORIGINS OF CREATIVITY 59, 64–65 (Karl H. Pfenninger & Valerie R. Shubik eds., 2001).

182 Referring to accidental creations, Jeanne Fromer speculates that "works created at least partially through a process other than an artist's conscious will might involve sufficient problem finding of the sort expected of artistic creativity." Jeanne C. Fromer, *A Psychology of Intellectual Property*, 104 NW. U. L. REV. 1441, 1493 n.352 (2010). But this is assuming that audience preference should dictate what is and is not creative as opposed to an understanding of the creative process from the perspective of the author. *See infra* subsection III.A.1.

183 *See* Flaherty, *supra* note 179, at 20; Dean Keith Simonton, *Creative Ideas and the Creative Process: Good News and Bad News for the Neuroscience of Creativity*, *in* THE CAMBRIDGE HANDBOOK OF THE NEUROSCIENCE OF CREATIVITY, *supra* note 9, at 9, 12.

different artistic outputs. The accidental creation of art described by Plutarch—a painter throws a sponge in anger and inadvertently creates a masterpiece—is not the way the vast majority of artistic breakthroughs are made. "[M]ore often than not, the unconventional tendencies of truly creative people are intentional and discretionary. They know what they are doing."[184]

Two particular attributes relating to motivation strongly correlate with creative output. Focus, which can be detected by the techniques of neuroscience, is a key ingredient in artistic production. Creativity demands an ability to ignore outside stimuli.[185] According to creativity researchers, originality requires the capability "to stay deeply absorbed in self-generated thoughts, despite the constant exposition of potentially interfering sensory stimulation."[186] A variety of studies link focused attention to success on divergent thinking tasks, a favorite metric for evaluating creative potential.[187] Neural scans describe a relationship between focused attention and success in generating novel ideas.[188]

The focus necessary for creative activity is not just to keep out external stimuli. Artists also need to be single-minded enough to inhibit their own habitual responses. This may be why high originality scores on a variety of creative tasks correlate with brain areas that relate to executive actions.[189] Innovators need to be able to block out the voices in their heads that tell them to take the cognitive path of least resistance by doing things in a routine or traditional way or by simply copying what came before. Originality demands that we ignore internal and external forces that draw us to the average and the familiar.

Artists must not only be able to focus on the task at hand, but also commit themselves to sustained action in pursuit of a creative goal. Various psychologists believe that the creative process occurs in various phases and that the process begins with "an early 'preparation' phase"

184 RUNCO, *supra* note 160, at 84.

185 *See* Darya L. Zabelina, *Attention and Creativity*, *in* THE CAMBRIDGE HANDBOOK OF THE NEUROSCIENCE OF CREATIVITY, *supra* note 9, at 161, 164 ("A considerable body of research suggests that creativity involves the ability to maintain an extended focus.").

186 Benedek, *supra* note 167, at 189.

187 Zabelina, *supra* note 185, at 164; *see* Jung et al., *supra* note 167, at 2. Divergent thinking involves coming up with multiple solutions to a problem. Tali R. Marron & Miriam Faust, *Free Association, Divergent Thinking, and Creativity: Cognitive and Neural Perspectives*, *in* THE CAMBRIDGE HANDBOOK OF THE NEUROSCIENCE OF CREATIVITY, *supra* note 9, at 261, 264.

188 *See* Mathias Benedek, Till Schües, Roger E. Beaty, Emanuel Jauk, Karl Koschutnig, Andreas Fink & Aljoscha C. Neubauer, *To Create or to Recall Original Ideas: Brain Processes Associated with the Imagination of Novel Object Uses*, 99 CORTEX 93, 99 (2018).

189 Marron & Faust, *supra* note 187, at 267.

that is "difficult and time-consuming," rather than sudden and effortless.[190] "[C]reativity isn't a burst of inspiration; it's mostly conscious hard work."[191] Studies of successful creators show this to be the case. For example, artists spend more time reworking their drawings than non-artists.[192]

Copyright law has long been enamored of metaphors suggesting that artistic creativity appears like a bolt of lightning out of nowhere as with the story of Plutarch's painter.[193] The *Feist* decision amplified this unfortunate tendency to equate creativity with speed. In that case, the Court used the phrase "creative spark" to describe what was needed to satisfy the creativity requirement, indicating that artistic creativity is a sudden and unforeseeable phenomenon.[194] Along similar lines, the *Alfred Bell* decision attributed copyrightable material to the immediate influence on the artist of a "clap of thunder."[195]

Metaphors involving sparks and claps of thunder oversimplify the creative process. Creativity involves multiple stages that take a significant amount of time.[196] By portraying creativity as a sudden phenomenon that comes out of nowhere, copyright law's operative metaphors imply that focus and sustained effort are irrelevant to the creative process. In truth, "[c]reative thought involves the generation of complex mental representations that need to be maintained over extended periods of time for simulation and elaboration."[197]

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190 Ulrich Kraft, *Unleashing Creativity*, 16 SCI. AM. MIND 16, 22 (2005).

191 SAWYER, *supra* note 148, at 387.

192 *See* Sydney Walker, *Understanding the Artmaking Process: Reflective Practice*, 57 ART EDUC. 6, 10 (2004).

193 Weindling Int'l, Corp. v. Kobi Katz, Inc., No. 00CIV2022, 2000 WL 1458788, at *4 (S.D.N.Y. Sept. 29, 2000) ("But even if the creative spark behind a commercial jewelry design is more like a flickering match than a bolt of lightning, it nonetheless is entitled to copyright protection."); *see also* Rockford Map Publishers, Inc. v. Directory Serv. Co., Inc., 768 F.2d 145, 148 (7th Cir. 1985) (copyright may inhere in "the work of an instant" and "[t]he input of time is irrelevant"); 2 PATRY, *supra* note 45, § 3:33 ("[T]here is no empirical correlation between time, talent, and money and the financial reward provided by enforcing exclusive copyright rights. A work of great genius may be the result of an instantaneous inspiration, while Hollywood annually churns out expensive flops.").

194 *See* Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 345 (1991).

195 *See* Alfred Bell & Co. v. Catalda Fine Arts, Inc., 191 F.2d 99, 105 (2d Cir. 1951). For many years, patent law applied a similar metaphor involving speed—the "flash of creative genius"—to describe the required level of inventiveness for patentability. *See* Cuno Eng'g Corp. v. Automatic Devices Corp., 314 U.S. 84, 91 (1941) (to receive a patent, "the new device . . . must reveal the flash of creative genius, not merely the skill of the calling"). Attacked for being both ambiguous and too high of a standard for patentability, Congress crafted legislation to replace the "flash of genius" test with the seemingly easier to satisfy requirement of nonobviousness. *See* 35 U.S.C. § 103 (2018).

196 *See* SAWYER, *supra* note 148, at 88–90, 133 (describing an eight-stage process for creative activity).

197 Benedek, *supra* note 167, at 189.

This is not to say that creative problem solving occurs in a linear, even-paced fashion. There are moments of insight. EEG studies are particularly suited to uncovering particular brain regions involved in those moments, which can involve seemingly sudden shifts in perspective.[198] But it is important to realize that these moments of insight are not all that is needed to generate something that is new and appropriate to the artistic undertaking.[199] It turns out that creative activity requires control over both outside stimuli that threaten to break our concentration and internal forces that threaten to distract us from the task at hand. Creativity is rarely speedy and rarely an accident. "Even when ideas come in a flash, focus and persistence are required to put them to good use."[200]

C. Specifying the Creative Domain

Creativity requires a comparison between the expressive product at issue and the past work and shared practices of the relevant artistic community. Without this domain-specific referent, the systems model explains, there is no basis for determining what is creative and what is not.[201] This is why highly creative people tend to be creative in one particular domain instead of several; "it takes a lot of experience, knowledge, and training to be able to identify good problems."[202]

As established in Part I, copyright's creativity analysis pays little attention to domain-specific information. In contrast to patent law, copyright law does not scrutinize prior art to evaluate the creativity of the plaintiff's contribution. Instead, the courts adopt an acontextual posture, examining the work at issue for the creativity necessary without comparing that work to the established practices or prior work in the domain.

Psychologists posit a dual model of creativity with artists cycling between idea generation and evaluation of ideas against a benchmark

198 *See* Anna Abraham, *The Forest Versus the Trees: Creativity, Cognition and Imagination*, *in* THE CAMBRIDGE HANDBOOK OF THE NEUROSCIENCE OF CREATIVITY, *supra* note 9, at 195, 200; *see also* SAWYER, *supra* note 148, at 198–200 (summarizing insight studies that use neuroscientific methods).

199 *See* SAWYER, *supra* note 148, at 137–38; *see also* Robert W. Weisberg, *On the "Demystification" of Insight: A Critique of Neuroimaging Studies of Insight*, 25 CREATIVITY RSCH. J. 1, 13 (2013) (listing flaws in psychological study of insight).

200 Zabelina, *supra* note 185, at 164.

201 CSIKSZENTMIHALYI, *supra* note 140, at 23 ("If by creativity we mean an idea or action that is new and valuable, then we cannot simply accept a person's own account as the criterion for its existence. There is no way to know whether a thought is new except with reference to some standards . . . .").

202 SAWYER, *supra* note 148, at 65.

of standards.[203] To learn these standards, it helps to have training in the domain. "Creative people are generally very knowledgeable about a given discipline. Coming up with a grand idea without ever having been closely involved with an area of study is not impossible, but it is very improbable."[204] It is important to know the norms, techniques, and history of your chosen artistic field before you create.[205] Even for those who seek to break boundaries, it is good to know what you are breaking.

This is not to say that creativity is simply a matter of directly applying domain-specific expertise. One still needs to find ways to combine elements in new formations that are not obvious or conventional. But domain-specific knowledge is critical to creative success. Without first learning what's already been done, a person doesn't have the raw material to create with. That's why an important part of the creative process is to first become very familiar with prior works and internalize the symbols and conventions of the domain.[206]

All kinds of creativity require an understanding of the prior works and shared assumptions of the relevant domain.[207] Copyright law posits a great disparity between scientific and artistic creation, with the former lending itself to objective comparisons against what came before and the latter relying on the author's subjective, personal reactions. Like Justice Holmes, psychologists once believed in a wide gulf between artistic and scientific creativity.[208] They divided all creativity into lower- and higher-level processes, placing achievement in "the arts" at the highest level.[209] By observing the same neural phenomena in different kinds of creative tasks, researchers have called

203 Mayseless et al., *supra* note 70, at 236; *see* Oded M. Kleinmintz, Tal Ivancovsky & Simone G. Shamay-Tsoory, *The Two-Fold Model of Creativity: The Neural Underpinnings of the Generation and Evaluation of Creative Ideas*, 27 CURRENT OP. BEHAV. SCIS. 131, 131 (2019).

204 Kraft, *supra* note 190, at 21–22 (2005); *see also* Carlos Blanco, *Philosophy, Neuroscience, and the Gift of Creativity*, ARGUMENTA PHILOSOPHICA, no. 1, 2017, at 95, 108 (contending that "knowledge of the present status of a certain discipline . . . underlie[s] the great triumphs of human creativity").

205 *See* Chetan Walia, *A Dynamic Definition of Creativity*, 31 CREATIVITY RSCH. J. 237, 242 (2019) ("Knowledge of the domain plays a significant role in the process of creation.").

206 SAWYER, *supra* note 148, at 93.

207 McPherson & Limb, *supra* note 143, at 524; R. Keith Sawyer, *The Western Cultural Model of Creativity: Its Influence on Intellectual Property Law*, 86 NOTRE DAME L. REV. 2027, 2049 (2011).

208 David Pearson, *Exploding the Myth of the Scientific vs. Artistic Mind*, CONVERSATION (Apr. 21, 2016), https://theconversation.com/exploding-the-myth-of-the-scientific-vs-artistic-mind-57843 [https://perma.cc/5LKU-6LWT].

209 Chambers, *supra* note 6, at 781.

that privileged role for artistic creativity into question.[210] Today, the consensus is that "[a]rtistic creativity may not hold a privileged place in the brain after all."[211] Domain-specific expertise is essential for artistic creativity, as it is for all other kinds of creativity.

Along these lines, a prior theory that has been thoroughly discredited in the recent creativity literature is the myth of people being divided into two cognitive tribes: creative, right-brained, free-spirited artists and analytical, left-brained, math/science-oriented logicians.[212] It turns out that inventors are no less creative than artists. The supposedly non-creative left hemisphere of the brain is actively involved in all manner of creative tasks.[213] For engineers as well as poets, the same process takes place: coming up with an idea, then building on that idea so that it is useful. This process requires both sides of the brain to be engaged.[214] To the extent copyright's creativity test depends on a view of artistic creativity as different in kind from other creative thought processes, neuroscience shows this view to be patently false.[215]

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210 *See* Melissa Ellamil, Charles Dobson, Mark Beeman & Kalina Christoff, *Evaluative and Generative Modes of Thought During the Creative Process*, 59 NEUROIMAGE 1783, 1791–92 (2012).

211 McPherson & Limb, *supra* note 143, at 524; *see also* Clark D. Asay, *Intellectual Property Law Hybridization*, 87 U. COLO. L. REV. 65, 71–73 (2016) (recounting psychological evidence showing that artistic creativity and scientific invention are interrelated processes).

212 Allison B. Kaufman, Sergey A. Kornilov, Adam S. Bristol, Mei Tan & Elena L. Grigorenko, *The Neurobiological Foundation of Creative Cognition*, *in* THE CAMBRIDGE HANDBOOK OF CREATIVITY 216, 219 (James C. Kaufman & Robert J. Sternberg eds., 2010).

213 *See* A.R. Aghababyan, V.G. Grigoryan, A.Yu. Stepanyan, N.D. Arutyunyan & L.S. Stepanyan, *EEG Reactions During Creative Activity*, 33 HUM. PHYSIOLOGY 252, 253 (2007); *see also* Arne Dietrich & Riam Kanso, *A Review of EEG, ERP, and Neuroimaging Studies of Creativity and Insight*, 136 PSYCH. BULL. 822, 825 (2010) (cataloging EEG studies of divergent thinking to show that the notion of lateralized brain creativity is unsubstantiated for either side of the brain).

214 Kaufman, Baer & Cole, *supra* note 173, at 221; Flaherty, *supra* note 179, at 30.

215 *See* Jared A. Nielsen, Brandon A. Zielinski, Michael A. Ferguson, Janet E. Lainhart & Jeffrey S. Anderson, *An Evaluation of the Left-Brain vs. Right-Brain Hypothesis with Resting State Functional Connectivity Magnetic Resonance Imaging*, 8 PLOS ONE, Aug. 14, 2013, at 1, 1. (scans of over 1,000 people "not consistent with a whole-brain phenotype of greater 'left-brained' or greater 'right-brained' network strength across individuals"); Robert H. Shmerling, *Right Brain/Left Brain, Right?*, HARV. HEALTH PUBL'G: HARV. HEALTH BLOG (Nov. 8, 2019), https://www.health.harvard.edu/blog/right-brainleft-brain-right-2017082512222 [https://perma.cc/DH79-H7XM] ("[F]or more individual personality traits, such as creativity or a tendency toward the rational rather than the intuitive, there has been little or no evidence supporting a residence in one area of the brain. In fact, if you performed a CT scan, MRI scan, or even an autopsy on the brain of a mathematician and compared it to the brain of an artist, it's unlikely you'd find much difference."). Law professor Greg Mandel has noted the left-brain/right-brain dichotomy at work in various aspects of intellectual property law to pernicious effect. *See* Gregory N. Mandel, *Left-Brain*

D. Expertise

Copyright law's populist stance enacts two myths about the creative process into the substance of copyright law. First, the law presumes that we are equally situated for creative success, ignoring evidence of authorial experience and training. In truth, our creative abilities differ. This is probably no surprise to most of us. We have own thoughts about how creative we are compared to the average person. Recent neuroscientific studies provide a wealth of evidence confirming the unequal distribution of creative capacity.[216] Most important for our purposes, these studies reveal that expertise is strongly correlated with the likelihood of generating creative output.[217]

Sheer familiarity with an art form produces dramatic physiological differences during creative thought. In one experiment, neuroscientists scanned the brains of experienced professional comedians, aspiring comedians, and a control group possessing the same high intelligence as the rest of the research subjects but with no experience as comedians.[218] All were given the task of coming up with captions for a blank *New Yorker* cartoon.[219] Although it might seem that the quality of humorous creations is subjective, it turns out that humor typically has high agreement across individuals and can be evaluated for quality through rankings as well as by listening for spontaneous laughter in audiences.[220] The study revealed significant differences in the experts'

Versus Right-Brain: Competing Conceptions of Creativity in Intellectual Property Law, 44 U.C. DAVIS L. REV. 283, 283–84, 333 (2010).

216 There is a level of intelligence associated with creative output, making intelligence a necessary but not sufficient condition of creativity. *See* Kai Zhou, *What Cognitive Neuroscience Tells Us About Creativity Education: A Literature Review*, 5 GLOB. EDUC. REV. 20, 24 (2018). Some people tend to be more persistent or more flexible in the face of shifting environmental demands, which facilitates creative output. Vera Mekern, Bernhard Hommel & Zsuzsika Sjoerds, *Computational Models of Creativity: A Review of Single-Process and Multi-Process Recent Approaches to Demystify Creative Cognition*, 27 CURRENT OP. BEHAV. SCIS. 47, 51–52 (2019). Different personality dimensions—openness, intellect, extraversion—have been shown to be more or less linked to creative output depending on the domain at issue. *See* Daniel Dostál, Alena Plháková & Tereza Záškodná, *Domain-Specific Creativity in Relation to the Level of Empathy and Systemizing*, 51 J. CREATIVE BEHAV. 225, 225–26, 234 (2017).

217 *See* Ioanna Zioga, Peter M.C. Harrison, Marcus T. Pearce, Joydeep Bhattacharya & Caroline Di Bernardi Luft, *From Learning to Creativity: Identifying the Behavioural and Neural Correlates of Learning to Predict Human Judgements of Musical Creativity*, 206 NEUROIMAGE, Oct. 25, 2019, at 1, 17 (describing "evidence for a positive linear association between expertise and creativity").

218 Amir & Biederman, *supra* note 153, at 2.

219 *Id.*

220 *Id.* at 1–2.

brain functioning while they devised their captions as compared to the other participants.[221]

Other research reveals differences in neural responses based on experience. Experienced writers show stronger activation of the brain regions associated with memory retrieval and emotion processing than inexperienced writers.[222] Familiarity with professional design concepts facilitates the inhibition of irrelevant visual memories in the brain's pre-frontal cortex, allowing greater focus on the development of a new industrial design.[223] This biological data complements older research claiming that those recognized for great creative achievements needed significant amounts of time to master their discipline. A common postulate in the literature is that theoretical breakthroughs typically require ten years of deep involvement in a domain.[224]

It is not just experience, but the kind of experience someone has in an artistic discipline, that matters. "Brain imaging studies have found that people with musical training actually think about music differently, people with artistic training think about art differently, and people with dance training think about dance differently."[225] Contrary to the popular belief that lengthy periods of institutional schooling stunt creative potential, there is no slump in creativity as training continues.[226] Children are no more likely to be creative than adults.[227] Given this research, scientists now believe that even spontaneous creative mental states are better fostered through systematic institutional training than informal training or no training at all.[228]

The second myth contends that no one—not even experts—can assess the aesthetic avant garde. This was one of Justice Holmes's prudential arguments for broadening the definition of artistic creativity to include anything that is the "personal reaction of an individual upon nature."[229] Justice Holmes warned that if courts failed

221 *Id.* at 10.

222 K. Erhard, F. Kessler, N. Neumann, H.-J. Ortheil & M. Lotze, *Professional Training in Creative Writing Is Associated with Enhanced Fronto-Striatal Activity in a Literary Text Continuation Task*, 100 NEUROIMAGE 15, 21–22 (2014).

223 Yasuyuki Kowatari, Seung Hee Lee, Hiromi Yamamura, Yusuke Nagamori, Pierre Levy, Shigeru Yamane & Miyuki Yamamoto, *Neural Networks Involved in Artistic Creativity*, 30 HUM. BRAIN MAPPING 1678, 1688 (2009).

224 SAWYER, *supra* note 148, at 93–94; Kaufman, Baer, Cropley, Reiter-Palmon & Sinnett, *supra* note 173, at 332, 335.

225 SAWYER, *supra* note 148, at 203.

226 *See id.* at 74.

227 *See id.*

228 *See* Kleinmintz et al., *supra* note 203, at 132; Joel A. Lopata, Elizabeth A. Nowicki & Marc F. Joanisse, *Creativity as a Distinct Trainable Mental State: An EEG Study of Musical Improvisation*, 99 NEUROPSYCHOLOGIA 246, 255 (2017).

229 Bleistein v. Donaldson Lithographing Co., 188 U.S. 239, 250 (1903).

to take such a hands-off approach to copyright's creativity requirement, new "works of genius" from modern-day Manets would be cast aside since they could not be aesthetically appreciated in their own times.[230]

Creativity research calls Justice Holmes's supposition into doubt, at least when it comes to experts in the relevant domain. One enduring misconception about creativity in Western societies is that creative people are so far ahead of the rest of us that their brilliance can never be appreciated during their lifetime.[231] Creativity scholar R. Keith Sawyer contends that, in actuality, most creative contributions are fully recognized as such at the time they are made.[232] Many of the most important creative contributions result not from something that transforms the discipline but from a relatively straightforward process like redefinition or combination of two previously uncombined fields.[233] These are creative leaps whose value can be appreciated by experts when they occur.[234] Quantitative studies confirm that artistic reputations stay consistent over time and it is rare for an unrecognized artist to be embraced as a genius after death.[235]

Justice Holmes also raised the specter of judges privileging what they know rather than what is new when it comes to expressive works.[236] This concern could surely apply to experts as well. Bias towards the familiar is certainly a risk when evaluating new forms of expression. But familiarity bias is a risk when evaluating all sorts of things, not just art.[237] Despite Justice Holmes's concerns, the creativity requirement need not be synonymous with judicial taste for the familiar. Instead, as described in the next Part, it is possible to evaluate creative contributions against a baseline of what has come before rather than

230 *Id.* at 251–52.

231 SAWYER, *supra* note 148, at 13.

232 Sawyer, *supra* note 207, at 2043–44.

233 *See* SAWYER, *supra* note 148, at 124.

234 *See id.*

235 *See* DEAN KEITH SIMONTON, GENIUS, CREATIVITY, AND LEADERSHIP 19 (1984); Victor Ginsburgh & Sheila Weyers, *On the Formation of Canons: The Dynamics of Narratives in Art History*, 28 EMPIRICAL STUD. ARTS 37, 63 (2010); Kathryn Graddy, *Taste Endures! The Rankings of Roger de Piles (†1709) and Three Centuries of Art Prices*, 73 J. ECON. HIST. 766, 766 (2013).

236 *See* Bleistein v. Donaldson Lithographing Co., 188 U.S. 239, 251–52 (1903) ("At the other end, copyright would be denied to pictures which appealed to a public less educated than the judge.").

237 *See* Matthew Tokson, *Judicial Resistance and Legal Change*, 82 U. CHI. L. REV. 901, 916–25 (2015) (examining cognitive biases causing judges to prefer familiar laws to unfamiliar ones).

by an expert's or a judge's personal preference.[238] Judges already perform this sort of analysis when ensuring that inventive activity must be "nonobvious" to be eligible for patent protection. Along similar lines, a more specified creativity standard could prompt judges to look for art that represents some departure from the status quo.

III. HOW TO TAKE CREATIVITY SERIOUSLY

As demonstrated by Parts I and II, the assumptions about creative thought governing copyright doctrine do not match the actual mechanics of the creative process. Before updating copyright law to reflect the realities of creative thought, however, we need to further interrogate the advantages of a meaningful creativity requirement. Some maintain that sheer production of artistic works, rather than creativity, should be the touchstone of copyright law.

If creativity should remain part of the test for copyrightability and the biological realities of the creative process taken into account, then copyright doctrine is due for some changes. Authorial motivation should become a formal part of the creativity evaluation. Courts should abandon the art/science double standard and shift from the current domain-general approach to a domain-specific one. Rather than being treated as presumptively flawed, expertise should be welcomed to help understand the appropriate baseline against which to evaluate authorial output.

A. Should Everything Be Creative?

For creativity abolitionists, legal scrutiny of the author's creativity should be replaced by the simpler and more achievable aim of furthering the production of all works, creative or not. Such an approach fails to acknowledge the text of the U.S. Constitution, the costs of ceding the creativity determination to market forces, and the structural benefits to judicial decision making from the presence of a meaningful validity test.

1. Production Problems

According to a committed few, "creativity should be banned from the copyright analysis."[239] The primary worry for those wishing to abolish the creativity requirement is an old one: courts must avoid the temptation to aesthetically discriminate between works, and even a

238 Miller, *supra* note 22, at 477 ("Rather than judge a work based solely on our own taste, we can judge a work by the ways in which the author's individual voice stands apart from conventional expression.").

239 Karjala, *supra* note 5, at 201.

weak creativity requirement is far too tempting.[240] This is the same argument Justice Holmes marshalled so effectively in *Bleistein*. Justice Holmes wrote that it would be a "dangerous undertaking" for lawyers "to constitute themselves final judges of the worth" of expressive content.[241] In accord, Aaron Fellmeth maintains that the creativity requirement injects "an arbitrary and subjective bias" into copyright law.[242]

To avoid bias, Fellmeth and others argue that courts should get out of the creativity business and simply let the marketplace determine which kinds of expressive works are of value. According to Brian Frye, "The purpose of copyright is to encourage the production of economically valuable works of authorship, not creativity."[243] Buying choices show that "consumers tend to prefer works that are generic and familiar, and tend to reject works that are unusual and unfamiliar."[244] For the creativity abolitionists, this disconnect between marketplace behavior and copyright law's preference for creative expression demonstrates the current creativity requirement's biased application. They recommend punting creativity questions to the audiences for creative works so courts can avoid charges of elitism and sidestep the fraught question of aesthetic judgment.[245]

Along somewhat similar lines, in a groundbreaking article written a little over a decade ago, Jeanne Fromer approved of copyright's current subjective definition of creativity. She used psychological studies of the time to suggest that audiences value divergent thinking, which is "personal and subjective," in art whereas they value convergent thinking, which requires convergence on an objective answer to a research question, for science and engineering.[246] Fromer acknowledged that the modern creativity standard is too vague and needs more articulation, but, given public sentiment, she resisted any increase in the creativity threshold for copyright protection. At its heart, Fromer's point was similar to that of the creativity abolitionists in that she called for the creativity requirement to be aligned with the

240 *See* Fellmeth, *supra* note 5, at 97–98; Frye, *supra* note 5, at 447.

241 *Bleistein*, 188 U.S. at 251.

242 Fellmeth, *supra* note 5, at 98.

243 Frye, *supra* note 5, at 428; *see also* Fellmeth, *supra* note 5, at 86 ("[T]he goal of copyright law is . . . securing a sufficient quantity of expressive works for the public benefit, with no very significant interest in the quality of the resulting works.").

244 Frye, *supra* note 5, at 450; *see also* 2 PATRY, *supra* note 45, § 3:33 ("The overwhelming number of copyrighted works . . . are everyday fare created without the slightest awareness that they are subject to copyright and without any cultural content.").

245 *See* Frye, *supra* note 5, at 450–53.

246 Fromer, *supra* note 182, at 1496. Fromer describes divergent thinking as "problem finding" and convergent thinking as "problem solving." *Id.* at 1470–71.

taste of marketplace. In her view, audiences tend to value subjectivity and personality in their art but without too much "newness."[247]

There are a few problems with the position of the creativity abolitionists. First, and perhaps foremost, there is a strong argument that the U.S. Constitution requires creativity for copyright eligibility. The Intellectual Property Clause of the Constitution grants Congress the power "[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."[248] In *Feist*, the Supreme Court deemed the words "authors" and "writings" to both have creative components, leading the Court to demand "more than a *de minimis* quantum of creativity" for copyright protection.[249] Hence, even if one agrees that the creativity requirement is wrongheaded, copyright law is stuck with it.

Leaving the text of the Constitution aside, the supposed impartiality of a validity test that only looks to productivity, creative or otherwise, ignores the normative commitments embedded in such a test. As Barton Beebe points out,[250] for all of its stress on aesthetic neutrality, *Bleistein* put its own thumb on the end of an aesthetic scale. By maintaining that judges should not evaluate aesthetic merit, the *Bleistein* decision effectively adopts its own aesthetic theory, one that equates aesthetic worth with a work's "commercial value."[251] Hence, the choice is not really between a validity test based on aesthetic considerations and one that does not consider aesthetics at all. Instead, the choice is between a premium being placed on human creativity or a premium on marketplace success.

A creativity abolitionist might respond that even if other values are at stake in the determination of copyright eligibility, audience preference should be the main determinant, not aesthetic expertise. One might think of audience preference as the opposite of expert

247 *Id.* at 1498. For scientific creations, Fromer found that the public is conditioned to evaluate works according to improvements from past baselines and to treasure significant departures from past learning, thus validating patent law's contrasting approach to evaluating creativity under the nonobviousness standard. *Id.*

248 U.S. CONST. art. I, § 8, cl. 8.

249 Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 346, 363 (1991). *Feist* relied heavily on two prior decisions from the nineteenth century: *The Trade-Mark Cases* and *Burrow-Giles Lithographic Co. v. Sarony*. In *Feist*, the Court found that the *Trade-Mark Cases* established "writings" as requiring independent creation and creativity and that *Burrow-Giles* read the same dual requirement into the word "authors." *Id.* at 346–47.

250 *See* Beebe, *supra* note 99, at 330–31.

251 *See id.* at 330; *see also* Brian Soucek, *Aesthetic Judgment in Law*, 69 ALA. L. REV. 381, 386 (2017) ("[A]cceding to relativism is itself a substantive aesthetic judgment, not an avoidance of such judgments, as Holmes's followers seem to believe.").

testimony as it relies on the opinions of those without special training to determine the value in an artistic work.

Relying on audience sensibilities might jibe with the rhetoric of copyright populism, but courts and legislators should be wary of allowing audience tastes to govern the creativity requirement. First, it may be a mistake to correlate "progress" with public sentiment. There are benefits to prompting investment in unconventional artistic expression, but those benefits risk being lost or at least suboptimally realized if creativity analysis is anchored to popular opinion and conventional tastes.[252] Patent law's requirements of novelty and non-obviousness are instructive here. If there is no difference between artistic and scientific creativity, setting a high standard meant to foster innovation for patent validity while adopting next to no standard for copyright validity seems inappropriate.

Society profits from promoting the production of works with a high degree of originality. Such works prompt greater advancements in the arts, literature, and related endeavors than low originality works.[253] Also, a high creativity standard reduces the cost for aspiring authors to produce their own works by limiting the number and scope of prior expressive assets under copyright that they must create around.[254] Allowing audience taste to set the standard for creativity jeopardizes both of these benefits.

Second, objective measurements of several aspects of the creative process are now realizable in a way that was not possible even a short time ago. Fromer relied on creativity research in psychology that often depended on the self-reporting of research subjects.[255] While such reports are not per se unreliable, observable data about the creative process realized through neuroscience provide a different perspective, unlocking realities about that process that creators cannot articulate themselves.[256] Recent work reveals both divergent and convergent thinking is important to all creative activities, not just work in the arts

252 *See* Miller, *supra* note 22, at 463–64.

253 *See* 2 PATRY, *supra* note 45, § 3:33 (exploring rationales for the creativity requirement, including that creative works "culturally benefit society" in a way that other works do not); Jing Zhou, Xiaoye May Wang, Lynda Jiwen Song & Junfeng Wu, *Is It New? Personal and Contextual Influences on Perceptions of Novelty and Creativity*, 102 J. APPLIED PSYCH. 180, 180 (2017) ("Fundamentally, novelty drives differentiation and competitiveness; it is the engine of growth.").

254 *See* Parchomovsky & Stein, *supra* note 22, at 1519–21.

255 *See generally* Fromer, *supra* note 182, at 1459–83.

256 *See supra* Section II.A; *see also* SAWYER, *supra* note 148, at 133 (contending that creativity research has historically tended to focus on the early stages of the creative process, particularly idea generation, while neglecting the later stages, including problem solving).

or discoveries in the sciences.[257] Even if it is true that audiences prefer their science objective and their art subjective, that may only be due to a failure of public imagination given the historical inability to objectively measure artistic creativity.[258] Although "the taste of any public is not to be treated with contempt,"[259] neither should it be the sole determinant for what is eligible for copyright and what is not.[260]

2. The Value of Validity

A slightly different objection to the creativity requirement does not so much reject creativity's importance to copyright law as question the need for a specific creativity threshold test. According to this line of attack, it does not matter if there is an ineffectual creativity requirement so long as courts reach the right result through other means. By employing the infringement analysis, fair use defense, or other areas of copyright law to allow free copying of uncreative materials, the argument goes, courts can incentivize creative expression while preserving room to create for downstream authors.[261] For example, rather than denying copyright in an alphabetically ordered phonebook for lack of creativity, courts should utilize the infringement and fair use analyses to permit others to copy the phone book without penalty. In other words, why not let everything be copyrightable?

One problem with this approach is the effect it has on other areas of copyright law. In the anatomy of a copyright lawsuit, the various parts of that lawsuit—establishing the validity of the plaintiff's work, evaluating whether the defendant's work is infringing, examining whether the defendant's work meets the criteria for fair use—are interdependent. A flawed or nonexistent validity evaluation infects these other areas of copyright law.

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257 Leslee Lazar, *The Cognitive Neuroscience of Design Creativity*, 12 J. EXPERIMENTAL NEUROSCIENCE 1, 1–3 (2018) (finding that design creativity, like scientific creativity, requires innovation and utility in its outcomes and involves both divergent and convergent thinking); Mekern et al., *supra* note 216, at 47 ("[A]ctual performance is likely to involve some degree of *interplay* between divergent, convergent, and other cognitive (sub)processes and process-related neural networks.").

258 *See* Fromer, *supra* note 182, at 1478 (admitting that "the weight attached to problem finding in the artistic domains" is likely due more "to our constructions of culture" rather than human psychology).

259 Bleistein v. Donaldson Lithographing Co., 188 U.S. 239, 252 (1903).

260 *See* Joseph P. Fishman, *Music as a Matter of Law*, 131 HARV. L. REV. 1861, 1914–15 (2018) (questioning whether market forces are the best determinant of value in expressive works).

261 *See* Fellmeth, *supra* note 5, at 98; Frye, *supra* note 5, at 438–39.

Infringement requires an analysis of whether two works are "substantially similar."[262] But the term "similarity" lacks content on its own. The trier of fact needs to ascertain the protectable elements in the original work so it can compare them to the defendant's work and make an infringement determination.[263] As a result, copyright's threshold tests for assessing the plaintiff's eligibility for copyright protection have a role to play in weighing liability for a defendant's conduct. Determining whether the defendant's use comes within the legal scope of the plaintiff's rights necessitates some definition of what those rights are.

The same is true of the fair use defense. One factor of the defense examines the "nature of the copyrighted work," narrowing the scope of fair use for unauthorized use of "highly creative" copyrighted works and broadening it for use of more factual works.[264] This means that a court's appraisal of creativity when assessing copyright validity informs a court's analysis of fair use.[265] Ideally, a scrupulous eligibility determination reduces the amount of analysis required in the infringement and fair use evaluations; a creativity test that is not a test at all makes the other parts of copyright law do all the work.

A case that aptly illustrates the structural problems with today's minimalist creativity requirement is *Conan Properties, Inc. v. Mattel, Inc.*[266] Conan Properties (CPI) held copyright in several comic books published in the 1970s featuring the character of Conan the Barbarian.[267] CPI could claim an interest in what was featured in the comic books, but not over the original Conan character who had been delineated by Robert Howard in a series of stories in the 1930s.[268] Howard's stories had passed into the public domain.[269] CPI sued Mattel for its He-Man action figure, contending the action figure was too closely related to the visual representation of Conan in its comic books.[270] Mattel defended He-Man by maintaining that CPI's character failed to meet the originality standard.[271]

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262 Walker v. Time Life Films, Inc., 784 F.2d 44, 47 (2d Cir. 1986).

263 Mark A. Lemley & Mark P. McKenna, *Scope*, 57 WM. & MARY L. REV. 2197, 2209 (2016).

264 Cambridge Univ. Press v. Patton, 769 F.3d 1232, 1268 (11th Cir. 2014) (quoting 17 U.S.C. § 107(2) (2018)).

265 *See, e.g.*, Tresóna Multimedia, LLC v. Burbank High Sch. Vocal Music Ass'n, 953 F.3d 638, 650 (9th Cir. 2020).

266 712 F. Supp. 353 (S.D.N.Y. 1989).

267 *Id.* at 358.

268 *Id.* at 357–58.

269 *Id.* at 358.

270 *Id.* at 360.

271 *Id.* at 358–59.

The court seemed troubled by the lack of creativity in CPI's Conan yet refused to actually find insufficient creativity. The judge admitted, "Just what, if anything, original CPI has contributed is difficult to discern."[272] He noted that Conan in the comic books looked no different from a universe of hunky, superhero musclemen like Hercules, Tarzan, and John Carter, all of whom had the same square-jawed and broad-shouldered appeal.[273] Yet rather than deeming the creativity requirement unsatisfied, he latched onto the comment, made by CPI's attorney during oral argument, that CPI's Conan "possesses a uniquely styled musculature, which differs significantly both from the other superhero hunks of the fantasy comic world, and from the lithe, swimmer-like Conan depicted in the illustrations that accompanied Howard's books."[274] Agreeing that "accentuat[ion] [of] certain muscle groups relative to others" can "constitute[] the protectable [sic] expression of an idea," the court found CPI to have satisfied the creativity threshold so that it could proceed in a battle over infringement with He-Man.[275]

The court then moved on to the infringement analysis and a comparison of the two muscular heroes. The court found these works were not substantially similar and that "no reasonable trier of fact could conclude otherwise."[276] But the only explanation it offered was tucked into a footnote. The footnote stated that CPI's Conan "is probably no better muscled than body-builder Arnold Schwarzenegger."[277] It then explained that Schwarzenegger had a fifty-seven-inch chest and twenty-inch calves when he won the Mr. Olympia title in 1977.[278] Calculating that the He-Man doll, if enlarged to a height of six feet two inches, would boast a seventy-one-inch chest and twenty-nine-inch calves, the judge concluded that this difference in musculature was enough for the two muscle men not to appear substantially similar to the ordinary observer.[279]

This infringement analysis leaves a lot to be desired. Although Schwarzenegger played Conan the Barbarian in two feature films, it is hard to know why he was the right template for evaluating the characteristics of the Conan character as illustrated in the comic books. Moreover, it seems unlikely that audiences would be able to

272 *Id.* at 359.
273 *Id.*
274 *Id.*
275 *Id.* (second alteration in original) (quoting Mattel, Inc. v. Azrak-Hamway Int'l, Inc., 724 F.2d 357, 360 (2d Cir. 1983)).
276 *Id.* at 361.
277 *Id.* at 361 n.14.
278 *Id.*
279 *Id.*

appreciate the differences in muscle size the court deemed so critical given the small stature of the actual He-Man doll. A better approach would have been to determine from the beginning that there was nothing creative about the comic book Conan's musculature and decide the case on that basis, rather than rendering an opaque decision that offers no guidance to those looking to design the next swole action hero while avoiding an infringement claim from CPI.

It would be one thing if *Conan Properties* was an outlier and the infringement test engineered to bear the burden of evaluating not just similarity but sufficient creativity. In reality, however, copyright's infringement standard is even more nebulous than its creativity requirement. We know very little about how judges determine when one work is substantially similar to another[280] and nothing about how juries make such a determination.[281] By fashioning copyright's test for validity into a rubber stamp, the current instantiation of the creativity requirement exerts great pressure on the ill-defined test for copyright infringement, making it harder for parties to predict the outcome of cases and artists to know in advance whether their behaviors run afoul of copyright law.

Rather than adding more weight than the substantial similarity or fair use analyses can bear, it makes sense to structure copyright law in stages. A staged approach allows for striking various balances between rewarding authors and leaving enough raw material for downstream users. Less attention to validity questions, including creativity, makes the determination of a copyright's proper scope in the infringement analysis both more critical and more intricate. This can pose a particular problem for jurors, who are unfamiliar with copyright's concepts and competing aims.[282] Conflating different analytical tasks in a copyright lawsuit, instead of strategically apportioning them, can also exacerbate tendencies to allow emotion or a desire to save cognitive energy to determine an outcome.[283]

In the end, copyright's current approach to creativity threatens the very purpose of copyright law. Somewhat ironically, the danger with an extremely generous creativity standard is that it may stifle

280 *See* Mark Bartholomew, *Copyright and the Brain*, 98 WASH. U. L. REV. 525, 547–54 (2020).

281 Cohen, *supra* note 17, at 1173.

282 Lemley & McKenna, *supra* note 263, at 2219.

283 *See* Chris Guthrie, Jeffrey J. Rachlinski & Andrew J. Wistrich, *Blinking on the Bench: How Judges Decide Cases*, 93 CORNELL L. REV. 1, 41 (2007) (discussing benefit of legal criteria that prompt judges to consider all relevant factors and "remind them of their responsibility to base decisions on more than mere intuition"); *see also* Joep Sonnemans & Frans van Dijk, *Errors in Judicial Decisions: Experimental Results*, 28 J.L. ECON. & ORG. 687, 714 (2011) (advocating for reforms to cause judges to be less reliant on intuition).

creativity. The easier it is for authors to claim copyright protection, the harder it is for downstream creators to come up with their own non-infringing expression. Awards of copyright in uncreative material invite frivolous litigation from copyright holders, thereby deterring others who would otherwise engage in creative activity but do not want to get sued. This argues in favor of narrow construction of copyright entitlements.[284] The current creativity requirement acts in the opposite manner.

B. Doctrinal Fixes

Fixing copyright's creativity requirement requires attention to all three parts of the systems model: the individual creator, the domain, and the field. Considering artistic motivation will add much-needed content to the creativity analysis. Instead of treating only scientific discoveries as permitting a comparison with what came before and artistic production as unyielding to any objective evaluation, an artistic domain's prior works and shared traditions can be compared to the work at issue to privilege departures from the conventional. To provide the content for such objective evaluation, the field of experts in a domain need to be allowed to provide information to the trier of fact. It makes little sense to continue to insist that the creative process has nothing to do with authorial mindsets, domain-specific practices, or expert judgments.

1. Making Motivations Matter

By discarding evidence of authorial motive, courts greatly expand the universe of copyrightable materials. Consider judicial treatment of photography. In the late nineteenth century, the Supreme Court deemed the new technology of photography an appropriate subject for copyright protection, noting the various choices as to lighting, posing, etc. that could be made by a photographer.[285] By no means, however, did the Court imply that every click of the shutter generates a copyrightable work. It explained that "an author who claims infringement must prove 'the existence of . . . intellectual production, of thought, and conception,'" thereby suggesting only purposive activities should be eligible for copyright.[286]

284 ROGER E. SCHECHTER & JOHN R. THOMAS, PRINCIPLES OF COPYRIGHT LAW 26–27 (2010); Cohen, *supra* note 17, at 1197.

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

286 Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 362 (1991) (quoting *Burrow-Giles*, 111 U.S. at 59–60) (summarizing late nineteenth century precedent); *see also* ROBERTA ROSENTHAL KWALL, THE SOUL OF CREATIVITY: FORGING A MORAL RIGHTS LAW FOR THE UNITED STATES 81 (2009) ("According to the Court, although authorship was evident in

Years later, a photographer's intentional choices became largely irrelevant to the copyrightability of photographs. Judge Learned Hand speculated that all photographs enjoyed copyright protection, regardless of motive. "[N]o photograph, however simple, can be unaffected by the personal influence of the author, and no two will be absolutely alike," he explained.[287] Today, "[a]lmost any photograph 'may claim the necessary originality to support a copyright.'"[288]

This generous posture towards photography depends on the exclusion of authorial narratives from the creativity analysis. Only on extremely rare occasions do courts find insufficient originality in a photograph.[289] Instead, for the reasons given in Part I, there has been resistance to using artistic motive to add substance to the creativity determination in photography cases.[290] Even the most thoughtful opinions about the proper scope of copyright in photography contend that the determination must focus only on the work itself and not the decisions that went into making that work.[291]

Blocked from examining authorial intent, courts in photography cases tend to find that a work's mere existence as a photograph qualifies the work as sufficiently original. Eva Subotnik describes this judicial reasoning as the "proxy of ontology," and it has produced some absurdity in recent copyright photography cases.[292] When a crested macaque named Naruto took a selfie with a camera that was accidentally left where the monkey could acquire it, a news agency asserted copyright in the photograph.[293] The Ninth Circuit denied copyright in the photograph, but not for lack of creativity.[294] Boxed in by decades of case law pronouncing every photograph sufficiently creative, the court of appeals could not find that Naruto's click of the shutter was uncreative. Instead, it was forced to rely on the different

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the photograph itself, the narrative supplied by the photographer was vital in assisting the Court's perception."); Hughes, *supra* note 108, at 356 ("The [*Sarony*] Court only says that a photograph *can* be copyrightable, not that every photograph *is* or *probably will be* copyrightable.").

287 Jewelers' Circular Pub. Co. v. Keystone Pub. Co., 274 F. 932, 934–35 (S.D.N.Y. 1921), *aff'd*, 281 F. 83 (2d Cir. 1922); *see also* SHL Imaging, Inc. v. Artisan House, Inc., 117 F. Supp. 2d 301, 310 (S.D.N.Y. 2000) ("The technical aspects of photography imbue the medium with almost limitless creative potential.").

288 Mannion v. Coors Brewing Co., 377 F. Supp. 2d 444, 450 (S.D.N.Y. 2005) (quoting 1 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 2.08 [E][1] (2005)).

289 *See* Subotnik, *supra* note 7, at 1521–23.

290 *See supra* Section I.B.

291 *See Mannion*, 377 F. Supp. 2d at 451.

292 Subotnik, *supra* note 7, at 1513–14.

293 Naruto v. Slater, 888 F.3d 418, 420 (9th Cir. 2018).

294 *Id.*

rationale that the copyright statute did not permit animals to be considered "authors."[295]

Photography is not the only art form where failure to consider intent contributes to the impotence of the creativity requirement. Various digital technologies afford amateurs the tools to take constant snapshots of their surroundings. Our phones record audio and video any place and any time with the touch of a button. Easily accessible software allows anyone to produce computer-generated imagery.[296] As we unthinkingly produce more and more content, copyright law prevents courts from using the heedless nature of that production to place a check on the expansion of copyright protection.[297]

Taking evidence of motivation seriously will require the trier of fact to scrutinize narratives of artistic initiative and not simply accept a story of creative inspiration at face value. Although this kind of interrogation of rationales for human behavior occurs all the time in the courts,[298] today, a copyright claimant can demand protection for their work without bothering to craft an explanation that suggests creative activity. As Subotnik writes about ways of assessing the creativity of photographs:

> [A]s between an assertion that 'if X is a photograph, then it is original,' and some compelling, or at least plausible explanation of what a photographer was trying to accomplish, the latter is more capable of being subject to scrutiny in litigation . . . and therefore is a more justifiable basis for copyright protection.[299]

An additional argument in favor of considering evidence of creative motivation in the creativity assessment is that, to a very limited degree, it is already being done. As compared to the general approach in copyright cases, courts have been more willing to probe authorial motivations when the work at issue is a derivative work, i.e., one that is

295 *Id.* at 425–26; *see also* Shyamkrishna Balganesh, *Causing Copyright*, 117 COLUM. L. REV. 1, 39 (2017) ("Under current originality doctrine, then, the monkey selfie would obtain copyright protection without issue."); John Tehranian, *Sex, Drones, & Videotape: Rethinking Copyright's Authorship-Fixation Conflation in the Age of Performance*, 68 HASTINGS L.J. 1319, 1355–58 (2017) (criticizing the *Naruto* case for ignoring creative contributions that do not involve fixation of the work into a tangible medium of expression).

296 *See* NEIL WEINSTOCK NETANEL, COPYRIGHT'S PARADOX 54–80 (2008); Jessica Litman, *Real Copyright Reform*, 96 IOWA L. REV. 1, 24 (2010) (attributing expansion of copyright to shift to Internet as primary means of communicating and disseminating informational works).

297 *See* Madison, *supra* note 5, at 831; Miller, *supra* note 22, at 478–79 (bemoaning how originality jurisprudence "severs the link between expression and volition").

298 *See supra* Section I.B.

299 Subotnik, *supra* note 7, at 1531.

heavily based on another copyrightable work.[300] In these situations, when the derivative work must be analyzed to make sure it satisfies the requirements for originality and is sufficiently distinguishable from the preexisting work, courts sometimes look to authorial purpose. This isolated trend in some derivative works cases should become a formalized approach in all creativity evaluations.

L. Batlin & Son, Inc. v. Snyder, a favorite of copyright casebooks, illustrates the approach sometimes taken.[301] The case involved a claim of copyright in a plastic toy bank modeled after a metal toy bank in the public domain.[302] A Second Circuit panel held that the plastic bank was not original.[303] The majority deemed variations between the metal and plastic versions of the bank trivial, in part, because the plaintiff manufacturer made the changes for efficiency and cost reasons rather than out of some creative vision.[304] Changes made only "in order to fit into the required price range and quality and quantity of material to be used" did not reflect a creative impulse so much as an attempt to appropriate public-domain work.[305]

A few other derivative works cases take the same approach. In *Meshwerks, Inc. v. Toyota Motor Sales U.S.A., Inc.*,[306] then court of appeals Judge Neil Gorsuch assessed whether two-dimensional digital models of cars generated for an advertising campaign were deserving of copyright. In concluding that the models were not original, Judge Gorsuch highlighted the designers' description of their modeling work "as an attempt accurately to depict real-world, three-dimensional objects as digital images viewable on a computer screen."[307] Along similar lines, a judge held photographic reproductions of works of art in the public domain uncopyrightable because "the point of the exercise was to reproduce the underlying works with absolute fidelity," which made them nothing more than "slavish copies."[308]

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300 The Copyright Act defines "derivative work" as "a work based upon one or more preexisiting works." 17 U.S.C. § 101 (2018).

301 536 F.2d 486 (2d Cir. 1976).

302 *Id.* at 488.

303 *Id.* at 487–88.

304 *Id.* at 489.

305 *Id.* at 488. A vigorous dissent faulted the majority for allowing consideration of artistic motivation to influence its analysis. Invoking the *Alfred Bell* decision, the dissent stressed that even "an inadvertent variation can form the basis of a valid copyright," rendering "the author's reasons for making changes . . . irrelevant." *Id.* at 493 (Meskill, J., dissenting). "After the fact speculation as to whether Snyder made changes for aesthetic or functional reasons should not be the basis of decision," the dissent continued. *Id.*

306 528 F.3d 1258 (10th Cir. 2008).

307 *Id.* at 1269.

308 Bridgeman Art Libr., Ltd. v. Corel Corp., 36 F. Supp. 2d 191, 197 (S.D.N.Y. 1999). For the most part, however, courts have declined the invitation to find insufficient creativity in photography. *See* Latimer v. Roaring Toyz, Inc., 601 F.3d 1224, 1234 (11th Cir. 2010)

Cases like *Batlin* and *Meshwerks* are sometimes criticized for employing their own, higher creativity standard.[309] But it is not so much a different standard being applied as a different evidentiary rule.[310] For good reason, cases involving the copyrightability of derivative works activate the fears of judges that the would-be author is only a copyist. As a consequence, judges tend to reach into their bag of traditional legal tools and interrogate the parties' motives. This interrogation allows courts to assess creativity in a more searching manner than in the average case.[311] Given what we now know about the centrality of authorial intent to creative output, these tools should be deployed in all copyright cases where creativity is at issue, not just cases involving derivative works.

2. Avoiding the Art/Science Double Standard

If motivation is critical to assessing creativity at the individual level, an examination of the surrounding work in the relevant artistic area is essential to understanding creativity at the level of domain. Such an approach is regularly undertaken when it comes to evaluating scientific creativity under patent law's nonobviousness standard but is eschewed in copyright out of a belief that artistic creativity lies beyond objective comprehension.[312] The psychological study of creativity shows that artistic and scientific creation are much the same and neuroscience confirms that theories of left-brained, analytical inventors and right-brained, unsystematic artists are false. Ending the art/science double standard would allow courts to take into account relevant prior art for a more rigorous evaluation of copyright creativity.

For decades, the standard protest to using prior art to evaluate the creativity of artistic expression is that judges lacked the perceptive abilities to do so. The creative process could only be understood by the individual artist. Moreover, if judges did try to determine what

("Except for a limited class of photographs that can be characterized as 'slavish copies,' courts have recognized that most photographs contain at least some originality in their rendition of the subject-matter.").

309 *See* Schrock v. Learning Curve Int'l, Inc., 586 F.3d 513, 521 (7th Cir. 2009); Dam Things from Den. v. Russ Berrie & Co., 290 F.3d 548, 564 (3d Cir. 2002); *see also* 2 PATRY, *supra* note 45, § 3:55 ("Under the Supreme Court's *Feist* opinion, there is a single test for originality applicable to all works, derivative and nonderivative alike."); Madison, *supra* note 5, at 846 (objecting to the moralism bound up in the term "slavish copying").

310 *Cf.* Douglas Lichtman, *Copyright as a Rule of Evidence*, 52 DUKE L.J. 683, 687 (2003) (framing the creativity requirement as an evidentiary rule that allows courts to exclude from copyright protection those cases where mere similarity in works is not enough to determine that there has been impermissible copying).

311 This inquiry into the motivation behind derivative works may also be geared to determining whether the independent creation criterion for originality has been satisfied.

312 *See supra* Section I.C.

deviations from existing work were significant enough to be considered creative, they would inevitably pollute the analysis with their own artistic tastes that hew to the orthodox rather than the avant-garde.

There is little evidence that personal preference will infect every judicial attempt to compare the works of the past against those of the present. As Joseph Miller asks, "[W]hy assume that the only alternative to a minimalist creativity inquiry is a stifling aesthetic orthodoxy?"[313] In patent law, the task is to evaluate the invention against the prior art to see if the invention would be obvious to one skilled in the art. Rather than encouraging conventional approaches or favoring the tried and true, the nonobviousness standard encourages innovation.[314] Copyright's creativity analysis could be structured similarly. If judges were told to examine the author's contribution for deviation from what came before instead of for the right kind of deviation, artistic innovation could be encouraged rather than disincentivized.

One potential objection to comparing the author's work against other works in the domain is that it would require not just creativity of authors but novelty as the law suddenly lurches from allowing anything "personal" to be copyrighted to awarding copyright protection only to expression that has never appeared anywhere before. A creativity standard based on prior art does not have to insist that a copyrightable work be unprecedented in human history, however. Courts could apply a lower threshold, only requiring the work to be different than the conventions that dominate the domain.[315] In fact, courts already employ a similar analysis in policing works for *scènes à faire*, those parts of a work that are "standard"[316] or "common-place . . . within the relevant field" and, as a result, not copyrightable.[317] For example, because the maze and scoring table in the PAC-MAN video game were "standard game devices," these game elements were deemed *scènes à*

313 Miller, *supra* note 22, at 462.

314 *See* W. Nicholson Price II, *The Cost of Novelty*, 120 COLUM. L. REV. 769, 821 (2020) ("Patent law pushes toward divergent innovation—either differentiating innovation or, if the nonobviousness requirement works well, exploring innovation.").

315 Miller, *supra* note 22, at 486.

316 Cavalier v. Random House, Inc., 297 F.3d 815, 828 (9th Cir. 2002).

317 Swirsky v. Carey, 376 F.3d 841, 850 (9th Cir. 2004). The actual *scènes à faire* doctrine is not an adequate substitute for a true creativity requirement. In addition to the term not being sufficiently developed in the case law, some courts have held that *scènes à faire* cannot apply to particular artistic domains, including visual works. *See* Southco, Inc. v. Kanebridge Corp., 390 F.3d 276, 287 (3d Cir. 2004) (en banc) (Becker, J., concurring). Also, *scènes à faire* have been applied only during the infringement calculation, not the validity analysis. Atari Games Corp. v. Oman, 888 F.2d 878, 886 (D.C. Cir. 1989); *see also* 4 NIMMER & NIMMER, *supra* note 4, § 13.03[B][4] ("[T]his doctrine does not limit the subject matter of copyright; instead, it defines the contours of infringing conduct.").

faire and a competitor's use of similar elements not infringing.[318] *Scènes à faire* jurisprudence shows that objective judicial review is not synonymous with demanding complete novelty.

Some might object that greater emphasis on prior art would tax artists with knowledge of the works in their domain that came before. This is a burden we expect inventors to shoulder in patent law, but ascertaining relevant prior art may be more difficult for artists. Unlike patented inventions, there is no comprehensive registry of copyrighted works for artists to consult. Advances in visual art, music, and literature are arguably less susceptible to indexing than scientific and technological improvements.[319]

Still, we now know that knowledge of a domain's prior works is essential to creative production. Experience with and training in the conventions of the domain are critical factors in the generation of work that can transcend those conventions. If the goal is to align the creativity requirement with the realities of the creative process, greater attention to prior art makes sense. Given that psychologists posit that the creative process demands domain-specific knowledge of what works have come before, we should be skeptical of arguments that authors cannot be charged with awareness of the prior art in their domain. In addition, although beyond the scope of this Article, proposals to make existing copyrighted works more searchable could be implemented so that it would be easier for authors to find relevant prior works.[320]

From the perspective of the trier of fact, evaluating works against prior art requires an ability to know what that prior art is and, more particularly, what its common elements are. Sometimes judges may be able to ferret this out on their own. Like everyone else in the early 1990s, the nine Justices hearing the *Feist* case were familiar with phone directories and could confidently assert that alphabetical ordering of names was not only typical but uniform for that product. In many other cases, judges and juries will need additional information. This is where my final recommendation and those who make up the field come in.

3. Embracing Expertise

To appreciate a domain-specific view of creative potential, courts need to be able to receive evidence from domain-specific experts.

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318 Atari, Inc. v. N. Am. Philips Consumer Elecs. Corp., 672 F.2d 607, 617 (7th Cir. 1982).

319 *See* GOLDSTEIN, *supra* note 66, § 2.2.1.

320 *See* Jeanne C. Fromer, *Claiming Intellectual Property,* 76 U. CHI. L. REV. 719, 781–94 (2009).

Domains differ. Some domains have more specific rules and more total rules than others.[321] In some artistic areas, like jazz music or experimental arts, "vast degrees of newness are expected and acclaimed."[322] Yet rather than welcoming such information to help titrate the creativity standard in individual cases, courts have been inhospitable to expert evidence in the creativity determination.

This is where perhaps *Bleistein* has had its greatest impact. As discussed, *Bleistein* maintains that any evaluation of artistic creativity involves a special kind of judgment that even the most informed cannot agree upon.[323] The cliché "beauty is in the eye of the beholder" controls discussion of aesthetic judgments in the law. Because courts assume all expert opinion on such matters is simply a question of personal taste, experts are blocked from informing judicial decision making in a variety of aesthetic areas, including copyright law.[324]

In reality, judgments about art involve much more than simply asking if someone enjoys an expressive work or thinks it has great value. Even if taste is relative, agreement can coalesce over such topics as what is the appropriate definition of a particular genre of visual art or what are the conventions of a specific musical domain. Research shows that those with expertise in a domain tend to independently agree on their assessment of the creativity of new works in that domain. Even if one thinks that a layperson's judgment of an artwork's beauty is a "subjective practice [that] would normally be anathema to the ideal of objective legal standards,"[325] elements of evaluation of aesthetic worth can submit to reasoned interrogation, particularly by those with experience and training in the domain.[326]

The best proof of this comes from other areas of copyright law that already welcome expert testimony to determine the value of artistic work. Under the Visual Artists Rights Act (VARA), artists producing limited edition visual works can prevent destruction of their works so long as the works are proved to be of "recognized stature."[327] As courts have divined what "recognized stature" must mean, they have promoted the role of art experts. In one influential formulation, proof of recognized stature requires the testimony of "art experts" or "other

321 CSIKSZENTMIHALYI, *supra* note 140, at 38–40.

322 Fromer, *supra* note 182, at 1507.

323 *See supra* Section I.D.

324 Soucek, *supra* note 251, at 450–52.

325 Andrew W. Torrance, *Beauty Fades: An Experimental Study of Federal Court Design Patent Aesthetics*, 19 J. INTELL. PROP. L. 389, 390 (2012).

326 *See supra* Section II.D.

327 17 U.S.C. § 106A (2018).

members of the artistic community."[328] Although some subsequent cases allow for alternatives to expert testimony, most decisions on "recognized stature" highlight the central importance of expertise.[329] Even in those cases not mandating expert testimony, "generally accepted standards of the artistic community" from other informational resources were applied to determine the work's stature.[330]

Expert testimony on creativity has also found its way into the fair use defense. Courts routinely evaluate the level of creativity in a defendant's work to assess "transformativeness" for purposes of the defense.[331] A transformative use employs a work for a different purpose or in a different manner than the original.[332] On some occasions, expert testimony on the subject is taken,[333] and some call for more regularized use of experts to help inform this analysis.[334]

Expert testimony can be expensive, and one should be wary of reforms to the creativity requirement that threaten to price out deserving authors from vindicating their rights in court. Such testimony will not be required in every case. In some situations, it will be obvious that the plaintiff has reached even a more than minimal creativity threshold and the parties will stipulate.[335] Judges will need less help tracing the contours of some artistic domains than others. For example, they may be familiar with the relevant conventions in literary works, but lacking in such knowledge when it comes to photography or appropriation art.

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328 Carter v. Helmsley-Spear, Inc., 861 F. Supp. 303, 325 (S.D.N.Y. 1994), *aff'd in part, rev'd and vacated in part on other grounds*, 71 F.3d 77 (2d Cir. 1995).

329 *See* Martin v. City of Indianapolis, 192 F.3d 608, 616 (7th Cir. 1999) (Manion, J., concurring in part and dissenting in part) ("Instances where expert testimony on this point is not necessary will be rare . . . .").

330 *See* Cohen v. G & M Realty L.P., 320 F. Supp. 3d 421, 438 (E.D.N.Y. 2018) (quoting *Helmsley-Spear*, 71 F.3d at 84, *aff'd sub nom.* Castillo v. G & M Realty L.P., 950 F.3d 155 (2d Cir. 2020), *cert. denied*, 141 S. Ct. 363 (2020)).

331 Shyamkrishna Balganesh, *Tiered Originality and the Dualism of Copyright Incentives*, 95 VA. L. REV. IN BRIEF 67, 73 (2009) ("[T]he principal focus of [fair use's transformativeness] inquiry remains the defendant's creative contribution to his or her use of the work.").

332 Bouchat v. Balt. Ravens Ltd. P'ship, 619 F.3d 301, 308–09 (4th Cir. 2010).

333 *E.g.*, Oracle Am., Inc. v. Google Inc., No. C 10-03561, 2016 WL 1743129, at *2 (N.D. Cal. May 2, 2016).

334 Holly Gordon, Note, *Appropriation Artists and Testifying Experts: Reconciling Postmodern Artistic Expression and Copyright Law*, 43 AIPLA Q.J. 445, 485–87 (2015); Monika Isia Jasiewicz, Note, *"A Dangerous Undertaking": The Problem of Intentionalism and Promise of Expert Testimony in Appropriation Art Infringement Cases*, 26 YALE J.L. & HUMANS. 143, 171 (2014).

335 *See, e.g.*, Dr. Seuss Enters., L.P. v. ComicMix LLC, 372 F. Supp. 3d 1101, 1116 (S.D. Cal. 2019), *aff'd in part, rev'd in part*, 983 F.3d 443 (9th Cir. 2020), *cert. denied*, 141 S. Ct. 2803 (mem.) (2021).

Other areas of the law manage to accommodate expert testimony on a regular basis despite its expense. In patent law, judges have standardized the use of experts in claim construction hearings so they can understand the claims from the perspective of "one of ordinary skill in the art."[336] Something similar in copyright law could be used to allow the trier of fact to learn the metes and bounds of the relevant artistic community. Without experts, judges and jurors are left to their own intuitions about what seems creative and what does not. Given the research showing the differences in how experts and amateurs understand and evaluate creative works, it makes sense to encourage parties to build a record illustrating the conventions and shared practices of the relevant domain.

CONCLUSION

A common lament in intellectual property scholarship concerns the lack of empirical information about the effects of different levels of intellectual property protection on human behavior.[337] This concern is most pronounced when it comes to copyright law.[338] We are not sure about the role of copyright law in furthering creative expression. Although the potential for financial remuneration would seem likely to motivate artists,[339] plenty of artistic activity appears to occur for free and without any awareness of copyright law.[340] Some interesting empirical work is being done on the question of copyright incentives,[341] but it is difficult to measure just how much total creative output there is under different legal variables.

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336 Liz Brown, *Remixing Transformative Use: A Three-Part Proposal for Reform*, 4 NYU J. INTELL. PROP. & ENT. L. 139, 176 (2014).

337 *See supra* note 11.

338 *See* Fishman, *supra* note 1, at 1341; Christopher Jon Sprigman, *Copyright and Creative Incentives: What We Know (and Don't)*, 55 HOUS. L. REV. 451, 455 (2017) ("Our copyright system is, for the moment, built mostly on speculation.").

339 "[N]o man but a blockhead ever wrote, except for money." Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 584 (1994) (quoting 3 BOSWELL'S LIFE OF JOHNSON 19 (George Birkbeck Hill ed. 1934)).

340 JESSICA SILBEY, THE EUREKA MYTH: CREATORS, INNOVATORS, AND EVERYDAY INTELLECTUAL PROPERTY 149–60 (2015); Christopher Buccafusco & David Fagundes, *The Moral Psychology of Copyright Infringement*, 100 MINN. L. REV. 2433, 2434 (2016) ("The past decade has seen a flood of legal scholarship devoted to undermining the foundations of copyright's central incentivist narrative. This work has challenged the assumption that money plays much of a role at all in motivating artistic production, suggesting instead that the desire for subcultural status or the intrinsic enjoyment of the creative process are stronger drivers of creative production.").

341 *See, e.g.*, Stefan Bechtold, Christopher Buccafusco & Christopher Jon Sprigman, *Innovation Heuristics: Experiments on Sequential Creativity in Intellectual Property*, 91 IND. L.J. 1251, 1251 (2016); Christopher Buccafusco, Zachary C. Burns, Jeanne C. Fromer &

Although it is unclear just how much legal rules stimulate artistic activity, at the least, the rules for copyright eligibility should not run counter to what psychologists diagnose as the conditions for curating optimal creative environments.[342] Our failure to understand copyright law's incentive effects counsels caution, but ultimately a stronger case can be made for changing the creativity requirement than retaining the permissive status quo. A creativity test that is too easily satisfied shrinks the supply of raw materials available for the creative work of others. By considering evidence of authorial motivations, comparing the work at issue with relevant prior works, and allowing experts to inform the analysis, courts can reconstruct copyright's creativity determination to more closely align with the ways in which imaginative expressive works are actually born.

Christopher Jon Sprigman, *Experimental Tests of Intellectual Property Laws' Creativity Thresholds*, 92 TEX. L. REV. 1921, 1922 (2014).

342 *See* Erez Reuveni, *Copyright, Neuroscience, and Creativity*, 64 ALA. L. REV. 735, 740 (2013) (arguing that it is important to align copyright law with the way the brain actually works).