The Sine Qua Non of Copyright is Uniqueness, not Originality

Samson Vermont
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Samson Vermont∗

ABSTRACT

The Supreme Court tells us originality is the sine qua non of copyright. I argue uniqueness is. Copyright only protects unique work – work no one created before (novel) and no one could independently create after (unrepeatable).

The Court also tells us originality has two components: independent creation by the author and creativity. But they are mere heuristics for uniqueness. Independent creation is over-inclusive; creativity is both over- and under-inclusive. They do not offset each other, so gaps remain. Courts plug most of the gaps with limiting doctrines and the substantial similarity standard. To put it imprecisely: (independent creation) + (creativity) + (limiting doctrines) + (substantial similarity) ≈ uniqueness.

This patchwork makes a hash of copyright doctrine. We can sort out doctrine by focusing directly on uniqueness. Uniqueness explains why a careless snapshot is protected more than a scientific database, and why a cartoon character is protected more than a literary character. Uniqueness also defines the boundary between copyright and utility patent, and illuminates the seemingly recurrent influence of the sweat of the brow. Finally, uniqueness largely unifies the many limiting doctrines, including the useful article doctrine, the idea- and fact-expression dichotomies, and others.

Yet, some limiting doctrine cases cannot be explained without supplementing uniqueness with a “dominance principle,” which is akin to antitrust and which limits protection for work even if it is unique. Examples of unique but dominant work include the QWERTY layout, Lotus 1-2-3 menu, phonebook listings, and very fanciful names.

∗Visiting Associate Professor of Law, U. Miami, School of Law, svermont@law.miami.edu. For helpful comments, I am grateful to Mark Lemley, TJ Chiang, Matt Sag, Rebecca Tushnet, Doug Lichtman, and to participants at the Intellectual Property Scholars Conference, Depaul U. School of Law (Aug. 11, 2011). For helpful comments on an earlier, embryonic version, thanks goes to participants at the Works-In-Progress in Intellectual Property Colloquium, Boston U. School of Law (Feb. 12, 2011), and to participants at the Internal Speaker Series, U. Miami School of Law (Jan. 26, 2011).
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I. INTRODUCTION

The 1976 Copyright Act limits copyright to “original works of authorship.”¹ The Supreme Court tells us that originality is the sine qua non of copyright² and that it has two components: independent creation by the author and a modicum of creativity.³ I argue that uniqueness is the true sine qua non of copyright and that the two components are rough heuristics for uniqueness. When we focus directly on uniqueness, a swath of puzzles melt away. More melt away when we supplement

¹ 17 USC 102(a).
³ Feist Publ’n, Inc., 499 U.S. at 346.
uniqueness with a dominance principle, which limits protection for a work whose social value is due largely to inputs from parties other than the work’s author.

A. Select Puzzles in Copyright Doctrine

1. Curious Features of the Limiting Doctrines

A student of copyright may notice three curious features of the limiting doctrines. The first is their large number. They include the idea-expression dichotomy, fact-expression dichotomy, merger doctrine, useful article doctrine, scènes à faire, and codified bars against protecting names, titles, single words, and short phrases, blank forms, familiar shapes and designs, simple dance steps, government works, and others.4

The second curious feature of the limiting doctrines is their mutual overlap.5 Cases that implicate a limiting doctrine implicate more than one. For example, the famous case of Baker v. Selden6 implicates at least the idea-expression dichotomy,7

4 Relevant citations appear later.
5 See, e.g., Dymow v. Bolton, 11 F.2d 690 (2d Cir. 1926) (equating idea-expression dichotomy with merger); Whelan Associates, Inc. v. Jaslow Dental Laboratory, Inc., 797 F.2d 1222 (3d Cir. 1986), cert. denied, 479 U.S. 1031, 1236 (1987) (equating idea-expression dichotomy both with merger and with useful article doctrine); Edward Samuels, The Idea-Expression Dichotomy in Copyright Law, 56 Tenn. L. Rev. 321, 386 (1989) (“Some of the cases which have held that scenes a faire... are not copyrightable based their reasoning upon the theory that the expression of stock scenes is merged with their idea.”); Id. at 440 (useful article doctrine “might be viewed as a subset of a more generalized idea-expression dichotomy...”); Alan L. Durham, Speaking of the World: Fact, Opinion and the Originality Standard of Copyright, in Intellectual Property Protection of Fact-based Works: Copyright and Its Alternatives 133, 142 (Robert F. Brauneis ed., 2009) (mentioning that courts sometimes treat idea-expression and fact-expression dichotomies as unitary principle); Richard H. Jones, The Myth of the Idea/Expression Dichotomy in Copyright Law, 10 Pace L. Rev. 551, 570 n.100 (1990) (listing cases relating scènes à faire doctrine to idea-expression dichotomy); Thomas M. Byron, Tying Up Feist’s Loose Ends: A Probability Theory of Copyrightable Creativity, 7 Wake Forest Intel. Prop. L. J. 45, 51 (2006) (“Like merger, scenes a faire is predicated on the limited number of permutations that a work may assume within its general genre.”); Justin Hughes, Created Facts and Their Awkward Place in Copyright Law, in Intellectual Property Protection of Fact-based Works: Copyright and Its Alternatives 186, 194 (Robert F. Brauneis ed., 2009) (arguing that when judges and copyright scholars say facts are not protected, they are subconsciously applying merger doctrine).
7 See, e.g., Mazer v. Stein, 347 U.S. 201, 217 (1954) (characterizing Baker v. Selden as standing for idea-expression dichotomy); Samuels, supra note 5, at 326 (“The idea-expression dichotomy in America is said to have originated in the United States Supreme Court case of Baker v. Selden.”).
merger doctrine,8 useful article doctrine,9 and the blank forms doctrine.10 Likewise the well-known case of Brandir v. Cascade11 implicates at least the idea-expression dichotomy, merger doctrine, useful article doctrine, and the bar against copyrighting familiar symbols and designs.12

The third curious feature of the limiting doctrines is that they overlap both the threshold requirement of originality13 and the infringement standard of

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8 See, e.g., Baker, 101 U.S. at 103 (“[W]here the art [that P’s book] teaches cannot be used without employing the methods and diagrams used to illustrate the book, or such as are similar to them, such methods and diagrams are to be considered as necessary incidents to the art, and given therewith to the public.”); Samuels, supra note 5, at 329 (“The Court in Baker invoked a merger theory by focusing upon the utilitarian or practical nature of the original work.”).

9 Cf. Whelan Associates, Inc., 797 F.2d at 1236 (with reference to Baker, equating idea-expression dichotomy both with merger doctrine and with useful article doctrine); Durham, supra note 5, at 147 (Baker gave rise to a “process-expression dichotomy”).

10 Baker, 101 U.S. at 107 (“[B]lank account books are not the subject of copyright...”); Roger E. Schechter & John R. Thomas, Principles of Copyright Law 45 (West 2010) (“Baker is also considered to be the genesis for the prevailing rule today that blank forms are not copyrightable subject matter.”).


12 See infra Part IV (A).

13 See Samuels, supra note 5, at 386 (“[S]ome of the cases which have held that scenes a faire... are not copyrightable based their reasoning upon the theory that the expression of stock scenes is merged with their idea. A better analysis would be that the stock treatments are not original...”); Id. at 427-28 (footnotes omitted) (“Some of the originality cases contain language that also refers to the idea-expression dichotomy. Other originality cases seem to be based upon a purpose that overlaps with the purpose of the idea-expression dichotomy. Originality cases seem to be based upon a purpose that overlaps with the purpose of the idea-expression dichotomy.”); Id. at 437-38 (some of the works in Copyright Office’s list of unprotectable works seem to lack sufficient originality, some seem to be works of utility, some seem to be ideas rather than expression, and some seem to be de minimis works); Jones, supra note 5, at 597 (“Short phrases, general plots and themes, scènes à faire and other unprotectible expressions are generally unprotected precisely because they usually do not evidence an original or creative writing.”); Id. (“The merger doctrine is invoked only with an uncreative statement or representation of an idea or fact.”); Id. at 598 (“Factual works are less open to protection only because they usually do not exhibit the requisite originality and creativity of expression.”); Leon R. Yankwich, Originality in the Law of Intellectual Property, 11 F.R.D. 457, 464-65 (1952) (scènes à faire are not sufficiently original); Craig Joyce et al., Copyright Law 122 (8th ed. 2010) (“Although it is sometimes viewed as a doctrine relating the scope of copyright protection, the idea/expression dichotomy has significant implications for the analysis of copyrightability in general (and originality in particular.”); Id. at 131 (“[N]ot infrequently, the [merger] doctrine has been applied by a court simply as a convenient way to administer the coup de grace against protection for a work exhibiting dubious originality.”); Michael Steven Green, Copyrighting Facts, 78 Ind. L. J. 919, 939 (2003)
substantial similarity\textsuperscript{14}. Further, originality and substantial similarity overlap each other.\textsuperscript{15}

\footnotesize{\textsuperscript{14} See also Sid \& Marty Krofft Television Prods., Inc. v. McDonald’s Corp., 562 F.2d 1157, 1168 (9th Cir. 1977) (suggesting that, the more original P’s work, the less likely idea behind it will merge with its expression); Leslie A. Kurtz, Speaking to the Ghost: Idea and Expression in Copyright, 47 U. Miami L. Rev. 1221, 1255, 1257, 1260 (1993) (Simple, unprotectable ideas are unoriginal because they are derived from experience and direct impressions of world surrounding author.); \textit{Id.} at 1248 n.159 (ideas unprotected in cases are trite); Edward C. Wilde, Replacing the Idea/Expression Metaphor with a Market-Based Analysis in Copyright Infringement Actions, 16 Whittier L. Rev. 793, 802 (1995) (purpose of idea-expression “metaphor” is to distinguish between common and original).

\textsuperscript{15} See 1 M. Nimmer, Nimmer on Copyright (1988), 2.03 [D], at 2-34 (footnotes omitted) (The distinction between idea and expression is “not so much a limitation on the copyrightability of works, as it is a measure of the degree of similarity which must exist as between a copyrightable work and an unauthorized copy, in order to constitute the latter an infringement.”); Samuels, \textit{supra} note 5, at 330, 407-13, 419-20; \textit{Id.} at 409 (“Probably the greatest number of cases that are improperly or unnecessarily described as idea-expression cases actually deal with, or could have been decided on the basis of, substantial similarity (or lack of substantial similarity) between two works.”); \textit{Id.} at 442 n.540 (“Many cases that appear to stand for the proposition that systems are not copyrightable depend to some extent, or could have been decided, on the basis of non-similarity.”); Jones, \textit{supra} note 5, at 576-78 (Merger is a matter of degree; scope of protection tracks variety of alternative expressions available.); William Patry, Patry on Copyright § 4.42 (2010) (like \textit{scenes a faire}, merger, if applied at all, should be applied at infringement stage).

See also Apple Computer, Inc. v. Microsoft Corp., 35 F.3d 1435, 1444 (9th Cir. 1994) (“[W]hen an idea and its expression are indistinguishable, or ‘merged,’ the expression will only be protected against nearly identical copying.”); Reyher v. Children’s Television Workshop, 533 F.2d 87, 90-91 (2d Cir.), cert. denied, 429 U.S. 980 (1976) (combining language of merger, idea-expression, and \textit{scènes a faire} with substantial similarity); Herbert Rosenthal Jewelry Corp. v. Kalpakian, 446 F.2d 738, 740-42 (9th Cir. 1971) (combining language of merger, idea-expression, and substantial similarity).

See also Samuels, \textit{supra} note 5, at 330; Jones, \textit{supra} note 5, at 601-02 (“The more markedly creative an expression is, the less of it that needs to be taken to find infringement.”); \textit{Id.} at 586 (“Saying that an alleged infringer did not take the expression of Mickey Mouse but took only the idea of a cartoon mouse is a jargon-filled and confusing way of stating that the alleged infringer’s drawing of a mouse does not capture the particular creativity embodied in Mickey Mouse.”); Henkel KgaA v. Holdfast New Zealand Ltd., [2006] NZSC 102 (“In general terms the greater the originality, the wider will be the scope of the protection which copyright affords and vice versa.”); John Shepard Wiley, Jr., Copyright at the School of Patent, 58 U. Chic. L. Rev. 119 (1991) (three central elements of copyright doctrine – originality, idea-expression dichotomy, and infringement standards – are closely related placeholders for other considerations).

See also Hart v. Dan Chase Taxidermy Supply Co., 86 F.3d 320, 322 (2d Cir. 1996) (Calabresi, J.) (“[T]he merger inquiry asks whether \textit{all} realistic fish mannequins... will necessarily be ‘substantially similar.’ And only if this is so, is there no unique expression to protect under the copyright laws.”); Crume v. Pacific Mut. Life Ins. Co., 140 F.2d 182, 183 (7th Cir.), cert denied, 322 U.S. 755 (1944) (remarking that matter of infringement is closely related to, if not actually dependent upon, extent of protection to which plaintiff is entitled); Durham Industries, Inc. v. Tomy Corp., 630 F.2d 905, 908-15 (2d Cir. 1980) (basing holdings of unprotectability for some of P’s toys on lack of originality, for others on lack of substantial similarity, and for others under useful article doctrine); Robert A. Gorman, Fact or Fancy? The Implications for Copyright, 29 J. Copyright Soc’y 560, 560-61 (1982).}
2. Dubious Assertions about Creativity

A student of copyright may also notice strained claims about creativity. The courts tell us, for example, that raw footage of an event is creative enough for copyright even if captured by a bystander or planted camera\textsuperscript{16} – despite that such footage seems wholly uncreative by lay standards of creativity.\textsuperscript{17} Also, the courts insist both that creativity is absolutely essential and that a tiny amount will suffice.\textsuperscript{18} Why are they so confident creativity is absolutely essential if a tiny amount will suffice, and why are they so confident a tiny amount will suffice if creativity is absolutely essential?\textsuperscript{19}

\begin{itemize}
  \item[\textsuperscript{17}] See also David McGowan, \textit{Copyright and Convergence: A Pragmatic Perspective}, in \textit{Intellectual Property Protection of Fact-based Works: Copyright and Its Alternatives} 233, 237 (Robert F. Brauneis ed., 2009) (asserting courts would protect footage of Rodney King beating captured by bystander George Holliday); \textit{Id.} at 246 (“At some point, we will have an iconic picture taken with a phone camera that gives its owner no choices to speak of at all; courts will still grant the owner rights.”).
  \item[\textsuperscript{18}] \textit{Feist} Publications, Inc. v. Rural Telephone Service Co., 499 U.S. 340, 345 (1991) (“To be sure, the requisite level of creativity is extremely low; even a slight amount will suffice.”); \textit{Id.} at 359 (“There remains a narrow category of works in which the creative spark is utterly lacking or so trivial as to be virtually nonexistent.”); CMM Cable Rep. Inc. v. Ocean Coast Props., Inc., 97 F.3d 1504, 1516 (1st Cir. 1996) (“\textit{T}he threshold of creativity is...very slight.”).
  \item[\textsuperscript{19}] See McGowan, supra note 16, at 257 (“\textit{T}he claim that creativity is a constitutional mandate seems hollow. What kind of constitutional mandate is it that makes courts announce a doctrine, only
\end{itemize}
Also puzzling are the cases in which courts not only protect a work of dubious creativity but protect it robustly. They robustly protect raw footage of an event though it not only seems devoid of creativity by lay standards but also barely meets the very lax standard courts purport to use. The mismatch – between the robust protection for such footage and its (at best) minimal creativity – seems to belie the common notion\(^{20}\) that the degree of protection tracks the degree of creativity. This mismatch also belies the common notion that the degree of protection tracks the degree to which the work is fact-based. Courts and commentators say work at copyright’s core (such as fiction) is more protected than work at copyright’s periphery (such as fact-based work).\(^{21}\) But footage of an event is fact-based work. It faithfully records historical fact – it accurately documents the state of the world that existed at a certain time and place. The same is true of still photographs of events, which courts likewise protect robustly.

3. Inconsistent Assertions about Novelty

Another curiosity is the inconsistency in the cases and commentary with respect to whether a work must be novel to be copyrighted. Many courts say a work need not be at all novel.\(^{22}\) Some say a work need not be especially novel.\(^{23}\) At other

\(^{20}\) See supra notes 14 and 15.

\(^{21}\) See, e.g., Feist Publ’n, Inc., 499 U.S. at 349 (“[C]opyright protection in a factual compilation is thin.... Works of fiction receive greater protection than works that have strong factual elements...or works that have strong functional elements.”); Robert A. Gorman, Copyright Courts and Aesthetic Judgments: Abuse or Necessity?, 25 Colum. J.L. & Arts 1, 19 (2001) (courts routinely grant thin copyright protection for maps and functional works); Jacobsen v. Deseret Book Co., 287 F.3d 936 (10th Cir. 2002) (“[b]ecause fact-based works differ as to the relative proportion of fact and fancy [ranging from ‘sparingly embellished maps and directories’ to ‘elegantly written biography’], the quantum of similarity required to establish infringement differs in each case.”); A.A. Hoehling v. Universal City Studios, Inc., 618 F.2d 972, 974 (2d Cir.), cert. denied, 449 U.S. 841 (1980) (“[T]he protection afforded the copyright holder has never extended to history, be it documented fact or explanatory hypothesis.”). But cf. Matthew Sag, Predicting Fair Use, Working Paper (Aug. 12, 2011) (finding no evidence that a borrower of fact-based work is more likely to prevail under fair use than a borrower of fictional work).

\(^{22}\) See, e.g., Feist Publ’n, Inc., 499 U.S. at 345 (“Originality does not signify novelty...”). Baker v. Selden, 101 U.S. 99, 102-03 (1880) (“The copyright of the book, if not pirated from other works, would be valid without regard to the novelty, or want of novelty, of its subject-matter.”); Johnson v. Donaldson, 3 F. 22, 24 (CCSDNY 1880) (“If each of two persons should compose a poem identically
times, courts in both camps say or hold that a work must be readily distinguishable from prior work whether still under copyright or in the public domain, which

See also Melville B. Nimmer & David Nimmer, 1 Nimmer on Copyright § 2.01[A] (2007) (separate copyrights would exist in each of two identical, independently created works); Arnstein v. Edward B. Marks Music Corp., 82 F.2d 275 (2d Cir. 1936) (separate copyrights would exist in each of two identical, independently created works); Schechter & Thomas, supra note 7, at 22 (“The work need not be novel. That something identical or virtually identical to it already was created by another is simply irrelevant so long as the second party did not copy from the first. Originality, as a legal term of art, is not synonymous with novelty.”); Merriam-Webster’s Dictionary of Law (1996) (Originality is “the quality or fact of being the product of individual creation that warrants copyright protection for a particular work regardless of novelty.”); H.R. Report No. 94-1476 at 51-52 (legislative history of 1976 Act) (standard of originality “does not include requirements of novelty, ingenuity, or esthetic merit…”).

See, e.g., L. Batlin & Son, Inc. v. Snyder, 536 F.2d 486 (2d Cir.) (en banc), cert. denied, 429 U.S. 857 (1976) (Snyder’s replica of public domain “Uncle Sam” bank not different enough from it to be copyrightable); Id. at 490 (“[I]n order to obtain a copyright upon a reproduction of a work...the work [must] contain some substantial, not merely trivial originality,” beyond the preexisting work); Id. at 492 (“To extend copyrightability to miniscule variations would simply put a weapon for harassment in the hands of mischievous copiers intent on appropriating and monopolizing public domain work.”); Alfred Bell & Co., 191 F.2d at 102-03 (author must have “contributed something more than ‘merely trivial’ variation, something recognizably ‘his own.’”); Bridgeman Art Library v. Corel Corp., 25 F. Supp. 2d 421 (1998), affirmed on reconsideration, 36 F. Supp. 2d 191 (S.D.N.Y. 1999) (holding P’s transparencies of public domain paintings uncopyrightable, likening them to photocopies and arguing that a finding of originality requires distinguishable variation beyond a mere change in medium from painting to transparency); ATC Distr. Group, Inc. v. Whatever It Takes Transmissions & Parts, Inc., 402 F.3d 700, 712-13 (6th Cir. 2005) (hand-drawn sketches of transmissions parts slavishly copied from photographs cut out of competitor catalogs fall short of “substantial variation” required for copyright); Bucklew v. Hawkins, Ash, Baptie & Co., LLP, 329 F.3d 923, 929 (7th Cir. 2003) (no originality present unless distinguishable from prior work); Gracen v. Bradford Exchange, 698 F.2d 300 (7th Cir. 1983) (Posner, J.) (if difference between Mona Lisa and A’s reproduction is slight, difference between A’s and B’s reproductions will also be slight, so that if B had access to A’s reproduction trier of fact will be hard-pressed to decide whether B was copying A or copying Mona Lisa itself).

See also Gaste v. Kaiserman, 863 F.2d 1061, 1068-69 (2d Cir. 1988) (“[S]triking similarity between pieces of popular music must extend beyond themes that could have been derived from a common source or themes that are so trite as to be likely to reappear in many compositions.”); Michael Green, Two Fallacies About Copyrighting Factual Compilations, in Intellectual Property Protection of Fact-
implies that a work must differ appreciably from all that precedes it, i.e., that P’s work must be novel in a non-trivial way. In any event, courts never award damages to P when P’s work lacks appreciable novelty or when the only material common to P’s work and D’s work lacks appreciable novelty. In such cases, courts always find some route (through a limiting doctrine, fair use, or a finding of no originality or no substantial similarity) to avoid awarding damages against D – even if D actually copied subject matter from P that P may have independently created.\textsuperscript{25}

In any event, policy militates against protecting work that lacks novelty.\textsuperscript{26} Why would we want to use the lure of legal monopoly to induce the re-creation of work that already exists?

4. Un-unified Observations about the Level of Granularity

Yet another curiosity is the failure of courts and commentators to notice or cleanly unify two seemingly diametric observations. Many have observed that no

\textit{based Works: Copyright and Its Alternatives} 109, 122-26 (Robert F. Brauneis ed., 2009) (distinguishable variation requirement helps prevent protection for works that could be independently created); \textit{Id.} at 123 (“It makes sense not to protect works that have very little added value, since the small economic benefits that result from encouraging their protection will be overridden by the transaction and enforcement costs.”); Green, \textit{supra} note 13, at 935-36 (same); Douglas Lichtman, \textit{Copyright as a Rule of Evidence}, 52 Duke L. J. 683, 707 (2003) (discussing evidentiary benefits of distinguishable variation); 1 Nimmer on Copyright §3.01, at 3-2, §3.03[A], at 3-10 (discussing requirement of distinguishable variation for derivative works).

\textsuperscript{25} See, e.g., Laureyssens v. Idea Group, Inc., 964 F.2d 131, 141 (2d Cir. 1992) (protection withheld where evidence suggested P independently created non-novel idea of flat-to-cube puzzle); Brandir Int’l, Inc. v. Cascade Pac. Lumber Co., 834 F.2d 1142 (2d Cir. 1987) (apparently novel bike rack unprotectable); \textit{A.A. Hoehling}, 618 F.2d at 979 (scenes a faire uncopyrightable as a \textit{matter of law}); Designers Guild v. Russell Williams, 3 FSR 113 (2001) n.19, para.39 (similarities may be disregarded if they are commonplace).

\textit{See also} Nichols v. Universal Pictures Corp., 45 F.2d 119, 122 (2d Cir. 1930) (Hand, J.) (“Even so, granting that the plaintiff’s play was wholly original, and assuming that novelty is not essential to a copyright, there is no monopoly in such a background.”); Dymow v. Bolton, 11 F.2d 690, 691 (2d Cir. 1926); Kurtz, \textit{supra} note 13, at 1236-37 and cites therein; Joyce et al., \textit{supra} note 13, at 256 (using non-novel elements is less creative).

\textit{Cf.} Alexander v. Haley, 460 F. Supp. 40 (S.D.N.Y. 1978) (courts must filter out clichés and material traceable to common source or to public domain); 37 CFR 202.1(a) (familiar symbols or designs are uncopyrightable); Computer Associates International v. Altai, Inc., 982 F.2d 693, 708-09 (2d Cir. 1992) (because efficient structure may be independently created by others, efficient structure should be filtered out during substantial similarity analysis).

\textsuperscript{26} See \textit{infra} Part II (D).
work is protectable when defined at a high level of abstraction.\textsuperscript{27} When we ascend too far up the ladder of abstraction from the literal work, we are left with an “idea”\textsuperscript{28} that is unprotectable regardless of whether P independently created it\textsuperscript{29}. For example, the play *Abie’s Irish Rose* is unprotectable when defined broadly as “a quarrel between a Jewish and an Irish father, the marriage of their children, the birth of grandchildren and a reconciliation.”\textsuperscript{30}

Yet, commentators have also observed that no work is protectable when parsed very finely.\textsuperscript{31} When we subdivide a work into small sub-elements, and focus on each individually, we are left with granules that are unprotectable regardless of whether P may have independently created them. For example, a single phrase from a novel is unprotectable on its own.

Are the bird’s eye view and the bug’s eye view uncopyrightable for the same reasons, or for different reasons?

**B. Uniqueness Resolves the Puzzles**

Copyright protects only unique work: work that no one created before (novel) and that no one could independently create after (unrepeatable). Below is a very brief summary of how this insight resolves the foregoing puzzles. More detailed explanations appear in later sections.

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\textsuperscript{27} See, e.g., *Nichols*, 45 F.2d at 121 (Hand, J.) (“Upon any work...a great number of patterns of increasing generality will fit equally well, as more and more of the incident is left out. The last may perhaps be no more than the most general statement of what the [work] is about, and at times might consist only of its title; but there is a point in this series of abstractions where they are no longer protected...”); Matthew J. Leary, *Welding the Hood Shut: The Copyrightability of Operational Outputs and the Software Aftermarket in Maintenance and Operations*, 85 B.U. L. Rev. 1389, 1415-16 n. 132 (2005) (“Since at the highest level of abstraction there is nothing but the ideas of functions that the program will ultimately perform, there cannot be any copyright protection at that level...”).

\textsuperscript{28} See infra Part IV (C).

\textsuperscript{29} See supra notes Part I (A) (3).

\textsuperscript{30} *Nichols*, 45 F.2d at 121 (Hand, J.).

\textsuperscript{31} See, e.g., Justin Hughes, *Size Matters (or Should) in Copyright Law*, 74 Fordham L. Rev. 575 (Nov. 2005); Green, supra note 24, at 121 (“[N]o individual component of any aggregate... looks copyrightable in isolation.”).
1. Regarding Curious Features of the Limiting Doctrines

The limiting doctrines overlap each other heavily because they all enforce the requirement of uniqueness. The same goes for originality and substantial similarity. The originality requirement screens out work so lacking in uniqueness that it merits no protection. The substantial similarity standard screens out causes of action against a D who either copied nothing unique from P’s work or copied something from P’s work of such trivial uniqueness or value that the social costs of protecting it would outweigh the social benefits.

2. Regarding Dubious Assertions about Creativity

The second component of originality, creativity, is both under- and over-inclusive. It is over-inclusive because some creative work is non-unique (and thus unprotectable). Specifically, creative work may be non-unique if it is non-complex (it has few elements) and/or it is only moderately unconstrained.

Creativity is under-inclusive because some non-creative work is unique. A unique work can be unique because it is complex and unconstrained or because it is complex and uniquely constrained. Unique creative work is unique because it is complex and unconstrained. Unique non-creative work is unique because it is complex and uniquely constrained.

The clearest example of unique non-creative work is video footage of an event captured by a planted camera or by a bystander who happened to be at the right place and time. This footage entails no creativity. It is unique because it uniquely records an event no one else captured before and no one else could capture after. Even if multiple parties recorded the event, in the vast majority of cases P will have recorded it at a readily distinguishable vantage point, angle, focus, resolution, and duration. In contrast, a plain photo of a stable, commonplace object (such as a bottle of a well-known brand of vodka)\(^{32}\) is not unique. Because the photo is plain and the object is stable and commonplace, someone else could have created the same image before or could create it after.

\(^{32}\) See infra Part II (A), discussing Ets-Hokin v. Skyy Spirits, 323 F.3d 763, 766 (9th Cir 2003).
The degree of protection for a work matches its degree\textsuperscript{33} of uniqueness more closely than its degree of creativity, factuality, or functionality. Again, consider footage of a spontaneous event. The footage is unique and robustly protected though it is both uncreative and factual.

3. Regarding Inconsistent Assertions about Novelty

The first component of originality, independent creation by P, is over-inclusive because it demands less than novelty when copyright actually demands novelty and more. If copyright only required independent creation by P, copyright would protect a second creator’s work even if it was identical to a first creator’s, so long as the second did not copy from the first. But copyright does not protect such non-novel work.

The mistaken view that copyright requires no novelty arose because it is an easy mistake to make and because it was reinforced early on by misleading\textsuperscript{34} or erroneous\textsuperscript{35} dicta from esteemed judges. It is an easy mistake to make because the novelty requirement is subsumed within the uniqueness requirement.\textsuperscript{36} Unlike patent, copyright requires no formal or affirmative finding that work is novel. Instead, by protecting only unique work, copyright \textit{tacitly} excludes non-novel work.

Not only is independent creation merely necessary but insufficient for novelty, novelty is merely necessary but insufficient for uniqueness. All unique works are novel but some novel works – namely, the repeatable ones – are non-unique. Thus copyright plaintiffs sometimes lose even when their works are novel\textsuperscript{37} and this observable phenomenon can reinforce the hasty conclusion that copyright requires no novelty. Further clouding the copyright landscape is that in a

\textsuperscript{33} For our purposes, uniqueness is a matter of degree, rather than an absolute or binary quality like pregnancy. \textit{See infra} Part II (B).

\textsuperscript{34} For example, in \textit{Bleistein v. Donaldson Lithographing Co.}, 188 U.S. 239, 249 (1903), Holmes famously wrote that “Others are free to copy the original. They are not free to copy the copy.” This statement is misleading insofar as it implies that copyright protects a later work (“the copy”) that is indistinguishable from a prior work (“the original”).

\textsuperscript{35} \textit{See supra} Part I (A) (3).

\textsuperscript{36} \textit{See infra} Part II (D).

\textsuperscript{37} \textit{See supra} Part I (A) (3).
minority of cases plaintiffs lose even when their works are unique. To explain this minority of cases, we must look to the dominance principle.\textsuperscript{38}

4. Regarding Un-unified Observations about the Level of Granularity

Work is uncopyrightable when we define it very broadly for the same reasons it is uncopyrightable when we focus tightly on its individual sub-elements. That is, a general idea abstracted from a work is uncopyrightable for the same reasons a tiny literal fragment of the same work is uncopyrightable. What the bird’s eye view and the bug’s eye view have in common is that both exclude so much of the work that what is left in view is too simple to be unique or too simple to be unique enough or valuable enough to justify the administrative and transaction costs of protection.\textsuperscript{39} In essence, the bird’s eye view and the bug’s eye view are both views of de minimis “microwork.”\textsuperscript{40}

\section*{II. Uniqueness}

\subsection*{A. Unique Works Are Free of Shared Constraints}

P’s work is unique if it was never independently created before (novel) and if it will never be independently created after (unrepeatable).\textsuperscript{41} A work is novel and

\begin{footnotesize}
\begin{enumerate}
\item See infra Part III and Part IV (B), (E) and (F).
\item See infra Part IV (B) and IV (C).
\item See infra Part IV (B); Hughes, supra note 31, at 575 (introducing term “microwork”).
\item On occasion, courts and commentators refer to uniqueness, though apparently as a casual synonym for originality or creativity. See, e.g., Bleistein v. Donaldson Lithographing Co., 188 U.S. 239, 249-50 (1903) (Holmes, J.) (“The copy is the personal reaction of an individual upon nature. Personality always contains something unique.”); Walt Disney Productions v. Air Pirates, 581 F.2d 751, 755 (9th Cir. 1979) (“a comic book character...is more likely to contain some unique elements of expression.”); Carol Barnhart, Inc. v. Economy Cover Corp., 773 F.2d 411, 419 (2nd Cir. 1985) (“The unique artistic design was wholly unnecessary to performance of the utilitarian function.”); Bright Tunes Music Corp. v. Harrisongs Music, Ltd., 420 F. Supp. 177, 178 (1976), aff’d, ABKCO Music, Inc. v. Harrisongs Music, Ltd., 722 F.2d 988 (2d Cir. 1983) (“While neither motif is novel, the four repetitions of A, followed by four repetitions of B, is a highly unique pattern.”); Id. at 180 n.11 (“The uniqueness is even greater when one considers the identical grace note in the identical place in each song.”); Alan Durham, The Random Muse: Authorship and Indeterminacy, 44 William & Mary L. Rev. 569 (2002) (indeterminate or randomly-organized works are “inherently unique”); Matthew Sag, Copyright and Copy-Reliant Technology, 103 Nw. U.L. Rev. 1607, 1629 (2009) (“in most cases, protecting the unique expression of an idea is sufficient to ensure that the author will be able to
\end{enumerate}
\end{footnotesize}
unrepeatable if it is (at least modestly) complex and either unconstrained\textsuperscript{42} (e.g., random or whimsical) \textit{or} uniquely constrained (e.g., dictated by circumstances exclusive to P). In either case there are no shared constraints to guide another to independently create work not readily distinguishable\textsuperscript{43} from P’s.

Suppose you make a list of your 100 favorite movies. Your list is protectable\textsuperscript{44} because it is unique. That is, we are inclined to think no one before independently created, and no one after will independently create, a list with the same movies in the same order. We think this because the content and order of your list depends on your peculiarities, not on shared constraints that could have driven or that could later drive another creator to make the same list. Hence other creators’ lists of their 100 favorite movies will differ appreciably from your list and from each others’\textsuperscript{45}.

\textsuperscript{42} Cf. Daniel J. Gervais, Feist Goes Global: A Comparative Analysis of the Notion of Originality in Copyright Law, 48 J. Copyr. Soc. of USA 949, 976-77 (2002) (defining creativity as choices made free of external constraints); Elizabeth F. Judge & Daniel J. Gervais, Of Silos and Constellations: Comparing Notions of Originality in Copyright Law, in Intellectual Property Protection of Fact-based Works: Copyright and Its Alternatives 74, 102 (Robert F. Brauneis ed., 2009) (finding that courts around the world implicitly define creativity as freedom from constraint); Byron, supra note 5, at 46 (“Essentially, inherent in 'creativity' is a certain degree of unexpectedness or randomness…”); Alan Durham, Copyright and Information Theory, 2004 BYU L. Rev. 69 (2004) (original work is free of constraint); Hughes, supra note 5, at 204 (notion that choices are original when they are not dictated by extrinsic considerations is straightforward copyright doctrine); Matthew Bender v. West, 158 F.3d 674, 682 (2d Cir 1988) (“[C]reativity inheres in making non-obvious choices from among more than a few options.”).

\textsuperscript{43} To be readily distinguishable, it is not enough that a work could be distinguished on close inspection, e.g., because the signature on it is different. To be readily distinguishable, the audience for the work must be able to easily recognize that the work has a worth or meaning different from that of other works.

\textsuperscript{44} Cf. Durham, supra note 5, at 180 (“Usually a list of the 100 ‘best’ of anything does not purport to reflect a fact, other than the author’s feelings; to treat such opinion as copyrightable content does not take anything of ‘the real world’ into the realm of property.”); Gorman, supra note 15, at 572-73 (Copyright protection for ‘one’s list of the fifty most livable cities in America, will because of the very subjectivity involved in the compilation, not likely deprive the public of quite as significant information as when the compilation is mechanical, streamlined, and exhaustive.”).

\textsuperscript{45} See, e.g., the two lists below, which appeared at top of search results in a Google search for “100 best movies.”
P’s work is *non*-unique if it was guided by constraints that could guide another to create work not readily distinguishable from P’s. Copyright does not protect an accurate list of the 100 top grossing movies. This list is non-unique because it is dictated by shared constraints, namely, historical records of box office receipts, DVD rentals, and so forth. These constraints would likewise dictate the content of another creator’s accurate list of the 100 top grossing movies. Hence, if you independently make an accurate list of the 100 top grossing movies, and if I independently make an accurate list of the 100 top grossing movies, our lists will not be readily distinguishable.

Creative work tends to be novel and unrepeatable because it is relatively unconstrained. The more unconstrained the work, the less likely it is to take a form

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<tr>
<td>1. Annie Hall</td>
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<td>2. Casablanca</td>
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<td>3. The Godfather</td>
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<td>6. Boogie Nights</td>
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<td>8. E.T.</td>
<td>8. Mr. Smith Goes to Washington</td>
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<td>9. This Is Spinal Tap</td>
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<td>90. Back to the Future</td>
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<td>91. Rosemary's Baby</td>
<td>91. Say Anything</td>
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<td>92. The Last Picture Show</td>
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<td>93. Saboteur</td>
<td>93. A Face in The Crowd</td>
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<td>94. High Art</td>
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<td>95. Paths of Glory</td>
<td>95. Great Escape</td>
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<td>96. Palm Beach Story</td>
<td>96. Rio Bravo</td>
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<td>97. Apocalypse Now</td>
<td>97. Gunga Din</td>
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<td>98. The Red Shoes</td>
<td>98. Adventures Of Robin Hood</td>
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<td>99. M<em>A</em>S*H</td>
<td>99. From Here to Eternity</td>
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<td>100. Goodfellas</td>
<td>100. Dazed and Confused</td>
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In general, a much shorter list, such as a list of 10 favorite movies, is unlikely to be unique. It could be unique, however, if P had very idiosyncratic tastes and thus chose favorites that no one else would choose.
others could independently create.\textsuperscript{46} Nevertheless, creativity is both an over- and under-inclusive measure of uniqueness.\textsuperscript{47} It is over-inclusive because even wholly unconstrained work, if it has few elements, may be non-novel or repeatable. For example, a string of numbers (3423749274) I banged out randomly on my keyboard shows up in 30 search results on Google. A string of randomly banged out letters (mfgpwoedfiuwon) shows up in one search result.

Creativity is under-inclusive because some non-creative work is uniquely constrained and thus unique. The clearest example is event footage captured by a bystander who happened to be at the right place and time. This footage is clearly protected by copyright.\textsuperscript{48} It is a stretch to argue it is creative.\textsuperscript{49} Anyway, even if we assume it entails a trace of creativity, we are left wondering why it is so thickly protected given its mere trace of creativity.

How thickly a work is protected depends more on how unique it is than on how creative it is.\textsuperscript{50} Event footage is thickly protected because it is very unique. It is very unique because no one else could ever independently create it – the event has come and gone. The main exception to thick protection for event footage applies when the footage is dominant, i.e., when it records an event of such historic or cultural importance that fully protecting the footage against all types of unauthorized use would over-reward the creator and deter socially beneficial use of the footage by others.\textsuperscript{51}

\textsuperscript{46} Cf. Green, supra note 24, at 126 (creative work is not highly susceptible to parallel independent creation); McGowan, \textit{supra} note 16 (the more variation is constrained, the less courts extend protection); Dan Burk, Method and Madness in Copyright Law, 2007 Utah L. Rev. 587, 602 ("The common thread here is that of determinism; courts declare that the law of copyright does not protect expression that can only be instantiated in a single, determined way.").

\textsuperscript{47} Cf. McGowan, \textit{supra} note 16, at 240 ("In some cases in which copyright protection is useful, creativity is undesirable, and perhaps impossible. In some cases where copyright is counterproductive, creativity is possible but irrelevant."); Marc K. Temin, The Irrelevance of Creativity: \textit{Feist’s} Wrong Turn and the Scope of Copyright Protection for Factual Works, 78 Ind. L.J. 919 (2006).

\textsuperscript{48} See \textit{supra} Part I (A) (2).

\textsuperscript{49} See \textit{supra} Part I (A) (2).

\textsuperscript{50} See \textit{infra} Part II (C).

Unlike footage of a spontaneous event, a photo of a stable object accessible to others is usually non-unique. In *Ets-Hokin v. Skyy Spirits*, (9th Cir 2003),\(^5^2\) a case of no liability, P photographed Skyy’s blue vodka bottle for use in Skyy’s marketing campaign. Skyy later hired other photographers to photograph the bottle and used the new photos instead of P’s. The lighting, angles, shadows, and background of the new photos differed from P’s. The only constant was the unadorned bottle, which is stable and widely accessible and thus something others could independently photograph.\(^5^3\)

Consider also *Meshwerks v. Toyota* (10th Cir 2008).\(^5^4\) Meshwerks used special machines and techniques to painstakingly create digitized images of Toyota cars. The court held Meshwerks’ “slavish copies” unprotectable.\(^5^5\) Yet slavishness is not

\(^{52}\) *Ets-Hokin v. Skyy Spirits*, 323 F.3d 763 (9th Cir 2003).

\(^{53}\) Compare *Ets-Hokin*, 323 F.3d 763 with Schrock v. Learning Curve International, Inc., 586 F.3d 513, 519 (7th Cir. 2009). In *Schrock*, P photographed D’s toys for use in advertisement and the court protected P’s photograph. In my view, the reason was that, before taking the photograph, P *arranged* the toys in a particular way so that the resulting photograph was unique enough to be thinly protected.

*Compare* Burrow-Giles Lithographic Company v. Sarony, 111 U.S. 53 (1884) *with* Oriental Art Printing v. Goldstar Printing, 175 F. Supp. 2d 542 (S.D.N.Y. 2001). In *Burrow-Giles* the Court upheld the copyright in P’s photo of a posing Oscar Wilde. Note that other creators could have independently photographed Wilde during his lifetime but the probability was very low that any of them would have created a photograph that was both independent of and not readily distinguishable from P’s.

In *Oriental*, the court held that P’s straightforward photographs of food dishes for a Chinese menu were not original enough for copyright. Note that, because P’s photographs were straightforward representations of common items, independent photographers could plausibly create photographs not readily distinguishable from P’s.

\(^{54}\) *Meshwerks*, Inc. v. Toyota Motor Sales U.S.A., Inc., 528 F.3d 1258 (10th Cir. 2008).

\(^{55}\) See also ATC Distr. Group, Inc. v. Whatever It Takes Transmissions & Parts, Inc., 402 F.3d 700, 712 (6th Cir. 2005) (“The illustrations were intended to be as accurate as possible in reproducing the parts shown in the photographs on which they were based, a form of slavish copying that is the antithesis of originality.”).

*Compare* Bridgeman Art Library v. Corel Corp., 25 F. Supp. 2d 421, 427 (1998), affirmed on reconsideration, 36 F. Supp. 2d 191 (S.D.N.Y. 1999), with Alfred Bell & Co. v. Catalda Fine Arts, Inc., 191 F.2d 99, 102-03 (2d Cir. 1951). In *Bridgeman*, D copied P’s transparencies of public domain paintings. The court held the transparencies uncopyrightable, likening them to photocopies and arguing that originality requires distinguishable variation beyond a mere change in medium from painting to transparency. My take on *Bridgeman* is that P’s transparencies were not unique because someone else could independently make transparencies of the public domain paintings that were not readily distinguishable from P’s.
dispositive. Event footage is protectable though it slavishly copies the event that unfolds before the lens. What distinguishes Meshwerks’ slavish copies of Toyota cars from photographers’ slavish copies of events is that someone else could independently create slavish copies of the same Toyota cars, whereas no one else could independently create slavish copies of events that have come and gone.56

A non-slavish copy of a stable, widely accessible thing is protectable insofar as no could independently create the non-slavish copy. For example, a translation of a well-known work from one human language to another is likely to be protectable57 unless the translation is extremely short. Consider a translation of a novella from Spanish to English. This translation is clearly unique – no one will ever independently make an indistinguishable translation. Even a translation of a single page of the novella might be unique, because English allows for some variety in syntax and contains infamously many synonyms.58

In *Alfred Bell*, the court upheld copyright in P’s mezzotint engravings of public domain paintings. The mezzotint engraving process is an inexact art requiring skill and judgment and subject to error. *Id.* at 104-05. Insofar as the process was an inexact art, it would seem that P’s engravings were readily distinguishable not only from the public domain paintings but also from independently created reproductions of the same public domain paintings.

56 *But see* Alva Studios, Inc. v. Winninger, 177 F. Supp. 265 (S.D.N.Y. 1959). The court in *Alva* upheld copyright protection for a faithful reproduction of Rodin’s famous statue “Hand of God” – a stable object. Are *Alva* and Meshwerks in conflict? Meshwerks, Inc. v. Toyota Motor Sales U.S.A., Inc., 528 F.3d 1258 (10th Cir. 2008). They may be. If so, *Alva* seems the wrongly decided of the two. The argument that *Alva* and Meshwerks are not in conflict, and that *Alva* is rightly decided, is that only in *Alva* was P’s work repeatable enough to be protected, albeit thinly. Though P’s reproduction in *Alva* was faithful to the contours of Rodin’s statue, P’s reproduction was half as large and the rear of its base was closed rather than open. Another creator who independently created a reproduction of Rodin’s statue would be unlikely to create one with dimensions, base and materials indistinguishable from P’s.

It is questionable whether the likelihood of independent creation is low enough in *Alva*. But, it is lower than in Meshwerks. Were Toyota to commission someone else to digitize its cars, it seems likely that the resulting images would not be readily distinguishable from Meshwerks’ images. Further, Meshwerks’ images might not be readily distinguishable from regular digital photographs of the cars or from certain images that Toyota made when it designed the cars.

57 *Cf.* Landes & Posner, *supra* note 8, at 110 (“To translate The Brothers Karamazov into English is an enormously time-consuming task of the same general character as the expressive activities that copyright protects…”).

58 Synonyms for the word huge, for instance, include enormous, massive, immense, very big, very large, giant, gigantic, gargantuan, jumbo, colossal, mammoth, titanic, voluminous, vast, mega-sized, prodigious, humongous, and more.
B. Uniqueness as a Function of Three Variables

Uniqueness is a matter of degree, not an absolute or binary quality like pregnancy.\footnote{See generally James Champlin Fernald, English Grammar Simplified: Its Study Made Easy 66-67 (1916): “Adjectives expressing some quality that does not admit degrees are not compared when used in their strict or full sense, as square, perpendicular, circular, absolute, eternal, illimitable, complete, perfect, etc. But such adjectives are often used in a modified or approximate sense, and when so used admit of comparison. If we say, ‘This is more perfect than that,’ we do not mean that either is perfect without limitation, but that ‘this’ has ‘more’ of the qualities that go to make up perfection than ‘that’; it is more nearly perfect.”} Every work is unique in trivial ways. No two works have exactly the same molecules arranged exactly the same way. Every work is created with some freedom from constraint or under some unique constraints. For our purposes, a work counts as unique if it has salient features unique enough to lead us to conclude the work is readily distinguishable from all independently created work that came before and all that will come after.

The thickness of protection for a work tracks the degree to which the work is (or at least seems) unique.\footnote{See infra Part II (C). The sound recording right is an exception that corroborates this rule. See infra Part IV (B).} A work as unique as Alice in Wonderland receives very thick protection. A typical list of 100 favorite movies is moderately unique and thus receives moderately thick protection. A mannequin head with stylized features suggestive of a hungry high-fashion look, and with an inadvertent flaw in its hairline, is unique enough to receive at least thin protection.\footnote{See infra Part IV (A), discussing Pivot Point International, Inc. v. Charlene Products, Inc., 372 F.3d 913 (7th Cir. 2004).} An accurate list of the 100 top grossing movies is non-unique and receives no protection.

To estimate or characterize the degree to which a work is unique, we can frame uniqueness as the probability that no one before independently created, and that no one after will independently create, work readily indistinguishable from P’s. The higher the probability, the more unique P’s work. The variables on which this probability depends can be defined in various ways. Below is one way.

The probability that P’s work is unique depends on:
(1) Added Complexity: the number of elements in P's work – including combinations, arrangements, highlights, and omissions – not manifestly devoid of novelty;

(2) Viable Alternatives: the number of alternative works with which independent creators could with equal or greater efficiency achieve ends equivalent or superior to those achieved by P's work; and

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63 Cf. Dennis W. Khong, Copyright Doctrines, Abstraction and Court Error, Review of Law & Economics: Vol. 3: Iss. 3, Article 5, 10 (2007), (probability of coincidental similarity falls as number of elements in work rises); Kurtz, supra note 13, at 1253-54 (characterizing ideas in terms of venn diagram, whereby ideas complex enough to be protectable reside only at small area where a number of simple ideas intersect).

64 Cf. Pickett v. Prince, 207 F.3d 403, 405 (7th Cir 2000) (“all works of art are ultimately combinations of familiar, uncopyrightable items”); Bright Tunes Music Corp. v. Harrisons Music, Ltd., 420 F. Supp. 177, 180 n.11 (S.D.N.Y. 1976) (“[A]lthough the two motifs were in the public domain, their use here was so unusual that [D's expert witness], in all his experience, had never come across this unique sequential use of these materials.”); Metcalf v. Bocho, 294 F.3d 1069, 1074 (9th Cir. 2002) (“The particular sequence in which an author strings a significant number of unprotectable elements can itself be a protectable element.”); Warner Bros., Inc. v. American Broadcasting Cos., 720 F.2d 231, 243 (2d Cir. 1983) (individual elements contribute to “expressive aspect of the combination,” regardless whether they are protectable in isolation); Joyce et al., supra note 13, at 692 (“Altai insists that public domain elements of programs should be ‘filtered out’ of the analysis. Ultimately, however, all copyrightable works, in all media, are simply combinations of public domain elements (be they individual words, or musical notes, or simple shapes).”); Roth Greeting Cards v. United Card Company, 429 F.2 1106 (9th Cir. 1970) (short phrases by themselves unprotected, but protected in combination with images and with splitting of phrases between front cover and inside of greeting card); Tufkenkian Import/Export Ventures v. Einstein Moomjy, 338 F.3d 127, 134 (2d Cir. 2003) (“[I]nfringement analysis is not simply a matter of ascertaining similarity between components viewed in isolation.”); Atari Games v. Oman, 979 F.2d 242 (D.C. Cir. 1992) (finding combination of standard geometric shapes protectable); Runstadrler v. MCM, 768 F. Supp. 1292 (N.D. Ill. 1991) (combination of standard shapes may be protectable); Green, supra note 24, at 121 (arguing copyrightability is an emergent property that arises out of aggregation of uncopyrightable elements).

65 See supra Part I (B)(3) and Part II (D), explaining that copyright tacitly requires novelty.

66 The intuition is that if there are few Viable Alternatives – if there are few viable ways to achieve the desired effect – the odds are relatively high that eventually someone else would independently choose the same way P chose. Conversely, if there are hundreds of viable ways to achieve the desired effect, the odds are low that someone else would independently choose the same way P chose.

Looking to alternatives is not a new idea. Courts have long looked to them. See, e.g., Pivot Point, Int'l, Inc., 372 F.3d 913 (many alternative designs available for mannequin head); Mattel, Inc. v. Goldberger Doll Manufacturing Co., 365 F.3d 133 (2d. Cir. 2004) (many alternatives to Barbie design); Dymow v. Bolton, 11 F.2d 690 (2d Cir. 1926) (work protected if same idea can be expressed in totally different manners); Kregos v. Assoc. Press, 937 F2d 700, 704-07 (2d Cir 1991) (P’s combination of data categories protectable because it was drawn from a universe of thousands of alternatives); Lanard Toys Ltd. V. Novelty Inc., 375 Fed.Appx. at 710-11 (upholding copyright and remarking that P's designer testified he “could have designed it in 'a million' other ways”); American Dental Association v. Delta Dental Plans Association, 126 F.3d 977 (7th Cir. 1997) (J. Easterbrook) (Upholding copyright in taxonomy of dental procedures and pointing out that “Dental procedures
(3) Contenders: the number of other creators (past, present and future) with the ability, opportunity and incentive to independently create work indistinguishable from P’s.

The uniqueness of P’s work rises with increases in Added Complexity, with increases in the number of Viable Alternatives, and with decreases in the number of Contenders. Thus a work is very unique when it has high Added Complexity, many Viable Alternatives, and few Contenders.

Yet, the variables often offset each other, so a work may still be unique despite low Added Complexity, few Viable Alternatives, or many Contenders. Conversely, a work may be non-unique despite high Added Complexity, many Viable Alternatives, or few Contenders. Note, however, that if the number of Contenders is zero, it cannot be offset. If there are no Contenders – if P was and always will be the only party who could create the work – the work must be unique.68

Event footage is factual work that has no Contenders. It has no Contenders because it is constrained by an “exclusive reality” that is fleeting and localized or otherwise inaccessible to others. In contrast, unprotected factual work is constrained by a “shared reality” that is stable and accessible to others. A factual could be classified... in any of a dozen different ways.”). See also infra Part IV (A) and accompanying footnotes.

Commentators also look to alternatives. See, e.g., Byron, supra note 5, at 67 (As number of possible alternatives increases, probability of P’s work decreases, making P’s work more copyrightable); Thomas M. Byron, As Long as There’s Another Way: *Pivot Point v. Charlene Products* as an Accidental Template for A Creativity-Driven Useful Articles Analysis, 49 IDEA 147, 153-54, 165-66, 188-91 (2009) (in cases involving useful articles courts look to number of viable alternatives, even when they purport to rely on different measure); Jones, supra note 5, at 577-78 (Merger is a matter of degree that tracks the variety of alternative expressions available.); Burk, supra note 46, at 606 (There is only one way Pythagorean theorem will work. Not so for a work of art or drama. Many different original portraits may be painted, many plays can be written on the same themes contained in those works.).

67 Viable Alternatives are alternatives that would have been at least as good as P’s work at achieving its ends. For instance, a comedy independently created by P is likely to be unique because myriad alternative comedies can achieve an equivalent effect (laughter).

68 Cf. Hugh Laddie, Peter Prescott and Mary Vitoria, *The Modern Law of Copyright and Designs* §3.56 (1995) (photo can be copyrighted if it captures a scene unlikely to recur); Khong, supra note 63, at 19-21 (Some facts are single-sourced, or costs of gathering them are highly asymmetrical among producers. When facts are single-sourced, likelihood of coincidental similarity to other works is low.)
work constrained by shared reality tends to have many Contenders over the long run because the facts are accessible to others and because consumers foreseeably value such work as a guide to action.\textsuperscript{69} Works constrained by shared reality also have few Viable Alternatives, because works not constrained by shared reality make poor guides to action.

Consider an unprotected factual work such as P’s accurate list of the 100 top grossing movies. P’s list has few Viable Alternatives – not only because it is accurate but also because it is accurate about something about which other creators can likewise be accurate.\textsuperscript{70} In addition, 100 is a common list number, and shorter lists (e.g., the 50 top grossing) and longer lists (e.g., the 200 top grossing) will be indistinguishable from the corresponding portion of P’s list.

There are many Contenders for a list of 100 top grossing movies because many people could access the information needed to independently create it. Also, for many in the film industry, the utility of such a list is foreseeably much greater than the cost of compiling it.

Finally, such a list has at best low Added Complexity. The movie titles, their number, and their arrangement (in descending order by earnings) are manifestly devoid of novelty. The only salient element not manifestly devoid of novelty seems to be the combination of all of the manifestly non-novel elements together in one list.\textsuperscript{71}

\textbf{C. How Thickly a Work is Protected Depends on How Unique It Is}

The limiting doctrines overlap not only each other but also the originality requirement and the substantial similarity standard.\textsuperscript{72} Further, originality and

\textsuperscript{69} See Green, \textit{supra} note 13, at 945-46 (“Consumers value factual material as a guide for their action…”).

\textsuperscript{70} See infra text and notes Part IV (E).

\textsuperscript{71} There may also be Added Complexity attributable to the specific date the list was made. That is, an accurate list made in the third quarter of 2011 may differ slightly from an accurate list made in, say, the first quarter of 2012.

\textsuperscript{72} See supra Part I (A) (1).
substantial similarity overlap each other. All of these doctrinal tools overlap because they all enforce the requirement of uniqueness.

To satisfy the threshold of copyrightability, a work must possess a threshold minimum degree of uniqueness. That is, there must be some salient, non de minimis feature of the work no other creator has or will independently create. How thickly a work is protected depends on how far its uniqueness exceeds the threshold. When P’s work is very unique, courts are more likely to protect not only smallish fragments of it but also moderately detailed patterns abstracted from it.

A work is most unique in its most complex form – the entire literal work verbatim. When we subdivide a work into tiny sub-elements, and focus on a sub-element in isolation, it seems too simple to be unique. Rarely is an individual word in a book unique, and any unique word (such as “supercalifragilisticexpialidocious”) can be subdivided into non-unique syllables and letters. The same is true for a small

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73 See supra Part I (A) (1).

74 See supra Part II (B), arguing that uniqueness is a matter of degree.

75 Cf. Feist Publications, Inc. v. Rural Telephone Service Co., 499 U.S. 340, 365 (1991) (“[C]opyright protects only those elements of a work that possess more than a de minimis quantum of creativity.”); Ringgold v. Black Entertainment Television, Inc., 126 F.3d 70, 75-76 (2d Cir. 1997) (“The legal maxim ‘de minimis non curat lex” (sometimes rendered, ‘the law does not concern itself with trifles’) insulates from liability those who cause insignificant violations of the rights of others…”); Robert P. Merges et al., Intellectual Property in the New Technological Age 532 (5th ed. 2010) (cases applying de minimis doctrine tend to use it as a shorthand for lack of substantial similarity); Tufenkian Import/Export Ventures, Inc. v. Einstein Moomjy, Inc., 338 F.3d 127, 135 (2d Cir. 2003) (implying that if P’s work includes only de minimis originality, copying all of work would be a de minimis taking); Intervest Construction, Inc. v. Canterbury Estate Homes, Inc., 554 F.3d 914, 920 (11th Cir. 2008) (if there is very little protected expression, similarity between works is unlikely to be substantial); Patry, supra note 14, at § 4.46 (to state that an idea has merged with expression because there are only a limited number of ways to express idea “is, in reality, a statement that the purported copyright owner’s way of expressing the idea contains only a de minimis number of non-ideas.”); Sag, supra note 41, at 1634 (2009) (copyright permits copying of trivial expressive features, because to do so does not unfairly compete with P).

76 Cf. Mark A. Lemley, Convergence in the Law of Software Copyright?, 10 High Tech. L.J. 1, 30 (1995) (“Where the alleged similarities occurred at a high level of abstraction, at which the copyright owner is entitled to little protection, she must be able to show more striking similarities between the works than if the copying had occurred at a lower level of abstraction.”); Kurtz, supra note 13, at 1260 (The more extraordinary and nonobvious the work, the more abstract forms of copying it is protected against.); Bucklew v. Hawkins, Ash, Baptie & Co., LLP, 329 F.3d 923, 926 (7th Cir. 2003) (“[W]hen the similarities concern details of such an arbitrary character that the probability that the infringer had duplicated them independently is remote, an inference of copying may be drawn without any additional evidence.”). See also supra Part I (A) (1).

77 See supra Part II (B). See also infra Part IV (B).
piece of an image and the pixels within it. Likewise for sub-elements of any other type of work. Yet, a very unique work can remain unique even after some degree of subdividing. Thus a small fragment of a very unique work is more likely to be unique than an equally small fragment of a marginally unique work.

Similarly, when we abstract far away from a work, and collapse its many elements into a handful of meta-elements, we are left with a broad summary of the work that seems too simple to be unique. Yet, a very unique work can remain unique even after some degree of abstracting. Thus a moderately detailed summary of a very unique work is more likely to be unique than an equally detailed summary of a marginally unique work.

When the issue is whether P’s work is copyrightable at all, courts usually view P’s work at the level at which it is mostly likely to be unique – the entire work verbatim. If the work is only marginally unique at this verbatim level, courts may also tacitly ask whether the benefits of protecting it seem to outweigh the transaction and enforcement costs.80

When the issue is whether D’s work infringes P’s, courts usually identify the most detailed subject matter common to both works, tacitly ask what features of that subject matter are unique to P’s work at that level of detail,81 and, if D’s taking is small, ask whether those features are so trifling that the benefits of protecting

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78 The sound recording right appears to bend this rule. See infra Part IV (B).
79 See supra Part I (B) (4).
80 See generally Green, supra note 13, at 932 (de minimis doctrine withholds protection when costs of enforcement and transaction exceed reduction in P's incentive to create); Id. at 951-52 (relative enforcement and transaction costs rise as size of borrowed portion decreases).
81 Cf. Kurtz, supra note 13, at 1234 (“We can consider the level of abstraction at which the similarities between the plaintiff's work and the defendant's work lie. We can then determine, in that specific context, whether the similarity lies on the idea or expression side of the line.”); Id. at 1253 (“The similarity between the plaintiff's and defendant's works is more or less saturated with detail. The greater that saturation, the more appropriate a finding of infringement.”); Nichols v. Universal Pictures Corp., 45 F.2d 119, 121 (2d Cir. 1930) (Hand, J.) (“the less developed the characters, the less likely they can be copyrighted; that is the penalty an author must bear for marking them too distinctly.”)
them seem to outweigh the costs. Sometimes courts perform these steps in different order.\textsuperscript{82}

Courts thereby match the degree of protection to the work's degree of uniqueness. The less unique P's work, the more similar to it D's work must be to infringe. If P's work is modestly unique, D's work must be more than modestly similar to it to infringe. To put it another way, if P's work is modestly unique, D's work infringes only if D's work includes either a large fragment of or a markedly detailed pattern in P's work.

Compare \textit{Rosenthal Jewelry v. Grossbardt} (2nd Cir. 1970)\textsuperscript{83} ("Rosenthal I") with \textit{Rosenthal Jewelry v. Kalpakian} (9th Cir. 1971)\textsuperscript{84} ("Rosenthal II"). In both cases both parties made jeweled pins shaped like bees. In \textit{Rosenthal I}, D had used one of P's pins to make a mold to produce a pin identical to P's except for inferior gems.\textsuperscript{85} The district court found infringement and the appellate court affirmed. In \textit{Rosenthal II}, D produced its own pin from its own mold, resulting in a bee pin moderately similar to P's. The district court found no infringement and the appellate court affirmed.

The key distinction between \textit{Rosenthal I} and \textit{Rosenthal II} is that only in \textit{Rosenthal I} did D's pin include subject matter unique to P's work. Given that insect-shaped pins have long been popular and given that bees are well-known insects, many independent creators have created and will create bee pins. To be recognized as a bee pin, a bee pin must approximate a real bee. The appearance of a real bee is a shared constraint that channels independent creators toward similar bee pins.\textsuperscript{86} P

\textsuperscript{82} See, e.g., Runstadler Studios Inc. v. MCM Ltd. Partnership, 768 F. Supp. 1292 (N.D. Ill. 1991). \textit{Runstadler} involved sculptures composed of glass rectangles overlying each other to form a tall spiral. The case turned on whether D infringed. D characterized P's work in specific terms; P characterized it broadly. The court elected D's characterization and found no infringement. In my view, the court elected D's characterization because P's characterization was too broad to be non-unique. That is, the features common to both works were not unique.


\textsuperscript{84} Herbert Rosenthal Jewelry Corp. v. Kalpakian (\textit{Rosenthal II}), 446 F.2d 738, 740-42 (9th Cir. 1971).

\textsuperscript{85} \textit{Rosenthal I}, 1970 WL 10069 ("defendants' pins are exact copies" except made with inferior gems).

\textsuperscript{86} Also, the number of alternative bee poses for pins is limited compared to, say, the number of alternative animal poses for taxidermy. See Hart v. Dan Chase Taxidermy Supply Co., 86 F.3d 320,
has no cause of action against a D whose bee pin has no more than this convergent similarity.\textsuperscript{87} P has a cause of action only against a D whose pin is so similar to P’s that a court can assume not only that such close similarity was due to D’s copying but also that no one else has or will independently create a bee pin as similar to P’s as D’s bee pin is.

Suppose similarity could be measured in percentages between 0 and 100, with 0% representing no similarity and 100% representing perfect identity. Suppose P’s pin is 80% similar to the appearance of a real bee, and D’s pin is 75% similar to P’s pin. The 75% similarity may be due to both independently tracking a real bee. Accordingly, a court is unlikely to find that D infringes. Compare a case in which D’s pin is still 75% similar to P’s but that P’s is highly stylized and only 30% similar to a real bee. In this case a court is far more likely to find that D infringes.

We are now in a position to see why graphic characters are usually protected more thickly than non-graphic characters.\textsuperscript{88} Graphic characters tend to be more

\textsuperscript{87} See Rosenthal II, 446 F.2d at 741 (“Any inference of copying based upon similar appearance lost much of its strength because both pins were lifelike representations of a natural creature.”) Id. at 742 (“There is no greater similarity between the pins of plaintiff and defendant than is inevitable from the use of jewel-encrusted bee forms in both.”).

\textsuperscript{88} See Joyce et al., supra note 13, at 149 (“Courts have had little trouble extending protection to characters in copyrighted cartoon strips or animated films...But literary characters are another matter entirely.”); Jones, supra note 5, at 570-71 n.102-104 (listing cases suggesting protection greater for graphic characters); Walt Disney Productions v. Air Pirates, 581 F.2d 751, 755 (9th Cir.)
unique, because they tend not to closely approximate things others could converge on. Mickey Mouse does not closely approximate a real mouse – and that fact is readily apparent to courts. In contrast, non-graphic characters tend to possess known traits and to face the recurrent problems of humankind. This is not to say graphic characters are always more unique than non-graphic characters. Graphic characters that are relatively banal or undetailed may be less unique than non-graphic characters that are extra fanciful or richly delineated.

D. Why Uniqueness?

A work is unique if it is a one-of-a-kind: novel and unrepeatable. Neither copyright nor patent protects work that lacks novelty because there are costs but no benefits from inducing the re-creation of work that already exists. One cost is duplication of effort, i.e., the expenditure of time and resources that could have been used to bring something new to the world. Other costs include the problems of proof and notice, and the high costs of transaction and administration, that result when multiple parties claim ownership of the same work.

89 In terms of our three variables, non-graphic characters tend to have lower Added Complexity, fewer Viable Alternatives, and more Contenders.


91 See infra, further below, this section, discussing costs generated by work that is novel but repeatable. Work that is non-novel as well as repeatable generates the same costs but more so.

92 See infra below, this section.
The conventional wisdom is that copyright requires no novelty.93 Taking the conventional wisdom as true, Roger Schechter and John Thomas suggest two reasons for why copyright requires no novelty.94 The first is that, in many areas of pop culture, works inevitably will resemble each other because of the limits of the genre and other conventions. For instance, a “comic book about a superhero will resemble many previous works of the same sort...”95 My response is simply that copyright does not protect a work insofar as it will inevitably resemble other works. Indeed, courts have refused to protect such features in superhero works.96

The alleged second reason why copyright requires no novelty is that “a novelty test can work only if there is some formal way [as in patent law] to compare newly created material with the body of previously existing work so that we can determine if it is genuinely novel.”97 My response is that there need be no formal test or examination for novelty so long as copyright only protects works very likely to be novel and only to the extent they are very likely to be novel.

Unlike copyright, patent protects some work that is novel but repeatable.98 There are benefits from inducing the creation of work that is novel but repeatable, namely, the benefits of getting the work sooner rather than later. However, there are substantial costs. Utility patents, with their shorter term and formal screening process, seem to provide the better balance of benefits to costs for work that is novel but repeatable.

93 See supra Part I (A) (3).
94 Schechter & Thomas, supra note 7, at 22.
95 Id.
96 See Conan Properties, Inc. v. Mattel, Inc., 712 F. Supp. 353 (SDNY 1989) (cartoonist cannot copyright idea of superhuman muscleman); Mattel, Inc. v. Azrak-Hamway Intern., Inc., 724 F.2d 357, 360 (2d Cir. 1983) (dolls positioned in crouched fighting stance of a Neanderthal man or that of a latter-day professional wrestler approaching opponent are uncopyrightable). See also Green, supra note 24, at 129 (arguing that general idea of superhero is unprotectable in part because it is susceptible to parallel independent creation).
97 Schechter & Thomas, supra note 7, at 23.
98 See infra Part II (E).
We reserve the long\textsuperscript{99} and easily obtained monopoly of copyright for work that is unique (novel and unrepeateable). The benefit of liberally protecting unique work exceeds the benefit of liberally protecting work that is novel but repeatable. A unique work can be made by only one particular party. If the law fails to incentive that particular party, and if that party has no other incentives to make the work, the work is lost to the world forever. In contrast, a non-unique work can be made by multiple parties. If the law fails to incentivize all but one of them, the world still gets the work eventually. In sum, liberal protection \textit{ensures} creation of unique work more effectively than it ensures creation of non-unique work.

Liberal protection for unique work also costs less than liberal protection for non-unique work. Protection for unique work does not encourage duplicative creation of the same thing. That is, no independent creator will repeat a unique work. By definition, a unique work cannot be repeated independently. In contrast, protection for non-unique work can encourage duplicative creation of the same thing – because non-unique work can be independently repeated by others.

To be sure, weak protection for non-unique work allows for free riding, which reduces the incentive for creators of non-unique work to be the first to create it. The choice of whether we should protect non-unique work requires a trade-off between the social costs of free riding and the social costs of duplicative creation. If we refuse to protect non-unique work, there is more free riding but less duplicative creation. If we protect non-unique work, there is less free riding but more duplicative creation. However, the main point to note here is that the choice of whether we should protect \textit{unique} work does \textit{not} entail this trade-off. If we refuse to protect unique work, there is more free riding and zero duplicative creation. If we protect unique work, there is less free riding and still zero duplicative creation.

\textsuperscript{99} I do not argue that the current copyright term is justified. It is obviously too long from a policy standpoint. \textit{See, e.g.,} Eldred v. Ashcroft, 537 U.S. 186 (2008) (Breyer, J., dissenting). I argue only that the copyright term should be longer than the patent term (at least if the patent term is not itself too long).
Third – and tipping the balance affirmatively against copyright protection for non-unique work – is that copyright for non-unique work would generate problems of proof,\(^{100}\) problems of notice and overlapping claims of ownership,\(^{101}\) high transaction costs,\(^{102}\) and rent seeking.\(^{103}\) If copyright protected non-unique work,

\(^{100}\) See Lichtman, supra note 24, at 686-87, 705-07 (2003). According to Lichtman, the creativity requirement screens out works for which courts would be unable to use similarity to infer that D copied from P. If copyright protected uncreative work, two parties would come forward with very similar works, and the court would find it virtually impossible to determine whether one copied from the other or whether, instead, the similarity between them was a natural outgrowth of that both lack creativity.

See also Khong, supra note 63 (accepting Lichtman’s theory); Schechter & Thomas, supra note 7, at 27 (rationalizing creativity requirement on ground that, without it, independent creators would be charged with copying and courts would find it difficult to determine whether Ds’ claims of independent creation were true); Green, supra note 13, at 926, 931-32, 941-42; Id. at 934 (“[I]f the work is likely to be created by many people independently, the enforcement costs will be greater because the fact-finder in an infringement case will have to expend time and effort excluding the possibilities that the D came up with the work herself and that the plaintiff in fact copied the work from a third party.”); L. Batlin & Son, Inc. v. Snyder, 536 F.2d 486, 492 (2d Cir.) (en banc), cert. denied, 429 U.S. 857 (1976) (“To extend copyrightability to minuscule variations would simply put a weapon for harassment in the hands of mischievous copiers intent on appropriating and monopolizing public domain work.”); Landes & Posner, supra note 8, at 90 (“The main function of conditioning copyright protection on a showing of some originality is… to lighten the evidentiary burden on the courts of having to decide whether two virtually indistinguishable works… were independently created or one was copied from the other…”); Id. at 87; Id. at 103 (“The more likely independent creation is, the more costly and uncertain the litigation of a claim of copyright infringement will be, and this becomes an argument for denying copyright protection.”); Assessment Technologies of WI, LLC v. WIREdata, Inc., 350 F.3d 640, 643 (7th Cir 2003) (Posner, J.) (describing creativity requirement as a means of identifying P’s independent creation).

But see McGowan, supra note 16, at 255-56 (remarking that “it is easy enough to weed out false positives by requiring strong proof of copying where the baseline probability of coincidental similarity is high…”). For partial responses to McGowan, See infra text and footnotes below.

\(^{101}\) See generally James Bessen & Michael J. Meurer, Patent Failure: How Judges, Bureaucrats, and Lawyers Put Innovators at Risk (2008) (explaining importance of property’s notice function, and arguing that notice is undermined when, inter alia, multiple parties claim rights in same subject matter); Michael Heller, The Gridlock Economy: How Too MuchOwnership Wrecks Markets, Stops Innovation, and Costs Lives (Basic Books 2008) (property system tends to fail when multiple parties claim overlapping rights to same subject matter). See also Ty, Inc. v. GMA Accessories, Inc., 132 F.3d 1167, 1169 (7th Cir. 1997) (J. Posner) (independent creation is a defense in copyright in part because authors cannot determine in advance whether their own work would infringe preexisting copyrights).

\(^{102}\) Cf. Green, supra note 13, at 926, 931-32, 941-42. Id. at 934 (“The likelihood of parallel independent creation also increases transaction costs. If material has been created only once, it is easier to identify the person from whom one should obtain a license. But if there are many creators of the material, someone seeking to insulate herself from an infringement suit must expend a great deal of time and effort tracing the ultimate provenance of the material she borrowed – or obtain a license from every creator.”).

\(^{103}\) Cf. Landes & Posner, supra note 8, at 93-96 (arguing that protecting ideas, names, titles, short phrases, and scènes à faire would over-reward first creators, and increase rent seeking, transaction costs, and overall cost of creating works); CCH Canadian Ltd. v. Law Society of Upper Canada,
multiple parties would often claim copyright in the same work and many more independent creators would get sued.\textsuperscript{104} Some first creators would sue second creators, some second creators would sue first creators, or both might sue or be sued by third creators. On occasion, independent creators would be sued by parties who had not independently created but had copied from the public domain, from other copyrighted works, or even from Ds’ work.\textsuperscript{105}

Independent creation is a defense to copyright infringement but we could not rely entirely on this defense were we to extend copyright to non-unique work. Some bona fide independent creators would be unable to prove independent creation, because courts rely on similarity as proof of copying.\textsuperscript{106} Courts would come to rely

\textsuperscript{104}One reason to think many more independent creators would be sued were copyright extended (like patent) to non-unique work is that the vast majority of patent infringement lawsuits are against independent inventors, not against pirates who actually copied from the patentee. See Christopher Cotropia and Mark A. Lemley, Copying in Patent Law, Stanford Public Law Working Paper No. 1270160 (Feb. 2009).

\textsuperscript{105}The risk of copiers suing creators exists for unique works too, but the risk is much lower because the evidence will usually point to the true creator of a unique work. For example, if you independently write a novel, there will likely be a paper trail that corroborates your claim that you wrote it.

\textsuperscript{106}See, e.g., Green, supra note 13, at 934 (“Although independent creation remains a defense against a suit for infringement, juries routinely rely upon similarity when inferring copying…”); Arnstein v. Porter, 154 F.2d 464, 469 (2d Cir. 1946) (“[A] case can occur in which the similarities were so striking that we would reverse a finding of no access, despite weak evidence of access (or no evidence thereof other than the similarities)…”); Durham Industries, Inc. v. Tomy Corp., 630 F.2d 905, 910-18 (2d Cir. 1980) (originality requirement and idea-expression dichotomy are necessary because, by itself, test of substantial similarity would as a practical matter subject innocent parties to threat of suit); A.A. Hoehling v. Universal City Studios, Inc., 618 F.2d 972, 977 (2d Cir.), cert. denied, 449 U.S. 841 (1980) (A “series of copyright cases in the Southern District of New York have granted defendants summary judgment when all alleged similarity related to non-copyrightable elements of the plaintiff’s work. These cases signal an important development in the law of copyright, permitting courts to put a ‘swift end to meritless litigation’ and to avoid lengthy and costly trials.”).

In Sid & Marty Krofft v. McDonald’s, 562 F.2d 1157 (9th Cir. 1977), the court said that limiting doctrines are necessary to prevent copyright from extending too far and that relying solely on the defense of independent creation would not suffice. Absent limiting doctrines, “[f]or example, a copyright could be obtained over a cheaply manufactured plaster statue of a nude. Since ownership of a copyright is established, subsequent manufacturers of statues of nudes would face the grave risk of being found to be infringers if their statues were substantially similar and access were shown. The burden of proof on plaintiff would be minimal, since most statues of nudes would in all probability be substantially similar to the cheaply manufactured plaster one.” Id. at 1162-65.
less on similarity and to more often require direct evidence of copying,\textsuperscript{107} but then copiers would more often escape liability – because direct evidence of copying is seldom available.\textsuperscript{108}

Further, if multiple parties claim rights in the same works, potential users of the works will find it more difficult to clear rights. How does a potential user know who is a bona fide independent creator with the power to assign or to license? If the work is repeatable, multiple parties can plausibly claim to have independently created it. Given the high costs of clearing rights and the residual risks, potential users might forego clearing rights in favor of independently creating the works themselves or by commissioning others to do so. But in cases in which potential users find it less costly to create work from scratch than to buy or license it, the law should probably let them freely copy it\textsuperscript{109} and thereby avoid wasteful duplication of effort.

\textbf{E. Repeatability Forms the Line Between Patent and Copyright}

Had the Wright Brothers not invented the powered airplane, someone else would have\textsuperscript{110} and soon.\textsuperscript{111} In contrast, had Lewis Carroll not written \textit{Alice in Wonderland}, no one would have ever written it.

\textsuperscript{107} \textit{Cf.} Mag Jewelry Co. v. Cherokee, Inc., 496 F.3d 108, 119 (1\textsuperscript{st} Cir. 2007) (“[W]here the simplicity of the design makes independent creation highly plausible, similarity alone could not establish access and, in turn, copying.”); Ferguson v. National Broadcasting Co., 584 F.2d 111, 113 (5\textsuperscript{th} Cir. 1978) (“If the two works are so strikingly similar \textit{as to preclude the possibility of independent creation}, ‘copying’ may be proved without a showing of access.” [emphasis added]). Accord Selle v. Gibb, 741 F.2d 896, 901 (7th Cir.1984); Ty, Inc. v. GMA Accessories, Inc., 132 F.3d 1167, 1171 (7\textsuperscript{th} Cir 1997); Gaste v. Kaiserman, 863 F.2d 1061, 1068-69 (2d Cir 1988).


\textsuperscript{109} \textit{Cf.} Wendy J. Gordon, Fair use as market failure: A structural and economic analysis of the \textit{Betamax} case and its predecessors, 82 Columbia L. Rev. 1600 (1982).

\textsuperscript{110} More specifically, someone else would have invented an airplane that operates in the same way, i.e., in the way described and claimed in the Wright Brothers’ patent. No one would have invented their \textit{exact} same working embodiment. Are the working embodiments of patentable inventions copyrightable?
The line between patent and copyright is the line between repeatable subject matter and unrepeatable subject matter. Contrary to popular opinion, the line is not between subject matter with practical utility and subject matter without it. The entertainment and diversion provided by movies, music and literature is a practical utility. In any event, copyright also protects “dry” works that we are more apt to label as practical, for example, maps, blueprints, technical manuals, price guides, textbooks, encyclopedias, and computer code.

As discussed above, liberal protection for non-unique work generates little social bang for the social buck. Thus we rely on the shorter and harder to obtain monopoly of utility patent to protect a subset of non-unique work: non-symbolic work that is novel but moderately repeatable and that efficiently exploits physical principles (“invention”).

Patent allows a degree of repeatability that copyright forbids. Hence most patent infringement suits are against inventors who independently created the invention, not against pirates. When an invention is very repeatable, however, even patent withholds protection – typically on the ground that the invention is

Yes, if copyright treats all inventions the way it treats computer programs. For several decades copyright has protected the working embodiments of computer programs (the actual code), while patent has protected both the actual code and more generalized versions of the methods carried out by the actual code.

No, if copyright treats other types of inventions differently and so withholds protection for their working embodiments. To withhold protection here would amount to an exception to the rule that copyright protects unique work. The exception might be justified on the ground that, in general, it is preferable to have only one form of intellectual property protecting a work.


112 “[A] judicial consensus developed that copyright protection of a useful article must end at the realm of utility, where patent protection begins.” Lester Horwitz & Ethan Horwitz, 1 Intellectual Property Counseling and Litigation, Section 3.03[d] (1999)

113 Cf. Ralph Brown, Eligibility for Copyright Protection: A Search for Principled Standards, 70 Minn. L. Rev. 579, 604 (1985) (The patent/copyright boundary “reflects the policy determination that a seventy-five year monopoly on a useful object would frustrate the policy that that seventeen years is long enough for patent protection.”).

114 Cotropia and Lemley, supra note 104.
“obvious” but occasionally on the ground that the invention is an “abstract idea.” An uncopyrightable idea is a repeatable pattern. An unpatentable abstract idea is a *very* repeatable pattern.

Inventions are repeatable because they are constrained by shared reality. More specifically, they are dictated by the laws of physics, by requisites of safety and compatibility, by costs of production, and by foreseen demand for solutions to well-defined problems. These shared constraints channel independent inventors toward the same inventions. Furthermore, the costs of invention fall with time.

Patents reward inventors enough to *accelerate* invention. A patent rewards an inventor not for bringing us an invention that would never have come absent the promise of exclusivity but for bringing us the invention sooner than it would have come absent the promise. In a world with no patents, most inventions would still come, but they would be postponed until they could be invented more cheaply.

Because most inventions would eventually arrive even without the promise of exclusivity, and because protection for them generates substantial social costs, we protect them for less time (20 years from filing) than we protect copyrighted work (~120 years on average). Also, we examine patent applications to see whether applicants actually invented what they claim and to see whether their claimed

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117 Cf. Burk, *supra* note 46, at 602, 605-08 (patent law protects highly constrained works). Cf. Lemley, *supra* note 111, *passim*. Lemley surveys the literature on parallel independent invention and reports that almost all significant inventions have been invented simultaneously or nearly so by inventors working independently of each other. One reason is that inventions are based on immutable physical principles, that is, independent inventors converge on the same path because there is a stable and optimal (if not inevitable) path for them to converge on. *Id*. at 1-11.

118 In terms of our three variables, inventions have relatively low Added Complexity, few Viable Alternatives, and many Contenders over the long term.
inventions are so repeatable they would have been created soon even without the promise of exclusivity.\textsuperscript{119}

\section*{F. Related Theories from Other Commentators}

The main claims of this paper are repeatable because they are not only true but also constrained by shared reality. Fortunately, most of them are novel in all but their most abstracted forms.

Khong, writing in the economic literature, very briefly sketches a theory similar to uniqueness.\textsuperscript{120} His theory is that the originality requirement screens out work that has a high probability of being coincidentally similar to the work of another, thereby avoiding erroneous findings of infringement and related proof problems.\textsuperscript{121} According to Khong, originality requires more than independent creation by P because, by itself, independent creation by P would fail to screen out some works that are coincidentally similar. To serve as an effective screen, originality also includes creativity, which requires that a work contain elements unlikely to coincide with other works. Khong’s theory is essentially correct but he does not elaborate it or show how it unfolds in the case law or commentary.

Byron proposes a theory that, though informed by intuitions similar to mine, falls short of uniqueness.\textsuperscript{122} Byron’s theory is that a work tends to be copyrightable when it is very unlikely to be created.\textsuperscript{123} In contrast, under the uniqueness theory, a work is copyrightable when it is very unlikely to be created more than once. The difference is bigger than it seems. Byron’s theory is very sensitive to the way we conceive of the probability that a work will be created. If we assess probability using our hindsight knowledge about the state of the world that existed when the work

\textsuperscript{119} In general, we do not want to award 20 years of exclusivity for an invention someone else would have independently created in six months absent the promise of exclusivity. Chiang, \textit{supra} note 115.

\textsuperscript{120} Khong, \textit{supra} note 63.

\textsuperscript{121} \textit{Id.} at 10.

\textsuperscript{122} Byron, \textit{supra} note 5.

\textsuperscript{123} \textit{Id.} at 47 (“only the work that is unlikely to be created merits copyright protection…”).
was created – including the existence of the creator with his individual attributes and circumstances as well as his expectation of copyright protection – then the creation of the work always seems likely. For instance, if, in determining whether *Alice in Wonderland* is copyrightable, we assume the existence, attributes and circumstances of Lewis Carroll, the creation of *Alice in Wonderland* seems likely and thus uncopyrightable under Byron’s theory. In contrast, if we ask whether *Alice in Wonderland* is unlikely to be independently created more than once, the right answer jumps out at us: it is clearly copyrightable.

Byron’s theory diverges further from mine in that he proposes a Goldilocks-like middle ground in which works are maximally protected when they are moderately unconstrained.\(^{124}\) That is, protection decreases toward both ends of the spectrum of constraint, such that works are unprotected when either very constrained or very unconstrained, and most protected when moderately constrained. Byron’s aim here is to account for cases in which courts refuse to protect arbitrary codes, which are very unconstrained.\(^{125}\)

If Byron were correct that very unconstrained works are uncopryrightable, we might expect Lewis Carroll’s poem *Jabberwocky* and Jackson Pollock paintings to be less copyrightable than more constrained works. But that does not appear to be the case. In any event, Byron’s middle-ground does not explain cases, such as *Lotus v. Borland*,\(^ {126}\) in which courts refuse to protect moderately constrained works. I look to a distinct principle, dominance, to explain cases in which court refuse to protect works along the entire spectrum of constraint.


\(^{125}\) *See supra* Part II (A). *See also* infra Part III.

Other commentators with theories or arguments that overlap mine include Michael Green, David McGowan, Doug Lichtman, and Alan Durham.

III. DOMINANCE

Uniqueness explains most but not all of the cases that involve the limiting doctrines. More can be explained by supplementing uniqueness with dominance, which is akin to antitrust.

Courts limit protection for a dominant work even if it is unique. A work is dominant if the work has itself become a lasting constraint on other parties for reasons apart from the work’s intrinsic merit or P’s contribution to it, especially if the social value of the work is due largely to inputs from other parties. When the success or social value of a work clearly outweighs its merit or P’s contribution – because, for instance, lock-in through path dependence, network effects, chance, or adoption as law or industry standard – imposing liability against everyone who engages in any copying of the work over-rewards P, deters efficient use of the work by others, and generates wasteful litigation and high transaction costs.

127 See Green, supra note 13, at 934 (creativity requirement helps screen out works that have a high probability of being independently created by others); Id. at 941, 951 (ideas and facts are susceptible to independent creation); Green, supra note 24, at 123 (distinguishable variation requirement helps prevent protection for works that could be independently created).

128 See McGowan, supra note 16, at 233, passim (the more convergence is expected and useful, the less courts extend protection).

129 See Lichtman, supra note 24, at 686-87, 705-07 (2003) (creativity requirement screens out works that could be independently created and thus for which courts could not rely on similarity as strong evidence that D copied).

130 See Durham, supra note 41, at 638 (2002) (Indeterminate or randomly-organized works are inherently unique, which makes infringing works readily identifiable and which may be one of the reasons for the originality requirement.).

131 The most successful designs are not always the best. Those who would argue otherwise should, for starters, consider the metric system. See also Scott Berkun, The Myths of Innovation, 117-21 (2007) (HTML and JavaScript are far from best software development languages); Id. at 113 (shapes of American electric plugs are not superior to alternatives, and Phillips screw is inferior to lesser-known Robertson screw); Id. at 114, 121-22 (Is the conventional mousetrap really superior to the more than 4000 alternative mousetrap designs patented in the US?).

132 See generally Merges et al., supra note 75, at 459-60 (“Courts have declined to find copyright protection (often on the grounds of merger) in cases where similarity in computer programs has been
Conversely, it is efficient to allow others to engage in at least some unauthorized copying of a dominant work.

Consider *Lotus v. Borland.* Lotus’s 1-2-3 spreadsheet software had become the de facto standard. After laboring for three years to develop spreadsheet software superior to Lotus 1-2-3, Borland released Quattro. To enable users familiar with the Lotus menu to use Quattro, Borland included an option to operate Quattro through an emulation of the Lotus menu. Lotus claimed the emulation infringed its copyright.

The appellate court held the Lotus menu unprotectable. The reason was not lack of originality or creativity. With 469 commands arranged into more than 50 menus and submenus, the Lotus menu entailed a litany of evitable choices. Nor was the reason that Lotus’s idea of spreadsheet software had merged with Lotus’s expression. From the standpoint of technology and intrinsic utility, innumerable other menu trees would have served equally well in a counterfactual world in which the Lotus menu did not exist. Indeed, Borland claimed its own menu was superior.

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134 *Lotus Dev. Corp.,* 49 F.3d at 821 (Boudin, J., concurring) (“Apparently, for a period Lotus 1-2-3 has had such sway in the market that it has represented the de facto standard for electronic spreadsheet commands.”).

135 *Id.* at 810.

136 Cf. *Apple Computer, Inc. v. Franklin Computer,* 714 F.2d 1240, 1253 (3d Cir. 1983) (achieving compatibility with other programs “is a commercial and competitive objective which does not enter into the somewhat metaphysical issue of whether particular ideas and expressions have merged”).

137 *Lotus Dev. Corp.,* 49 F.3d at 810-11.

138 *Id.* at 821 (Boudin, J., concurring).
The majority reasoned that the Lotus menu was a “method of operation” and thus barred by 17 USC 102(b). The majority’s stated reason is very problematic. As the concurring opinion suggests, Lotus lost because: (1) the Lotus menu had become the de facto standard (much like the QWERTY keyboard layout); (2) Borland could not compete with Lotus unless it provided the emulation as an option for users who had invested in learning the Lotus menu; and (3) Borland limited its free riding by designing its own spreadsheet and by not copying any of Lotus’s code to create the emulation. In other words, the Lotus menu had become dominant and thus unprotected against uses like Borland’s.

139 17 USC §102(b): “In no case does copyright protection . . . extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work.”

140 The Lotus majority’s reading of 102(b) is straightforward but problematic. The majority’s reading implies not only that software menus are uncopyrightable but that most if not all computer programs are uncopyrightable – because they are methods of operation. Yet Congress explicitly decided that computer programs are copyrightable. Hence the majority’s reading of 102(b) essentially conflicts with the definition of “computer program” in 17 USC § 101: “A ‘computer program’ is a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result.” The majority’s reading of 102(b) also conflicts with legislative history stating that 102(b) was not supposed to change the law. See H.R. Rep. No. 1476, 94th Cong., 2nd Sess. 1, 57, reprinted in 1976 U.S. Code Cong. & Admin. News 5659, 5670 (“Section 102(b) in no way enlarges or contracts the scope of copyright protection under the present law.”).

Finally, the majority’s reading conflicts with other cases. See Apple Computer, Inc., 714 F.2d 1240 (102(b) does not bar copyright for software applications or operating systems); Mitel, Inc. v. Iqtel, Inc., 124 F.3d 1366, 1370 (10th Cir. 1997) (an element may contain copyrightable expression even if element can be characterized as a method of operation); Compaq Computer Corp. v. Procom Technology, Inc., 908 F. Supp. 1409, 1415, 1418 (S.D. Tex. 1995) (method for predicting failure of disk drives copyrightable where many of P’s choices were based on opinion and where it was impossible to empirically verify whether P’s choices were optimal). But see Durham, supra note 5, at 176 (arguing Compaq’s system is candidate for patent, not copyright).

The majority’s reading of 102(b) is also misleading in that it lead the majority to conclude that whether the menu could have been designed differently was irrelevant. See Lotus, 49 F.3d at 816. This conclusion suggests that the number of alternatives is irrelevant, which conflicts with most case law as well the uniqueness theory.

141 See also Landes & Posner, supra note 8, at 99, 392 (copyright protection for user interface that has become industry standard would, like copyright protection for QWERTY, generate deadweight costs that exceed costs of reducing incentive to create user interface).

Note that the QWERTY keyboard layout is unique. It would not be were it the most efficient layout, but it is far from that. The letter ‘e,’ for example, is the most commonly used letter in English; yet it does not appear on the home row in QWERTY. Many other layouts before and after QWERTY’s invention in 1870 vary widely from it. The Dvorak layout, which I use, is the most famous alternative. Newer alternatives appear to be superior to Dvorak, especially for typing on computers as opposed to typewriters. See, e.g., Maltron layout (July 23, 2011) http://en.wikipedia.org/wiki/Maltron#Layouts.
The dominance principle may express itself at the threshold of copyrightability\textsuperscript{142} (e.g., through a limiting doctrine or through the requirement of originality), through the affirmative defense of fair use,\textsuperscript{143} or through a finding that the accused work is too dissimilar or the taking too de minimis to infringe. Where a work falls into a category of works that seem clearly dominant at the outset, a court is likely to hold the work unprotectable at the threshold of copyrightability.

Names, titles and other pure designators usually seem dominant at the outset.\textsuperscript{144} They tend to get locked in. Indeed, their social value depends on their getting locked in through the inputs of other parties – through their learning and using the names and titles (and only those names and titles) to refer to the persons and things named and titled.\textsuperscript{145} Unique names and titles – such as Moon Unit Zappa and \textit{I Heart Huckabees} – are just as dominant as non-unique names and titles. Whether or not unique, allowing people to freely use names and titles tends to be efficient.\textsuperscript{146} So they are uncopyrightable.\textsuperscript{147}

Codes for parts and procedures can qualify as dominant for the same reasons names and titles do.\textsuperscript{148} That is, such codes qualify as dominant when most of their

\textsuperscript{142} See, e.g., Feist Publications, Inc. v. Rural Telephone Service Co., 499 U.S. 340 (1991), discussed \textit{infra} Part IV (E); Directive on the Legal Protection of Computer Programs, 91/250/EEC, art. 6, 1991 O.J. (L 22) (European Directive exempting copying necessary to achieve interoperability). \textit{See also} \textit{infra} Part IV (B) (discussing names, titles, and part numbers).

\textsuperscript{143} See, e.g., Time, Inc. v. Bernard Geis Assoc., 293 F. Supp. 130, 131-32, 146 (S.D.N.Y. 1987) (bystander’s footage of Kennedy assassination was most important photographic evidence and D’s book on assassination was a serious analysis of evidence that deserved to be heard); Los Angeles News Service v. CBS Broadcasting, Inc., 305 F.3d 924 (9th Cir 2002) (fair use for D to incorporate few seconds of P’s footage of Reginald Denny beating in promotion of D’s trial coverage).

\textsuperscript{144} \textit{Cf.} Hughes, \textit{supra} note 5, at 198-203 (discussing copyright protection for names and other designators such as addresses, part numbers, and codes for medical and dental procedures); \textit{Id.} at 199 (“[H]aving names for things – both general and proper names – is fundamental to communicating any other facts.”).

\textsuperscript{145} \textit{Cf.} McGowan, \textit{supra} note 16, at 250 (Variation in names is undesirable even when they are not industry standards. A new set of names, or codes, would impede understanding and raise information and transaction costs.).

\textsuperscript{146} \textit{Cf.} \textit{Id.} at 248-50 (Names are uncopyrightable even when they are creative, because protecting names would be inefficient.).

\textsuperscript{147} \textit{See} 37 CFR 202.1(a) (2007) (excluding protection for names and titles).

\textsuperscript{148} \textit{Cf.} Hughes, \textit{supra} note 5, at 201 (The ADA’s code numbers were, in effect, names for dental procedures. “[T]hey are the only practical way to refer to particular medical and dental procedures just as your home address is the only practical way to refer to the particular place where you live.”);
social value is due to inputs other than their creators’. If a code is arbitrary, most of its social value is likely due to the inputs of others, because an arbitrary code is a pure designator that costs very little to create.\textsuperscript{149} Hence courts tend to find arbitrary codes uncopyrightable\textsuperscript{150} even though they are unique at least when aggregated together.\textsuperscript{151} Arbitrary codes are unique when aggregated together precisely because they are arbitrary, i.e., unconstrained.\textsuperscript{152} That courts nonetheless find them uncopyrightable strongly suggests uniqueness must be supplemented by a distinct principle. (This is harder to see in close cases involving non-arbitrary codes that are borderline unique, borderline dominant, or both.\textsuperscript{153})

\hspace{1cm} \textit{Id.} at 203, 220-21 (suggesting that SouthCo part numbers were necessary for carrying out non-expressive activities and that no copyright protection was needed to incentivize SouthCo to create its part numbers); McGowan, \textit{supra} note 16, at 247 (numbers that designate parts or medical procedures serve as names).

\textsuperscript{149} Suppose that the QWERTY layout were under copyright and that P had slapped it together at low cost. The fact that other keyboard suppliers do not slap together their own non-infringing layouts is evidence that QWERTY is dominant.

In general, if P’s cost to produce the work was very low, D’s cost to produce non-infringing work will also be very low. The fact that D chose to copy P’s low cost work rather than to produce non-infringing low cost work is itself evidence that P’s work is dominant.

As another example, consider the siren sounds that one hears in different countries. Competing siren makers could make different siren sounds at trivial cost but to do so would be futile given the dominance of particular siren sounds in particular countries.

\textsuperscript{150} See, e.g., Mitel, Inc. v. Iqtel, Inc., 124 F.3d 1366, 1373 (10th Cir. 1997) (command codes uncopyrightable because arbitrary selection of numbers “required de minimis creative effort”); Toro Co. v. R & R Products Co., 787 F.2d 1208, 1213 (8th Cir. 1986) (arbitrary part numbering system unprotectable).

\textsuperscript{151} No single random number that is, say, ten digits long is unique on its own. But an aggregation of more than a few random ten-digit numbers is unique, especially when further aggregated with references to specific parts, procedures, or persons.

\textsuperscript{152} See Durham, \textit{supra} note 5, at 192 (randomly-organized works are inherently unique).

\textsuperscript{153} See, e.g., Southco, Inc. v. Kanebridge Corp., 390 F.3d 276, 285 (3d Cir. 2004). Southco involved part numbers that denoted functional characteristics of each product, e.g., thread type, grip length, and knob finish. The court described the part numbers as mechanically produced by the inflexible rules of the SouthCo system. This implies that SouthCo’s numbers were non-unique or at least less unique than arbitrary codes. Yet, SouthCo’s mechanical production implies low cost of creation, which is itself evidence of dominance. See \textit{supra} note above. Moreover, SouthCo’s part numbers had to some degree become an industry standard. Hughes, \textit{supra} note 5, at 201, citing Southco, 258 F.3d 148, 150 (3d Cir. 2001). So SouthCo was a difficult case. After three trips to the Third Circuit, the court en banc finally held SouthCo’s part numbers uncopyrightable.
Government works are another category of works that seem dominant at the outset. Hence they are unprotected. A traditional rationale is that the public has already paid for government works through taxes. One problem with this rationale is that it fails to explain why privately funded works, such as model codes, also tend to lose protection when government adopts them without compensating the private party. A better rationale is that works adopted by government seem dominant at the outset. A privately-funded work adopted by government is just as likely to be dominant as a government-funded work adopted by government.

Where the dominance of a work is a close call, the dominance principle is more likely to express itself through a finding of fair use. For example, unauthorized use of footage of a spontaneous event could qualify as fair use if the event is important and if the footage is the best or sole record of it. In such cases, fully protecting the footage against any and all forms of unauthorized use could

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154 Section 105 of Copyright Act (federal works uncopyrightable); Wheaton v. Peters, 33 U.S. (8 Pet.) 591, 668 (1834) (“[N]o reporter has or can have any copyright in the written opinions delivered by this Court...”); Banks v. Manchester, 128 U.S. 244, 253 (1888) (the “whole work done by the judges constitutes the authentic expression and interpretation of the law, which, binding every citizen, is free for publication to all”); Veeck v. Southern Building Code Congress Int'l, 293 F.3d 791 (5th Cir. 2002) (en banc), cert. denied, 539 U.S. 969 (2003); 1 Melville B. Nimmer & David Nimmer, Nimmer on Copyright § 5.06(c) at 5-92 (2000) (“[S]tate statutes, no less than federal statutes, are regarded as being in the public domain.”).

155 Hughes, supra note 5, at 209.

156 Cf. New York Mercantile Exchange, Inc. v. Intercontinental Exchange, Inc., 497 F.3d 109 (2d Cir. 2007). The fact that the NYMEX settlement prices were established by committee suggests they were probably unique. But they were probably dominant, as illustrated by the appellate court’s point that P was required by law to create them and by the district court’s point that “NYMEX prices are widely publicized and used as benchmarks by market participants.” New York Mercantile Exchange, Inc. v. Intercontinental Exchange, Inc., 389 F. Supp. 2d 527, 542 (S.D.N.Y. 2007).

See also CCC Information Services, Inc. v. Maclean Hunter Market Reports, Inc., 41 F.3d 61 (2d Cir. 1994) (holding red book guide to used car prices protectable). Despite the holding in CCC, a court would likely allow some unauthorized use of the red book when the use is attributable to the legal requirement in some states to take the average, for insurance purposes, of the value in the red book and the value in the Kelly blue book.

157 That a work is important does not by itself make it dominant. Cf. Harper & Row v. Nation Enterprises, 471 U.S. 539, 559 (1985) (“It is fundamentally at odds with the scheme of copyright to accord lesser rights in those works that are of greatest importance to the public.”); Folsom v. Marsh, 9 F. Cas. 342 (1841) (D’s copying of George Washington’s private letters not fair use where P had already published them in his biography of Washington). To be dominant, the work must be important for reasons other than its merit or P’s contribution to it.
bestow a large windfall\textsuperscript{158} on P while deterring efficient use of the footage by others. Accordingly, courts may protect footage of important events against some but not all unauthorized uses.\textsuperscript{159}

\section*{IV. The Limiting Doctrines Unified}

Copyright's many limiting doctrines largely reduce to the uniqueness requirement. What remains largely reduces to the dominance principle.

\subsection*{A. Useful Article Doctrine}

Examples of useful articles include belt buckles, ashtrays, furniture, dinnerware, candle holders, lighting fixtures, and automobile bodies. In an attempt to codify\textsuperscript{160} the useful article doctrine, the copyright statute instructs courts to protect the design of a useful article “only if, and only to the extent that, such design incorporates pictorial, graphic, or sculptural features that can be identified separately from, and are capable of existing independently of, the utilitarian aspects of the article.”\textsuperscript{161} This instruction is a source of great confusion\textsuperscript{162} that has spawned ten or so “separability tests.”\textsuperscript{163}

\textsuperscript{158} Cf. McGowan, \textit{supra} note 16, at 262 (absolute copyright protection would seem to confer an unjustifiable windfall on bystanders who captured footage of Kennedy assassination and Rodney King beating).

\textsuperscript{159} \textit{Compare} Time, Inc. v. Bernard Geis Assocs., 293 F. Supp. 130, 131-32, 146 (S.D.N.Y. 1987) (bystander’s footage of Kennedy assassination was most important photographic evidence and D’s book on assassination was a serious analysis of evidence that deserved to be heard) \textit{with} Los Angeles News Service v. Tullo, 24 U.S.P.Q. 2d 1026 (9th Cir. 1992) (no fair use where other versions of newsworthy event were readily available).

\textit{Compare} Los Angeles News Service v. CBS Broadcasting, Inc., 305 F.3d 924 (9th Cir 2002) (fair use for D to incorporate few seconds of P’s footage of Denny beating in promotion of D’s trial coverage) \textit{with} Los Angeles News Service v. Reuters Television Intern., Ltd., 149 F.3d 987 (9th Cir. 1998) (no fair use for D to copy and broadcast to news outlets over half minute of P’s footage of Denny beating).


\textsuperscript{161} 17 USC §101.

\textsuperscript{162} Schechter & Thomas, \textit{supra} note 7, at 76 (“[C]ourts and commentators have struggled to define this notion of conceptual separability and it is our sad duty to report that the law is in disarray.”); Matthew C. Broaddus, Designers Should Strive To Create “Useless” Products: Using The “Useful Article” Doctrine To Avoid Separability Analysis, 51 S. Tex. L. Rev. 493, 509 (2009) (“The vast array of confusing and potentially conflicting tests for conceptual separability is troublesome on many levels.”); Richard G. Frenkel, Intellectual Property in the Balance: Proposals for Improving
In reality, the useful article doctrine does not limit protection only to those features of a useful article separable from its utilitarian features. Separability per se is irrelevant, which is why most of the so-called separability tests actually ignore separability per se. Ultimately, whether the work is utilitarian is also irrelevant. Copyright protects unique features regardless of whether they are separable from utilitarian features and even regardless of whether they are themselves utilitarian features.

Compare *Pivot Point v. Charlene* (7th Cir 2004) with *Carol Barnhart v. Economy Cover* (2d Cir 1985). In *Pivot Point*, P hired an artist to create a stylized...
mannequin head used by beauty schools to teach make-up application.\textsuperscript{168} Dubbed “Mara,” the head included distinctive angular features such as an upturned nose and almond-shaped eyes. The production version included hair with an inadvertent double hairline.\textsuperscript{169} P sued D for selling a nearly identical mannequin head complete with double hairline. The court protected P’s work, dismissing the argument by the district court (Judge Easterbrook sitting by designation)\textsuperscript{170} and by the dissent (Judge Kanne) that Mara served a utilitarian function as a teaching tool and that separating her aesthetic features would leave a useless egg on a stick.\textsuperscript{171}

In \textit{Carol Barnhart}, P’s works were four unstylized male and female mannequin torsos with hollow backs that were used by stores to display clothing. Two of the four were nude. The third was contoured to resemble a generic button-down men’s shirt. The fourth was contoured to resemble a generic blouse. P sued D for selling nearly identical mannequin torsos.\textsuperscript{172} The court held that P’s mannequin torsos were unprotectable.

The key distinction between \textit{Pivot Point} and \textit{Carol Barnhart} is one of degree: P’s work in \textit{Pivot Point} was more unique. In \textit{Pivot Point} the probability was very low that an independent creator of a mannequin head would create one not readily distinguishable from Mara. And anyone who created a mannequin head without knowledge of Mara would be very likely to create one differing from Mara more than D’s mannequin head did. Because Mara was only modestly stylized, she was protected only within a thin range, but D’s nearly identical mannequin head fell within it.

Recall the three variables summarized in Part II (B). The uniqueness of a work rises with increases in Added Complexity, increases in the number of Viable Alternatives, and with decreases in the number of Contenders. Mara’s Added

\textsuperscript{168} \textit{Pivot Point, Int’l, Inc.}, 372 F.3d at 915.
\textsuperscript{169} Id. at 915-16.
\textsuperscript{171} See \textit{Pivot Point, Int’l, Inc.}, 372 F.3d at 932-33 (Kanne, J., dissenting).
\textsuperscript{172} \textit{Carol Barnhart, Inc.}, 773 F.2d at 413.
Complexity was moderately high, in part because of her flawed hairline.\(^{173}\) The number of Viable Alternatives to Mara was also moderately high. A variety of mannequin heads can serve as props for teaching make-up application.\(^{174}\) In *Pivot Point* the number of Contenders who could independently create indistinguishable work was moderately low, because Mara’s particular design required an artist’s skill and months of effort and because the commercial value of her particular design was not widely foreseeable. Together, our three variables suggest Mara is unique enough to be protected against works as close as D’s.

In *Carol Barnhart* P’s torsos were straightforward representations of average, lean torsos with generic contours.\(^{175}\) Together, our three variables suggest that P’s torsos, especially the nudes, were not unique enough to be protected even against works as close as D’s.

P’s torsos include little Added Complexity. Their contours seem to lack novelty – somewhere in the world there were already indistinguishable contours on a mannequin, doll, statue, mold, or other depiction of a body, shirt or blouse. The only salient Added Complexity seems to be the combination of these contours with a hollow back, and only then if hollow backs were not already widely known in the industry.

While the inclusion of a hollow back may or may not provide some Added Complexity, it reduces the number of Viable Alternatives. Hollow backs have distinct, predictable advantages: they economize on material, on weight, and on

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\(^{173}\) See *infra* Part IV (E), arguing that errors translate into more Added Complexity, more Viable Alternatives, and fewer Contenders.

\(^{174}\) See *Pivot Point, Int’l, Inc.*, 372 F.3d at 931-32. See also Mattel, Inc. v. Goldberger Doll Manufacturing Co., 365 F.3d 133 (2nd Cir. 2004) (dolls can be made in many ways that differ from Barbie); Hart v. Dan Chase Taxidermy Supply Co., Inc., 86 F.3d 320, 321, 323 (2nd Cir. 1996) (J. Calabresi) (for taxidermy universe of possible expressions can be broad enough to sustain copyright protection because even realistic animal mannequins can vary sufficiently in artistic details such as pose, attitude, and appearance).

\(^{175}\) See Cohen et al., *Copyright in a Global Information Economy* 202 (3d ed. 2010) (pictures of torso forms from *Barnhart*); Joyce et al., *supra* note 13, at 185, 193-94 (describing torso shapes as constrained). We can assume that D’s torso forms were identical to P’s torso forms in *Barnhart*, because, as D conceded for purposes of its summary judgment motion, “[D] contracted to have produced for it four forms...[to be] ‘copied from Barnhart’s display forms’ and [to be]...’substantially similar to Barnhart’s display forms.’” *Carol Barnhart, Inc.*, 773 F.2d at 413.
costs of manufacture and shipping. They are also more maneuverable and can be stacked, which economizes on costs of use, storage, packing, and packaging. Another reason to think there are few Viable Alternatives to P’s torsos is that to display clothing, clothing must fit the torsos, which means they must approximate the average size and shape of human torsos. The torsos contoured to resemble a shirt and blouse have more Viable Alternatives than the nude torsos, but the number still seems low.

The number of Contenders also seems higher than in *Pivot Point*. The market for clothing displays is larger and more foreseeable than the market in *Pivot Point*, and the skill required to independently create torsos like P’s seems lower than the skill required to independently create a mannequin head like Mara.

We can likewise distinguish *Kieselstein-Cord v. Accessories by Pearl* (2d Cir 1980)\(^ {176} \) and *Brandir v. Cascade* (2d Cir 1987)\(^ {178} \). In *Kieselstein* P’s work was a highly stylized belt buckle sold at high-fashion jewelry stores and that had been included in museum collections. P sued D for selling a similar buckle. The appellate court protected P’s buckle, rejecting D’s argument that its aesthetic features were inseparable from its utilitarian features and from its utilitarian function of holding up pants.

\(^{176}\) *Carol Barnhart, Inc.*, 773 F.2d at 419 (“a model of a human torso, in order to serve its utilitarian function, must have some configuration of the chest and some width of the shoulders.”).

\(^{177}\) Compare *Carol Barnhart, Inc.*, 773 F.2d 411, *with Hart*, 86 F.3d at 323 (Calabresi, J.) (distinguishing *Barnhart* torsos from taxidermy mannequins for mounting fish skins). “In *Barnhart*, the headless, armless, backless styrene torsos were little more than glorified coat-racks used to display clothing in stores. In taxidermy, by contrast... the shape, volume, and movement of the animal are depicted by the underlying mannequin. Whether the fish is shown as resting, jumping, wiggling its tail, or preparing to munch on some plankton, is dictated by the mannequin and its particular form...”). *Id.*

\(^{178}\) *Brandir Int’l, Inc. v. Cascade Pac. Lumber Co.*, 834 F.2d 1142 (2d Cir. 1987).

\(^{179}\) See *Cohen et al.*, *supra* note 175, at 199 (pictures of P’s belt buckles from *Kieselstein-Cord*).
Contrary to the court’s reasoning in *Kieselstein*, it is not clear that the unique features of P’s buckle are separable from the utilitarian features. From a photograph of P’s buckle\(^{180}\) it appears that at least some of the unique features are seamlessly intertwined with and reinforce the structural integrity of the non-unique features.

The underlying reason P in *Kieselstein* prevailed was that P’s buckle was sufficiently unique. In terms of our three variables, P’s buckle in *Kieselstein* had high Added Complexity, many Viable Alternatives, and few Contenders with the skill and foresight to create the particular design. Thus anyone who independently created a buckle (e.g., created a buckle without knowledge of P’s) would be unlikely to create one that resembled P’s as much as D’s did.

In *Brandir*, P’s work was the “Ribbon Rack,” a bike rack consisting of a metal tube undulated from end to end like a series of waves (sinusoidal). P sued D for selling a very similar sinusoidal bike rack. The appellate court held that P’s rack was unprotected because its aesthetic features were inseparable from its utilitarian features and function.

The underlying reason P in *Brandir* lost was that P’s rack was not sufficiently unique. Specifically, it was repeatable. Had P never invented a sinusoidal bike rack, it is at least plausible that someone else eventually would have. Consider our variables. The Added Complexity in P’s rack consists solely of the combination of a bike rack and a basic sinusoid shape. As separate elements, they clearly lack novelty. Bike racks are commonplace and the sinusoid, like other unprotectable basic shapes,\(^ {181}\) is ubiquitous in art, nature, and technology.

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\(^{180}\) See *Id.*

\(^{181}\) Basic shapes are unprotectable on their own. *See, e.g.*, Muller v. New York Arrows, 802 F.2d 464 (8th Cir 1986) (simple arrow shape uncopyrightable); Esquire Inc. v. Ringer, 591 F.2d 796, 801-02 (D.C. Cir. 1978), cert. denied, 440 US 908 (1979) (simple, elliptical lighting fixture uncopyrightable; basic geometric shapes in public domain); 37 C.F.R. 202.1(a) (barring protection for familiar symbols or designs); Tufenkian Import/Export v. Einstein Moomjy, 338 F.3d 127, 132 (2d Cir. 2003) (remarking that public domain includes standard geometric shapes); OddzOn v. Oman, 924 F.2d 346, 349-50 (DC Cir 1991) (not abuse of discretion for Copyright Office to refuse to register applicant’s spherical “Koosh ball”).
The number of Viable Alternatives to P’s rack is low because a sinusoidal rack provides benefits other shaped racks do not. Compared with a cornered rack, for instance, a sinusoidal rack is more durable, lacks sharp edges, and can be made of a single metal tube in a few steps with few or no welds, bolts or brackets. A sinusoidal rack also fits bikes alternately over the troughs and under the adjacent crests, thereby supporting and separating each bike along its entire height and on both sides. This shape allows for twice the storage of conventional racks and accommodates all types of bikes and mopeds.\textsuperscript{182} Insofar as a sinusoidal rack best provides these benefits, the path toward a sinusoidal rack is a path upon which others could plausibly converge.

The number of Contenders in \textit{Brandir} is relatively high because the market for bike racks is large and known, and because a sinusoidal rack can be made in one step by heating a pipe and thus requires no great skill or resources.

We are now in a position to solve the main puzzles surrounding the useful article doctrine. The first puzzle concerns the statute’s definition of a useful article as “an article having an intrinsic utilitarian function that is not merely to portray the appearance of the article or to convey information.”\textsuperscript{183} \textit{Why} does the statute define a useful article as excluding a work that merely conveys information or portrays its own appearance? Lack of usefulness is not the reason. Many copyrightable works that merely convey information or portray their own appearance are plenty useful. Some are even useful in a way we are apt to label as practical: blueprints, technical manuals, dictionaries, textbooks, encyclopedias, and architectural models.

The underlying reason why the statute defines a useful article as excluding a work that only conveys information or portrays its own appearance is that, as a rough rule of thumb, such a work is likely to be unique more or less from its top to its bottom. Such a work is likely to be unique from its top to its bottom because

\textsuperscript{182} \textit{Brandir Int'l, Inc.}, 834 F.2d at 1147.

\textsuperscript{183} 17 USC 101.
there tend to be many alternative ways (Viable Alternatives) to convey information about or to portray any given subject and because such a work often has relatively high Added Complexity. So, as a rough rule of thumb, the odds are low that more than one creator would independently convey the same information about the same thing in the same way, or independently portray the appearance of the same thing in the same way.

Works that courts and commentators have labeled as useful articles are sculptural (three-dimensional) works with a large proportion of non-unique features, non-unique because they are dictated by mechanical principles and because they serve well-defined and common needs, which translates into relatively low Added Complexity, few Viable Alternatives, and many Contenders. For example, much of a belt buckle consists of non-unique features, including an opening for a belt, a tongue, and a tongue swivel. These features are dictated by mechanical principles and serve the well-defined and common need of securing a belt and holding up pants. Hence a court would not automatically protect a belt buckle nor protect it in its entirety. Instead, a court would protect only those features of a belt buckle, if any, that are unique.

Unfortunately, the copyright statute does not explicitly instruct courts to protect only the unique features of a useful article. Instead, it instructs courts to protect only the pictorial, graphic or sculptural features that are separable from the utilitarian features. The statute’s language does not faithfully capture the case law it was meant to codify. For example, the term “utilitarian” is somewhat misleading. It appears to serve as a label for non-symbolic features that efficiently exploit physical principles. In most cases, such features are non-unique, because they are constrained by shared reality: the laws of physics, requisites of safety and

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184 For the same reason, information in filled-in forms is copyrightable, whereas blank forms that “do not in themselves convey information” are uncopyrightable. See 37 CFR 202(1)(C) (blank forms uncopyrightable).
185 Compare Masquerade Novelty, Inc. v. Unique Industries, Inc., 912 F.2d 663 (3rd Cir. 1990) (protectable costume masks portray their own appearance), with Galiano v. Harrah’s Operating Co., Inc., 416 F.3d 411 (5th Cir. 2005) (unprotectable casino uniform is useful article).
186 See 17 USC §101.
compatibility, costs of production, and by longstanding demand for specific solutions to defined problems.\textsuperscript{187}

Yet, in some cases the work includes features that seem both unique and utilitarian – and courts protect them. One example is \textit{Lanard v. Novelty}, in which the court protected features of a flying toy that help it fly and that help the user to operate it.\textsuperscript{188} In other cases, courts protect features that seem neither unique nor utilitarian in isolation but that seem unique when aggregated and that enable the work as a whole to serve a seemingly utilitarian function.\textsuperscript{189}

The statute distracts and confuses courts.\textsuperscript{190} It should not instruct them to determine whether a work's pictorial, graphic or structural features are \textit{separable} from its utilitarian features.\textsuperscript{191} It should simply instruct courts to protect only those

\textsuperscript{187} Cf. Byron, \textit{supra} note 5, at 66 (“Where a functional or utilitarian constraint dictates the work, the likelihood that work will result becomes that much higher due to the fact that any choice that the author may have confronted was one of a smaller set of choices.”).

\textsuperscript{188} Lanard Toys Ltd. v. Novelty Inc., 375 Fed. Appx. 705 (9th Cir. 2010); \textit{Id.} at 714-17 (Clifton, J., dissenting) (arguing that protected portions of toy serve utilitarian function). \textit{See also} Spinmaster v. Overbreak, 404 F. Supp. 2d 1097, 1102-04 (ND Ill 2005) (motor and main propeller of toy flying saucer were uncopyrightable, but hub, blades, outer ring, separate controller and base station were copyrightable).

\textsuperscript{189} \textit{See, e.g.}, \textit{Pivot Point, Int'l, Inc.}, 372 F.3d at 932-33 (Kanne, J., dissenting) (separating protectable features of mannequin head would leave a useless egg on a stick).

\textsuperscript{190} The Second Circuit, for example, has discussed at least seven different tests for separability and has ostensibly relied on at least three. \textit{See, e.g.}, \textit{Kieselstein-Cord}, 632 F.2d at 993 (whether artistic features are “primary” and utilitarian features “subsidary”); Carol Barnhart, Inc. v. Economy Cover Corp., 773 F.2d 411, 419 (2nd Cir. 1985) (whether aesthetic features are required by utilitarian features); Brandir Int'l, Inc. v. Cascade Pac. Lumber, 834 F.2d at 1144 (purporting to apply Denicola test of whether design has features that reflect “artistic expression uninhibited by functional considerations”) (citing Denicola, \textit{supra} note 164, at 741).

\textsuperscript{191} Some courts and commentators suggest that we interpret or revise the statute to switch its order of analysis from asking whether the work's pictorial, graphic or sculptural (PGS) features are separable from its utilitarian features to asking whether its utilitarian features are separable from its PGS features. \textit{See, e.g.}, Carol Barnhart, Inc., 773 F.2d at 419 (“aesthetic features embodied in a useful article are conceptually separable from that article if they are not required by the article's utilitarian features.”); Goldstein, \textit{supra} note 164, at § 2.76 (PGS feature “is conceptually separable... if the useful article in which it is embodied would be equally useful without it”); Stacey Dogan and Wendy Gordon, Functionality, Works-in-Progress in Intellectual Property Colloquium, Boston U. School of Law (Feb. 11, 2011) (suggesting a similar switch in order of analysis).

Switching the order of analysis improves on the order literally recited in the statute. The reason is that if separating features from a work appears to destroy its utility, those features are less likely to be unique. But, merely switching the order of analysis would perpetuate the incorrect view that separability and utility matter and still fail to conform to case law outcomes. For example, it would not conform to \textit{Pivot Point}, discussed \textit{supra}. 
features of a work that are expressive or, better yet, unique. This, in the end, is what courts do anyway.

Some of the so-called separability tests look to the number of alternatives to the work.\textsuperscript{192} This makes sense for two reasons. First, looking at alternatives is not wholly inconsistent with the statutory language. When we can imagine separating a feature from the work, we can imagine alternatives standing in for the separated feature. The more readily we can imagine such alternatives, the more separable the feature appears.\textsuperscript{193}

Second, and more importantly, the number of Viable Alternatives is a respectable measure of the uniqueness of useful articles and of other seemingly utilitarian works – such as computer programs\textsuperscript{194} – that do not qualify as “useful articles” as defined in the statute. Useful articles and other seemingly utilitarian works are in large part constrained by shared reality and thus have fewer Viable Alternatives than unconstrained works.

So, should we rely exclusively on the number of Viable Alternatives to assess the copyrightability of useful articles and other seemingly utilitarian works? Probably not. Some works that seem fully constrained by shared reality may not be. Consider a work that is mechanical but whimsical, such as a Rube Goldberg Machine\textsuperscript{195} or P’s flying toy in \textit{Lanard}. At first glance, P’s flying toy seems

\textsuperscript{192} The best reasoned proposal along these lines is Byron, As Long as There’s Another Way: Pivot Point v. Charlene Products as an Accidental Template for A Creativity-Driven Useful Articles Analysis, 49 IDEA 147 (2009). Yet, Byron’s alternatives test is slightly off-base because it focuses on the alternatives available to the creator when the work was created. \textit{See Id.} at 170-71. His test would be better if it focused on the alternatives available to other creators past, present and future.

\textsuperscript{193} \textit{See generally} David R. Mandel, Denis J. Hilton, and Patrizia Catellani (Eds.), \textit{The psychology of counterfactual thinking} (2005 London: Routledge Research).


\textsuperscript{195} A Rube Goldberg machine “is a deliberately over-engineered machine that performs a very simple task in a very complex fashion, usually including a chain reaction.” [http://en.wikipedia.org/wiki/Rube_Goldberg_machine](http://en.wikipedia.org/wiki/Rube_Goldberg_machine) (07/18/11).
constrained by shared reality in that its features efficiently exploit physical principles. On second thought, its sheer existence – the decision to make this type of flying toy in the first place – does not seem inevitable. And even once that decision is made, the particular shape and dimensions of the toy do not seem inevitable.\footnote{See Lanard Toys Ltd. v. Novelty Inc., 375 Fed. Appx. 705, 710-11 (9th Cir. 2010) (P’s designer testified he “could have designed it in ‘a million’ other ways”)} Had P never created this particular toy, it seems that no one else would have ever independently created an indistinguishable flying toy. Hence P’s toy is probably unique enough for thin protection.

Granted, we might conclude the Lanard toy is protectable even if we consider only the number of Viable Alternatives. But what counts as a viable alternative is not always clear and not all viable alternatives are equally likely.\footnote{See Byron, supra note 5, at 65 (“Cases might exist where few variations are possible but one of the few variations is of such low probability as to merit copyright protection.”).} It is helpful to also consider the number of Contenders. The number of Contenders is relatively low in Lanard because few independent creators in the toy industry would foresee that creating that particular design – with its particular shape and size – would exceed the opportunity costs of creating a different flying toy.

\textbf{B. Names, Titles, Phrases, and Other Small Works}

Size matters in copyright law.\footnote{Hughes, supra note 31, at 578.} Courts tend to reject claims that very small works merit protection and that very small portions of larger works merit protection independent of the larger works.\footnote{See Id. at 577.} When withholding protection for very small works (“microworks”\footnote{Id. at 575-76.}) courts find them to be unoriginal or uncreative\footnote{See Id. at 605-07. See, e.g., Magic Marketing v. Mailing Services of Pittsburgh, Inc., 634 F. Supp. 769 (W.D. Pa. 1986) (holding “Contents Require Immediate Attention” and other short phrases unprotectable for lack of originality); Takeall v. PepsiCo, Inc., 809 F. Supp. 19 (D. Md. 1992), aff’d, 14 F.3d 596 (4th Cir. 1993), cert. denied, 512 U.S. 1236 (1994) (holding phrase “You’ve got the right one, uh-huh” unprotectable for lack of sufficient originality); Acuff-Rose Music Inc. v. Jostens Inc., 155 F.3d 140, 144 (2d Cir. 1998) (Calabresi, J.) (holding phrase “You’ve got to stand for something, or you’ll fall for anything” unprotectable, and remarking that use of same or similar phrase by others causes no “real risk of confusion”).} or they
invoke the idea-expression dichotomy, the merger doctrine or the scènes à faire doctrine.\textsuperscript{202} This makes sense because smallness correlates with lack of uniqueness.\textsuperscript{203}

Microworks tend to be non-unique because they tend to have low Added Complexity, few Viable Alternatives, and many Contenders.\textsuperscript{204} Consider an answer key for a multiple choice exam with 50 questions, each having one of five possible answers – A, B, C, D, or E. The key is a mere list of 50 numbers paired with 50 letters: “1. D, 2. B, 3. C…” Each answer by itself is a very non-unique microwork that takes one of five alternative forms. For example, “2. B” is very non-novel and very repeatable. In contrast, the whole key – 50 sequential numbers each paired with one of five alternative forms – is very unique. The \textit{whole} key (a “macrowork”) takes one of up to $5^{50}$ alternative forms.

Yet, some microworks are unique.\textsuperscript{205} It is very unlikely that more than one creator would independently create the word “supercalifragilisticexpialidocious,” or the name Moon Unit Zappa, or the title \textit{I Heart Huckabees}, or the line “‘Twas brillig, and the slithy toves,”\textsuperscript{206} or the line “I’m getting fed up with this orgasm!”\textsuperscript{207} Copyright may or may not protect a unique microwork.\textsuperscript{208} Copyright withholds protection for a unique microwork when it is dominant. Names and titles

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  \item Abraham Lincoln, John Cougar Mellencamp, and Martin Luther King Jr. made it very unlikely that P had independently created phrase. See also Joyce et al., \textit{supra} note 13, at 85 (arguing that phrase in \textit{Acuff-Rose} did not meet \textit{de minimis} standard of creativity).
  \item Hughes, \textit{supra} note 31, at 605.
  \item \textit{Cf.} Green, \textit{supra} note 13, at 947 (smaller works are more likely to be independently created); Landes & Posner, \textit{supra} note 8, at 89 (“The shorter the phrase, the likelier is independent duplication; and it is difficult by the methods of litigation to distinguish between it and deliberate copying.”).
  \item \textit{Cf.} Goldstein, \textit{supra} note 164, at 2:96 (3d ed. 2005) (arguing that the smaller the piece of expression, the less likely it is to have acceptable substitutes and thus the more likely it is to merge with idea it expresses); Hughes, \textit{supra} note 31, at 617-18 (expanding on Goldstein’s point).
  \item \textit{Cf. Id}, at 578 (“Many very small expressions positively leap over the low threshold of originality…”); \textit{Id.} at 607 (there are “thousands or millions of short phrases that are original enough to cross the modicum of the creativity threshold.”).
  \item Lewis Carroll, \textit{Jabberwocky} (1872).
  \item \textit{American Dad!}, \textit{Halyias}, Season 3, Episode 5 (Fox television broadcast Nov. 11, 2007).
  \item \textit{Cf.} Hughes, \textit{supra} note 31, at 583 (“There are many occasions when courts have succumbed to arguments that very small pieces of expression are worthy of independent copyright protection.”).
\end{itemize}
\end{footnotesize}
are usually dominant. They get locked in by path dependence and network effects. Further, their social value depends on inputs other than their creators’ contribution, specifically, on others learning and using those names and titles (and only those names and titles) to refer to the persons and things named and titled. Unique names and titles are as dominant as non-unique names and titles. Whether or not unique, allowing people to freely use them tends to be efficient. The same holds for slogans that serve as designators in the way names and titles do. Hence the Copyright Office prohibits registration for names, titles, and (many) short phrases – even for those that are “novel and distinct.”

Even if a microwork is unique and non-dominant, copyright withholds protection when protecting it would generate transaction and administrative costs that seem to well exceed any harm caused by D’s unauthorized use. Using P’s microwork tends not to harm P much. Seldom does it cost P much to create a microwork and seldom does a microwork serve as a market substitute for P’s macrowork. Furthermore, in most cases we cannot say D would have licensed the microwork from P had D believed he would be held liable for using it without permission. In most cases, D would simply forego use of the microwork rather than incur the transaction costs to get permission.

For example, in Murray Hill v. ABC, (6th Cir. 2001), a radio station borrowed from P’s movie the line “This is JP on the JR in the AM. Have a swell day.” The court held the line unprotectable, saying it had merged with the idea or information it conveyed and that it was constrained by the need to convey “whose

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209 See supra Part III.
210 See also McGowan, supra note 16, at 248-49.
211 Cf. Id. at 251 n.100 (Some slogans serve as designators in the way that names and titles do.)
212 See Material Not Subject to Copyright, 37 CFR 202.1(a) (1988) (excluding protection for names, titles and short phrases). Regarding protection for some short phrases, see discussion below.
213 See Copyright Office, Copyright Protection Not Available for Names, Titles, or Short Phrases, Circular 34 (1986).
214 Cf. Hughes, supra note 31, at 610-19 (discussing transaction costs and other reasons to not protect original microworks); Green, supra note 13, at 951-52 (relative transaction and enforcement costs rise as size of borrowed portion decreases).
morning show, what radio station, and what time.” The court’s reasoning suggests the line is repeatable. But it may not be. Another creator would be very unlikely to independently create the line verbatim. Murray may be an example of a case in which the verbatim work, though unique, is denied even thin protection because the work is so trifling that the costs of protecting it exceed the benefits.

Copyright protects microworks when they are unique, non-dominant and when protection does not generate excessive transaction or administrative costs. For example, copyright protects some short phrases despite the Copyright Office’s purported prohibition against them. In Foxworthy v. Custom Tees, P’s calendar included 365 one-line jokes all beginning with the phrase “You might be a redneck if…” The court implied each joke was protected and held D liable for copying 11 of them onto 11 T-shirts. Other cases in which courts have expressed willingness to protect unique microworks include Heim v. Universal Pictures, Warner Bros. v. American Broadcasting, Narrell v. Freeman, and Life Music v. Wonderland Music.

The sound recording right, a product of acute political compromise, is the exception that corroborates the rule that small works are less unique and thus receive less protection than large works. The size of sound recordings matters less.

216 Id. at 633.
218 See Hughes, supra note 31, at 588 n.72.
219 See Id. at 581-97 (discussing Foxworthy and other cases in which small works were protected or in which dicta suggests they are).
220 Heim v. Universal Pictures Co., 154 F.2d 480, 487 (2d Cir. 1946) (J. Jerome Frank) (remarking in dicta that it may be an infringement were someone to copy a highly original phrase such as “Twas brillig, and the slithy toves” or “Euclid alone has looked on Beauty bare.”).
221 Warner Bros. v. American Broadcasting Co., 720 F.2d 231, 242 (2d Cir. 1983) (suggesting that “small, highly original phrases can be protected under copyright law”).
222 Narrell v. Freeman, 872 F.2d 907, 911 (9th Cir 1989) (remarking in dicta that Frank Zappa’s “Weasels Ripped My Flesh” is an “original and hence protected phrase”).
224 See, e.g., Merges et al, supra note 75, at 483 (limited protection for sound recordings “reflects the lobbying clout of broadcasters”).
To be sure, a one-second sample of a sound recording is less likely than a one-minute sample of the same sound recording to be unique, i.e., to be readily distinguishable from all independently created sound recordings in the past and future. But, under current law, the degree to which copyright protects a sample does \textit{not} track the degree to which the sample is unique. The sound recording right, as defined in the statute, always affords very thin protection. It protects sound recordings only against the most direct form of copying – mechanical re-capture of “the actual sounds fixed in the recording.”\footnote{Sound Recording Amendment of 1971, 17 USCA 114(b).} An owner of a sound recording right cannot through that right prevent less direct copying, such as close imitation.\footnote{Copyright does not protect a sound recording against the making “of another sound recording that consists entirely of an independent fixation of other sounds, even though such sounds imitate or simulate those in the copyrighted sound recording.” \textit{Id}.}

So defined, the sound recording right does \textit{not} conform to my theory of uniqueness. But where they can courts protect samples in a way that conforms to some of the policy rationales for uniqueness.\footnote{See supra Part II (D).} Courts are more willing to protect small samples of sound recordings than other works (or portions thereof) that are equally small.\footnote{See Hughes, \textit{supra} note 31, at 579. \textit{See also} Grand Upright Music, Ltd. v. Warner Bros. Records, Inc., 780 F. Supp. 182 (S.D.N.Y. 1991) (liability for sampling of three words and a short keyboard riff); Bridgeport Music, Inc. v. Dimension Films, 410 F.3d 792, 801 (6th Cir 2005) (“[A] sound recording owner has the exclusive right to ‘sample’ his own recording.”); Newton v. Diamond, 349 F.3d 591, 592 (9th Cir 2003), amended 388 F.3d 1189 (9th Cir 2004), cert. denied, 545 U.S. 1114 (2005) (D’s use of six-second sample did not infringe musical composition, though it may have infringed sound recording had defendant not licensed it.).} This disparity probably makes sense. When courts protect small samples, they protect them only against mechanical re-capture and never against imitation or non-mechanical copying. In this sense, protection for small samples is thinner. Courts can partially compensate for this by protecting very small samples. Compensation is not problematic because we need not worry that a small sample lacks uniqueness – because we never protect it against independent creators.

Also, a small sample would be very hard pressed to become dominant – in part because others are free to imitate it. In addition, freedom to imitate implies that transaction costs less often justify letting D off the hook for copying a small
sample. After all, if D faced high transaction costs to license the sample, D could avoid them by just imitating it. Thus courts can assume D’s transaction costs are capped at D’s cost of imitating. And the smaller the sample, the smaller D’s costs of imitating. Further undermining the transaction costs rationale for withholding protection for small samples is that some of them, such as catchy guitar riffs, are valuable despite their smallness.

C. Idea-Expression Dichotomy

An “idea” is a term of art\textsuperscript{229} in copyright that refers to a type of microwork. Specifically, an idea is a pattern so far abstracted\textsuperscript{230} from P’s work that either it is too simple\textsuperscript{231} to be unique – \textit{i.e.}, it could likewise be abstracted from the work of

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\item \textit{Cf.} Jones, \textit{supra} note 5, at 552-53, 564-68, 579 (Ideas and expression can merge only if they are the same type of entity. Ideas are themselves expressions. No idea can exist separately from some expression of the idea. The real dichotomy in copyright law is not between idea and expression but between unprotectable expression and protectable expression.).
\item \textit{Cf.} Green, \textit{supra} note 13, at 941 (“The more abstract material becomes, the more likely it is that more than one author is going to come up with it.”); Green, \textit{supra} note 24, at 129 (“The chance of abstract material being independently created by any one person is the sum of that person’s chances of independently creating each of the concrete examples that fall under it. For example, my chance of independently creating the idea of a superhero is the sum of the chances of my independently creating each particular superhero – my chance of creating Superman plus my chance of creating Aquaman plus my chance of creating the Green Lantern, and so on.”); Kurtz, \textit{supra} note 13, at 1243-44 (“Perhaps we can sort unprotectible abstract ideas (labeled ideas) from protectable concrete ideas (labeled expression).”); \textit{Id.} at 1257-58 (One reason not to protect a general idea is that it is difficult to determine whether D copied it from P or created it independently.); Khong, \textit{supra} note 63, at 7-8, 18-19 (probability of coincidental similarity is higher at a higher level of abstraction because “elements at higher levels of abstraction are fewer and more common”).
\item \textit{Cf.} Durham, \textit{supra} note 5, at 139 (“The difference between unprotectable ‘ideas’ and protectable ‘expression’ is one of specificity.”); Jones, \textit{supra} note 5, at 551 at 565-66 (1990) (pointing out that courts never define what they mean by an idea, but look to degree of detail and arrangement); IBCOS Computers Ltd. v Barclays Mercantile Highland Finance Ltd. [1994] FSR 275 (only general ideas are unprotected; detailed ideas may be protected under copyright); Kurtz, \textit{supra} note 13, at 1248 (“The process of abstraction can be seen as involving an omission, a setting aside, as more and more of the detail is left out...The more abstract an idea is... the more it is a part of the culture as a whole.”); \textit{Id.} at 1251 (“The ideas left unprotected by copyright... are reductions from the work, a lessening of its complexity...”); \textit{Id.} at 1252-60 (Unprotected ideas are simple, conventional, and, like primary colors or elements of matter, exist in limited number); \textit{Id.} at 1253-54 (ideas complex enough to be protectable reside only at the small area where a number of simple ideas intersect); \textit{Id.} at 1255 (“Simple [hence unprotectable] ideas tend to be derived from experience and impressions – from the direct impact of that which exists in the world surrounding the author. More complex [and hence protectable] ideas are more the creation of the author...”); \textit{Id.} at 1256 (“General ideas are abstract and partial ideas of more complex ones. The idea of a ‘horse’ leaves out those particulars in which individual horses differ and retains only those wherein they agree.”); Byron, \textit{supra} note 5, at 73-74
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someone (in the past, present or future) who did not copy from P – or it is too simple to be unique enough or valuable enough to outweigh the transaction and administrative costs\textsuperscript{232} of protecting it.

Imagine you are a copyright lawyer and a client tells you he is producing a movie in which a prairie dog meets a seahorse on Pluto. The notion of a prairie dog meeting a seahorse on Pluto comes from a book he read to his child. The client would rather not seek a license from the book’s author. He assures you that his movie \textit{takes nothing else from the book} and that the prairie dog and the seahorse in the movie differ greatly from the prairie dog and the seahorse in the book.

After perusing the book and the movie screenplay, you decide he is correct that the movie takes \textit{nothing else} from the book and that the characters differ greatly. Can you immediately conclude with confidence that if the book author sues she will lose her prima facie case against your client? Perhaps not. The reason to hesitate is that “prairie dog meets seahorse on Pluto” is a unique pattern that would appear only in the work of someone who copied from P.\textsuperscript{233}

Now imagine your client has decided against producing that movie in favor of a movie in which a boy meets a girl at a dance. You recall that a boy meets a girl at a dance in the same book in which a prairie dog meets a seahorse on Pluto. After perusing the new screenplay and re-perusing the book, you decide that the movie takes \textit{nothing else} from the book and that the boy and the girl in the movie differ greatly from the boy and the girl in the book. Can you immediately conclude with

\textit{\textsuperscript{232}}See, e.g., Green, \textit{supra} note 24, at 130-31 (Individual ideas are likely to entail relatively high transaction costs, because they are usable by many parties but of little worth to any single party.). \textit{See also} text and notes Part IV (B).

\textit{\textsuperscript{233}}This pattern has some Added Complexity, i.e., a combination of elements not manifestly devoid of novelty. More importantly, it has innumerable Viable Alternatives. There is nothing valuable about this particular choice of creatures and meeting place. It reflects no stable features of shared reality. Indeed, in shared reality seahorses are found only where prairie dogs are not, and neither could survive for an instant on Pluto. Finally, this pattern has few Contenders. Although it takes no skill to create, no one would foresee any value from creating \textit{it} as opposed to creating some other random pairing of creatures.
confidence that if the book author sues she will lose her prima facie case against your client? Yes, because “boy meets girl at a dance” is clearly a non-unique pattern that has appeared and will appear in the work of many creators who did not copy from P.\textsuperscript{234}

Although “prairie dog meets seahorse on Pluto” is unique, whether a court would actually protect it – by holding D liable for damages – is another question. As discussed in the preceding section, copyright withholds protection for a unique microwork if protecting it would generate transaction or administrative costs that exceed the benefits. There is nothing inherently compelling or fitting about “prairie dog meets seahorse on Pluto.” It poses no clear advantage over other random pairings such as “frog meets polar bear in volcano.” Given the low value of “prairie dog meets seahorse on Pluto,” it seems the transaction costs to get permission to use it would exceed the value of using it, which suggests a court is likely to let D off the hook – either by labeling the pattern an unprotectable idea, by finding it insufficiently original, by finding D’s use fair or de minimis, or by finding no substantial similarity between D’s work and P’s.

\textit{D. Merger of Idea and Expression}

There is no important difference between the idea-expression dichotomy and the merger doctrine. Expression that has merged with an idea is a term of art for a pattern not unique enough or valuable enough to justify the costs of protection – even though the pattern is relatively detailed, detailed because it includes elements in (or only slightly abstracted from) P’s verbatim work.

The conventional view is that the idea-expression dichotomy differs from merger in that the idea-expression dichotomy turns on whether the work

\textsuperscript{234} In terms of our variables, this pattern has no Added Complexity. That is, its elements – boy, meets, girl, dance, and the combination thereof – are manifestly devoid of novelty. It also has few Viable Alternatives. Although there are alternative ways for a boy and girl to meet in an atmosphere conducive to new romance, a dance is more closely associated with new romance than most alternatives. Finally, this pattern has many Contenders. Innumerable creators ignorant of P’s work have created and will create this pattern cost-effectively, because it foreseeably achieves valuable ends and because it directly reflects obvious features of shared reality.
constitutes idea or expression, whereas merger turns on whether the idea or goal behind the work can be conveyed or achieved through alternative expressions. The conventional view is incomplete. Both the idea-expression dichotomy and merger turn on whether the pattern in question is unique and, if so, whether the pattern is unique enough or valuable enough to justify the costs of protection. The conventional view implies that merger turns solely on Viable Alternatives, but, even when there are no Viable Alternatives, courts do not always find merger. Again, for example, there are usually no Viable Alternatives to footage of spontaneous events. Yet no court has held that such footage merges with the event it records.

Like the other limiting doctrines, merger turns on all three variables. Indeed, cases in which courts find that expression has merged with idea appear to be cases in which relatively high Added Complexity is offset by a low number of Viable Alternatives and/or a high number of Contenders.

Consider *Morrissey v. Procter & Gamble* (1st Cir 1967). P was in the business of devising games and contests. The work in question consisted of P’s straightforward instructions for a product box-top sweepstakes. D’s instructions were identical in parts and very similar overall, differing mainly in that they referred to D’s product and used more standard grammar. The appellate court held P’s expression was so straightforward that it merged with the unprotectable sweepstakes idea.

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235 *Cf.* Samuels, *supra* note 5, at 382-83 (“Whereas the focus of the idea-expression dichotomy is upon whether the work constitutes idea or expression, the merger doctrine focuses upon whether the work is capable of alternative expressions. Thus, the doctrine requires reference not only to a given work, or to two given works, but to a whole range of works that might use the idea of the original work.”).


237 *Morrissey v. Procter & Gamble Co.*, 379 F.2d 675 (1st Cir. 1967).

238 “1. Entrants should print name, address and social security on a boxtop, or a plain paper. Entries must be accompanied by boxtop or by plain paper on which the name is copied from any source. Official rules are explained on packages or leaflets obtained from dealer. If you do not have a social security number you may use the name and number of any member of your immediate family living with you. Only the person named on the entry will be deemed an entrant and may qualify for a prize.

   Use the correct social security number belonging to the person named on entry [A] wrong number will be disqualified.”
Independent creation of similar instructions seems plausible here because P’s instructions are simple, straightforward (efficient), and foreseeably valuable. Simplicity, efficiency (concision, precision and logical order), and foreseeable value constitute – especially in combination – a path of least resistance on which others could converge. Or, speaking in terms of our three variables, we might say that the relatively high Added Complexity of the work was outweighed by its low number of Viable Alternatives and by its moderately high number (over the long term) of Contenders.

But more relevant than whether someone could independently create instructions similar to P’s is whether someone could independently create instructions not readily distinguishable from P’s. If no one could create the latter, P’s instructions are unique, albeit marginally so. Morrissey may be a case in which the work is unique but not unique enough or valuable enough to justify the costs of protecting it.

Suppose instead that P had composed his sweepstakes instructions in the form of a colorful and circuitous limerick. Suppose also that D’s instructions were as similar to P’s limerick as D’s instructions were to P’s straightforward instructions in the unaltered version of Morrissey. D would be liable in the altered version as P’s limerick would seem unique enough and valuable enough to justify the costs of protection.

E. Fact-Expression Dichotomy

The courts assert that facts – by which they mean representations of facts – cannot be copyrighted. The assertion is wrong. Representations of facts can

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239 Cf. Computer Associates International v. Altai, Inc., 982 F.2d 693, 708 (2d Cir. 1992) (“[E]fficiency concerns may so narrow the practical range of choice as to make only one or two forms of expression workable options.”).

240 See Hughes, supra note 5, at 193 (when judges and copyright scholars refer to facts, they mean representations or statements of facts.); Green, supra note 13, at 948-51 (discussing Feist majority’s conflation of reality with representations of reality).
be copyrighted when they are unique, i.e., when they are very unlikely to appear in
the work of an independent creator.

At other times, courts and commentators emphasize that it is only
representations of “discovered facts,”243 “historical facts,”244 or “hard facts”245
(hereafter “accurate facts”) that cannot be copyrighted. That too is wrong.
Representations of accurate facts can be copyrighted when they are unique. Raw
footage of a spontaneous real world event, for example, is unique and protectable
though it represents accurate facts. More generally, representations of accurate
facts are unique when they derive from P's unique access to accurate facts. Hence,
an accurate list of your 100 favorite movies is unique and protectable though it
represents the accurate fact that those are your 100 favorite movies.

There are four things that stymie our realization that some representations
of accurate facts are protectable because they are unique. One is the inexplicable
willingness of courts and commentators to ignore the factual nature of some factual
works (e.g., event footage, or an accurate list of one's 100 favorite movies).

Universal City Studios, Inc., 650 F.2d 1365, 1368-69 (5th Cir. 1981).

242 Most commentators avidly reject the Court’s assertions about facts. See, e.g., Hughes, supra note 5, at 186 (“The problem with the Feist analysis is that it is wrong – and the error has produced a decade of distortion in copyright doctrine.”); Green, supra note 24, at 111 (“The Feist approach is
incoherent.”); Temin, supra note 47.

243 See, e.g., Feist Publications, Inc., 499 U.S. at 347 (“The distinction is one between creation and
discovery.”); CDN Inc. v. Kapes, 197 F.3d 1256, 1259 (9th Cir. 1999) (same); Durham, supra note 5, at 142 (same).

244 See, e.g., A.A. Hoehling v. Universal City Studios, Inc., 618 F.2d 972, 974 (2d Cir.), cert. denied,
449 U.S. 841 (1980) (“The protection afforded the copyright holder has never extended to history, be it documented fact or explanatory hypothesis.”); CDN, 197 F.3d at 1260-61 (Coin price guide protectable where coin prices were not historical market prices but imperfect estimates based on
author's judgment and expertise.); CCC Information Services v. Maclean Hunter Market Reports, 44
F.3d 61, 63 (2d Cir. 1994) (Red book used car guide protectable where prices “are not historical
market prices but predictions, based on a wide variety of information sources and... professional
judgment.”); Nash v. CBS, Inc., 899 F.2d 1537, 1542 (7th Cir. 1990) (“The first person to conclude
that Dillinger survived does not get dibs on history.”).

245 Durham, supra note 5, at 172 n.239 (Recent cases distinguish between uncopyrightable hard facts
and copyrightable soft facts. Hard facts refer to information that is relatively certain and
independent of any point of view; soft facts refer to information that is relatively uncertain and
“infused with opinion.”).
A second obscurant is that unique works that represent accurate facts are more likely than other unique works to be dominant.\textsuperscript{246} Consider \textit{Feist}.\textsuperscript{247} P's phonebook listings in \textit{Feist} were unique. Apparently, P created all of the phone numbers independently,\textsuperscript{248} not just the fake seed numbers. The phone numbers were not “preexisting” facts; they were created facts – works.\textsuperscript{249} Presumably, they were also arbitrary, or the manner in which they were assigned to particular individuals was arbitrary, or at least the initial starting number was arbitrary. And when the numbers and names were aggregated, the resulting listings were highly complex. Hence no one could ever independently create the same listings. If a phone company other than Rural had created and assigned phone numbers from scratch, everyone in the area would have ended up with a number different from the one Rural assigned them.\textsuperscript{250}

P in \textit{Feist} lost because P’s unique listings were dominant,\textsuperscript{251} dominant for the same reasons names, addresses, and arbitrary part numbers are dominant. Phone numbers are cheap to create and assign and they get locked in. Indeed, their value derives from lock-in and from investments others make in learning and using them.

\textsuperscript{246} Cf. Khong, \textit{supra} note 63, at 20 (When facts are single-sourced, likelihood of coincidental similarity to other works is low. “However, from a welfare perspective, protecting sole-sourced facts under copyright law may lead to a severe monopolization problem necessitating further remedy.”).

\textsuperscript{247} \textit{Feist Publications, Inc.}, 499 U.S. 340.

\textsuperscript{248} See Hughes, \textit{supra} note 5, at 196; \textit{Id.} at 584 n.42.

\textsuperscript{249} See generally \textit{Id. See also} Castle Rock Entertainment v. Carol Publishing Group, 150 F.3d 132 (2d Cir. 1998) (holding that unauthorized trivia book, \textit{Seinfeld Aptitude Test}, infringed Seinfeld television series because “facts” appearing in D’s book had been created by P).

\textsuperscript{250} In terms of our variables, P’s phonebook had high Added Complexity and innumerable Viable Alternatives. Given P’s exclusive right to assign phone numbers, P’s phonebook also had no Contenders.

According to Michael Green, facts presented in a phonebook are “likely to be duplicated by anyone who undertakes the same protect.” Green, \textit{supra} note 24, at 125, n.47. Green is correct insofar as anyone who independently creates a phonebook listing is likely to include most of the same names and addresses in the same order. But he is wrong to imply that someone could independently create and assign the same \textit{numbers} to the same people.

\textsuperscript{251} Cf. Rural Telephone Service Co. v. Feist Publications, Inc., 737 F. Supp. 610, 622 (D. Kan. 1990) (district court decision that found that Rural had an unlawful purpose to extend its monopoly in phone service).
The third and greatest obscurant to seeing that some representations of accurate facts are unique and protectable is that many representations of accurate facts are not unique – because many are constrained by shared reality. A work that represents accurate facts constrained by shared reality usually has few Viable Alternatives\textsuperscript{252} and many Contenders. In contrast, any given work that deviates from shared reality – that includes inaccuracies, errors, or fictions (especially random as opposed to systematic ones\textsuperscript{253}) – usually has many Viable Alternatives\textsuperscript{254} (including other inaccurate works and accurate works) and few Contenders (because no independent creator is likely to be motivated to create P’s particular inaccuracies, errors, or fictions).

Consider E=MC\textsuperscript{2}, which also implicates the idea-expression dichotomy because it is a pattern abstracted from nature. Though a product of genius, this

\textsuperscript{252} See Hughes, supra note 5, at 194 (Generally, there are few ways of expressing facts, particularly quantitative facts.); Green, supra note 24, at 124 (“The problem of parallel independent creation is surely the main reason that individual facts have been thought insufficiently ‘original’ to be protected.”); Green, supra note 13, at 951 (Facts are susceptible to parallel independent creation. “That many people are liable to arrive at the same factual representations is particularly true concerning those representations that depend upon simple observation.... People's factual beliefs, unlike their fanciful stories, tend to overlap.”); Robert Post, The Constitutional Concept of Public Discourse, 103 Harv. L. Rev. 603, 656-58 (1990) (we treat a statement as factual when we expect reasonable persons engaged in the inquiry to reach same conclusion.); Byron, supra note 5, at 66 (accuracy is a constraint that increases probability that the work will be created).

See also Landes & Posner, supra note 8, at 102-03 (“When the ‘originality’ of a work consists mainly in the disclosure of facts, it will often be difficult to determine whether a subsequent author’s similar work is a copy of the previous work or a work of independent creation because there will be other routes of access to facts besides the previous work.”).

\textsuperscript{253} Cf. Byron, supra note 5, at 66 (suggesting that perfect copy of a prior work is more likely to be created than any given imperfect copy of prior work); Green, supra note 24, at 125 (“Creative works can be produced through inadvertence.”); Alfred Bell, 191 F.2d at 104-05 (“A copyist's bad eyesight or defective musculature, or a shock caused by a clap of thunder, may yield sufficiently distinguishable variations. Having hit upon such a variation unintentionally, the ‘author’ may adopt it as his and copyright it.”); Joyce et al., supra note 13, at 632 (discussing a number of cases in which copying could be proved by presence of errors in D’s work also present in P’s work).

\textsuperscript{254} Cf. Khong, supra note 63, at 19-21 (number of phenomena that have actually occurred – facts – is smaller than number of possible fictional phenomena. Because factual phenomena are less abundant than fictional phenomena, odds of coincidental similarity are higher for works based on factual phenomena.); Id. at § 3.4.3 (“The evidentiary argument for protecting fictitious facts is that they reduce the likelihood of coincidental similarity and risk of court error in a factual work.”); Hughes, supra note 5, at 215 (“Elements of fiction are rarely needed for non-expressive activity.”) Hughes argument implies that a copyright monopoly on fictional work is seldom a meaningful economic monopoly.
equation is not unique and thus not protected.\textsuperscript{255} Not only could independent creators have later formulated mass-energy equivalence as $E=MC^2$, one independent creator, Italian scientist Olinto de Pretto, did so several years before Einstein.\textsuperscript{256} And other physicists got close.\textsuperscript{257} Furthermore, this equation has no Viable Alternatives because it cleared the view toward nuclear weapons and because it resolves what would otherwise be lingering puzzles in theoretical physics.\textsuperscript{258}

A work that aims to represent accurate facts but that falls short might be described as representing “soft facts.” But it seems clearer to describe such a work as representing “estimates.” Works that represent estimates are both more likely to be unique and less likely to be dominant than works that represent accurate facts tightly constrained by shared reality.

Consider the following excerpts from lists of values of U.S. coins.

A. From a list of the values of U.S. coins in current circulation: “A nickel is worth five cents.”

B. From a list of estimated values of U.S. collectible coins: “A 1924 Denver Mint buffalo nickel in fine condition is worth $16.09.”\textsuperscript{259}

Excerpt A, which represents an accurate fact, is non-unique.\textsuperscript{260} Independent creators could include – indeed have included\textsuperscript{261} – the same statement in their own work.

\textsuperscript{255} See American Dental Association v. Delta Dental Plans Association, 126 F.3d 977 (7th Cir. 1997) (Easterbrook, J.) (referring to $E=MC^2$ as unprotectable fact). \textit{But cf.} Green, \textit{supra} note 13, at 954-57 (proposing alternative reason for lack of protection for explanatory theories: their creators benefit more when they are freely disseminated).


\textsuperscript{257} See \textit{Id}.

\textsuperscript{258} \textit{Id.} Given the transcendent importance of nuclear weapons, this equation is also likely dominant.

\textsuperscript{259} Cf. Durham, \textit{supra} note 5, at 172-73 (presenting this example of a 1924 nickel).

\textsuperscript{260} With respect to our three variables, A has no or low Added Complexity, few Viable Alternatives, and a moderately high number of Contenders. The number of Contenders is only moderately high because, although anyone could obtain this information at no cost, few people would expect a reward from stating something so obvious.
Excerpt B, which represents an estimate, is probably unique. Other independent creators of collectible coin valuations are very unlikely to report a value of $16.09 for a 1924 Denver Mint buffalo nickel in fine condition. Although B has little Added Complexity, it has many Viable Alternatives and relatively few Contenders. B has many Viable Alternatives because it is not tightly constrained by a stable, shared reality\textsuperscript{262} and because alternative valuations (\textit{e.g.}, $15.68 or $17.02) are readily distinguishable. Other estimates for this coin are unlikely to converge on $16.09 because the values of the inputs on which such estimates are based are in constant flux, because different estimators use different inputs, assumptions and methods,\textsuperscript{263} and because the inputs, assumptions and method that lead to $16.09 are unlikely to be manifestly superior\textsuperscript{264} to those that lead to $15.68, $17.02, and so

\textsuperscript{261} See, \textit{e.g.}, EduTech, What Do You Know About the Penny, Nickel, and Dime? \url{http://www.leroy.k12.ny.us/Elementary/LinksPages/money/sld019.htm}.

\textsuperscript{262} \textit{Cf.} Durham, \textit{supra} note 5, at 173 (“Nothing in the world ‘out there’ compels the choice of exactly $16.09.”); CDN v. Kapes, 197 F.3d 1256, 1260-61 (9th Cir. 1999) (Collectible coin price guide based on imperfect estimates requiring judgment and expertise.); CCC Information Services v. Maclean Hunter Market Reports, 44 F.3d 61, 63, 72-73 (2d Cir. 1994) (Red book used car prices are estimates infused with opinion and “based on a wide variety of information sources and... professional judgment.”); Hughes, \textit{supra} note 5, at 204 (Court in CCC implied that Red Book was original because it was inaccurate.); Green, \textit{supra} note 24, at 119 (“[I]t is common in factual compilation cases for a court to claim that content is protected, even though it is rightly described as factual, because extensive judgment was required for its creation.”).

\textit{But see} Burk, \textit{supra} note 46, at 607-08 (“The Red Book tables [in CCC] provide testable and falsifiable predictions about the value of used automobiles and a recommendation as to how one ought to act – what one ought to pay – in the market for used automobiles. While the value estimate may have been the result of choices, those choices were profoundly constrained by the logic of science, by the need to conform to the state of the external world.”).

\textsuperscript{263} Cf. Green, \textit{supra} note 24, at 124 (The more judgment required to create a factual compilation, the less likely it is to be independently created. Courts hold factual content unprotected when it has a high likelihood of parallel independent creation.); McGowan, \textit{supra} note 16, at 259 (“If any reasonable person replicating CDN’s inquiry would... reach the same price as CDN, then CDN’s price expresses a fact...”).

\textsuperscript{264} In \textit{Kregos v. Associated Press}, 937 F.2d 700 (2d Cir. 1991), D was held liable for producing a virtually identical form used to predict the performance of baseball pitchers matched for an upcoming game. The court pointed out that P’s form was the first ever to list nine particular categories of data concerning the previous performances of pitchers (\textit{Id.} at 702) and that P’s combination of nine categories was drawn from a universe of thousands of alternatives and based on P’s subjective opinion as to the data newspaper readers should consider in making their own predictions. \textit{Id.} at 704-07. Note that, if Kregos’ compilation of pitching data were \textit{the} best way to predict outcomes, it would probably be repeatable. But it is very unlikely to be \textit{the} best way.
on. This is especially true of estimates for collectibles, because their values depend not on any intrinsic utility but on speculation about the expectations of others.265

Even if B were not unique standing on its own, the aggregation of B with other parts of the list from which it came clearly is. As discussed earlier, sub-elements of works are not unique in isolation.266 Uniqueness emerges when sub-elements aggregate to form elements and elements aggregate to form salient features of the work. For work just unique enough to be copyrightable, uniqueness emerges only when all elements aggregate to form the entire work verbatim.

Consider maps. Much of the content of the typical map is unprotectable.267 In the past, geographical maps were more unique because they were more inaccurate, but even then a map’s uniqueness emerged in large part from aggregation of non-unique elements.268 Today, most geographical maps contain few to no individual elements that are unique on their own. For these maps, uniqueness must emerge wholly from aggregation of non-unique elements, i.e., from an evitable medley of highlights and omissions.269


B also has few Contenders because the market for collectible coin valuations is smallish and because other estimators are likely to base their estimates on inputs whose values have changed since B was created.265

See supra Part II (C) discussing fact that tiny sub-elements of works are not unique.

Schechter & Thomas, supra note 7, at 70. See also Gorman, supra note 21, at 19 (maps tend to be thinly protected); Merges at al., supra note 75, at 480 (limited range of expressive choices necessarily limits scope of protection for maps); Darden v. Peters, 488 F.3d 277 (4th Cir. 2007) (upholding refusal of Copyright Office to register standard census maps, finding that adding color, shading and labels with standard fonts and shapes did not render maps sufficiently original).

Cf. Gen. Drafting Co. v. Andrews, 37 F.2d 54, 55 (2d Cir. 1930) (“The elements of the copyright (in a map) consist in the selection, arrangement, and presentation of the component parts.”); Emerson v. Davies, 8 F. Cas., 615, 619 (C.C.D. Mass. 1845) (Story, J); Joseph Story, Commentaries on Equity Jurisprudence as Administered in England and America 216 (1836) (“The difficulty [for maps] is to distinguish, what belongs to the exclusive labors of a single mind, from what is the common source of the materials of the knowledge used by all…”).

Compare Kern River Gas Transmission Co. v. Coastal Corp., 899 F.2d 1458 (5th Cir. 1990) with Mason v. Montgomery Data, Inc., 967 F.2d 135, 140 (5th Cir. 1992) (“[T]he idea in Kern was simply the placing on a map of Kern River’s certain proposed location for a prospective pipeline,” and thus merger was found, while in Mason, the idea was more complex: “to bring together available information on boundaries, landmarks, and ownership and to choose locations and effective pictorial
Yet, it is not accuracy per se that makes these maps face an uphill battle for protection. They face an uphill battle because they are accurate about things other map-makers can likewise be accurate about. In contrast, if P creates an accurate map of something to which no one but P will ever have access, P’s map is unique no matter how accurate it is. Consider a map to P’s buried treasure that includes specific directions from or to a non-addressed location. Another example is a detailed concept map or mind map that accurately represents P’s unique thoughts.

A detailed fictional map, such as Tolkien’s map of Middle Earth, is probably the most unique kind of map. It may possess some individual elements that are unique standing on their own. In any event, it will likely emerge as unique well before all of its elements fully aggregate to form the entire work verbatim.

In sum, four types of maps tend to be unique:

(i) estimated maps,
(ii) fictional maps,
(iii) maps that accurately represent things accessible to others but that include evitable highlights and omissions, and
(iv) maps that accurately represent things accessible only to P.

A type (i) map is likely to be a one-of-a-kind because it is not tightly constrained by shared reality or by a reality exclusive to P. And no independently created map of the same thing is likely to be inaccurate in the same way. A type (ii) map is likely to be a one-of-kind for the same reasons a type (i) map is, only more so. A type (iii) map is likely to be a one-of-a-kind because, although some of its elements are tightly constrained by shared reality, some of its highlights and

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expression of these locations,” and thus, no merger was found). See also Byron, supra note 5, at 51 (analyzing Kern).

270 In terms of our variables, a type (i) map is unique because it has many Viable Alternatives. It may also have high Added Complexity and few Contenders.
A type (iv) map is likely to be a one-of-a-kind even if tightly constrained, so long as it is tightly constrained by a reality exclusive to P.  

Compare maps to biographies. The vast majority of accurate biographies are analogous to maps of type (iii). Suppose Jones plans to write a biography of Napolean. Many biographies of Napolean have been written and Jones wants to do more than retell in his own words the same series of already-known tales about the emperor. Jones decides instead to describe a handful of less famous tales in great detail, to summarize others, to pass over others entirely, and to deviate now and again from chronological order.

Suppose Smith reads Jones’s biography and then writes a biography that tells, in Smith’s own words, the same tales Jones told, with the same degree of emphasis and in the same order. Will a court find Smith to be an infringer? Yes. Had Smith written a biography without first reading Jones’s, Smith’s biography would have been much less similar to Jones’s. More to the point, anyone who writes a biography of Napolean independent of Jones’s is very likely to write one that differs from Jones’s more than Smith’s does.

Accurate autobiographies are analogous to maps of type (iv). Accurate autobiographies represent some accurate facts that could never be represented by anyone but the autobiographer. When facts are exclusive to P, so that no one else could independently represent them, the number of Contenders is zero. This

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271 In terms of our variables, a type (iii) map is unique because it has many Viable Alternatives. It may also have high Added Complexity.

272 In terms of our variables, a map of type (iv) is unique because it has zero Contenders.

273 Any given accurate biography is likely to have many Viable Alternatives and high Added Complexity. Cf. American Dental Association v. Delta Dental Plans Association, 126 F.3d 977, 979 (7th Cir. 1997) (Easterbrook, J.) (“There can be multiple, and equally original, biographies of the same person’s life…”).

274 This hypothetical is based on one in Joyce et al., supra note 13, at 148.

implies that, if all other things are equal, accurate autobiographies are protected more thickly than equally accurate biographies.\textsuperscript{276}

The fourth obscurant to realizing that some representations of accurate facts are protectable because they are unique is the apparently persistent but varying influence\textsuperscript{277} of the sweat of the brow doctrine.\textsuperscript{278} This influence is largely illusory. Sweat – effort, skill or resources – is significant primarily because it correlates with the number of Contenders. High sweat correlates with few Contenders (and thus with uniqueness) because, the more sweat required to create the work, the lower is the number of independent creators with the ability and motivation to create it.\textsuperscript{279} Conversely, low sweat correlates with many Contenders and thus with non-uniqueness.

But this correlation is weak and unreliable. A bystander’s event footage requires low to no sweat yet has no Contenders. For other factual works, high sweat can translate into many Contenders rather than few. When high sweat increases the accuracy of a work – by making it conform more closely to shared reality – high sweat thereby increases the number of other parties who could independently converge on the same work.\textsuperscript{280} In addition, some work that requires high sweat

\textsuperscript{276} Suppose an accurate autobiography and an accurate biography about the same person include equally unique highlights and omissions of information accessible to other biographers. The autobiography will be additionally unique insofar as it also includes information accessible only to the autobiographer.

\textsuperscript{277} See McGowan, supra note 16, at 237 (Cost recovery – sweat of the brow doctrine – is alive and well.); Id. at 257 (“Feist rejected the ‘sweat of the brow’ doctrine in name only. The doctrine lives on in the tacit acceptance that spontaneous news reporting is creative, when much of the time that is not true.”).

\textsuperscript{278} See, e.g., Alfred Bell v. Catalda Fine Arts, 191 F.2d 99, 104-05 (2d Cir. 1951) (upholding copyright in mezzotint engravings of paintings in public domain, based in part on great skill and effort required to simulate public domain oil paintings via mezzotint process); Alva Studios, Inc. v. Winninger, 177 F. Supp. 265, 267 (S.D.N.Y. 1959) (upholding copyright in half-size reproduction of Rodin’s statue “Hand of God,” based in part on long hours and great skill required to create reproduction); U.S. Payphone, Inc. v. Executives Unlimited of Durham, Inc., 18 U.S.P.Q. 2d 2049 (4th Cir 1991) (upholding copyright in publication that distilled complicated payphone tariff information in public domain into a convenient one-page-per-state format).

\textsuperscript{279} Cf. Green, supra note 24, at 125 (The great difficulty of assembling facts will reduce the extent to which parallel independent creation is a problem.).

\textsuperscript{280} Cf. Byron, supra note 5, at 66 (suggesting that perfect copy of a prior work is more likely to be created than any given imperfect copy of prior work). See also supra Part IV (E).
promises very high reward, thereby ensuring that other creators will be motivated to cultivate the skill and obtain the resources to create the work. For example, a work that accurately represents a stable object would require high sweat if the object were very large (e.g., the earth) or very small (e.g., an atom) or if the method of recording were very high tech. Yet the foreseeable value of the work could well exceed the high sweat needed to create it, ensuring many Contenders over the long run.

V. CONCLUSION

Others have observed that there is some common substratum that underlies seemingly disparate copyright doctrines. Uniqueness is that common substratum. Originality is merely a rough heuristic for uniqueness. Originality is over-inclusive in that some original work is non-unique and thus uncopyrightable. Consider, for example, a colorful turn of phrase independently created by plaintiff. Where originality is over-inclusive, courts withhold protection via a limiting doctrine or a finding of no infringement.

Originality is under-inclusive in that some unoriginal work (specifically, some non-creative work) is unique and thus copyrightable. The clearest example is raw footage of a spontaneous event captured by a bystander. When such non-creative work is unique, courts simply declare it creative. That is, they resort to legal fiction.

The current patchwork unduly multiplies doctrine and produces puzzles and paradoxes that distract, confuse, and increase uncertainty about copyright ownership and enforceability. We are puzzled to see limiting doctrines overlapping


282 See Robert A. Gorman, Fact or Fancy? The Implications for Copyright, 29 J. Copyright Soc’y 560, 560-61 (1982) (“Although there is a natural temptation to think of the three stages of copyright analysis – copyrightability, infringement, and defenses of privilege – as water-tight compartments, they are not; there is a common substratum of social policy under all three of these issues...”). Cf. John Shepard Wiley, Jr., Copyright at the School of Patent, 58 U. Chic. L. Rev. 119 (1991) (three central elements of copyright doctrine – originality, idea-expression dichotomy, and infringement standards – are closely related placeholders for other considerations).

283 Though original, the phrase is likely non-unique (and uncopyrightable), because it includes relatively few elements and because it is only moderately unconstrained (assuming it is not a nonsense phrase).
not only each other but also originality and substantial similarity, and originality and substantial similarity overlapping each other. We read dubious assertions about creativity in the case law, for example, that footage taken from a helicopter during the Los Angeles riots is creative. We are puzzled by the mismatch between the (at best) low degree of creativity of such footage and the fairly robust protection it receives. This leads some to conclude that the sweat of the brow doctrine must be doing heavy work behind the scenes, but then what to make of cases in which footage captured without sweat is still protected? We also witness inconsistency on the issue of novelty. Some courts say copyright requires no novelty at all. Others say copyright requires no striking novelty. In any event, courts never actually hold defendant liable for damages when plaintiff's work lacks appreciable novelty. Most puzzling of all is the useful article doctrine, for which more than 10 tests have been proposed, none reliable.

We can solve these puzzles and streamline doctrine by focusing directly on uniqueness. A work is unique if it is a one-of-a-kind: a work that no one created before (novel) and that no one could independently create after (unrepeatable). A work is novel and unrepeatable when it is (at least modestly) complex and either unconstrained or uniquely constrained.

Why is uniqueness the touchstone for copyright? It makes no sense to protect work that lacks novelty. What would be the point of inducing the re-creation of work that already exists? There is a point to inducing the creation of novel but repeatable work – to get it sooner rather than later – but patent protection better suits such work. Patent law economizes on the costs of protecting repeatable work, such as duplication of effort and problems of proof.

Copyright arises automatically and lasts a long time and is thus a liberal form of protection. Liberal protection suits unique work. For unique work there is no such thing as duplication of effort – by definition, no one can independently duplicate unique work. Unique work also generates few proof problems, because the evidence usually points straight to its true creator. Another reason to protect
unique work more liberally is that we get only one chance to incentivize its creation. If we fail to incentivize the one and only creator who can create it, it is lost to the world forever.