

Essay

A FRESH LOOK AT TESTS FOR NONLITERAL COPYRIGHT INFRINGEMENT

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ABSTRACT—Determining whether a copyright has been infringed is often straightforward in cases involving verbatim copying or slavish imitation. But when there are no literal similarities between the works at issue, ruling on infringement claims becomes more difficult. The Second and Ninth Circuits have developed five similar yet distinct tests for judging nonliteral copyright infringement. This Essay argues that each of these tests is flawed and that courts have generally failed to provide clear guidance about which test to apply in which kinds of cases.

This Essay offers seven specific strategies to improve the analysis of nonliteral infringements. Courts should do more, for instance, to tailor infringement analysis based on the nature of the works at issue (that is, are they fanciful or artistic works or are they factual or functional?). The goal of this Essay is to offer these strategies as a way to bring greater coherence and consistency to the determination of nonliteral infringements, and to do so in a manner that properly balances the interests of first and subsequent generations of creators.

AUTHOR—Richard M. Sherman Distinguished Professor, Berkeley Law School. I am grateful to Northwestern University School of Law for the opportunity to deliver the Julius Rosenthal Lectures, from which this Essay derives, and to Kathryn Hashimoto for her invaluable contributions to this Essay. I am also grateful for comments on an earlier draft by Julie Cohen, Paul Geller, Daniel Gervais, Paul Goldstein, Neil Netanel, David Nimmer, Christopher Sprigman, Rebecca Tushnet, and Molly Van Houweling. I apologize to the many colleagues whose work on nonliteral infringement I do not cite in this Essay; please understand that I am under severe word constraints that limit my engagement with the rich literature on this topic. These constraints also explain why I have concentrated on a rather small number of infringement cases. I hope this Essay will be of use to others who find the nonliteral copyright infringement case law to be frustratingly obscure, ambiguous, and confusing.

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INTRODUCTION

A central puzzle for U.S. copyright law in the twentieth and twenty-first centuries has been how to test for infringement of the exclusive right this law gives authors to control the reproduction of their works in copies. No subtlety of analysis is required when a work is copied word-for-word, line-for-line, or note-for-note or when second comers have made merely “colourable and fraudulent variations.”¹ But as Professor Kaplan once observed, “[w]e are in a viscid quandary once we admit that ‘expression’ can consist of anything not close aboard the particular collocation in its sequential order.”²

This Essay offers several strategies for refining infringement analysis so that it becomes less viscid in cases alleging what the Nimmer treatise describes as “nonliteral” similarities between two works.³ Nonliteral

¹ See, e.g., *Millar v. Taylor*, (1769) 4 Burr. 2303, 2310, 98 Eng. Rep. 201 (K.B.) 205. While most nonliteral similarity cases involve claims of infringement of the reproduction right, it is also possible for nonliteral similarities to be the basis for claims of derivative work or public performance infringements.

² BENJAMIN KAPLAN, AN UNHURRIED VIEW OF COPYRIGHT 48 (1967).

³ 4 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 13.03[A], at 13-39 (2013) [hereinafter NIMMER ON COPYRIGHT].

infringement may arise, for instance, when a second comer appropriates detailed plot sequences from another author's drama but uses different dialogue.⁴

Part I discusses the five most frequently utilized tests for infringement of the reproduction right in nonliteral similarity cases.⁵ It compares these tests and explains why each test is flawed in one or more respects. Apart from these flaws, it is problematic that there are so many different tests and so little guidance about which test to use when.

Part II recommends, among other things, that courts tailor infringement tests based on characteristics of the works at issue. The more artistic or fanciful a work is, for example, the more appropriate it is to focus infringement analysis primarily on similarities in the aesthetic appeal of the two works rather than on a dissective analysis of similarities and differences. The more factual or functional a work is, by contrast, the "thinner" is said to be its scope of copyright protection,⁶ suggesting that infringement analysis should place more emphasis on dissecting similarities and differences of these works and less on impressions. Courts should also give more guidance about what constitutes protectable expression in copyrighted works and what aspects, besides abstract ideas, are unprotectable by copyright.

I. WHY CONVENTIONAL TESTS FOR JUDGING NONLITERAL INFRINGEMENT ARE PROBLEMATIC

One reason why conventional tests for judging nonliteral copyright infringement are problematic is that there are too many tests and not enough guidance about which one to use in what kinds of cases. Occasionally, courts have applied several different tests without being sure which test is the right one.⁷ The Second and Ninth Circuits have been the most influential of the appellate courts in addressing nonliteral infringement claims. This section will critique the five tests these courts have utilized. Each test is similar, but none is the same. Each test has flaws, although each is flawed in a somewhat different way.

⁴ See, e.g., *Sheldon v. Metro-Goldwyn Pictures Corp.*, 81 F.2d 49, 54–56 (2d Cir. 1936).

⁵ The Supreme Court has twice endorsed a two-step test for infringement, first requiring proof of "ownership of a valid copyright," and second, copying of constituent parts that are original. *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 361 (1991) (citing *Harper & Row, Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 548 (1985)). However, this test has not caught on in lower courts.

⁶ See, e.g., *id.* at 349 (finding that factual works have a "thin" scope).

⁷ See, e.g., *Castle Rock Entm't, Inc. v. Carol Publ'g Grp., Inc.*, 150 F.3d 132, 139–40, 146 (2d Cir. 1998) (discussing multiple tests, none of which would have resulted in infringement, but deciding a quiz based on a TV program nonetheless infringed).

A. *Arnstein v. Porter: The Copying and Improper-Appropriation Test*

One influential test for nonliteral infringement of the reproduction right derives from *Arnstein v. Porter*, decided by the Second Circuit Court of Appeals in 1946.⁸

This case grew out of an unusual set of facts. Ira Arnstein accused the highly successful composer Cole Porter of infringing copyrights in several of his songs, including some that had never been published. Porter moved for summary judgment, claiming to have never heard Arnstein's songs. The trial court granted Porter's motion, characterizing as "fantastic" Arnstein's claim that Porter had hired stooges to follow him and ransack his home in order to get access to Arnstein's compositions.⁹

Judge Frank wrote the *Arnstein* opinion for a split Second Circuit, with Judge Clark in dissent. The decision reversed the grant of summary judgment to Porter on the theory that Arnstein's credibility as a witness was better left to a jury to decide.¹⁰

Judge Frank distinguished two separate elements which were "essential" to a copyright plaintiff's case: first, "that defendant copied from plaintiff's copyrighted work," and second, "that the copying (assuming it to be proved) went so far as to constitute improper appropriation."¹¹

Concerning the first element, the *Arnstein* opinion recognized that defendants sometimes admit copying something from the plaintiff's work. However, when defendants deny copying, plaintiffs have to rely on circumstantial evidence to prove this element, which requires consideration of whether the defendant had access to the plaintiff's work and whether sufficient similarities existed between the two works from which the trier of fact could infer that the defendant had, in fact, copied from the plaintiff's work.¹² Deficiencies in evidence of access could be overcome, Judge Frank asserted, by evidence of similarities "so striking as to preclude the possibility that plaintiff and defendant independently arrived at the same result."¹³ In the copying step of the test, expert testimony about similarities

⁸ 154 F.2d 464 (2d Cir. 1946), *abrogated in part by* First Nat'l Bank of Ariz. v. Cities Serv. Co., 391 U.S. 253 (1968). As of February 8, 2013, *Arnstein* had been positively cited in 142 federal court decisions on the subject of copyright in the WestlawNext database, at least once in every circuit except the Federal Circuit. But its influence is greater than the citation count alone reveals because the Goldstein treatise has adopted the *Arnstein* framework for its discussion of infringement. *See* 2 PAUL GOLDSTEIN, GOLDSTEIN ON COPYRIGHT § 9.1 (3d ed. 2013). The Patry treatise describes *Arnstein* as a "landmark" case, although criticizing it in some respects. WILLIAM F. PATRY, 3 PATRY ON COPYRIGHT §§ 9:118, 9:87 (2007).

⁹ *Arnstein*, 154 F.2d at 467, 469. The lower court also took into account that Arnstein's previous claims against other composers had been dismissed as vexatious. *Id.* at 474.

¹⁰ *Id.* at 473–74. Judge Learned Hand was the third member of the *Arnstein* panel. *Id.* at 468.

¹¹ *Id.* at 468.

¹² *Id.*

¹³ *Id.*

and differences in the works is admissible, and the trier of fact is allowed more generally to engage in dissective analysis of the works at issue.¹⁴

Arnstein offered scant guidance about the improper-appropriation step of the test, except to say that expert testimony and dissective analysis are “irrelevant” to this determination and that the final judgment should be made based on a lay listener’s impression about the impropriety of the appropriation.¹⁵ As the *Arnstein* test has been understood over time, the second-step inquiry is whether there is substantial similarity in expression in the two works and whether, as perceived by the audience for a work of that kind, the defendant improperly copied that expression from the plaintiff’s work.¹⁶

There are at least three flaws in the *Arnstein* two-step test for nonliteral infringement. First, the test is deeply confusing because it directs the trier of fact to make two different determinations about similarities and copying, each of which is based on a different meaning of the key terms. The presence of the same erroneous entries in both a plaintiff’s and defendant’s maps, for example, might prove first-step copying, even if these errors, standing alone, would be insufficient to prove improper appropriation (which *Arnstein* also designates as a form of copying¹⁷). *Arnstein* recognizes that similarity evidence might sometimes be “double-purpose,” that is, it may “justify an inference of copying and . . . prove improper appropriation.”¹⁸ But the court emphasized that copying and improper appropriation are distinct elements, and “proof of improper appropriation need not consist of similarities which, standing alone, would support an inference of copying.”¹⁹ The court did not explain what it meant by this statement, which seems somewhat confusing.

Courts and commentators have sought to mitigate this confusion by designating the copying analysis in *Arnstein*’s first step as “copying in fact”²⁰ and the similarity analysis in the first step as “probative similarity.”²¹ They have also emphasized that the similarity assessment in the second

¹⁴ *Id.*

¹⁵ *Id.* at 468, 473. One empirical study shows that lay listeners find it hard to distinguish between compositional similarities (which are relevant to infringement) and performance similarities (which are not relevant to infringement, but to which lay listeners tend to give considerable weight in assessing similarities). See Jamie Lund, An Empirical Examination of the Lay Listener Test in Music Composition Copyright Infringement 39, 41 (Apr. 23, 2012) (unpublished manuscript), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2030509.

¹⁶ 2 GOLDSTEIN, *supra* note 8, §§ 9.1, 9.3.1.

¹⁷ *Arnstein*, 154 F.2d at 468.

¹⁸ *Id.* at 469.

¹⁹ *Id.*

²⁰ See, e.g., JULIE E. COHEN ET AL., COPYRIGHT IN A GLOBAL INFORMATION ECONOMY 291 (3d ed. 2010).

²¹ See, e.g., Alan Latman, “Probative Similarity” as Proof of Copying: Toward Dispelling Some Myths in Copyright Infringement, 90 COLUM. L. REV. 1187, 1204 (1990).

step must focus on the expressive elements of the plaintiff's work and improper appropriation may only be found if the defendant copied substantial amounts of expression from the plaintiff's work.²² While these measures help to some degree, it is far from clear that judges or juries will be able to keep separate the two distinct notions of similarity and copying that *Arnstein* envisions.

Second, *Arnstein*'s formulation of a two-step test may put defendants at an unfair disadvantage. The disadvantage can arise because the test directs the trier of fact to decide, first, that there are enough similarities between the works at issue to support an inference that the defendant copied something from the plaintiff's work and then to decide whether that copying amounted to improper appropriation. This may stack the deck in the plaintiff's favor because the trier of fact will have already made a full commitment to finding that there was copying *before* deciding if too much was appropriated.

This seems particularly unfair because first-step copying evidence may consist of nonexpressive elements (e.g., erroneous entries in a compilation), which should be irrelevant to the second-step copying inquiry, which is supposed to be based entirely on copying of expressive elements. It also seems unfair because *Arnstein* directs that the improper-appropriation conclusion should be based on the lay observers' or listeners' impressions, rather than on careful consideration of similarities and differences between expressive and nonexpressive aspects of the works. The risk is that the trier of fact may conclude that second-step copying has occurred as a spillover from a finding of first-step copying. Indeed, *Arnstein* seems to anticipate this spillover given its articulation of the second-step inquiry as whether "the copying (assuming it to be proved) went so far as to constitute improper appropriation."²³ This formulation is difficult to square with the court's insistence that copying and improper appropriation are distinct elements in copyright infringement cases that should not be confused.²⁴

Third, the *Arnstein* test is unsuited to serve as a general test for infringement because it was designed to deal with claims that similarities were due to independent creation.²⁵ In a great many and perhaps most cases, defendants admit to copying *something* from the work they are alleged to have infringed, but contend that the copied elements are ideas or otherwise beyond the scope of protection that copyright offers to the

²² See, e.g., 2 GOLDSTEIN, *supra* note 8, § 9.2.1; 4 NIMMER ON COPYRIGHT, *supra* note 3, § 13.03[A].

²³ *Arnstein*, 154 F.2d at 468.

²⁴ *Id.* Some evidence may, of course, serve a dual purpose. Close paraphrasing might, for instance, be evidence both of copying-in-fact and of improper appropriation. The problem with the *Arnstein* formulation is that it risks intermixing the two concepts.

²⁵ Independent creation of substantially similar works does not infringe because liability depends on reproduction of the plaintiff's work. See, e.g., 4 NIMMER ON COPYRIGHT, *supra* note 3, § 13.01[B]; 3 PATRY, *supra* note 8, §§ 9:17, 9:36.

plaintiff's work.²⁶ Applied literally, the *Arnstein* test becomes illogical in cases involving defendants who admit to copying something from the plaintiff's work because it would mean that no dissective analysis could be undertaken nor expert testimony used.²⁷ The trier of fact would be directed to go straight to the lay observer/listener overall-impression test.

Given the free expression interests at stake in copyright cases involving nonliteral infringement and the Supreme Court's insistence that the idea-expression distinction is essential to the consistency of copyright and the First Amendment,²⁸ a strict application of *Arnstein* in nonindependent creation cases is difficult to justify. Some dissective analysis should be undertaken in every copyright infringement case, and expert testimony may be needed to aid the trier of fact, whether a judge or jury, in understanding the intended audience for the works, what elements are common in works of that kind, or other issues.

It is unlikely that Judge Frank expected his words in *Arnstein* would carry so much weight in infringement analysis in subsequent cases. After all, the actual holding of the *Arnstein* opinion was aimed at giving copyright plaintiffs their day in court by taking away the summary judgment option from defendants faced with claims bordering on the delusional.²⁹ Interestingly enough, it has become much easier over the years for defendants to win noninfringement rulings on summary judgment.³⁰ It thus seems that the holding of *Arnstein* has, in effect, been overruled while its dictum lives on. Go figure.

B. Krofft v. McDonald's: *The Extrinsic/Intrinsic Test*

Sid & Marty Krofft Television Productions, Inc. v. McDonald's Corp. is the Ninth Circuit's most widely cited case establishing a two-step test for judging nonliteral copyright infringement.³¹ Krofft, the creator of the H.R. Pufnstuf television program, sued McDonald's for infringement, alleging that McDonaldland commercials had copied expressive elements of the

²⁶ See, e.g., *A.A. Hoehling v. Universal City Studios, Inc.*, 618 F.2d 972, 977–78 (2d Cir. 1980) (considering a claim that a movie nonliterally infringed the copyright of a history book). The *Krofft*, *Roth*, *Nichols*, *Whelan*, and *Altai* decisions discussed later in this Essay are all dependent creation cases.

²⁷ The Nimmer treatise is critical of *Arnstein* on this ground. See 4 NIMMER ON COPYRIGHT, *supra* note 3, § 13.03[E][3][a][i].

²⁸ *Eldred v. Ashcroft*, 537 U.S. 186, 219–20 (2003).

²⁹ *Arnstein*, 154 F.2d at 469.

³⁰ See, e.g., 2 GOLDSTEIN, *supra* note 8, § 9.2, n.2.

³¹ 562 F.2d 1157 (9th Cir. 1977), *superseded on other grounds by* Copyright Act of 1976, Pub. L. No. 94-553, § 504, 90 Stat. 2541, 2585 (codified at 17 U.S.C. § 504(b) (2006)), *as recognized in* *Dream Games of Ariz., Inc. v. PC Onsite*, 561 F.3d 983, 988 (9th Cir. 2009). As of February 8, 2013, *Krofft* had been positively cited in 309 federal court decisions on the subject of copyright in the WestlawNext database, at least once in every circuit. Forty-six percent of those cites are from jurisdictions outside of the Ninth Circuit, which is indicative of the decision's influence.

Pufnstuf programs.³² A jury ruled in Krofft's favor; McDonald's appealed; the Ninth Circuit affirmed.³³

The main defense in *Krofft* was that the McDonaldland characters and settings were too different from the Pufnstuf characters and settings to infringe. The defendants argued their case "by dissecting the constituent parts of the Pufnstuf series—characters, setting, and plot—and pointing out the dissimilarities between these parts and those of the McDonaldland commercials."³⁴ They analyzed "the clothing, colors, features, and mannerisms of each character."³⁵ Pufnstuf wore a cummerbund, for instance, whereas the McDonaldland mayor wore a diplomat's sash.

Several of the most damning facts in *Krofft* demonstrated the dependence of the McDonaldland commercials on H.R. Pufnstuf characters and settings. In early 1970 the Needham advertising agency approached Krofft to express interest in negotiating a deal to base a commercial campaign for McDonald's on Pufnstuf characters. After numerous telephone exchanges about this possibility and one in-person visit, Needham informed Krofft that "it was going forward with the idea of a McDonaldland advertising campaign based on the H.R. Pufnstuf series," acknowledging "the need to pay the Kroffts a fee for preparing artistic designs and engineering plans."³⁶ However, shortly thereafter Needham abruptly informed Krofft "that the advertising campaign had been cancelled" when, in fact, it was proceeding ahead without a license.³⁷ Needham not only hired former Krofft employees to design the costumes and sets for the McDonaldland commercials, but "also hired the same voice expert" that Krofft had for the Pufnstuf character voices.³⁸

The jury was almost certainly swayed by this evidence, as well as by evidence that the Kroffts were unable to obtain new licenses for their Pufnstuf characters or extend existing licenses because of the competition with McDonaldland merchandise.³⁹

³² *Krofft*, 562 F.2d at 1161–62.

³³ *Id.* at 1162, 1175.

³⁴ *Id.* at 1165.

³⁵ *Id.* at 1166–67.

³⁶ *Id.* at 1161 & n.2.

³⁷ *Id.*

³⁸ *Id.* It did not help McDonald's case with the jury or the appellate court that Needham deceived Krofft in some respects about its arrangement with McDonald's. *Id.* at 1161 n.2.

³⁹ *Id.* at 1162. The Ice Capades cancelled its license for Pufnstuf characters and instead licensed McDonaldland characters. *Id.* The jury may also have been swayed by the fact that Krofft was a family firm that had been in the entertainment industry for forty years. *Id.* at 1161 n.1. Its biggest hit, H.R. Pufnstuf, had only been showing on NBC for a few months before Needham contacted the Kroffts about a possible deal. *Id.* at 1161. The jury may have perceived that a large corporation and well-heeled advertising agency were taking unfair advantage of a smaller creative firm. There was, in other words, an unfair competition undercurrent in *Krofft*.

The court in *Krofft* announced its own two-step nonliteral infringement test, consciously adapted from *Arnstein*. The court called the first step “extrinsic” because “it depends not on the responses of the trier of fact, but on specific criteria which can be listed and analyzed,” including “the type of artwork involved, the materials used, the subject matter, and the setting for the subject.”⁴⁰ In this step, dissective analysis and expert testimony are permissible, as in *Arnstein*. The court characterized the second step as “intrinsic” because “it does not depend on the type of external criteria and analysis which marks the extrinsic test.”⁴¹ During the second step the trier of fact is supposed to engage in a more impressionistic judgment of infringement without the aid of dissection or expert testimony, also as in *Arnstein*.

The *Krofft* test is an improvement over the *Arnstein* test in two important ways: first, its entire focus is on sorting out whether similarities between the works exist as to elements that copyright does or does not protect, and second, it implicitly recognizes that independent creation is a separate issue. Hence, *Krofft* does not make the mistake of asking the trier of fact to determine copying-in-fact based in part on nonexpressive similarities between the works at issue before asking whether too much was taken, so it does not put defendants at the same disadvantage that *Arnstein* does. And by not trying to induce the trier to keep track of two different types of similarities and of copying, it is somewhat less confusing than *Arnstein*.

However, *Krofft* is worse in some ways than *Arnstein*. First, the “extrinsic” and “intrinsic” terminology of the *Krofft* test is inapt and confusing. As an adjective, “extrinsic” means that the thing so described is inessential, not an inherent characteristic of the thing’s true nature, or has come from the outside; foreign, extraneous, and alien are its synonyms.⁴² Characteristics such as colors, shapes, and sizes, which *Krofft*’s first step considers, are, however, inherent characteristics, not outside or foreign elements. So “extrinsic” is an inapt word to use as the name of that first step. “Intrinsic” is no more helpful, although perhaps less misleading, as a descriptor of the second step. Later cases have suggested that the two steps might be “more sensibly described as objective and subjective analyses of expression.”⁴³ Unfortunately, the Ninth Circuit has nonetheless persisted in the extrinsic/intrinsic terminology.⁴⁴

Second, as originally formulated in *Krofft*, the extrinsic step was focused on whether there was “substantial similarity in ideas” between the

⁴⁰ *Id.* at 1164.

⁴¹ *Id.*

⁴² See, e.g., *Extrinsic Definition*, MERRIAM-WEBSTER.COM, <http://www.merriam-webster.com/dictionary/extrinsic> (last visited July 25, 2013).

⁴³ *Shaw v. Lindheim*, 919 F.2d 1353, 1357 (9th Cir. 1990).

⁴⁴ See, e.g., *Cavalier v. Random House, Inc.*, 297 F.3d 815, 822 (9th Cir. 2002).

two works at issue.⁴⁵ Substantial similarity in ideas should, however, never be the basis for making an infringement determination. Copyright law does not protect ideas, no matter how similar they are. Fortunately, this error was corrected over time,⁴⁶ and creating a work that has the same or similar ideas to a pre-existing work is no longer suspicious in the Ninth Circuit.

The Ninth Circuit seems to have made this mistake in *Krofft* because it misunderstood the *Arnstein* first step. The court seemed to think that when the Second Circuit “refers to ‘copying’ which is not itself an infringement, it must be suggesting copying merely of the work’s idea.”⁴⁷ The court in *Krofft* was trying to reconcile its first step with the *Arnstein* first step, but the first steps in the two tests are really quite different. The *Arnstein* first step was focused on whether there were enough similarities between two works to defeat an independent creation claim. The *Krofft* first step, by contrast, is focused on a dissective analysis of similarities and differences in expression in the works at issue.

Third, as the intrinsic step has been applied over time, the core inquiry has become whether the defendant “captured the total ‘concept and feel’” of the plaintiff’s work.⁴⁸ After viewing representative examples of the plaintiff’s Pufnstuf show and the challenged McDonald’s commercials that featured Pufnstuf-like characters, the court concurred with the jury’s judgment that the defendant had “captured the ‘total concept and feel’ of the Pufnstuf show” and affirmed the jury’s finding of infringement.⁴⁹ The next subsection explains why courts should not use a total concept and feel test in copyright cases.

C. Roth Greeting Cards: *The Total Concept and Feel Test*

Roth Greeting Cards v. United Card Co. was the first case to articulate a total concept and feel (which this Essay will condense to “total concept”) approach to judging nonliteral infringement of the reproduction right.⁵⁰

⁴⁵ *Krofft*, 562 F.2d at 1164.

⁴⁶ *Shaw*, 919 F.2d at 1357–58.

⁴⁷ *Krofft*, 562 F.2d at 1165.

⁴⁸ *Shaw v. Lindheim*, 809 F. Supp. 1393, 1402 (C.D. Cal. 1992) (quoting *Shaw*, 919 F.2d at 1356).

⁴⁹ *Krofft*, 562 F.2d at 1167 (quoting *Roth Greeting Cards v. United Card Co.*, 429 F.2d 1106, 1110 (9th Cir. 1970)). As of February 8, 2013, 106 federal court decisions on the subject of copyright in the WestlawNext database have positively cited *Krofft* with a reference to the total concept and feel test, 64 from within the jurisdiction of the Ninth Circuit.

⁵⁰ 429 F.2d at 1110, *superseded on other grounds by* Copyright Act of 1976, Pub. L. No. 94-553, ch. 5, § 411(a), 90 Stat. 2541, 2583 (codified at 17 U.S.C. § 411(a) (2006)), *as recognized in* *Cosmetic Ideas, Inc. v. IAC/InteractiveCorp*, 606 F.3d 612, 616 n.5 (9th Cir. 2010). As of February 8, 2013, *Roth* had been positively cited in 88 federal court decisions on the subject of copyright in the WestlawNext database, at least once in all circuits except the Federal Circuit. The total concept test came to be associated more with *Krofft* than with *Roth* over time. The total concept test has been mentioned in 33 cases that cite *Roth* and in 106 cases citing *Krofft*. The total concept phrase was rarely used prior to 1980 (only 3 cases). *Krofft* may be responsible for an uptick in use of the phrase because 48 subsequent

After the Ninth Circuit embraced the total concept approach in *Krofft*, this test has become widely applied, sometimes as a one-step test and sometimes as part of the *Krofft* test.

In *Roth*, a split Ninth Circuit panel reversed a lower court dismissal of infringement claims. *Roth*'s facts help to explain why. United had made a practice of acquiring Roth cards at gift shows and retail outlets to observe "what the competition was doing."⁵¹ It then designed cards that were similar to Roth's and sold them under its own label.⁵² Roth's cards featured a cartoon-like drawing and a sentimental expression on the front of or on the inside of the card, or both. One card, for instance, featured on the front a forlorn boy, weeping, with the message "I miss you already" and the inscription "and You Haven't even Left" on the inside.⁵³ United used the same message on one of its cards, but a different drawing of a sad man. Seven greeting cards were challenged as infringements. Because of graphical differences in the cards, the trial court entered judgment for United, and Roth appealed.⁵⁴

The appellate court agreed with United that the textual material in Roth's cards, "considered apart from its arrangement on the cards and its association with artistic representations, was not original" enough to be copyrightable.⁵⁵ However, the court also stated that "all elements of each card, including text, arrangement of text, art work, and association between art work and text, [must] be considered as a whole."⁵⁶ Considering all elements together, the court concluded that the Roth cards were "both original and copyrightable."⁵⁷ With regard to infringement, while conceding that United's art work was "somewhat different" than Roth's, the court opined that "[t]he test of infringement is whether the work is recognizable by an ordinary observer as having been taken from the copyrighted source."⁵⁸ It characterized the similarities between the plaintiff's and defendant's cards as "remarkable" in the "characters depicted in the art work, the mood they portrayed, the combination of art work conveying a particular mood with a particular message, and the arrangement of the words on the greeting card."⁵⁹ This caused the court to

cases used it between 1980 and 1989. But more than half of the copyright citations to this phrase come from cases decided after 2000 (136 cases out of 259 total).

⁵¹ *Id.* (internal quotation marks omitted).

⁵² *Id.* at 1110–11.

⁵³ *Id.* at 1110 (internal quotation marks omitted).

⁵⁴ *Id.* at 1107, 1110.

⁵⁵ *Id.* at 1109.

⁵⁶ *Id.*

⁵⁷ *Id.*

⁵⁸ *Id.* at 1110 (quoting *Bradbury v. Columbia Broad. Sys., Inc.*, 287 F.2d 478, 485 (9th Cir. 1961)) (internal quotations marks omitted).

⁵⁹ *Id.* The lettering was also similar. *Id.*

conclude that “in total concept and feel the cards of United are the same as the copyrighted cards of Roth.”⁶⁰

There are several troubling things about using the total concept approach to judge nonliteral copyright infringement. For one thing, it does not focus the trier of fact’s attention on specific expressive elements of the plaintiff’s work or on whether the defendant copied those expressive elements from the plaintiff’s work. This is, however, what the infringement determination is supposed to measure.

Second, this approach makes it too easy for unprotectable elements to be swept into the infringement analysis because it is so vague and because it uncritically embraces a fuzzy totality approach. Indeed, it practically directs the trier of fact to consider conceptual similarities as a basis for infringement, even though concepts have never been protectable by U.S. copyright law.⁶¹ Indeed, § 102(b) of U.S. copyright law states that “[i]n no case does copyright protection . . . extend to any . . . concept.”⁶² Strangely enough, no court applying the total concept test has noticed that this formulation might run afoul of the strictures of § 102(b).

Third, the total concept approach contributes to the unpredictability of infringement determinations. Its vagueness makes it hard for courts to review and overturn unwarranted infringement rulings. Unless the application of this test is strictly limited—for example, to artistic and fanciful works—the total concept test is “problematic.”⁶³

Fourth and relatedly, this approach is difficult to square with the First Amendment. Although the Supreme Court has opined that copyright is consistent with the First Amendment because this law distinguishes between expression (which copyright protects) and ideas (which are beyond copyright’s reach),⁶⁴ a vague standard such as “total concept and feel” does not provide guidance as to whether too much expression has been taken from the plaintiff’s work.⁶⁵

⁶⁰ *Id.*

⁶¹ Although the unprotectability of concepts was not codified until after *Roth*, copyright commentary and case law had long recognized the unprotectability of ideas and concepts. *See, e.g.*, EATON S. DRONE, A TREATISE ON THE LAW OF PROPERTY IN INTELLECTUAL PRODUCTIONS 98 (Boston, Little, Brown & Co. 1879); Pamela Samuelson, *Why Copyright Law Excludes Systems and Processes from the Scope of Its Protection*, 85 TEX. L. REV. 1921, 1924–28 (2007).

⁶² 17 U.S.C. § 102(b) (2006). After enactment of this provision, one might have expected courts to be more skeptical of the total concept approach to infringement, but this has not occurred.

⁶³ *See, e.g.*, 3 PATRY, *supra* note 8, § 9:72.

⁶⁴ *See, e.g.*, *Eldred v. Ashcroft*, 537 U.S. 186, 219–20 (2003).

⁶⁵ *See, e.g.*, Alfred C. Yen, *A First Amendment Perspective on the Idea/Expression Dichotomy and Copyright in a Work’s “Total Concept and Feel,”* 38 EMORY L.J. 393, 410–20 (1989); *see also* Joseph P. Liu, *Copyright and Breathing Space*, 30 COLUM. J.L. & ARTS 429, 432–35 (2007) (noting that the Supreme Court in *Eldred* did not consider uncertainty in the idea–expression distinction in its First Amendment analysis).

Fifth, *Roth* is unconvincing on the merits. Judge Kilkenny, in dissent, made a strong case against the majority's holding. He agreed with his colleagues that the words on the cards were unprotectable by copyright law and that the art work on the cards, while imitated, was not infringed. However, it was illogical, in his view, to hold that "the uncopyrightable words and the imitated, but not copied art work, constitutes such total composition as to be subject to protection under the copyright laws."⁶⁶ Such a conclusion "results in the whole becoming substantially greater than the sum total of its parts."⁶⁷ There was, in other words, too little original expression and substance in Roth's cards to justify a total concept approach.⁶⁸

The *Roth* majority was probably influenced by a sense that United had engaged in unfair competition by not doing enough independent creative work. It noted, for instance, that Roth had hired writers and artists to develop its cards, whereas United employed no writers or artists.⁶⁹ The one employee whose designs were on United's cards was quite hazy in his testimony about the origins of United's cards and about his acquaintance with Roth's cards, which the majority found troubling.⁷⁰ This employee seemed to go to shows to see what United's competitors (not just Roth) were turning out and then imitate them.⁷¹ This unfairness may have tipped the scale toward infringement despite numerous visual differences in the cards.

While the *Roth* majority certainly used the total concept phrase, it did not announce this as a test that should be widely used in infringement cases. The phrase was more an off-hand comment than a well-conceived way to think about nonliteral infringement. Indeed, the test the majority purported to apply was "whether *the work* is recognizable by an ordinary observer as having been taken from the copyrighted source."⁷² It is hence somewhat bizarre that the total concept test has become so widely used in copyright cases.⁷³

⁶⁶ *Roth Greeting Cards v. United Card Co.*, 429 F.2d 1106, 1111 (9th Cir. 1970) (Kilkenny, J., dissenting).

⁶⁷ *Id.* There may be times, such as in *Krofft*, when the expressive whole is greater than the sum of its parts. *Roth* was not such a case.

⁶⁸ Judge Kilkenny distinguished *Roth* from *Detective Comics, Inc. v. Bruns Publications, Inc.*, 111 F.2d 432 (2d Cir. 1940), on which the majority had principally relied. *Id. Detective Comics* involved a close imitation of more expressive pictorial representations, verbal descriptions, and dialogue taken from Superman comics. *Id.*

⁶⁹ *Id.* at 1107–08 (majority opinion).

⁷⁰ *Id.* at 1108.

⁷¹ *Id.* at 1110–11.

⁷² *Id.* at 1110 (emphasis added) (quoting *Bradbury v. Columbia Broad. Sys., Inc.*, 287 F.2d 478, 485 (9th Cir. 1961)) (internal quotation mark omitted) (citing *White-Smith Music Publ'g Co. v. Apollo Co.*, 209 U.S. 1, 17 (1908)).

⁷³ See *infra* notes 77–88 and accompanying text.

Finally, the *Roth* opinion was careless in citing to and misquoting the Supreme Court's decision in *White-Smith Music Publishing Co. v. Apollo Co.*⁷⁴ *Apollo* was a strange case to cite in *Roth* because it concerned a very different type of infringement issue (i.e., whether piano rolls were infringing copies of musical compositions).⁷⁵ The only statement in *Apollo* that comes close to the *Roth* pincite concerned what the term "copy" means, which was "that which comes so near to the original as to give to every person seeing it the idea created by the original."⁷⁶ *Apollo* was concerned with the materiality of a copy as perceived by the human eye; a viewer could not read the musical composition alleged to infringe in *Apollo* by looking at a piano roll.

Given the many flaws of this test, it is quite surprising that the total concept approach has become an integral part of the Ninth Circuit's nonliteral infringement test and has been endorsed in numerous circuits in a wide variety of cases such as those involving similarities in fabric designs,⁷⁷ masquerade costumes,⁷⁸ slippers,⁷⁹ duffel bags,⁸⁰ rugs,⁸¹ jewelry,⁸² dolls,⁸³ children's books,⁸⁴ scripts for a television program,⁸⁵ commercials,⁸⁶ videogames,⁸⁷ and building designs.⁸⁸ Although some early cases applied

⁷⁴ 209 U.S. 1, *superseded by statute*, Copyright Act of 1976, Pub. L. No. 94-553, ch. 1, § 101, 90 Stat. 2541, 2542 (codified at 17 U.S.C. § 101 (2006)), *as recognized in* *Matthew Bender & Co. v. W. Publ'g Co.*, 158 F.3d 693, 703 (2d Cir. 1998). For *Roth's* citation to *Apollo*, see *supra* note 72 and accompanying text.

⁷⁵ *Id.* at 8–9.

⁷⁶ *Id.* at 17 (quoting *West v. Francis*, (1822) 5 B. & Ald. 737, 743, 106 Eng. Rep. 1361 (K.B.) 1363) (internal quotation mark omitted). *Apollo* is surely wrong in suggesting that infringement can be based on two works that conjure up the same ideas. The quote in *Roth* actually comes from a different case. See *Bradbury*, 287 F.2d at 485 (holding that a CBS program infringed Bradbury's book copyright).

⁷⁷ See, e.g., *Hamil Am., Inc. v. GFI*, 193 F.3d 92, 102 (2d Cir. 1999).

⁷⁸ See, e.g., *Nat'l Theme Prods., Inc. v. Jerry B. Beck, Inc.*, 696 F. Supp. 1348, 1355 (S.D. Cal. 1988).

⁷⁹ See, e.g., *Animal Fair, Inc. v. Amfesco Indus., Inc.*, 620 F. Supp. 175, 188 (D. Minn. 1985), *aff'd mem.*, 794 F.2d 678 (8th Cir. 1986).

⁸⁰ See, e.g., *Wildlife Express Corp. v. Carol Wright Sales, Inc.*, 18 F.3d 502, 510–11 (7th Cir. 1994).

⁸¹ See, e.g., *Tufenkian Imp./Exp. Ventures, Inc. v. Einstein Moomjy, Inc.*, 338 F.3d 127, 136–37 (2d Cir. 2003).

⁸² See, e.g., *Yurman Design, Inc. v. PAJ, Inc.*, 262 F.3d 101, 110–11 (2d Cir. 2001).

⁸³ See, e.g., *Aliotti v. R. Dakin & Co.*, 831 F.2d 898, 902 (9th Cir. 1987).

⁸⁴ See, e.g., *Cavalier v. Random House, Inc.*, 297 F.3d 815, 825 (9th Cir. 2002).

⁸⁵ See, e.g., *Shaw v. Lindheim*, 919 F.2d 1353, 1360 (9th Cir. 1990).

⁸⁶ See, e.g., *Stillman v. Leo Burnett Co.*, 720 F. Supp. 1353, 1359 (N.D. Ill. 1989).

⁸⁷ See, e.g., *Atari, Inc. v. Amusement World, Inc.*, 547 F. Supp. 222, 228, 230 (D. Md. 1981).

⁸⁸ See, e.g., *Shine v. Childs*, 382 F. Supp. 2d 602, 613–14 (S.D.N.Y. 2005). *Shine's* use of a total concept test has been criticized. See Daniel Su, Note, *Substantial Similarity and Architectural Works: Filtering Out "Total Concept and Feel,"* 101 NW. U. L. REV. 1851, 1878–82 (2007) (arguing that an "abstraction, filtration, comparison" test should be used in architectural work cases).

this test in cases involving computer programs,⁸⁹ this approach fell out of favor in later software copyright decisions.⁹⁰ Only rarely have courts declined to apply a total concept approach.⁹¹

Courts and juries do not inevitably reach incorrect conclusions when applying a total concept test.⁹² However, when courts have gotten to the right result in these cases, it has been despite this vague formulation, not because of it. Far better would be a test that focused the trier of fact's attention on whether there is substantial similarity in the aesthetic combination of expressive elements in the two works at issue that the defendant copied from the plaintiff's work.

D. *Nichols v. Universal Pictures: Judge Hand's Abstractions Test*

Judge Learned Hand's 1930 decision in *Nichols v. Universal Pictures Corp.* has emerged in recent decades as another influential nonliteral infringement decision.⁹³ Its approach to infringement analysis is quite similar to *Arnstein's* in some respects, although different in others. While it is not as flawed as *Arnstein*, it introduced some concepts into copyright infringement discourse that had some distortionary effects in certain computer program cases decades later.⁹⁴

At issue in *Nichols* was whether Universal had infringed Ms. Nichols's copyright in her play, *Abie's Irish Rose*, by making a motion picture, *The Cohens and The Kellys*, having a similar plot.⁹⁵ The play featured a prosperous Jewish father who wanted his son to marry a Jewish woman instead of the Gentile woman to whom the son had been attracted in the past, as well as an Irish Catholic father who wanted his daughter to marry a Catholic. After some subterfuge with the fathers, the couple invited them to a marriage ceremony, with each father assuming that his religious

⁸⁹ See, e.g., *Broderbund Software, Inc. v. Unison World, Inc.*, 648 F. Supp. 1127, 1137 (N.D. Cal. 1986).

⁹⁰ See, e.g., *Apple Computer, Inc. v. Microsoft Corp.*, 35 F.3d 1435, 1445 (9th Cir. 1994) (rejecting Apple's argument that the district court should have considered the "total concept and feel" of the works).

⁹¹ See, e.g., *Cooling Sys. & Flexibles, Inc. v. Stuart Radiator, Inc.*, 777 F.2d 485, 493 (9th Cir. 1985) (not applying total concept and feel approach to radiator parts catalogs), *overruled in part by Fogerty v. Fantasy, Inc.*, 510 U.S. 517, 533 (1994).

⁹² See, e.g., *Berkic v. Crichton*, 761 F.2d 1289, 1291, 1294 (9th Cir. 1985) (finding defendants' book and movie not substantially similar to plaintiff's screen treatment); *Eden Toys, Inc. v. Marshall Field & Co.*, 675 F.2d 498, 500 (2d Cir. 1982) (finding snowman plush toys substantially different in their total concept and feel).

⁹³ 45 F.2d 119 (2d Cir. 1930). As of February 8, 2013, *Nichols* had been positively cited 204 times in federal court decisions on the subject of copyright in the WestlawNext database and cited in every circuit. Almost half (99) of these citations are from cases decided after 1989, 60 since 1998.

⁹⁴ See, e.g., *Lotus Dev. Corp. v. Borland Int'l, Inc.*, 799 F. Supp. 203, 211–12, 217–23 (D. Mass. 1992), *rev'd*, 49 F.3d 807 (1st Cir. 1995). For a discussion of this case, see *infra* notes 102–03 and accompanying text.

⁹⁵ *Nichols*, 45 F.2d at 120–21.

preferences had been respected. Disappointment led to disaffection until a child was born that brought the families back together. The movie had a similar plot, although with some inversions (e.g., the daughter being Jewish and the son being Catholic) and some differences (e.g., an inheritance plot missing from the play). Nichols relied upon expert testimony regarding the similarities between her play and the movie.⁹⁶ The District Court was not convinced by Nichols's evidence and dismissed the action; Nichols appealed.⁹⁷

Nichols, like *Arnstein*, seems to endorse a two-step process in which a first step involves dissective analysis and a second step involves the "ingenuous" impression of a spectator.⁹⁸ *Nichols*, like *Arnstein*, also expresses some disdain toward expert testimony.⁹⁹

An important difference between *Nichols* and *Arnstein*, however, is the former's approach to dissective analysis:

Upon any work, and especially upon a play, a great number of patterns of increasing generality will fit equally well, as more and more of the incident is left out. The last may perhaps be no more than the most general statement of what the play is about, and at times might consist only of its title; but there is a point in this series of abstractions where they are no longer protected, since otherwise the playwright could prevent the use of his "ideas," to which, apart from their expression, his property is never extended.¹⁰⁰

Reviewing the similarities and differences in incident, character, and overall plot, Judge Hand concluded that "the defendant took no more—assuming that it took anything at all—than the law allowed."¹⁰¹ While not saying so directly, Judge Hand must have concluded that such similarities as existed were too high up in the abstractions hierarchy to be protectable expression.

The patterns-of-abstraction concept from the *Nichols* opinion has been quite influential in subsequent cases. It is helpful in focusing on the level at which similarities exist when making infringement determinations. One problem with the *Nichols* approach, however, has been that it seems to suggest that only relatively high-level abstractions are beyond the scope of copyright protection. Judge Hand failed to acknowledge that some very detailed and concrete elements of protected works are sometimes unprotectable as well.

⁹⁶ *Id.* at 122–23.

⁹⁷ *Id.* at 119.

⁹⁸ The first part of the opinion compares the plot and characters of the play. *Id.* at 120–21. Then toward the end of the opinion, Judge Hand speaks of the "firmer, if more naïve, ground of [the observers'] impressions." *Id.* at 123.

⁹⁹ Judge Hand thought that expert testimony had prolonged the trial and confused the issues. *Id.*

¹⁰⁰ *Id.* at 121. As of February 8, 2013, 73 federal court decisions on the subject of copyright in the WestlawNext database have quoted this passage.

¹⁰¹ *Id.*

Consider, for instance, the command hierarchy of Lotus 1-2-3. Borland International developed a spreadsheet program with an emulation interface presenting the same commands in the same order as the Lotus software in order to allow users who had constructed Lotus macros (mini-programs that allowed one stroke execution of common sequences of functions) to reuse them when they switched to Borland's competitive spreadsheet program. The District Court drew upon the Hand abstractions test to support its conclusion that the command hierarchy was part of the protectable expression of the Lotus program because it was a detailed, concrete, and original part of the Lotus program, and hence not an abstract idea.¹⁰² The First Circuit reversed because it regarded the command hierarchy as an unprotectable method of operating a spreadsheet program under § 102(b), rather like the buttons and dials on VCR machines.¹⁰³

Judge Hand's abstractions test is premised on the proposition that it is "essential to any protection of literary property . . . that the right cannot be limited literally to the text, else a plagiarist would escape by immaterial variations."¹⁰⁴ It is unfortunate, though, that Judge Hand seems almost to revel in the unpredictability of copyright. He says, for example, that "decisions cannot help much in a new case" and that "[n]obody has ever been able to fix that boundary [between ideas and expressions], and nobody ever can."¹⁰⁵ In another of his well-known copyright opinions, he says that decisions must "inevitably be *ad hoc*."¹⁰⁶ However much one might admire Judge Hand's facility with words, his glorification of copyright's unpredictability may have contributed to uncertainty about copyright boundaries for follow-on creators wanting to express themselves by drawing upon the cultural landscape in which they live.¹⁰⁷

*E. Computer Associates v. Altai:
The Abstraction, Filtration, and Comparison Test*

The most widely used test for judging nonliteral infringement of computer programs was announced by the Second Circuit in *Computer*

¹⁰² *Lotus Dev. Corp. v. Borland Int'l, Inc.*, 799 F. Supp. 203, 211–12, 217–23 (D. Mass. 1992), *rev'd*, 49 F.3d 807 (1st Cir. 1995).

¹⁰³ *Lotus Dev. Corp.*, 49 F.3d at 815–17.

¹⁰⁴ *Nichols*, 45 F.2d at 121.

¹⁰⁵ *Id.*

¹⁰⁶ *Peter Pan Fabrics, Inc. v. Martin Weiner Corp.*, 274 F.2d 487, 489 (2d Cir. 1960). As of February 8, 2013, this case had been positively cited in 326 federal court decisions on the subject of copyright in the WestlawNext database, in 54 of which the "inevitably be *ad hoc*" phrase appears.

¹⁰⁷ See, e.g., Julie E. Cohen, *Copyright, Commodification and Culture: Locating the Public Domain*, in *THE FUTURE OF THE PUBLIC DOMAIN* 121, 157–65 (Lucie Guibault & P. Bernt Hugenholtz eds., 2006) (discussing authorial interests in drawing upon the cultural landscape). There are similar First Amendment problems with the unpredictability of copyright's boundaries as with the total concept test discussed *supra* notes 64–65 and accompanying text.

*Associates International, Inc. v. Altai, Inc.*¹⁰⁸ This test, known as the “abstraction, filtration, and comparison” (which this Essay will condense to “filtration”) test, has three steps.

The first step involves constructing a hierarchy of abstractions for the plaintiff’s program.¹⁰⁹ The second step filters out various types of unprotectable elements of the program. This includes not only high-level abstractions embodied in the program, but also efficient design elements, standard programming techniques, and structural aspects that are dictated by external factors, such as the computer hardware or software with which the program at issue is intended to interoperate.¹¹⁰ The third step compares the expressive elements of the plaintiff’s program that remain after the filtration step with the elements of the defendant’s program alleged to infringe.¹¹¹ Finding infringement is warranted if there is substantial similarity in program expressions and these similarities resulted from copying.

Each step of the *Altai* filtration test involves disjunctive analysis, and expert testimony is seemingly admissible in all three steps.¹¹² The *Arnstein* approach to nonliteral infringement was sound, *Altai* concluded, “when the material under scrutiny was limited to art forms readily comprehensible and generally familiar to the average lay person.”¹¹³ But the “highly complicated and technical subject matter at the heart of [nonliteral software] claims” called for a different approach because the internal designs of computer programs were “likely to be somewhat impenetrable by lay observers.”¹¹⁴

The main issue in *Altai* was whether the parameter lists and macros of Computer Associate’s (CA) scheduling program were part of the protectable “structure, sequence, and organization” (SSO) that *Altai* had copied from CA.¹¹⁵ *Altai* accepted responsibility for infringement as to code that a former CA employee had directly copied from CA’s program into

¹⁰⁸ 982 F.2d 693, 706–11 (2d Cir. 1992). As of February 8, 2013, *Altai* had been positively cited in 236 federal court decisions on the subject of copyright in the WestlawNext database and has been cited in every circuit except the D.C. Circuit. More than half of those citations are from jurisdictions outside the Second Circuit.

¹⁰⁹ *Id.* at 706–07. The lowest level of this hierarchy would be the source or object code, and the highest level would be the ultimate function of the program. The court in *Altai* drew this abstractions analysis from Judge Hand’s *Nichols* decision and said it was adaptable to computer programs. *Id.*

¹¹⁰ *Id.* at 707–10.

¹¹¹ *Id.* at 710.

¹¹² The Second Circuit left to the trial court’s discretion whether to admit expert testimony. *Id.* at 713. The district court in *Altai* had appointed a computer scientist expert to testify about the programs’ similarities and differences. *Id.* at 712–13.

¹¹³ *Id.* at 713.

¹¹⁴ *Id.*

¹¹⁵ *Id.* at 706, 714–15 (quoting *Whelan Assocs., Inc. v. Jaslow Dental Lab., Inc.*, 797 F.2d 1222, 1224 n.1 (3d Cir. 1986)) (internal quotation marks omitted).

Altai's software, but argued that its reimplementing of parameter lists and macros had resulted in noninfringing code.¹¹⁶ The district court agreed, finding that the parameter lists and macros were dictated by external factors, that is, by the constraints imposed by the interfaces of the three IBM operating system programs with which CA and Altai's scheduling programs were designed to interoperate.¹¹⁷ Applying the filtration test, the Second Circuit affirmed the lower court's ruling of noninfringement.¹¹⁸

The *Altai* filtration test was developed in reaction to another software-specific test developed by the Third Circuit in *Whelan Associates, Inc. v. Jaslow Dental Laboratory, Inc.*¹¹⁹ The *Whelan* decision had interpreted copyright law as extending protection to program SSO as long as there was more than one way to structure a program to achieve certain functions and to program "look and feel," by which it seemed to mean the manner in which programs carried out their functions.¹²⁰ The *Whelan* test for infringement was this:

[T]he purpose or function of a utilitarian work would be the work's idea, and everything that is not necessary to that purpose or function would be part of the expression of the idea. . . . Where there are various means of achieving the desired purpose, then the particular means chosen . . . is expression, not idea.¹²¹

Altai noted the mixed reception *Whelan* had received in the case law and the heavy criticism levied against it in the academic literature.¹²² While agreeing with *Whelan* that program structure could sometimes be protected expression, the court in *Altai* thought that *Whelan* displayed a "flawed understanding" of program methods of operation and failed to recognize that the "essentially utilitarian nature" of computer programs limited the extent of copyright protection available to them.¹²³

As important as was *Altai*'s recognition that copyright protection does not extend to efficient program designs, standard programming techniques, or elements of programs dictated by external factors, *Altai* did not call for exclusion of program "procedure, process, system, [or] method of operation," even though the copyright statute explicitly states that "[i]n no case does copyright protection . . . extend" to such elements.¹²⁴ The court did acknowledge that programs were process-oriented works and that

¹¹⁶ *Id.* at 699–701.

¹¹⁷ *Computer Assocs. Int'l, Inc. v. Altai, Inc.*, 775 F. Supp. 544, 550, 561–62 (E.D.N.Y. 1991), *aff'd in part, vacated in part*, 982 F.2d 693.

¹¹⁸ *Altai*, 982 F.2d at 714–15.

¹¹⁹ 797 F.2d 1222.

¹²⁰ *Id.* at 1246.

¹²¹ *Id.* at 1236 (emphasis omitted).

¹²² *Altai*, 982 F.2d at 705.

¹²³ *Id.* at 704, 706.

¹²⁴ 17 U.S.C. § 102(b) (2006).

program processes, like the bookkeeping processes at issue in the “seminal” *Baker v. Selden* decision,¹²⁵ were ineligible for copyright protection.¹²⁶ And yet, the filtration step of its test did not direct the exclusion of these elements, as it should have. Some subsequent decisions have rectified this omission.¹²⁷

II. SEVEN WAYS TO IMPROVE NONLITERAL INFRINGEMENT ANALYSIS

This Part will discuss seven ways to improve infringement analysis in nonliteral similarity cases. First, triers of fact should do some analytic dissection and make some overall-impression judgment in virtually every nonliteral similarity case, and the impression judgment should be made keeping in mind the existence of unprotectable elements in the works at issue. Second, courts should be more explicit than they have generally been about which elements in protected works are unprotectable by copyright law as they go about making judgments as to nonliteral infringement. Third, dissection should be given more emphasis than impression when cases involve works having a “thin” scope of protection to ensure that unprotectable elements are not inadvertently protected when considering overall impressions. Fourth, overall impression should be given more emphasis in cases involving artistic and fanciful works. Fifth, while courts should be careful about the scope of permissible testimony to be offered by experts in nonliteral infringement cases, there should not be a blanket rule against admitting such testimony. (The matrix in the Appendix aims to illustrate these first five principles.) Sixth, plaintiffs in nonliteral similarity cases should have to prove not only that the defendants’ work is substantially similar to theirs, but also that the defendants appropriated a sufficient quantum of expression from the plaintiffs to have caused commercial harm. Seventh, courts should inquire whether the defendant had access to and copied something from the plaintiff’s work only when the defendant asserts he independently created the same or a similar work. When independent creation has been claimed, scrutiny into access and copying of something from the plaintiff’s work should be undertaken *after* a finding of substantial similarity in expression in order to avoid the unfair prejudice that may occur under the *Arnstein* test.

A. *Doing Dissection and Impression in Virtually All Cases*

Underlying the two-step tests in *Arnstein* and *Krofft* is an intuition that triers of fact in nonliteral similarity cases should engage in some dissective

¹²⁵ 101 U.S. 99, 107 (1880) (holding bookkeeping system and forms unprotectable by copyright); see also Samuelson, *supra* note 61, at 1969–73 (discussing the implications of *Baker* for computer program copyrights).

¹²⁶ *Altai*, 982 F.2d at 704.

¹²⁷ See, e.g., *Gates Rubber Co. v. Bando Chem. Indus., Ltd.*, 9 F.3d 823, 836 (10th Cir. 1993).

analysis (e.g., of similarities and differences between the works at issue) as well as make a more holistic or overall impressionistic judgment as to whether the defendant's appropriation of expression from the plaintiff's work was substantial enough to subject her to liability for infringement. A related intuition is that dissection should come first, and impression second.

These are sound intuitions in most cases. The only exception is when the protected work is highly complex and technical (e.g., internal design elements of computer programs) or is otherwise inaccessible to the trier of fact (e.g., in Arabic). In those cases, the infringement decision should be based solely on dissective analysis, and expert testimony may be useful in aiding the trier of fact to reach a sound legal conclusion.

One difference between this Essay's approach and the *Arnstein* and *Krofft* tests is the recommendation that the trier of fact should keep the results of his dissective analysis in mind as he proceeds to the holistic-impression stage. And unlike *Krofft* and *Roth*, no emphasis should be placed on the total concept and feel of the work.

B. Distinguishing Protectable and Unprotectable Elements

Too often, as in *Nichols*, courts assume that only abstract ideas are beyond copyright's scope. There are, however, many categories of unprotectable elements that may be embodied in copyrighted works, as the statute and case law have recognized. They include:

- ideas, concepts, principles, theories, abstractions, and the like;¹²⁸
- data, information, facts, research, know-how, and the like;¹²⁹
- processes, procedures, systems, methods of operation, functions, and the like;¹³⁰
- rules, laws, judicial opinions, regulations, and the like;¹³¹
- common or standard elements for works of that kind, *scenes a faire*, and the like;¹³²
- public domain works or features;¹³³
- original elements drawn from another author's work;¹³⁴

¹²⁸ § 102(b).

¹²⁹ See, e.g., *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 350–51 (1991); *A.A. Hoehling v. Universal City Studios, Inc.*, 618 F.2d 972, 978–79 (2d Cir. 1980).

¹³⁰ § 102(b).

¹³¹ See, e.g., *Veeck v. S. Bldg. Code Cong. Int'l, Inc.*, 293 F.3d 791, 794–95 (5th Cir. 2002) (en banc).

¹³² See, e.g., *Cavalier v. Random House, Inc.*, 297 F.3d 815, 823 (9th Cir. 2002).

¹³³ See, e.g., *L. Batlin & Son, Inc. v. Snyder*, 536 F.2d 486, 489–90 (2d Cir. 1976) (en banc).

¹³⁴ See, e.g., *Apple Computer, Inc. v. Microsoft Corp.*, 799 F. Supp. 1006, 1022–23 (N.D. Cal. 1992).

- works or features of works as to which there is only one or a very small number of ways to express an idea, so that merger of idea and expression is warranted;¹³⁵
- designs of useful articles depicted in copyrighted works;¹³⁶ and
- features of works that are dictated by functionality or other external factors (e.g., market demands).¹³⁷

Courts should be more explicit than they typically have been about the unprotectability of all of these elements. Obviously, not every category of unprotectable element will be present in every work, but when instructing juries or making judgments as triers of fact, courts should identify the relevant subset of these categories as elements that should either be filtered out, as in *Altai*, or at least kept in mind as aspects of the works that should not be considered in making more holistic impressionistic judgments about infringement.

Protectable elements should also be given more attention. Courts should offer some guidance about what is original expression in relation to the particular kinds of works at issue. With data compilations, for instance, originality will generally lie in the creative selection and arrangement of elements. With dramatic works, novels, or motion pictures, protectable expression is likely to include detailed sequences of incidents and other plot elements, well-developed characters, and dialogue. With musical works, melody, lyrics, rhythm, and other specific features are protectable expression. With artistic and fanciful works, expression often exists in the overall aesthetic design.

C. *The Role of Dissection for “Thin Copyright” Works*

Many types of works have “thin” scopes of copyright protection. This includes “highly functional, utilitarian” works, such as computer programs, as to which “the Copyright Act [may] serve[] as a relatively weak barrier against public access to the theoretical interstices behind a program’s source and object codes.”¹³⁸ Fact-intensive works, such as data compilations, have a similarly thin scope of protection because the facts they contain are unprotectable.¹³⁹ Catalogues, instruction manuals, scientific and technical articles, drawings of useful articles, bookkeeping formbooks, contracts and other legal documents, research reports, and

¹³⁵ See, e.g., *Morrissey v. Proctor & Gamble Co.*, 379 F.2d 675, 678–79 (1st Cir. 1967).

¹³⁶ 17 U.S.C. § 113(b) (2006).

¹³⁷ See, e.g., *Computer Assocs. Int’l, Inc. v. Altai, Inc.* 982 F.2d 693, 707–10 (2d Cir. 1992).

¹³⁸ *Id.* at 712.

¹³⁹ *Feist Publ’ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340 349 (1991) (stating that fact compilations have thin scope); *id.* at 350 (noting that “raw facts may be copied at will”).

derivative works of public domain works are other examples of “thin copyright” works.¹⁴⁰

In some instances (e.g., data compilations), the scope of protection may be so thin that an infringement finding may be warranted only where there is substantial identity between the works. In other instances (e.g., a historical work), the scope of protection may be “thicker” because the way that the author has expressed the facts and his research discoveries is protectable.

Insofar as works have a thin scope of protection, courts should, as in *Altai*, give greater emphasis to analytic dissection, so that unprotectable elements do not inadvertently serve as the basis for a finding of infringement. Several courts have, in fact, adopted an *Altai*-like filtration test in thin copyright nonsoftware cases.¹⁴¹

An overall-impression test may be inappropriate in many thin copyright cases, such as those involving internal structures of computer programs. In other cases, however, an overall impression may be appropriate to consider similarities in expressive aspects (e.g., lines and shading of drawings of useful articles); but even so, the unprotectable elements should be kept in mind as the impression judgment is made.

D. Giving More Emphasis to Impression for Artistic and Fanciful Works

Artistic and fanciful works, such as graphic designs and cartoons, tend to enjoy a “thicker” scope of protection from copyright law than fact-intensive or functional works. The quantum of original expression in these works is often high relative to the quantum of unprotectable elements. Often an aesthetic design creatively weaves together individual aspects that, standing alone, might not be protectable. An overall-impression test is thus more likely to capture the expressive essence of the work than is a dissective analysis.

The intuition underlying the directive in *Arnstein* and *Krofft* that the last stage of infringement decisions should not be based solely on dissection is often sound in cases involving artistic and fanciful works. It would be a mistake for infringement decisions to be based on whose list of similarities and differences is longest; this would cause the trier of fact to lose sight of the overall character of the works and their expressive elements. Holistic impression may, as Judge Hand observed, be “the firmer, if more naïve, ground” for making such judgments.¹⁴² But an

¹⁴⁰ See, e.g., Samuelson, *supra* note 61, at 1921 n.4 (discussing generally how § 102(b) limits copyright protection for functional expression); see also *id.* at 1961–77 (discussing case law interpreting § 102(b)).

¹⁴¹ See, e.g., *Kohus v. Mariol*, 328 F.3d 848, 855–56 (6th Cir. 2003) (using a filtration test in a case involving the drawing of latch design); *R. Ready Prods., Inc. v. Cantrell*, 85 F. Supp. 2d 672, 675, 683 & n.10 (S.D. Tex. 2000) (applying a filtration test to advertising materials for automobile sales).

¹⁴² *Nichols v. Universal Pictures Corp.*, 45 F.2d 119, 123 (2d Cir. 1930).

overall-impression judgment should still be made with a firm recollection of the similarities and differences and of the protectable and unprotectable elements, especially when the plaintiff's work is based on a public domain work.

Artistic and fanciful works tend to lie somewhere along a broad spectrum of expressiveness, some being quite simple (e.g., Pufnstuf characters) and some very complex (e.g., Jackson Pollack's paintings). Overall impression should be given more weight in making infringement determinations when works are on the simpler end of the spectrum. Novels, dramatic plays, and motion pictures are often more complex works than graphic art or cartoons. That is, they typically embody a wider array of expressive as well as unprotectable elements. In such cases, a mixture of dissection and overall impression should be used in making nonliteral infringement judgments (see Appendix).

E. Allowing Expert Testimony When Appropriate

Arnstein, Krofft, and Nichols expressed some skepticism about expert testimony in nonliteral infringement cases. Judges have questioned whether such testimony should be utilized when determining improper appropriation, and they have worried that experts might confuse the jury or cause trials to be too long. There may be some merit to these concerns. Experts probably do add to the expense and duration of a trial; they may be confusing to the trier of fact insofar as they employ jargon which sounds more erudite than is actually warranted, sometimes their evidence will be misleading, and litigants will be tempted to urge their experts to offer a conclusion on the ultimate issue in the case.¹⁴³

However, *Arnstein, Krofft, and Nichols* may have overreacted to the risks posed by expert testimony. A better approach would be to give trial courts discretion to allow expert testimony in appropriate cases. Sometimes the appropriateness of expert testimony will be apparent, as in cases involving software or otherwise inaccessible subject matters. But experts may be helpful in a wide range of cases involving more accessible works on issues such as the range of expressive alternatives, design features that have become standard in an industry, respects in which the work at issue is distinguishable from similar works, the degree of its originality, and damages issues.¹⁴⁴ Experts may be less useful and appropriate in artistic and fanciful design cases insofar as triers of fact are able to judge the aesthetic appeal as ordinary observers as well as or better than experts.¹⁴⁵

When unsure about whether expert testimony would be appropriate, courts should ask for an offer of proof to allow them to assess the probative

¹⁴³ See, e.g., *id.* at 123.

¹⁴⁴ 3 PATRY, *supra* note 8, § 9:79.

¹⁴⁵ See *supra* Part II.D.

value of the testimony and to refine the scope of issues the expert can address. However, to allow expert testimony only in independent creation cases, as *Arnstein* directed, would be a disservice to triers of fact who want to reach sound decisions in nonliteral infringement cases.

*F. Focusing on Substantial Similarities
that Harm Copyright Markets and Incentives*

Substantial similarity sometimes seems to be a vacuous phrase in nonliteral infringement cases,¹⁴⁶ especially when courts find infringement based on quantitatively small appropriations said to be qualitatively substantial.¹⁴⁷ Also contributing to the lack of clarity in nonliteral similarity analysis is the typical judicial direction that the final judgment must be made based on a lay observer or listener's impression as to the total concept and feel of the works in question. Substantial similarity can become a more meaningful concept by close study of the fact patterns of leading cases, with attention to the expressive choices authors have made in creating their works, and the cognizable commercial harm that will result from the defendant's appropriation of this expression from the plaintiff's work.

Courts should direct the trier of fact to consider, first, who is the intended audience(s) for the works at issue; second, what level of sophistication or expertise should that audience be understood to have; and third, while keeping in mind that audience and its relative sophistication, whether the defendant appropriated a substantial enough quantum of expression from the plaintiff's work as to cause commercial harm to the plaintiff's actual or reasonably foreseeable markets or to her incentives to engage in creative work. Commercial harm has not to date been explicitly required as an essential element for proving nonliteral infringement, but it would be a reasonable development in U.S. copyright law.

Presuming harm to copyright markets may be appropriate when defendants are selling exact or near-exact copies of the whole or

¹⁴⁶ There is an extensive literature in cognitive science about what similarity means and how it should be measured. There are at least four models for what that term means. One focuses on feature-based similarities. "This model matches the features or properties of the two things being compared and computes a similarity measure according to three sets of features: those they share, those the first has that the second lacks, and those that the second has that the first lacks." ROBERT J. GLUSHKO ET AL., *THE DISCIPLINE OF ORGANIZING* 253 (Robert J. Glushko ed., 2013). Yet because of difficulties in identifying the properties on which similarities should be judged, some cognitive scientists consider the concept of similarity to be "meaningless." *Id.* at 270 n.360. And this was without reading the copyright nonliteral infringement cases.

¹⁴⁷ See, e.g., *Bridgeport Music, Inc. v. Dimension Films*, 410 F.3d 792, 796, 798 (6th Cir. 2005) (holding that a four-second sample from a sound recording is not *de minimis*); *Harper & Row, Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 579 (1985) (Brennan, J., dissenting) (noting that the majority found that a news article reproducing 300 words from a 200,000 word manuscript was infringing).

quantitatively substantial parts of the plaintiff's work in the same or in overlapping marketplace(s).¹⁴⁸ But a presumption of harm is not justifiable when defendants have engaged in some degree of transformativeness in their uses of the plaintiffs' works, as is typical in nonliteral infringement cases.¹⁴⁹

If a defendant raises a fair use defense in a nonliteral infringement case,¹⁵⁰ it will be necessary to consider not only whether the amount taken was reasonable in light of the defendant's purpose, but also whether that appropriation has harmed "traditional, reasonable, or likely to be developed markets" that copyright owners are entitled to control.¹⁵¹ If a defendant instead argues that it took only ideas or other unprotectable elements from the plaintiff's work or that similarities between the works are too abstract to be actionable, as in *Krofft*, *Roth*, and *Nichols*, it is sensible to consider harm to markets (or lack thereof) in other types of nonliteral similarity cases.

A plethora of fair use cases demonstrate that appropriations of expression from copyrighted works do not always cause actionable harm.¹⁵² Cases such as *Krofft*, however, demonstrate that nonliteral copying can sometimes cause provable harm to the plaintiff's markets. *Krofft*, after all, was unable to grant new or extend old licenses to Pufnstuf characters because of McDonald's vigorous merchandising campaign.¹⁵³

Although some commentators in the past have questioned whether harm should be a factor in copyright infringement determinations,¹⁵⁴

¹⁴⁸ See *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 591 (1994) (noting that courts can presume harm as to commercially distributed, verbatim copies). This presumption may generally be unnecessary, however, as harm will often be easy to prove when a defendant is distributing exact or near-exact copies.

¹⁴⁹ See, e.g., *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 391 (2006) (requiring plaintiffs to prove irreparable harm, among other things, to be entitled to injunctive relief); *Campbell*, 510 U.S. at 583–84 (rejecting a presumption of harm in transformative use cases); *Salinger v. Colting*, 607 F.3d 68, 82–83 (2d Cir. 2010) (vacating a preliminary injunction because there was no showing of irreparable harm as *eBay* requires in a nonliteral similarity case).

¹⁵⁰ 17 U.S.C. § 107 (2006) ("[T]he fair use of a copyrighted work . . . for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright."):

¹⁵¹ *Bill Graham Archives v. Dorling Kindersley Ltd.*, 448 F.3d 605, 614–15 (2d Cir. 2006) (quoting *Am. Geophysical Union v. Texaco, Inc.*, 60 F.3d 913, 930 (2d Cir. 1994)) (internal quotation marks omitted) (holding that copyright owners are not entitled to control all markets for transformative uses of their works).

¹⁵² See, e.g., Pamela Samuelson, *Unbundling Fair Uses*, 77 *FORDHAM L. REV.* 2537 (2009) (discussing the policy clusters in which fair use cases tend to fall).

¹⁵³ *Sid & Marty Krofft Television Prods., Inc. v. McDonald's Corp.*, 562 F.2d 1157, 1161–62 (9th Cir. 1977).

¹⁵⁴ See, e.g., David Ladd, *The Harm of the Concept of Harm in Copyright*, 30 *J. COPYRIGHT SOC'Y U.S.A.* 421, 422 (1983) (characterizing the "notion of economic 'harm' as a prerequisite for copyright protection [a]s mischievous"); Pamela Samuelson et al., *The Copyright Principles Project: Directions*

numerous contemporary commentators have made cogent arguments in favor of harm as a factor in nonliteral infringement cases.¹⁵⁵ Professor Sprigman, for instance, has argued for a per se rule against literal copying that competes in the same market as the plaintiff's work, but for a rule-of-reason approach to nonliteral copying under which a finding of infringement would depend on proof of harm to the plaintiff's markets or his incentives to create.¹⁵⁶

G. Avoiding Prejudice in Independent Creation Cases

To avoid the unfair prejudice to defendants that the *Arnstein* test may inadvertently pose,¹⁵⁷ triers of fact should consider evidence of access and similarities in unprotectable elements as relevant to infringement only when defendants assert that they independently created a similar work. Such claims seem to be relatively rare.¹⁵⁸ If a defendant does raise an independent creation defense, the trier of fact should consider, first, whether there is enough substantial similarity in the expression of the works so that, if copied from the plaintiff's work, it would justify a finding of infringement, and then go on to determine whether these expressive similarities are attributable to independent creation by two different authors or whether the defendant is lying about independent creation or has engaged in unconscious copying. Circumstantial evidence of access and of similarities unlikely to be the result of independent creation would then be relevant to test this claim.

CONCLUSION

The easiest way to avoid the “viscid quandary” that nonliteral infringement cases present would be to return to a rule that only exact or near-exact copies (i.e., slavish imitations) are infringements. While that approach has some normative appeal because it would make copyright law more predictable and provide follow-on creators with greater freedom to draw upon today's copyright-saturated cultural landscape, the weight of modern precedents and the statutory derivative-work right make this unlikely.

for Reform, 25 BERKELEY TECH. L.J. 1175, 1209–14 (2010) (discussing the cons as well as the pros of commercial harm as an element of infringement).

¹⁵⁵ See, e.g., CHRISTINA BOHANNAN & HERBERT HOVENKAMP, CREATION WITHOUT RESTRAINT 33–59, 161–99 (2012); Wendy J. Gordon, *Harmless Use: Gleaning from Fields of Copyrighted Works*, 77 FORDHAM L. REV. 2411, 2435 (2009).

¹⁵⁶ Christopher Sprigman, *Copyright and the Rule of Reason*, 7 J. TELECOMM. & HIGH TECH. L. 317, 334–40 (2009).

¹⁵⁷ See *supra* Part I.A

¹⁵⁸ *Arnstein* is the only case discussed in this Essay to have involved an independent creation defense.

There are, moreover, some normative reasons why copyright should extend to more than exact or near-exact copies.¹⁵⁹ The principal reason is that society is likely to get increased and more diverse contributions to science (broadly construed) and to culture if follow-on creators are induced to express themselves differently than previous authors. Secondly, a nonliteral infringement rule discourages the making of close imitations by those seeking to evade liability through modest variations or addition of extra detail. A nonliteral infringement rule also protects the legitimate interests of authors against unfair appropriations of the commercial value of the expressive components of their works.

The main objective of this Essay has been to explain why a one-size-fits-all approach to judging nonliteral infringement, such as *Krofft* and *Nichols* attempted, is unworkable. Given the very considerable diversity among types of copyrighted works and the wide range of expressiveness such works embody, tests for nonliteral infringement need to be tailored to recognize this. In addition, courts should consider the interests of subsequent generations of creators as well as those of current generation creators when judging nonliteral infringement cases to ensure that copyright fulfills its constitutional purpose of promoting the ongoing progress of knowledge creation and dissemination. Only the appropriation of a substantial quantum of expression from a plaintiff's work that will cause harm to the copyright owner's markets and incentives to create should result in liability. Drawing the line between infringement and fair following will never be easy, but it is not "inevitably *ad hoc*," as Judge Hand once cleverly opined. Adopting the proposals recommended in this Essay will hopefully lead to more coherence and consistency in this viscid part of U.S. copyright law.

¹⁵⁹ Some commentators have suggested that nonliteral infringements be considered as implicating the derivative-work right, with the reproduction right being reserved for exact or near-exact copying cases. See, e.g., Rebecca Tushnet, *Worth a Thousand Words: The Images of Copyright*, 125 HARV. L. REV. 683, 739 (2012). One commentator has made a cogent argument for granting monetary, but not injunctive, relief in nonliteral similarity cases. See Paul Edward Geller, *Hiroshige vs. Van Gogh: Resolving the Dilemma of Copyright Scope in Remediating Infringement*, 46 J. COPYRIGHT SOC'Y U.S.A. 39, 53 (1998).

APPENDIX

Matrix for Infringement Analysis in Different Types of Cases (with Examples)

	Artistic/Fanciful Works	Functional/Factual Works
Simple Works	More emphasis on overall holistic impression	More emphasis on dissection to filter out unprotectable elements
	Whole may be greater than sum of parts	Thin scope of protection because of unprotectables
	Less emphasis on dissection (unless variant on public domain work)	May be inappropriate to use overall holistic impression
	Experts unlikely to be needed	Expert testimony may be needed
	<i>Ex.: Krofft v. McDonald's</i>	<i>Ex.: Lotus v. Borland</i>
Complex Works	Mixture of dissection and overall impression needed	Heavily dissective analysis is generally appropriate to filter out unprotectable elements; danger that overall impression may lead to mistaken infringement ruling
	Final judgment based mostly on overall holistic impression, but keeping unprotectable elements in mind	Important to ensure that unprotectable elements are filtered out before assessing similarities in expression
	Worry that too much dissection will miss forest for the trees	Wary of overall impression
	Need for care in use of experts	Expert testimony may be needed
	<i>Ex.: Nichols v. Universal</i>	<i>Ex.: Computer Associates v. Altai</i>

