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Revisiting Innovative Technologies to Determine Substantial Similarity in Musical Composition Infringement Lawsuits

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REVISITING INNOVATIVE TECHNOLOGIES TO DETERMINE SUBSTANTIAL SIMILARITY IN MUSICAL COMPOSITION INFRINGEMENT LAWSUITS

YVETTE JOY LIEBESMAN¹

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¹ Professor of Law, Saint Louis University School of Law. The author wishes to thank Professor Ann Bartow and the faculty and staff of the Franklin Pierce Center for Intellectual Property at University of New Hampshire School of Law for organizing and inviting her to present at its IP Redux Conference in April 2018. The author also thanks the participants of the IP Redux conference for their valuable insight, conversation and feedback on this essay. She is especially grateful to Professor Zahr Said, whose strong encouragement led to this update of the original article.

Please be aware that, due to the brevity of and word limitations for this essay, most of the prose in Sections II and III is taken from the original article, either directly (omitting quotation marks indicating so) or paraphrased; footnotes are abbreviated. Full citations for sources in the summary sections can be found in the original article.

I. INTRODUCTION

A music video by Sir Mashalot² combines six award-winning popular country-western songs,³ demonstrating the amazing similarity among the tunes. Not mentioned by the mash-up⁴ artist is that none of the songs are infringing on any of the others. While all copied the same chord progressions, none copied any protected copyrightable expression, and thus none of the authors of the melodies are infringing.

It is often difficult to determine if there has been unlawful copying of a song. Currently, a judge or jury relies on music experts who analyze the songs based on a limited number of characteristics in a head-to-head comparison. In addition, these finders of fact may not have an adequate musical knowledge base to make a bona fide determination. For example, in *Dawson v. Hinshaw Music*,⁵ the finder of fact had to compare the sheet music of the two songs in question, even though he did not know how to read sheet music.⁶

In 2007, I published an article on music copyright infringement—*Using Innovative Technologies to Analyze for Similarity Between Musical Works in Copyright*

² Sir Mashalot, *Mind-Blowing Six Song Country Mashup*, YOUTUBE (Nov. 4, 2014), <https://www.youtube.com/watch?v=FY8SwIvxj8o>.

³ The six songs in the mash-up video are “Sure Be Cool if you Did” by Blake Shelton, “Close Your Eyes” by Parmalee, “This is How We Roll” by Florida Georgia Line, “Ready Set Roll” by Chase Rice, “Chillin’ It” by Cole Swindell, and “Drunk on You” by Luke Bryan.

⁴ *Mash-Up*, MERRIAM-WEBSTER DICTIONARY, <https://www.merriam-webster.com/dictionary/mash-up> (last visited May 19, 2018) (defining a “mash-up” as “a piece of music created by digitally overlaying an instrumental track with a vocal track from a different recording.”).

⁵ *Dawson v. Hinshaw Music*, 905 F.2d 731 (4th Cir. 1990).

⁶ *Id.*

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*Infringement Disputes*⁷—in which I argue that we use more reliable methods to determine whether a musical work has been unlawfully copied. My article proposed two analytical tools that would aid the finders of fact evaluating songs for substantial similarity of their copyrightable expression. My proposed method based on the Art of Music relied on song databases to determine similarities within musical genres and between songs.⁸ My Physics of Music method relied on the physical harmonics of sound for its analysis.⁹

In the intervening years, there has continued to be criticism on how unlawful music copying is determined,¹⁰ which has only strengthened the argument that we need to change the current method of dueling experts and limited comparison of the songs' harmony, melody, rhythm, and the structure of the work.¹¹ Courts continue to struggle with discerning what is unprotected and thus available for the public to use, and where that that permitted use ends.¹² There also continues to be a risk that the finder of fact is not familiar enough with the form of music at issue to make an unlawful copying judgment.¹³ An unintended audience may find that the two works sound substantially alike where an intended audience may find the works fall short of

⁷ Yvette Joy Liebesman, *Using Innovative Technologies to Analyze for Similarity Between Musical Works in Copyright Infringement Disputes*, 35 AIPLA Q.J. 331 (2007).

⁸ See *infra* § III.A.

⁹ See *infra* § III.B.

¹⁰ See, e.g., *Williams v. Gay*, 885 F.3d 1150, 1183–97 (9th Cir. 2018) (Nguyen, J., dissenting); see *infra* notes 67–106 and accompanying text.

¹¹ See Liebesman, *supra* note 7, at 339 (citing John R. Autry, Note, *Toward a Definition of Striking Similarity in Infringement Actions for Copyrighted Musical Works*, 10 J. INTELL. PROP. L. 113, 121 (2002)).

¹² See Paul M. Grinvalsky, *Idea-Expression in Musical Analysis and the Role of the Intended Audience in Music Copyright Infringement*, 28 Cal. W. L. Rev. 395, 396 (1992); see, e.g., *Apple Comput., Inc. v. Microsoft Corp.*, 779 F. Supp. 133, 135 (N.D. Cal. 1991).

¹³ Grinvalsky, *supra* note 12.

substantial similarity. Or, as noted *supra*, the judge or jury may be forced to compare sheet music even if he or she doesn't know how to read it.¹⁴ We need to replace the current method—which is what my earlier article discussed—using new, assessable, reproducible methods to evaluate substantial similarity of the copyrightable expression.

This essay first summarizes from my 2007 article the basics of music infringement and my two proposed test methods.¹⁵ I then discuss how using either of these tools to decide if a work has been unlawfully copied—that is, if there substantial similarity between two songs—could have affected the Blurred Lines lawsuit.

II. THE CURRENT TEST FOR INFRINGEMENT¹⁶

It is a well-established principle of copyright law that an author only has ownership of their original creative expression—not for the underlying idea, nor for any other uncopyrightable parts (such as facts or individual words) or that part of the work that everyone is free to copy.¹⁷ It is difficult, however to determine where to draw the line

¹⁴ *Dawson*, 905 F.2d at 737.

¹⁵ *Liebesman*, *supra* note 7, at 335–56.

¹⁶ As noted *supra*, most of the prose in this section is taken from the original article, either directly (omitting quotation marks indicating so) or paraphrased; footnotes are abbreviated. Full citations for sources in the summary sections can be found in the original article; *Liebesman*, *supra* note 7, at 335–42.

¹⁷ *See, e.g.*, *Sid & Marty Krofft Television Prods., Inc. v. McDonald's Corp.*, 562 F.2d 1157, 1163 (9th Cir. 1977) (“It is an axiom of copyright law that the protection granted to a copyrighted work extends only to the particular expression of the idea and never to the idea itself. This principle attempts to reconcile two competing social interests: rewarding an individual’s creativity and effort while at the same time permitting the nation to enjoy the benefits and progress from use of the same subject matter.” (citing *Mazer v. Stein*, 347 U.S. 201, 217–18 (1954); *Baker v. Selden*, 101 U.S. 99, 102-03 (1879))).

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between an unprotectable idea and a protectable original expression. Finders of fact follow Judge Learned Hand's idea/expression model from the 1930 Second Circuit case, *Nichols versus Universal Pictures*,¹⁸ where he declared that one analyzes the specificity of the expression—and thus copyright protection—in layers. Moving from specific to general, at some point the level of character development, themes, and dialogue would no longer be protected expression, but would reach the level of being an unprotected idea.¹⁹

Songs often use the same uncopyrightable note or chord sequence that anyone is free to copy, and no one who uses the sequence or the “groove” or “feeling” is infringing.²⁰ It is not always easy, however, to remove the uncopyrightable elements from those the author has the right to control. For example, if one considered individual notes in a song as unprotectable and removed them from the infringement analysis, then there would be nothing left to examine, even though unprotectable individual notes may be combined in an original copyrightable expression,²¹ analogous to how unprotectable individual words can be

¹⁸ *Nichols v. Universal Pictures Corp.*, 45 F.2d 119 (2d Cir. 1930). (examining a dispute between a movie, “*The Cohens and The Kellys*,” and a play, “*Abie’s Irish Rose*,” which had the same basic plot—a Jewish boy marries an Irish Catholic girl—where both the play and movie revolve around the differences between their families and the turmoil their unions cause.

¹⁹ *Id.* at 87.

²⁰ *Williams v. Gaye*, 885 F.3d 1150, 1185 (9th Cir. 2018) (Nguyen, J., dissenting).

²¹ *Apple Comput., Inc.*, 779 F. Supp. at 135–36 (“The problem with analytic dissection of copyrighted works is that carried to an extreme, it can preclude copyright protection for works which deserve protection in that they represent creative effort which the copyright laws seek to foster.”) (discussing that, because a musical note is both the idea and expression of a specific sound and cannot be expressed any other way, it would be forced to find that the merger doctrine applied).

combined to create copyrightable sentences and paragraphs and develop copyrightable works of literature.

Courts determine whether unlawful copying occurred using the test described in *Arnstein v. Porter*,²² a plaintiff with a valid copyright must demonstrate in her prima facie case (1) that the defendant actually copied the plaintiff's work; and (2) that the copying amounts to an improper or unlawful appropriation,²³ meaning that the defendant copied without permission that part of the work which the plaintiff had the right to control. For the first prong, if the defendant does not admit to copying,²⁴ the plaintiff can demonstrate actual copying by proving that the defendant had access to the work plus showing substantial similarity of the protected expression between the works.²⁵ If the plaintiff cannot directly prove access, then copying can still be demonstrated through an inference of access by showing that the similarity between the works is so striking that the possibility of independent creation, coincidence, or prior common source are, as a practical matter, precluded.²⁶

²² See *Arnstein v. Porter*, 154 F.2d 464, 468 (1946) (“[T]wo separate elements essential to a plaintiff's case in such a suit: (a) that defendant copied from plaintiff's copyrighted work and (b) that the copying (assuming it to be proved) went to far as to constitute improper appropriation.”); John R. Autry, Note, *Toward a Definition of Striking Similarity in Infringement Actions for Copyrighted Musical Works*, 10 J. INTEL. PROP. L. 113, 114 (2002) (explaining that the standard espoused by the Second Circuit in *Arnstein v. Porter*, “provide[s] the framework for almost all infringement litigation of copyrighted musical works.”).

²³ *Castle Rock Entm't v. Carol Publ'g Group, Inc.*, 150 F.3d 132, 137 (2d Cir. 1998) (“There are two main components of [a] *prima facie* case of infringement: ‘a plaintiff must first show that his work was actually copied . . . [and] then must show that the copying amounts to an improper or unlawful appropriation.’”).

²⁴ See *Arnstein*, 154 F.2d at 468.

²⁵ See, e.g., *Cavalier v. Random House, Inc.*, 297 F.3d 815, 822 (9th Cir. 2002) (using access plus substantial similarity to prove actual copying).

²⁶ See *Selle v. Gibb*, 741 F.2d 896, 901 (7th Cir. 1984).

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Proof and rebuttal of similarity is usually accomplished through a battle of dueling experts—one for the plaintiff and one for the defendant—both of whom are usually classically-trained musicologists from places like Julliard and the New England Conservatory of Music.²⁷ These experts form their opinions on the similarities and differences by analyzing and comparing the two musical scores head-to-head to determine whether there is substantial similarity between the protected elements of the copyrighted work.²⁸ They usually dissect the music into twenty-five to thirty characteristics, grouped into four major elements: melody, harmony, rhythm, and the structure of the work.²⁹

Melody is the tune or theme around which a piece of music is constructed—the character of the composition.³⁰ Harmony is defined as the relationship of each pitch included in a composition to the other pitch choices made by the composer—the essence of how one chord relates to the next, and how the chords progress from the first chord in a phrase of music to the last.³¹ Rhythm is the symmetry, tempo, and time value of notes and silences.³² One can think of rhythm as hearing the song played on a drum, where only the differential timing of the thumping of the beat is considered.³³ The structure of the work is an empirical

²⁷ Autry, *supra* note 22, at 121; *Tisi v. Patrick*, 97 F. Supp. 2d 539, 543 (S.D.N.Y. 2000) (discussing that experts for the plaintiff and defendant were from the Julliard School and the Department of Music and Performing Arts at New York University, respectively).

²⁸ See, e.g., *Williams*, 885 F.3d at 1170.

²⁹ Autry, *supra* note 22, at 138–39.

³⁰ *Id.* at 121.

³¹ In *Gaste v. Kaiserman*, 863 F.2d 1061 (2d Cir. 1988), harmony was dispositive in a finding of infringement regarding the song “Feelings,” where the court found actual copying due to evidence of a “unique musical fingerprint.”

³² Autry, *supra* note 22, at 134–35.

³³ *Id.* at 137.

analysis and comparison of the number of stanzas, measures and notes between the two songs.³⁴

Expert witnesses rely on this limited breakdown and mapping of songs to compare the musical compositions in dispute, which often leads to seemingly incongruous results. Using at most thirty characteristics is too small a number to fully quantify the differences. There is also the added risk that the musicologist’s examination includes the unprotectable elements, such as the overall vocal style.

The recent “*Blurred Lines*” lawsuit³⁵ and appellate opinion³⁶ exemplify these problems. Courts continue to struggle with implementation of the infringement test—in separating what is unprotected and thus available for the public to use, where that that permitted use stops, and discerning similarity based on what is protectable. The first musician to sing a rap song does not have a monopoly over that style, yet Marvin Gaye’s unique vocalization in “Got to Give It Up” was part of what was considered in the *Blurred Lines* dispute.³⁷

It is also problematic to rely on a jury as an adequate proxy for the music’s intended audience.³⁸ For example, if

³⁴ *Id.* at 139.

³⁵ *Williams v. Bridgeport Music, Inc.*, No. 2:13-cv-06004-JAK (AGRx), 2016 WL 6822309, at *1 (C.D. Cal. Apr. 12, 2016).

³⁶ *Id.* at 1150.

³⁷ *Id.* at 1170 (“The Thicke Parties argue that the district court abused its discretion in allowing Dr. Monson to play audio “mash-ups” superimposing Marvin Gaye’s vocals from “Got To Give It Up” onto the accompaniment in “Blurred Lines,” and vice versa. They argue that the “mash-ups” contained unprotectable elements, such as the keyboard parts, bass melodies, and Marvin Gaye’s vocals.”).

³⁸ Liebesman, *supra* note 7, at 342–344. See generally Jeanne C. Fromer & Mark A. Lemley, *The Audience in Intellectual Property Infringement*, 112 MICH. L. REV. 1251, 1253 (2014) (“[C]hoice of audience . . . collectively shapes the available body of works, products, and brands [and] [t]his critical link between the audience for IP infringement and the types of works the law permits underscores the importance of the optimal choice of audience.”).

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the songs at issue are jazz compositions, then jazz aficionados are the intended audience.³⁹ But the members of the jury may be country-western music lovers and may not be an adequate proxy for the intended audience. There is a risk that the finder of fact is not familiar enough with the form of music at issue to make an unlawful copying judgment. An unintended audience may find that the two works sound substantially alike where an intended audience may find the works fall short of substantial similarity.⁴⁰ Or, as what happened in *Dawson v. Hinshaw Music*, the judge or jury may be forced to compare sheet music even if he or she doesn't know how to read it.⁴¹ It is obvious that we need better tools to aid the finders of fact assess the similarity of songs than what courts currently use.

III. ALTERNATIVE WAYS TO COMPARE SONGS

In 2007, I proposed two new methods for analyzing similarity between musical works—one which relied on the art of music, and the other on the science of music.⁴² This section provides a brief summary of those tests, which are more fully described in the original article.⁴³

A. *Musical Elements of a Song*

Music as an art form is the rhythm, melody, harmony, vocals, and other elements that when combined—sometimes obviously, sometimes subtly—create sounds that

³⁹ Liebesman, *supra* note 7, at 342.

⁴⁰ *Id.* at 342 (citing Grinvalsky, *supra* note 12; Michael Sitzer, *Copyright Infringement Actions: The Proper Role for Audience Reactions in Determining Substantial Similarity*, 54 S. CAL. L. REV. 385 (1981)).

⁴¹ *Dawson*, 905 F.2d at 737.

⁴² Liebesman, *supra* note 7, at 344–356.

⁴³ *Id.* at §§ III A–B.

are pleasing to the ear.⁴⁴ It is this artistic nature from which the current improper appropriation standard has its roots.⁴⁵ Analyzing a song under the broad, artistic categories of harmony, melody, structure, and rhythm is a good starting point for determining the level of similarity between songs, but these categories can be expanded and subdivided into a larger number of artistic elements, beyond what is currently performed by experts.⁴⁶

Pandora’s Music Genome Project is an example of this sub-dividing, and could be analogized as a DNA database for music.⁴⁷ My previous article noted that in 2006, the Music Genome Project contains songs from over ten thousand artists which have been objectively analyzed by musicians for over 400 distinct musical characteristics, grouped into larger categories such as the familiar ones of harmony, rhythm, structure, melody, vocals, and lyrics.⁴⁸ The number of songs is likely exponentially larger now, and there are many musical databases similar to Pandora’s that analyze a multitude of artistic elements in songs.⁴⁹ These

⁴⁴ *Id.* at 344.

⁴⁵ *Id.* at 345.

⁴⁶ *Id.* at 345–349.

⁴⁷ Liebesman, *supra* note 7, at 346–47 n.81–84; E-mail from Tim Westergren, Chief Strategy Officer & Founder of Pandora Music, Inc., to Author (Nov. 5, 2005) (on file with author); Telephone Interview with Tim Westergren, Chief Strategy Officer & Founder of Pandora Music, Inc. (Nov. 7, 2005).

⁴⁸ Autry, *supra* note 22.

⁴⁹ Other streaming sites that operate using their own proprietary algorithms to select songs based on the listener’s preferences (versus sites whereby the listener chooses the songs to be played) include Spotify, SPOTIFY, <https://www.spotify.com/us/> (last visited May 25, 2018), and Slacker Radio, SLACKER RADIO, <https://www.slacker.com/> (last visited May 25, 2018). As described in its review of Slacker Radio, “[PC Magazine’s] favorite music platform began life as the human-curated alternative to the pioneering, Music Genome Project-powered Pandora Internet Radio. Since then, however, Slacker has expanded to include news and weather updates, live ESPN radio, entertaining

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database creators use proprietary software to mathematically calculate correlations between songs.⁵⁰ Listeners use an internet interface application to find music they like, and the computer program suggests tunes that are similar to previously selected music.⁵¹

This technology could be adapted to objectively and independently analyze the two songs in question in an infringement dispute, then compare them against each other and other music in that genre to determine their degree of similarity. This method would have several benefits over the current test: first, it would offer a much larger number of comparison points than the current method. Since most musicologists currently use twenty-five to thirty musical elements in their comparisons, this leads to problems of over-inclusiveness and under-inclusiveness. One may falsely find similarities based on the “big picture” when a more detailed analysis would show substantial differences or show an overall dissimilarity when there are a substantial number of small-scale similarities.⁵²

Second, unlike the current infringement analysis where the two songs are compared directly, in my method, the songs are analyzed independently of each other.⁵³ Each song is scored on an objective scale, without regard to infringement by or on other songs. Only once a song has been analyzed and the results are input into the database is it compared to the independent analysis of the other work.⁵⁴ This would remove some of the potential bias on the part of

lifestyle channels, and well-conceived themed stations that are sure to delight music fans.” Jeffrey L. Wilson, *Slacker Radio*, PC MAGAZINE (August 25, 2017), <https://www.pcmag.com/article2/0,2817,2340016,00.asp>.

⁵⁰ Telephone Interview with Tim Westergren, *supra* note 47.

⁵¹ Liebesman, *supra* note 7, at 346–47.

⁵² *Id.* at 347–49.

⁵³ *Id.* at 347–49.

⁵⁴ *Id.*

the musicologist when comparing the songs. In addition, multiple musicians analyze each song for the music streaming database, and this would overcome any skewing by musicians who may have preferences towards certain music genre.⁵⁵

B. The Physics of a Song

As an alternative to expanding the number of artistic elements analyzed, my other proposed test method used a new approach, based on the physics of music.⁵⁶ The courts continue to ignore the physical science behind the creation of musical sound. Sound is the movement of a wave by compression of molecules in the air resonating on an ear drum, which is subsequently interpreted by the brain. Music is the expression of these harmonic oscillations.⁵⁷ An individual music wave, such as the plucking of a guitar string, is a pure tone represented by a single sine wave.⁵⁸ Chords are a simultaneous combination of these individual waves.⁵⁹ Where the superimposed waves in a chord are both “positive” or both “negative,” they create a larger signal.⁶⁰ Where they are opposite directions, they create a smaller signal.⁶¹ If they are completely opposite of each other, they cancel out each other.⁶² When arranged sequentially in time,

⁵⁵ *Id.*

⁵⁶ *Id.* at 349–56.

⁵⁷ JOHN S. RIGDEN, *PHYSICS AND THE SOUND OF MUSIC* 12 (2d ed. 1985).

⁵⁸ RIGDEN, *supra* note 57; RICHARD P. FEYNMAN ET AL., 1 *THE FEYNMAN LECTURES ON PHYSICS* 50-52 (1963).

⁵⁹ RIGDEN, *supra* note 57, at 57.

⁶⁰ David Worrall, *Course Notes for The Physics and Psychophysics of Sound and Music: Superimposition of Two Sine Tones of Equal Frequency and Equal Phase*, AVATAR POLYMEDIA, <http://www.avatar.com.au/courses/PPofM/psychohearing/psycho3.html>.

⁶¹ *Id.*

⁶² Liebesman, *supra* note 7, at 352 n.103; Worrall, *supra* note 60; CNET, *The Sound of Silence*, CNET REVIEWS (July 19, 2005), http://reviews.cnet.com/4520-3000_7-1017728-1.html.

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these harmonic oscillation combinations form stanzas and musical compositions.⁶³

We can map musical sound waves similarly to how oceanographers map ocean waves, through computer modeling, which reduces the harmonic motion of waves to mathematic formulas. After transforming the sound waves of two songs into mathematical formulas representing their physical components, these expressions would be compared through what is known as a correlation analysis, to determine how similar the songs are relative to each other and to other songs in the genre.⁶⁴

As discussed in the original article, this Physics of Music test would have several benefits over the current similarity analysis. It could be used to demonstrate that a certain level of similarity is always present within a given genre. It could act as a filtering mechanism, similar to attempts at removing the uncopyrightable components prior to analysis for similarity.⁶⁵ For example, if there was an infringement dispute regarding two country-western songs, one could mathematically compare the two songs, as well as other country-western tunes. One might learn that all country-western tunes are at least 60 percent alike, yet there is a 95 percent correlation between the two songs in question, and no other song is closer than 70% similar. Or, one may find both the copyrighted song and allegedly infringing song are both copied from another song, or that there is a strong correlation between the two songs in dispute to every other song in the country-western music database.⁶⁶

⁶³ RIGDEN, *supra* note 57, at 57.

⁶⁴ Liebesman, *supra* note 7, at 353–354.

⁶⁵ *Id.* at 354.

⁶⁶ *Id.* at 355–356.

IV. A NEW ANALYTICAL METHOD: USING THE SOFTWARE ITSELF TO DETERMINE SUBSTANTIAL SIMILARITY OF COPYRIGHTABLE EXPRESSION

Advances and innovations in computer technology have led to the creation of several popular musical composition software programs. Authors create works using the software and the songs are fixed as computer files that can be read by the software for playback.⁶⁷ This results in an additional way to examine the similarity of songs—when songs are composed using the same software program, by comparing their computer code, we can eliminate that code which is not within the rights of the plaintiff composer to control, and focus our analysis on the substantial similarity for the code that is protected expression.

⁶⁷ There are several popular music composition software programs—Sibelius is the best-selling. *Sibelius*, WIKIPEDIA, [https://en.wikipedia.org/wiki/Sibelius_\(scorewriter\)](https://en.wikipedia.org/wiki/Sibelius_(scorewriter)); *Sibelius*, AVID, <http://www.avid.com/sibelius-ultimate/features>. This is followed by Finale. FINALE, <https://www.finalemusic.com/>. Other programs continue to make inroads, and new programs continue to be introduced. See also Danlismusic, *Best Music Notation Software*, COMPOSER TOOL BOX (Oct. 21, 2017), <https://composerstoolbox.com/2017/10/21/best-music-notation-software/> (“There are two main figures, Finale and Sibelius, and there are quite a few emerging/less-prominent programs, such as Dorico, Noteflight, MuseScore, and Lilypond.”). These programs accommodate the MIDI standard. The Musical Instrument Digital Interface (MIDI) is “a standard adopted by the electronic music industry for controlling devices . . . A number of software programs are available for composing and editing music that conforms to the MIDI standard. They offer a variety of functions: for instance, when you play a tune on a keyboard connected to a computer, a music program can translate what you play into a written score.” Vangie Beal, *Midi*, WEBOPEDIA, <http://www.webopedia.com/TERM/M/MIDI.htm> (last visited May 26, 2018).

V. BLURRED LINES

Either of my test methods from 2007, the Pandora-like database correlation or the physics modeling of a song, could have been valuable tools for the “Blurred Lines” finders of fact. Robin Thicke and Pharrell Williams wrote “Blurred Lines,” which seemed to incorporate some elements from Marvin Gaye’s “Got to Give it Up.” (1977).⁶⁸ Gaye’s heirs sued Thicke and Williams for copyright infringement; a jury found in favor of Gaye’s children and awarded them over five million in damages and profits, which was upheld in a 2-1 decision by the U.S. Court of Appeals for the Ninth Circuit.⁶⁹

Thicke and Williams admitted that they were inspired by “Got To Give It Up.” Williams even stated in his testimony that he “must have been channeling . . . that late-’70s feeling.”⁷⁰ As mentioned *supra*,⁷¹ however, it is not copyright infringement to write a song with the same “groove” or “feel” as another song, because what is copied is an unprotectable idea, not a protectable original expression of that idea.⁷²

Artists build on the ideas, genres, and styles that preceded them,⁷³ and there are thus countless similar-

⁶⁸ *Williams*, 885 F.3d at 1162.

⁶⁹ *Id.* at 1160, 1163.

⁷⁰ Ben Sisario & Noah Smith, *Pharrell Williams Acknowledges Similarity to Gaye Song in ‘Blurred Lines’ Case*, N.Y. TIMES (Mar. 4, 2015), <https://www.nytimes.com/2015/03/05/business/media/pharrell-williams-acknowledges-similarity-to-marvin-gaye-song-in-blurred-lines-case.html> (“I must have been channeling that feeling, that late-’70s feeling,” Mr. Williams testified in the case.”).

⁷¹ See *supra* notes 18–20 and accompanying text.

⁷² See *Williams*, 885 F.3d at 1185 (Nguyen, J., dissenting) (“‘Blurred Lines’ clearly shares the same ‘groove’ or musical genre as ‘Got to Give It Up,’ which everyone agrees is an unprotectable idea.”).

⁷³ See *Eng’g Dynamics, Inc. v. Structural Software, Inc.*, 26 F.3d 1335, 1344–45 (5th Cir. 1994) (“[T]he purpose of the Copyright Act [is] to

sounding songs, as illustrated in this essay’s introduction with the Country-Western mash-up.⁷⁴ In addition, musicians are creating with a limited musical vocabulary.⁷⁵ Musical similarities constitute copyright infringement only when one musician has copied a substantial amount of another artist’s copyright-protected material—that is, the other artist’s “original creative expression.”⁷⁶ Gaye’s “Got To Give It Up” was inspired by Johnnie Taylor’s song “Disco Lady.”⁷⁷ Anything Marvin Gaye copied directly from his Motown, funk, or disco predecessors is not “original.”⁷⁸ Gaye cannot claim copyright over material that he himself borrowed and

protect an author’s original, creative expression insofar as is compatible with general advancement of expressive arts and the free use and development of non-protectable ideas and processes.” (internal quotations and citations omitted)); *see also* Feist Publ’ns, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 349–50 (1991) (“[C]opyright assures authors the right to their original expression, but encourages others to build freely upon the ideas and information conveyed by a work.”).

⁷⁴ *See supra* § I.

⁷⁵ *See* Darrell v. Joe Morris Music Co., 113 F.2d 80 (2d Cir. 1940) (quoting Judge Learned Hand: “while there are an enormous number of possible permutations of the musical notes of the scale, only a few are pleasing; and much fewer still suit the infantile demands of the popular ear. Recurrence is not therefore an inevitable badge of plagiarism.”).

⁷⁶ *See* 17 U.S.C. § 102(a) (2012); *Feist Publ’ns, Inc.*, 499 U.S. at 346 (“[C]opyright [is]. . . limited to original intellectual conceptions of the author”).

⁷⁷ Brief for 212 Songwriters, Composers, Musicians, and Producers as Amici Curiae Supporting Appellants, *Williams*, 885 F.3d at 1150 (No. 15-56880), 2016 WL 4592129, *9–10.

⁷⁸ Jennifer Jenkins, *The “Blurred Lines” of the Law*, DUKE LAW: CENTER FOR THE STUDY OF THE PUBLIC DOMAIN, <https://law.duke.edu/cspd/blurredlines> (“Anything Marvin Gaye copied directly from his Motown, funk, or disco predecessors is not ‘original’ and should be off the table. (For example, ‘Got To Give It Up’ was inspired by Johnnie Taylor’s song ‘Disco Lady.’ Gaye cannot claim copyright over material that he himself borrowed.)”).

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has no right to stop others from using these elements in their own works.⁷⁹

We do not know why the jury found that there was copyright infringement. Why did they favor one expert over the other? Did Robin Thicke’s testimony about being on drugs bias them against him and Williams?⁸⁰ Juries do not tell us the rationale behind their verdict, so we can only speculate. It may be due to the problems applying the second part of the Ninth Circuit’s test for improper appropriation (the second element in an infringement analysis)⁸¹ where jurors are asked to decide whether “the ordinary, reasonable listener would conclude that the *total concept and feel*” of the works in question is “substantially similar.”⁸² It is very difficult to compare the “total concept and feel” without erroneously taking into account the unprotectable elements. For example, many of the features that make the two songs sound similar, such as the falsetto vocals and the use of a cowbell to provide rhythmic accents, are not copyrightable and should not have been considered by the jury.⁸³ Yet since the jurors listened to the songs, were these unprotectable elements considered as part of the “total concept and feel?”⁸⁴

⁷⁹ The Thicke Parties based their appeal on the argument “that the district court abused its discretion in admitting portions of Finell and Dr. Monson’s expert testimony, arguing that they based their testimony on unprotectable elements.” *Williams*, 885 F.3d at 1170.

⁸⁰ Confidential Deposition of Robin Thicke at 104, 118–19, *Williams v. Gay*, 885 F.3d 1150 (9th Cir. 2018) (No. 15-56880, No. 16-55089, No. 16-55626).

⁸¹ See *Castle Rock Entm’t*, 150 F.3d at 137.

⁸² See *infra* notes 102-05 and accompanying text.

⁸³ Jenkins, *supra* note 78.

⁸⁴ Because “Blurred Lines” did not use Gaye’s performance of “Got To Give It Up”—that is, Thicke and Williams did not “sample” a recording of Gaye’s performance—the only relevant musical elements were those in Gaye’s *composition*, which is limited to the music and lyrics on the sheet music deposited with the Copyright Office. This leads to one problem with the verdict—even though only the sheet music should have

Did that confuse the jury as they were performing their intrinsic analysis of the overall concept and feel of the works? Even though the judge found that these elements were not copyrightable and should be excluded from the infringement analysis, they were still part of the sound recordings heard by the jury.⁸⁵

How do we examine two songs in a way that removes these unprotectable elements? As described in the 2007 article, either of the proposed methods from my earlier article would have been able to remove the theme and style and other uncopyrightable elements, and compare only what the Plaintiff actually owns to the disputed portions of the Defendant’s work.⁸⁶ For my expanded “Pandora-like” test method, while these databases include non-copyrightable expressive elements, such as the artist’s style, these could be removed and Marvin Gaye’s unique falsetto and other uncopyrightable elements would not be incorrectly, even if inadvertently, considered by the jury. If that was not possible, the jury could listen to a recording which contained the uncopyrightable elements of genre, to help them distinguish the copyrightable from uncopyrightable parts of the songs at issue. A physics algorithm based on the musical composition would also be able to remove the uncopyrightable elements through the use of a genre baseline.

On appeal, the Ninth Circuit reviewed the decision under its “abuse of discretion” standard;⁸⁷ the majority deferred to the expert testimony that was found most

been compared, like in *Dawson*— the Blurred Lines jury heard recordings of the songs. *See id.*

⁸⁵ *Williams*, 885 F.3d at 1162.

⁸⁶ Liebesman, *supra* note 7, at 354.

⁸⁷ *Williams*, 885 F.3d at 1170 (“We review the district court’s evidentiary rulings for abuse of discretion.” (citing *Wagner v. Cty. of Maricopa*, 747 F.3d 1048, 1052 (9th Cir. 2013))).

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credible by the jury—too much so, the dissent argued.⁸⁸ In her dissent, Judge Nguyen recognized the erroneous inclusion of uncopyrightable elements used in the infringement determinations, declaring that “the majority allow[ed] the Gays to accomplish what no one has before: copyright a musical style.”⁸⁹ Judge Nguyen acknowledged the largest problem first discussed in this essay⁹⁰—that the copyright infringement case was presented as a battle of the experts in which the jury is merely crediting one expert’s factual assertions over another’s.⁹¹ Yet even Judge Nguyen problematically used those basic elements—melody, harmony and rhythm—in her discussion of the lack of similarity between the songs.⁹²

Also inferred by the dissent is that, under the majority’s rationale, Marvin Gaye is also liable for infringement for his copying of an earlier style.⁹³ Gaye should not be able to claim copyright over material that he himself borrowed and should have no right to stop others from using these elements in their own works.⁹⁴ In addition, Judge Nguyen reasoned that many of the musical elements that are common to both “Blurred Lines” and “Got To Give It Up” are “scenes à faire” elements⁹⁵—these are defining

⁸⁸ *Id.* at 1183 (Nguyen, J., dissenting) (“The majority, like the district court, presents this case as a battle of the experts in which the jury simply credited one expert’s factual assertions over another’s.”).

⁸⁹ *Id.*

⁹⁰ See *supra* notes 27-29 and accompanying text; see also Liebesman, *supra* note 7, at 337–342.

⁹¹ *Williams*, 885 F.3d at 1183 (Nguyen, J., dissenting).

⁹² *Id.* at 1187–1194.

⁹³ *Id.* at 1196 (“The Gayes, no doubt, are pleased by this outcome. They shouldn’t be. They own copyrights in many musical works, each of which (including ‘Got to Give It Up’) now potentially infringes the copyright of any famous song that preceded it.”).

⁹⁴ *Id.* at 1186–87.

⁹⁵ *Id.* at 1185 (“Even original expression can be so intimately associated with the underlying idea as to be unprotectable. Under the doctrine of

elements and building blocks of a genre or style, and can be used without infringing copyright because they are “indispensable” to creating works within a particular genre⁹⁶—which were included in the sound recordings heard by the jury.⁹⁷ In addition, Judge Nguyen questioned whether, even if some copyrightable elements had been copied, the copying rose above *de minimis*.⁹⁸

scènes à faire, expressions that are standard, stock, or common to a particular subject matter or medium are not protectable under copyright law. The doctrine of merger provides where an idea contained in an expression cannot be communicated in a wide variety of ways, the idea and expression may merge . . . [such] that even verbatim reproduction of a factual work may not constitute infringement.”).

⁹⁶ See Jenkins, *supra* note 78 (“[C]opyright’s “scènes à faire” doctrine allows anyone to use the defining elements of a genre or style without infringing copyright, because these building blocks are ‘indispensable’ to creating within that genre. No one owns the 12 bar blues, or the I-IV-V chord progression, or the two-step, or a descending melodic line, regardless of who originated them. Many of the musical elements common to ‘Blurred Lines’ and ‘Got To Give It Up’ fall into these unprotectable categories.”).

⁹⁷ The jury was allowed to hear a mash-up of “Got to Give It Up” and “Blurred Lines,” but the judge refused the Williams’ request to show the jury a video by Axis of Awesome, Cesar Alvarez, *Four Chords, 36 Songs*, YOUTUBE (Jan. 20, 2009), https://www.youtube.com/watch?v=i4_f6pfabQk, to demonstrate how a common sequence of four chords served as the basis for all of the songs in the video—ranging from the WWI song *Waltzing Matilda* to “Man in the Mirror,” by Michael Jackson and 34 others. As noted by Judge Nguyen, “Blurred Lines” had a two-chord harmonic progression at issue. *Williams*, 885 F.3d at 1185 n.1 (Nguyen, J., dissenting).

⁹⁸ *Williams*, 885 F.3d at 1183–84 (Nguyen, J., dissenting) (agreeing with the Thicke/Williams argument that the superficial similarities were either unprotectable, taken out of context, or too insufficient to rise to an actionable level); see Jenkins, *supra* note 78 (“And, to the extent that copyright-protected material from Gaye’s song recurs in Thicke’s, it is too inconsequential to be considered ‘substantial.’”).

VI. DISCUSSION

Either of my proposed test methods would have been able to remove the theme and style and other uncopyrightable elements and compare only what the Plaintiff actually owns to the disputed portions of the Defendant's work. If the analysis by one of my methods concluded that there was some copying of Gaye's protectable expression in "Blurred Lines" Thicke and Williams would still have to have copied "enough" of the original work to rise above "*de minimis*" use,⁹⁹ otherwise the copying would be deemed to be too inconsequential to be considered substantial and thus infringing.¹⁰⁰ With regard to *scènes à faire* elements, a mathematical comparison of the songs could also remove these, and would likely reveal that there was too little similarity to rise to the level of unlawful copying.

For either method to be adopted, there are hurdles that must be overcome. As discussed in the 2006 article, issues such as satisfying the Daubert Standard under Federal Rule of Evidence Rule 702 and the use of scientific evidence and whether finders of fact would accept the results of such test methods are still issues that would need to be resolved.¹⁰¹

⁹⁹ See *Newton v. Diamond*, 388 F.3d 1189, 1192–93 (9th Cir. 2004) ("For an unauthorized use of a copyrighted work to be actionable, the use must be significant enough to constitute infringement. This means that even where the fact of copying is conceded, no legal consequences will follow from that fact unless the copying is substantial. The principle that trivial copying does not constitute actionable infringement has long been a part of copyright law.").

¹⁰⁰ See *VMG Salsoul, LLC v. Ciccone*, 824 F.3d 871, 877 (9th Cir. 2016) ("[T]o establish its infringement claim, Plaintiff must show that the copying was greater than *de minimis*.").

¹⁰¹ See Liebesman, *supra* note 7, at 357–360.

VII. CONCLUSION

As illustrated throughout the *Williams* majority and dissenting opinions, there continues to be serious problems determining substantial similarity between musical works, such as removing the unprotectable elements, scènes à faire, and commonalities within a musical genre.¹⁰² Either of the methods I proposed in 2007 would satisfy the Ninth Circuit’s “extrinsic test,” which “considers whether two works share a similarity of ideas and expression as measured by external, objective criteria . . . requir[ing] analytical dissection of a work and expert testimony.”¹⁰³ “An analytical dissection, in turn, requires breaking the works down into their constituent elements, and comparing those elements for proof of copying as measured by substantial similarity.”¹⁰⁴ It would also aid the jury by limiting their intrinsic “total concept and feel” analysis¹⁰⁵ to just those disputed copyrighted portions of the work. For my expanded “Pandora-like” test method, while these databases would likely include non-copyrightable expressive elements, such as the artist’s style, these elements could be removed for purposes of the comparison, and Marvin Gaye’s unique falsetto would not be incorrectly, even if inadvertently, considered by the

¹⁰² See generally *Williams*, 885 F.3d at 1183–1197 (Nguyen, J., dissenting).

¹⁰³ Liebesman, *supra* note 7, at 338 (quoting *Swirsky v. Carey*, 376 F.3d 841, 845 (9th Cir. 2004)); see also *Williams*, 885 F.3d at 1163 (“We use a two-part test for substantial similarity; an extrinsic test and an intrinsic test. For a jury to find substantial similarity, there must be evidence on both extrinsic and extrinsic tests . . . The extrinsic test is objective. It considers whether two works share a similarity of ideas and expression as measured by external, objective criteria.”).

¹⁰⁴ *Williams*, 885 F.3d at 1163 (quoting *Swirsky*, 376 F.3d at 845).

¹⁰⁵ *Id.* at 1164 (“The intrinsic test . . . is subjective. It asks whether the ordinary, reasonable person would find the total concept and feel of the works to be substantially similar.” (quoting *Three Boys Music Corp. v. Bolton*, 212 F.3d 477, 485 (9th Cir. 2000)).

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jury.¹⁰⁶ Or they could be used by the defense to demonstrate the uncopyrightable “musical genre” commonality in both songs. A physics algorithm based on the musical composition would also be able to remove the uncopyrightable elements through the use of a genre baseline.

It is past time to explore utilizing these methods; it is now more feasible than in 2007. As Judge Nguyen concluded, “it can be very challenging for judges untrained in music to parse two pieces of sheet music for extrinsic similarity.”¹⁰⁷ So, while she notes that the reliance on music experts is problematic, she offers no solution and no alternative. I do.

¹⁰⁶ Liebesman, *supra* note 7, at 338. This intrinsic component must be ascertained by the jury. *Swirsky*, 376 F.3d at 845. Its goal is to answer the question of “whether defendant took from plaintiff’s works so much of what is pleasing to the ears of lay listeners, who comprise the audience for whom such popular music is composed, that defendant wrongfully appropriated something which belongs to the plaintiff.” *Arnstein*, 154 F.2d at 473. In other circuits, only this second part of the improper appropriation test, the ordinary observer’s analysis, is used. *See, e.g.,* *Boisson v. Banian, Ltd.*, 273 F.3d 262, 272 (2d Cir. 2001) (explaining that for the improper appropriation prong in an infringement analysis, the Second Circuit only requires that an ordinary observer compare the two works in question to determine whether the allegedly infringing work is substantially similar to the allegedly infringed work).

¹⁰⁷ *Williams*, 885 F.3d at 1197 (Nguyen, J., dissenting).