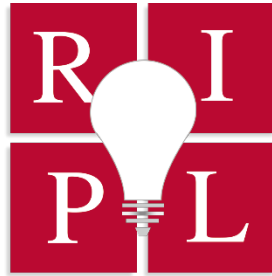


UIC REVIEW OF INTELLECTUAL PROPERTY LAW



UN-BLURRED LINES: A PROPOSAL FOR A MORE OBJECTIVE METHOD IN DETERMINING THE EXTENT OF SIMILARITIES BETWEEN MUSICAL WORKS FOR THE PURPOSE OF PROBATIVE COPYING

RACHAEL BELENSZ

ABSTRACT

In March 2013, Pharrell Williams and Robin Thicke released one of the best-selling singles of all time, "Blurred Lines". In April 2014, the family of late soul singer Marvin Gaye sent a demand notice to Williams and Thicke alleging that "Blurred Lines" infringed on Gaye's 1977 funk tune "Got to Give It Up." In a declaratory judgement action, a jury found Williams and Thicke to be liable of unlawfully copying "Got to Give It Up" and ordered one of the largest pay-outs in music-copyright history, which was affirmed on appeal. The crux of this verdict rested on expert witness analysis of the harmony, melody, rhythm, and structure of "Blurred Lines" and "Got to Give It Up." Although the expert witnesses analyzed the same musical elements, each expert applied highly subjective and differing methods, leaving legal experts and artists in fear that the verdict in *Williams v. Gaye* set a dangerous precedent. This article proposes a music-theory based method as a uniform basis of analysis that would aid expert witness testimony in establishing actual copying by showing substantial similarity between musical works. The Proposed Method suggests Counterpoint Rules to be used as a tool in analyzing musical structure in a way that incorporates melody, rhythm, and harmony. This method is designed to provide a more objective way of determining the extent of similarities for purposes of the probative similarity part of the actual copying analysis.

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RACHAEL BELENSZ*

I. INTRODUCTION

Expert witness testimony has become commonplace in music infringement claims and constitutes a significant portion of the litigation.¹ Actual copying between two musical works is established by expert witness testimony predominantly based on the four musical elements of harmony,² melody,³ rhythm,⁴ and structure,⁵ and, if applicable, a fifth element—lyrics.⁶ Expert witness analyses based around these four musical elements exudes a *seemingly* objective method on its face, but a thorough examination of how each musical element is applied by these expert witnesses reveals significantly flawed and subjective testimonies.⁷ Although these four musical elements

* © Rachael Belenz, Esq. 2021. This paper was submitted in partial fulfillment of the requirements for the Juris Doctor Degree, supervised by Ira Nathenson, Professor of Law. I am grateful to my parents Robert and Ofelia, my dog Minnie, the Collins family—Candy, Jim, Brian, Christina, and Michael, Mark and Melendre Middlebrook, Rachael Grosz, Denise Pichardo, James McCormick, Jacques de Merode, Travis Cohen, Benjamin Schmidt, Felice Biancardi, Malorie Lipman, Klara Kotenova, Nacho Acevedo, Nicolo Bates, Richard Rabello, Valeria Yulee, Kyle Rego, and Adam Bercu for all their encouragement and support.

¹ See Michael Der Manuelian, *The Role of the Expert Witness in Music Copyright Infringement Cases*, 57 FORDHAM L. REV. 127, 128 (1988) (citing R. Osterberg, *How to Prove Plagiarism of a Musical Work* 6, in Creativity Versus the Copier: The Trial of a Copyright Action (Aug. 10, 1987) (distributed at the Annual Meeting of the ABA Tort and Ins. Practice Section) (available in the files of the Fordham L. Rev.)).

² CATHERINE SCHMIDT-JONES & RUSSELL JONES, UNDERSTANDING BASIC MUSIC THEORY 117 (Rice Univ., 2007), <https://cnx.org/exports/2ad74b7b-a72f-42a9-a31b-7e75542e54bd@3.74.pdf/understanding-basic-music-theory-3.74.pdf> (Harmony is the simultaneous sound of two or more notes.).

³ *Id.* at 73 (Melody is a string of notes that are musically satisfying.).

⁴ *Id.* at 71 (The placement of the sounds in time is the rhythm of a piece of music.).

⁵ Pls. and Counter-Defs. Evid. RE: Mot. for Summ. J. or, in the Alternative, Partial Summ. J., Decl. of Sandy Wilbur at 2, Williams et al. v. Bridgeport Music, Inc., et al., LA CV13-06004 JAK (AGRx) (2014) (ECF No. 91-1) [hereinafter Decl. of Sandy Wilbur] (“The structure of a composition consists of its organization into different sections (verse, chorus, bridge, break, etc.), and the respective length of each section.”).

⁶ 1 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 2.05[D] (2018) [hereinafter NIMMER]; Yvette Joy Liebesman, *Using Innovative Technologies to Analyze For Similarity Between Musical Works In Copyright Infringement Disputes*, 5 AILPA Q.J. 331, 347 (1997); 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 also Paul J. Heald, *Reviving the Rhetoric of the Public Interest: Choir Directors, Copy Machines, and New Arrangements of Public Domain Music*, 46 DUKE L.J. 241, 252–53 (1996); Aaron Keyt, *An Improved Framework for Music Plagiarism Litigation*, 76 CAL. L. REV. 421, 431 (1988) (discussing the problems of oversimplification in an analysis using only these broad elements); Der Manuelian, *supra* note 1, at 127; Decl. of Sandy Wilbur, *supra* note 5, at 3.

⁷ Liebesman, *supra* note 6, at 347.

have not been stipulated by the courts as a uniform set of factors,⁸ they serve as the basis of what expert testimony is based around, as these four elements are what make up a musical work.⁹

Expert witness musicologists possess full power and ability to individually develop and use their own methods in analyzing these musical elements. Each method of analysis varies from another in application, weight, and scrutiny of these four musical elements.¹⁰ As a result, conflicting expert testimonies based on a limited, manipulated, and biased breakdown and mapping of songs lead to unjust results that lack a meaningful methodology when determining actual copying.¹¹

In March 2013, Pharrell Williams and Robin Thicke released one of the best-selling singles of all time, “Blurred Lines”.¹² In April 2014, the family of late soul singer Marvin Gaye sent a demand notice to Williams and Thicke alleging that “Blurred Lines” infringed on Gaye’s 1977 funk tune “Got to Give It Up.”¹³ In a declaratory judgement action, a jury found Williams and Thicke to be liable of unlawfully copying “Got to Give It Up” and ordered one of the largest pay-outs in music-copyright history, which was affirmed on appeal.¹⁴ The crux of this verdict rested on expert witness analysis of the harmony, melody, rhythm, and structure of “Blurred Lines” and “Got to Give It Up.”¹⁵ Although the expert witnesses analyzed the same musical elements, each expert applied highly subjective and differing methods, leaving legal experts and artists in fear that the verdict in *Williams v. Gaye* set a dangerous precedent.¹⁶

This article proposes a music-theory based method as a uniform basis of analysis that would aid expert witness testimony in establishing actual copying by showing substantial similarity between musical works. The Proposed Method suggests Counterpoint Rules to be used as a tool in analyzing musical structure in a way that incorporates melody, rhythm, and harmony. This method is designed to provide a more

⁸ *Swirsky v. Carey*, 376 F.3d 841, 849 (9th Cir. 2004).

⁹ NIMMER, *supra* note 6, § 2.05.

¹⁰ *Three Boys Music Corp. v. Bolton*, 212 F.3d 477, 486 (9th Cir. 2000) (upholding a jury finding of substantial similarity based on the combination of five otherwise un-protectable elements: the title hook phrase; the shifted cadence; the instrumental figures; the verse/chorus relationship; and the fade ending); Stephanie J. Jones, *Music Copyright in Theory and Practice: An Improved Approach for Determining Substantial Similarity*, 31 DUQ. L. REV. 277, 294–95 (1993) (noting that other courts have taken account of additional components of musical compositions, including melody, harmony, rhythm, pitch, tempo, phrasing, structure, chord progressions, and lyrics. Additionally, legal scholarship has suggested that timbre, tone, spatial organization, consonance, dissonance, accents, note choice and their combinations, instrumental interplay, basslines, and technological sounds can all be elements of a musical composition).

¹¹ See Amy B. Cohen, *Masking Copyright Decisionmaking: The Meaninglessness of Substantial Similarity*, 20 U.C. DAVIS L. REV. 719, 720 (1987).

¹² *Williams v. Gaye*, 885 F.3d 1150, 1159 (9th Cir. 2018).

¹³ *Id.*

¹⁴ *Id.* at 1175; Jordan Runtagh, *Songs on Trial: 12 Landmark Music Copyright Cases*, ROLLING STONE (June 8, 2016), <https://www.rollingstone.com/music/lists/songs-on-trial-10-landmark-music-copyright-cases-20160608/robin-thicke-vs-marvin-gaye-2014-20160608> (Thicke and Williams were ordered to pay the Gaye family \$7.3 million, a figure that later decreased to \$5.3 million with 50 percent of the song’s future royalties awarded to the Gaye’s of 50).

¹⁵ Decl. of Sandy Wilbur, *supra* note 6, at 6.

¹⁶ Daniel Kreps, *Pharrell Talks ‘Blurred Lines’ Lawsuit for First Time*, ROLLING STONE (Mar. 19, 2015), <https://www.rollingstone.com/music/news/pharrell-talks-blurred-lines-lawsuit-for-first-time-20150319> (Williams feared that “the verdict handicaps any creator out there who is making something that might be inspired by something else.”).

objective way of determining the extent of similarities for purposes of the probative similarity part of the actual copying analysis. The Proposed Method is designed to give a better, more objective way of determining the extent of similarities for purposes of the “probative similarity” part of the actual copying analysis, plus access. The more similarities there are between musical works based on an analysis using the eight Rules of Counterpoint, the more likely there is actual copying.¹⁷ Copying is more likely in songs that have a high number of similarities, a high duration of similarities, similar rarities within similar items, and conjunctions of the same, or different/rare types of similarities within the entire song. This Proposed Method does not determine conclusively whether there was actual copying, but rather whether the evidence of copying, when combined with access, is sufficient to send the case to the jury, and in rare cases, to allow for summary judgment. Although musicologists analyze both the composition and the audio recordings of musical works, this Proposed Method focuses solely on the notated composition.

Part II outlines copyright law and the elements in proving an infringement. This part explains the idea-expression dichotomy of copyright of how ideas are not copyrightable but how the expression of an idea can be, as well as the differences between the probative similarity and misappropriation portions of infringement analysis. This part reviews the current tests for establishing infringement in musical works by examining cases and legal scholarship that illustrate the shortcomings in determining actual copying. This part further outlines the development of music theory throughout history by using music theory to lay a foundation for Counterpoint Theory, which has dominated Western musical composition for centuries.¹⁸ The four main elements that make up music and are used in expert witness musical analysis are present within a song’s Counterpoint Rules. Music can be measured horizontally in terms of length and duration, as well as vertically in terms of its structure, which is comprised of rhythmic note placements, melodic lines, and harmonic progressions.¹⁹

Part III utilizes the music theory concepts from Part II in explaining the methods used by expert witnesses in the infamous case, *Williams v. Gaye*. Such methods used by the expert witnesses in the Ninth Circuit are broken down, dissected, and explained in terms of the musical elements present within each song. This part further applies Counterpoint Theory in analyzing the similarities and differences between “Blurred Lines” and “Got to Give It Up.”

Part IV uses the conflicting expert witness testimony from *Williams v. Gaye* to demonstrate the subjectivity and manipulation in each analysis of the four musical elements.²⁰ The author proposes a new and objective method that heavily incorporates

¹⁷ Liebesman, *supra* note 6, at 341 (“At most, twenty-five to thirty elements are used to compare the two songs, which may be too small a number to truly quantify the differences and similarities between them”).

¹⁸ SCHMIDT-JONES & JONES, *supra* note 2, at 71 (The purpose of music theory is to convey a deep description of various pieces of music in terms of their similarities and differences.).

¹⁹ Beth Marmorstein, *The History of Counterpoint*, BETH MARMORSTEIN (2001), beth.marmorstein.org/Music/Counterpoint.html (“The first dimension is the vertical dimension, which deals with the relationship between the lines and the intervals between simultaneous notes. The second dimension is the horizontal dimension, which deals with the shape, direction, individuality, and independence of each of the lines.”).

²⁰ See *Williams v. Bridgeport Music, Inc.*, No. LA CV13-06004 JAK (AGRx), 2014 U.S. Dist. LEXIS 182240, at *11–12 (C.D. Cal. Oct. 30, 2014).

music theory towards analyzing the four musical elements of two musical works by use of Counterpoint Analysis. By implementing the universal guideline of Counterpoint that has been present throughout all Western musical history, a mathematically objective method towards musical analysis may be obtained. The elements of melody, harmony, rhythm, and structure are illuminated by the rules of Counterpoint as a tool into a standard and objective method of analysis. The Proposed Method is applied to the same musical excerpts used by the expert witnesses in *Williams v. Gaye* to demonstrate how the analysis of the four musical elements can be improved. The author applies The Proposed Method to the entirety of both musical works in determining whether or not the two works are substantially similar.

Part V evaluates the Proposed method based on current copyright policy and the governing music theory treatise of Counterpoint. It explains how the Proposed Method serves as a solution to the methods while also addressing scholarly criticisms. Weighing the flaws within the current methods against the flaws within The Proposed Method confirms the overwhelming presence of subjectivity in the current method as opposed to The Proposed Method. Based on the policy that strives towards objective and fair expert witness analysis, the article concludes that The Proposed Method provides a more uniform and rigid method that is less subjective than the current methods.

II. COPYRIGHT

Copyright is based on the idea-expression dichotomy that protects a creator's expression while simultaneously encouraging the creation of new ideas.²¹ This Part covers copyright basics of a musical work and the requirements of establishing an infringement by proof of both probative copying and misappropriation. Probative copying is distinguished from misappropriation in order to further elaborate on how probative copying is applied by expert witness testimony through the circuits. The scope of expert witness testimony in establishing probative/actual copying, as will be seen, has been critiqued by current legal scholarship.

A. Copyright of a Musical Work

A copyright is the legal right granting the creator of an original work exclusive rights.²² Copyright protects the expression of ideas of an original creator that constitute "original works of authorship."²³ A creator's original work is considered an original work of authorship if it possesses "at least some minimal degree of creativity."²⁴ An original work is granted automatic protection under copyright law the moment that an original work is "fixed in any tangible medium of expression."²⁵

²¹ NIMMER, *supra* note 6, at § 19E.04 (Copyright law protects the expression of ideas rather than ideas on their own); THE FEDERALIST No. 43 (James Madison).

²² 17 U.S.C. § 106 (2021).

²³ 17 U.S.C. § 102(a) (2021).

²⁴ Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 342 (1991).

²⁵ 17 U.S.C. § 102 (2021).

An original work may be registered with the U.S Copyright Office, placing on record a verifiable account of the work's date and content for the copyright owner to produce prima facie evidence in the event of an infringement.²⁶ The author – the composer – of a musical work may copyright in two main ways: the composition in the form of a notated copy, and the sound recording.²⁷ The Copyright Act of 1976 defines sound recordings as works resulting “from the fixation of a series of musical, spoken, or other sounds, but not including the sounds accompanying a motion picture or other audiovisual work, regardless of the nature of the material objects . . . in which they are embodied.”²⁸ A musical composition consists of music, including any accompanying words.²⁹

The Copyright Act of 1909 was based on the belief that compositions were fixed and circulated in notation.³⁰ In the early 20th century, sheet music was “the primary means of circulating popular song, but as the recording industry expanded and radio broadcasting was introduced in the 1920s, recordings began to replace sheet music as the primary means of circulating popular music.”³¹ Copyright protection of modern, popular songs requires the copyright deposit that contains the melody and chords of the song.³²

B. *Elements of a Copyright Infringement Suit*

Copyright infringement is the non-authorized use of a copyrighted work that violates certain exclusive rights granted to the copyright holder.³³ An infringement claim requires proof of three elements.³⁴ First, the plaintiff must establish ownership of a valid copyright.³⁵ Second, there must have been actual copying, also known as probative copying, of the original work.³⁶ If copying is established, then the third element arises of whether the copying constituted an improper or unlawful

²⁶ 17 U.S.C. § 410 (2021).

²⁷ 17 U.S.C. § 102(a)(2) (2021) (protects musical works); 17 U.S.C. § 102(a)(7) (2021) (protects sound recordings).

²⁸ 17 U.S.C. § 101 (2021).

²⁹ SCHMIDT-JONES & JONES, *supra* note 2, at 97.

³⁰ J. Ex Parte Appl. to Shorten Time for Hr'g [of Countercl. For An Order to Shorten Time to Hear Countercl. Rule 56(d) Mot.; to Extend Consideration of and Opp'n to Pls.'s Mot. For Summ. J.; or in the Alternative, to Extend the Date for Opp'n] filed by Def. and Countercl, Frankie Christian Gaye, Nona Marvisa Gaye, Decl. of Ingrid Monson in Supp. at 2, Williams, et al. v. Bridgeport Music, Inc., et al., LA CV13-06004 JAK (AGRx) (2014) (ECF No. 95-4) [hereinafter Decl. of Ingrid Monson]; Expert Report of Ingrid Monson, Williams et al. v. Bridgeport Music Inc., et al. (2014) (No. 2:13cv6004), 2014 Misc. Filings LEXIS 6977, at *2–3.

³¹ Expert Report of Ingrid Monson, *supra* note 30, at *2–3.

³² *Id.* at *3; Lee Ann Obringer, *How Music Royalties Work*, HOWSTUFFWORKS (2018), <http://entertainment.howstuffworks.com/music-royalties6.htm>.

³³ 17 U.S.C. § 106 (2021) (defining exclusive rights of a copyright holder).

³⁴ NIMMER, *supra* note 6, § 13.01; Mark Avsec, *Nonconventional Musical Analysis and Disguised Infringement: Clever Musical Tricks to Divide the Wealth of Tin Pan Alley*, 52 CLEV. ST. L. REV. 339, 344 (2005).

³⁵ 17 U.S.C. § 410(c) (2021).

³⁶ Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 361 (1991); 17 U.S.C. § 410(c) (2021); NIMMER, *supra* note 6, § 13.01.

appropriation.³⁷ The real tasks within an infringement action are determining whether or not there has been copying of an expressed idea rather than the idea itself, and to extract the expression from the unprotected idea.³⁸

Before filing an infringement suit, a lawful copyright owner may choose to send a cease and desist letter to the party they believe to be infringing in order to negotiate and prevent litigation.³⁹ Should negotiations fail, the accused party may be able to bring a declaratory judgment action requesting the court a binding declaration that it has not infringed the other party's right.⁴⁰ The Declaratory Judgment Act permits federal courts to hear suits raising federal claims if an actual "case or controversy"⁴¹ is presented.⁴²

1. Probative Similarity as Distinguished from Improper Appropriation

When proving infringement, it is important to note the differences between the second element of probative similarity and the third element of improper appropriation. This article focuses on substantial similarity in terms of the second element: proving probative copying. Probative similarity looks to whether there was *actual* copying, whereas improper appropriation looks to whether the copying was of protected expression.⁴³ Probative copying can be established by either direct proof or by circumstantial evidence.⁴⁴ Circumstantial evidence can be shown by access to the plaintiff's work plus "substantial similarity" between the parties' works.⁴⁵ Probative similarity does not take into account whether the copying was of protected expression that constitutes an improper appropriation.⁴⁶ Instead, improper appropriation looks to whether the defendant's work has "substantial similarity" to the protected expressions of the Plaintiff's work.⁴⁷ "Substantial similarity" is thus used in different contexts in regard to establishing both probative similarity and improper appropriation and the double use of this terminology is not to be confused with one another.

In determining probative similarity, the entirety of both works – "including [all] copyrightable and non-copyrightable parts" are taken into consideration.⁴⁸ Any and all similarities found between the two works, whether of expression or not, may support a finding of probative similarity based on the high improbability of such similarities

³⁷ *Arnstein v. Porter*, 154 F.2d 464, 468 (2d Cir. 1946).

³⁸ *Sid & Marty Krofft Television Prod. v. McDonald's Corp.*, 562 F.2d 1157, 1163 (9th Cir. 1977).

³⁹ Digital Millennium Copyright Act, 17 U.S.C. § 512 (2021).

⁴⁰ The Declaratory Judgment Act, 28 U.S.C. §§ 2201, 2202 (2021).

⁴¹ *State of Texas v. West Publ'g Co.*, 882 F.2d 171, 173 (5th Cir. 1989) (An actual controversy exists according to the following two-pronged test: "(1) when the declaratory plaintiff has a real and reasonable apprehension of litigation and (2) when the declaratory plaintiff has engaged in a course of conduct that brings it into adversarial conflict with the declaratory defendant."); *NIMMER*, *supra* note 6, § 12.01.

⁴² 28 U.S.C. § 2201 (2021); *NIMMER*, *supra* note 6, § 12.01.

⁴³ See *Arnstein v. Porter*, 154 F.2d 464, 468 (2d Cir. 1946); see also *Avsec*, *supra* note 34, at 347–48.

⁴⁴ *Avsec*, *supra* note 34, at 350.

⁴⁵ *NIMMER*, *supra* note 6, § 13.01.

⁴⁶ *Id.*

⁴⁷ *Id.*

⁴⁸ *Positive Black Talk, Inc. v. Cash Money Records, Inc.*, 394 F.3d 357, 369–70 (5th Cir. 2004).

arising independently in the absence of copying.⁴⁹ Proof of access can aid in establishing copying, and the existence of probative similarity between two works can strengthen the proof that one originated from the other.⁵⁰ Probative similarity may draw a powerful inference of copying, but the identified similarities between the two works must be substantial enough to present an actionable infringement claim.⁵¹ However, an infringement claim will be dismissed as a matter of fact if both works were established to have been created independently.⁵²

Testimony of expert musicologists is typically used to establish actual copying but, on the other hand, are typically not allowed when testifying regarding unlawful appropriation.⁵³ Evidence of copying, when combined with access, is sufficient to send the case to the jury, and in rare cases, allow for summary judgment.⁵⁴

2. The Extrinsic and Intrinsic Tests

The Ninth Circuit adopted the extrinsic and intrinsic tests towards determining probative similarity.⁵⁵ The extrinsic test is another way of determining whether actual copying took place.⁵⁶

In *Sid & Marty Krofft Television Productions, Incorporated v. McDonalds Corporation*, the Ninth Circuit differentiated between the extrinsic and intrinsic tests.⁵⁷ The test for similarity of ideas is a factual one to be decided by a trier of fact and is called the "extrinsic test" because it depends on specific criteria which can be listed and analyzed, rather than depending on the responses of the trier of fact.⁵⁸ The specific criteria analyzed in the extrinsic test includes the subject matter, the materials used, the type of artwork involved, and the setting for the subject.⁵⁹ Expert testimony and analytic dissection are appropriate in the extrinsic test.⁶⁰

"The determination of when there is substantial similarity between the forms of expression is necessarily more subtle and complex If there is substantial similarity in ideas, then the trier of fact must decide whether there is substantial similarity in the expressions of the ideas so as to constitute infringement."⁶¹ The test applied in determining whether there is substantial similarity in expressions is intrinsic because it does not depend on the type of external criteria and analysis which marks the extrinsic test.⁶² Expert testimony and analytic dissection are not appropriate in the intrinsic test, since it depends on the response of the ordinary reasonable person.⁶³

⁴⁹ *Id.* at 370.

⁵⁰ NIMMER, *supra* note 6, § 13.03.

⁵¹ *Id.*

⁵² *Id.* § 13.01.

⁵³ *Sid & Marty Krofft TV Prods. v. McDonald's Corp.*, 562 F.2d 1157, 1164 (9th Cir. 1977).

⁵⁴ NIMMER, *supra* note 6, § 13.01.

⁵⁵ *Sid & Marty Krofft TV Prods.*, 562 F.2d at 1165–66.

⁵⁶ *Id.* at 1165.

⁵⁷ *Id.* at 1164–65.

⁵⁸ *Id.* at 1164.

⁵⁹ *Id.*

⁶⁰ *Sid & Marty Krofft TV Prods.*, 562 F.2d at 1164.

⁶¹ *Id.*

⁶² *Id.*

⁶³ *Id.*

The extrinsic test typically relies on expert testimony to aid an analytic dissection of a musical work in determining the probative similarity between multiple musical works.⁶⁴ This analytic dissection is then fed to the jury through the intrinsic test, who then determines which parts of the song are protected and unprotected under copyright and the degree of similarity of such parts.⁶⁵

In *Swirsky v. Carey*, the Ninth Circuit admitted that the application of the extrinsic test in assessing substantial similarity of ideas and expression to musical works “is [a] somewhat unnatural task guided by little precedent.”⁶⁶ “There is no one magical combination of [musical] factors that will automatically substantiate a musical infringement suit; each allegation of infringement will be unique.”⁶⁷ “So long as the plaintiff can demonstrate, through expert testimony that addresses some or all of these elements and supports its employment of them, that the similarity was ‘substantial’ and to ‘protected elements’ of the copyrighted work, the extrinsic test is satisfied.”⁶⁸

C. Current Methods Used by Expert Witnesses in Determining Actual Copying Between Musical Works

The extrinsic test in a music infringement suit typically relies on expert witness testimony to establish probative similarity.⁶⁹ Expert testimony is admissible if the required specialized knowledge would assist the trier of fact in understanding the evidence.⁷⁰ Expert witnesses may also provide opinion testimony, based on facts, of which the expert has little to no personal knowledge so long as such testimony will assist the trier of fact.⁷¹

Expert musicologists base their analyses on the four musical elements of harmony, melody, rhythm, and structure, and, if applicable, a fifth element—lyrics.⁷² Although this method of analysis seems uniform, it gives rise to problems of conflicting expert testimony that relies on limited breakdown and mapping of songs that leads to random, and unjust, results.⁷³ “At most, twenty-five to thirty elements are used to compare the two songs, which may be too small a number to truly quantify the differences and similarities between them.”⁷⁴ Such analyses ignore the crucial fact of music that there are many more elements than these four.⁷⁵ Different experts across different courts stress, and view, certain musical elements over others.⁷⁶ “The

⁶⁴ *Id.*

⁶⁵ *Sid & Marty Krofft TV Prods.*, 562 F.2d at 1166 (citing *Arnstein v. Porter*, 154 F.2d 464, 468 (2d Cir. 1946), *cert. denied*, 330 U.S. 851 (1947)).

⁶⁶ *Swirsky v. Carey*, 376 F.3d 841, 848 (9th Cir. 2004).

⁶⁷ *Id.* at 849.

⁶⁸ *Id.*

⁶⁹ *Id.* at 847–48.

⁷⁰ FED. R. EVID. 702.

⁷¹ FED. R. EVID. 703 (permitting a qualified expert to give opinion testimony).

⁷² NIMMER, *supra* note 6, § 2.05[D]; Liebesman, *supra* note 6, at 347; see Grinvalsky, *supra* note 6, at 396; see also Heald, *supra* note 6, at 252; Keyt, *supra* note 6, at 431; Der Manuelian, *supra* note 1, at 127; Decl. of Sandy Wilbur, *supra* note 5, at 3.

⁷³ Liebesman, *supra* note 6, at 341.

⁷⁴ *Id.*

⁷⁵ Keyt, *supra* note 6, at 430.

⁷⁶ Liebesman, *supra* note 6, at 343–44.

subjective and limited breakdown and analyses of the songs often lead to conflicting interpretations by the musical experts called to testify, and result in a credibility contest between these experts rather than actual similarity comparison between the songs.”⁷⁷

In establishing actual copying between two musical works, expert musicologists apply a variety of methods throughout the Circuits. In *Three Boys Music Corp.*, the Ninth Circuit upheld a jury finding of substantial similarity based on the combination of five otherwise un-protectable elements: the title hook phrase;⁷⁸ the shifted cadence; the instrumental figures; the verse/chorus relationship; and the fade ending.⁷⁹ Other courts have taken account of additional components of musical compositions, including melody, harmony, rhythm, pitch, tempo,⁸⁰ phrasing,⁸¹ structure, chord progressions,⁸² and lyrics.⁸³ Additionally, legal scholarship have suggested that timbre,⁸⁴ tone,⁸⁵

⁷⁷ *Id.* at 342.

⁷⁸ *Three Boys Music Corp. v. Bolton*, 212 F.3d 477, 486 (9th Cir. 2000). A hook is the most important melodic material that becomes the memorable melody by which the song is recognized. In *Three Boys Music Corp.*, analysis of the hook included its lyrics, rhythm, and pitch.

⁷⁹ *Id.* at 485.

⁸⁰ *SCHMIDT-JONES & JONES*, *supra* note 2, at 15, 48. Tempo is the speed at which a musical piece is played. The pitch of a note is how high or how low the note is.

⁸¹ *Id.* at 57. A musical phrase has a complete musical sense of its own, built around motifs to construct melodies and sections.

⁸² *Id.* at 84. A chord progression is “[a] series of chords played one after another . . . [m]usicians may describe a specific chord progression (for example, ‘two measures of A major, then a half measure of B minor and a half measure of F seventh’, or just ‘A, B minor, F seventh’) or speak more generally of classes of chord progressions (for example a ‘blues chord progression’).”

⁸³ See *Ellis v. Diffie*, 177 F.3d 503, 506 (6th Cir. 1999) (noting that the district court had compared idea, phraseology, lyrics, rhythms, chord progressions, “melodic contours,” structures, and melodies under “ordinary observer” test); *Cottrill v. Spears*, No. 02-3646, 2003 U.S. Dist. LEXIS 8823, at *9 (E.D. Pa. May 22, 2003) (unpublished disposition) (comparing pitch, chord progression, meter, and lyrics under extrinsic test); *Tisi v. Patrick*, 97 F. Supp. 2d 539, 543 (S.D.N.Y. 2000) (analyzing structure, melody, harmony, and rhythm under “striking similarity” test); *McKinley v. Raye*, No. 3:96-CV-2231-P, 1998 U.S. Dist. LEXIS 3019, at *17 (N.D. Tex. Mar. 6, 1998) (analyzing lyrics, melodies, and song structure); *Damiano v. Sony Music Entm’t, Inc.*, 975 F. Supp. 623, 631 (D. N.J. 1996) (analyzing instrumentation and melody under the extrinsic test); *Sylvestre v. Oswald*, 91 Civ. 5060 (JSM), 1993 U.S. Dist. LEXIS 7002, at *13–14 (S.D.N.Y. May 18, 1993) (analyzing melody and lyrics under “striking similarity” test); *Intersong-USA v. CBS, Inc.*, 757 F. Supp. 274, 280 (S.D.N.Y. 1991) (analyzing chord progression, structure, pitch, and harmony under substantial similarity test).

⁸⁴ *SCHMIDT-JONES & JONES*, *supra* note 2, at 72. Timbre is the general sound that one would expect of a type of instrument that does not have anything to do with the sound’s pitch, length, or loudness. For example, if a saxophone plays a note, and then a trumpet plays the same note, for the same length of time, and at the same loudness, one could still easily tell the two notes apart because a saxophone sounds different from a trumpet.

⁸⁵ *Id.* Variations in timbre between specific instruments, two different saxophones, for example, or two different saxophone players, or the same saxophone player using different types of sound in different pieces, may be called differences in tone.

spatial organization,⁸⁶ consonance,⁸⁷ dissonance,⁸⁸ accents,⁸⁹ note choice and their combinations, instrumental interplay,⁹⁰ basslines,⁹¹ and technological sounds can all be elements of a musical composition.⁹²

The Ninth Circuit has never announced a uniform set of factors to be analyzed under the extrinsic test, stating:

There is no one magical combination of [musical] factors that will automatically substantiate a musical infringement suit; each allegation of infringement will be unique. So long as the plaintiff can demonstrate, through expert testimony that addresses some or all of these elements and supports its employment of them, that the similarity was “substantial” and to “protected elements” of the copyrighted work, the extrinsic test is satisfied.⁹³

When analyzing the composition of a musical work, it is customary for the expert witness musicologists to transpose both songs into the same key.⁹⁴ After transposition, the musicologists compare accompaniment lines, harmonies, and melodic themes⁹⁵ to identify any rhythms, chords, and notes that occur simultaneously. “Such a comparison yields an opinion as to the degree of similarity between two musical pieces.”⁹⁶

D. Legal Scholarship on Current Methods

Current legal scholarship proposes a variety of methods that could help improve the methods used in establishing actual copying of an original musical work. Michael Landau and Donald E. Biederman propose specialized courts that deal solely with

⁸⁶ *Id.* at 3–4. Spatial organization refers to the relationship between notes on a staff. Music is written and read from left to right on the five horizontal lines of a staff.

⁸⁷ *Id.* at 183. Consonant notes are those that sound good, pleasant, and “stable” together when played at the same time. The human ear has no desire for the consonant chord to change to a different chord when listening to the music, making it stable in nature.

⁸⁸ *Id.* at 183–84. Dissonant notes are those that sound harsh, unpleasant, and “unstable.” When played at the same time, dissonant notes produce an instability in sound that the human ear will interpret as a desire for a chord change that resolves the dissonance.

⁸⁹ SCHMIDT-JONES & JONES, *supra* note 2, at 57. Accents are notated markings – known as dynamics – that indicate especially strong-sounding notes.

⁹⁰ *Id.* at 24. Instrumental interplay is instrument choice and their particular and/or interweaving use of them.

⁹¹ *Id.* at 84. Basslines are the lowest, continuous, notes in a musical work.

⁹² Jones, *supra* note 10, at 294–95.

⁹³ *Swirsky v. Carey*, 376 F.3d 841, 849 (9th Cir. 2004).

⁹⁴ SCHMIDT-JONES & JONES, *supra* note 2, at 18–19, 126–31; Avsec, *supra* note 34, at 354. Generally, music in a particular key will only use the notes within the scale associated with that key, as notated by the key signature. A key signature is a musical symbol located immediately after the clef that notates sharps and flats on the lines or spaces of the staff, stipulating that all notes on such lines and spaces are to be played the stipulated half step high or lower. The name of the key is further classified into either a major key or minor key, based on the type of scale that is dictated by the sharps and flats of the key signature.

⁹⁵ SCHMIDT-JONES & JONES, *supra* note 2, at 78. A theme is a relatively long melodic section that keeps reappearing in a piece of music.

⁹⁶ Avsec, *supra* note 34, at 354.

copyright claims.⁹⁷ Jamie Lund says that the optimal scenario for music copyright infringement case would be to amass a jury of musicians relatively fluent in music theory or performance and understand sheet music.⁹⁸ The Court in *Arnstein* does the opposite of this proposal, contending that “the refined ears of musical experts” are irrelevant because “the views of such persons are caviar to the general [public]--and plaintiff's and defendant's compositions are not caviar.”⁹⁹ Lund counters this argument in *Arnstein* by conducting a test with a statistically significant pool where she reaches the conclusion that musicians are capable of hearing and comprehending compositional elements of songs in a way that laypeople cannot, even after laypeople receive limited musical training.¹⁰⁰ Specifically, whereas musicians tend to focus on similarities in the melody, harmony, and rhythm, a lay participant incorrectly opined, “I think as far as music goes, if it has a different feel to it, it is a different song.”¹⁰¹

Larry Jones says that the jury should first listen to both songs on their own and then, only after, take in what experts have to say.¹⁰² This has some merit because it would be helpful for a jury to hear what the expert is dissecting before all the testimony is thrown at them all at once.¹⁰³ Jones also proposes an adoption of a definition for what a “musical idea” is in order to help specify and winnow what the musical ideas are that further implements the identification and analysis of another musical element.¹⁰⁴ Alice Kim suggests that the jury should be comprised of jurors who are familiar with the media at issue in order for jurors to make a more informed and sophisticated analysis.¹⁰⁵

Sergiu Gherman proposes a uniform set of factors that would fit every substantial similarity analysis, while still defending the practice of musical dissection in determination of extrinsic similarity.¹⁰⁶ “Instead of looking for a uniform rule that would cue litigants to the right number of factors to satisfy the extrinsic test, [Gherman's] Article suggests the focus shift to the structural elements of each song

⁹⁷ Michael Landau & Donald E. Biederman, *The Case for a Specialized Copyright Court: Eliminating the Jurisdictional Advantage*, 21 HASTINGS COMM. & ENT. L.J. 717, 730 (1999).

⁹⁸ Jamie Lund, *Fixing Music Copyright*, 79 BROOKLYN L. REV. 61, 77 (2013).

⁹⁹ See *Arnstein v. Porter*, 154 F.2d 464, 473 (2d Cir. 1946).

¹⁰⁰ Lund, *supra* note 98, at 78.

¹⁰¹ *Id.* One hundred seventy-eight mock jurors were asked to compare the plaintiff's and defendant's songs from a Ninth Circuit composition copyright infringement case. Half of the jurors heard identical compositions performed similarly, and the other half heard the identical pairs of compositions performed differently. The first half of participants heard both songs (“Songs 1 and 2”) performed as R&B ballads. The other half of participants heard Song 1 performed in a calypso style and Song 2 performed as an R&B ballad. The mock jury seemed primarily swayed by similarities in performance and not by similarities in the copyrightable elements of a composition. If representative of the real world, the results of the survey indicate a problem: jurors are considering aspects of the works that are not copyrightable. In doing so, they are impermissibly altering the statutory scope of the composition copyright.

¹⁰² Larry Jones, *Developing and Using Survey Evidence in Trademark Litigation*, 19 MEM. ST. U. L. REV. 471, 479 (1989).

¹⁰³ *Id.*

¹⁰⁴ *Id.* at 473.

¹⁰⁵ Alice J. Kim, *Expert Testimony and Substantial Similarity: Facing the Music in (Music) Copyright Infringement Cases*, 19 COLUM. J.L. & ARTS 109, 109 (1995) (citing *Dawson v. Hinshaw Music Inc.*, 905 F.2d 731, 735 (4th Cir.)).

¹⁰⁶ Sergiu Gherman, *Harmony and its Functionality: A Gloss on the Substantial Similarity Test in Music Copyrights*, 19 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 483, 491 (2009).

and the analysis of each one from the acoustical perspective.”¹⁰⁷ Gherman bases his method on the Ionian Greek Philosopher, Pythagoras’¹⁰⁸ observation that a sound “phenomenon could be represented through mathematical ratios, and that certain ratios generated ‘pleasant’ intervals and others produced ‘unpleasant’ ones.”¹⁰⁹ Gherman’s proposed method uses ratios based on intervals between notes and whether they are consonant or dissonant.¹¹⁰ The proposed method by Gherman contends that basic harmony should *not* be taken into account when determining substantial similarity between songs, as basic harmonic progressions are universal in music and prominent across all genres.¹¹¹ Gherman asserts that his method is “an outgrowth of Counterpoint and of its resulting polyphony.”¹¹² There is, however, a flaw in this assertion, which is that the Pythagorean method was developed seventeen centuries before Counterpoint Theory.

Yvette Joy Liebesman concludes that broad analysis of songs leads to contradictory and subjective results, and proposes an analysis that expands on the four musical elements typically used.¹¹³ Liebesman proposes two new tests, one being a “Mega-Element Analysis” (“MEA”) that uses about 400 distinct musical characteristics across tens of thousands of artists that utilizes methods used in the Music Genome Project.¹¹⁴ The purpose of the MEA is to find an objective test that could be used in analyzing the similarity between two songs. The MEA subjects the audio version of a song to heavy scrutiny with a thorough analysis of every single sound wave, each of which are further broken down and compared to one another through a series of mathematical equations.¹¹⁵ Through equations, the MEA will be able to determine an objective numerical percentage of similarity between the two songs in question.¹¹⁶ Liebesman noted that, in theory, it should be possible for a musically-knowledgeable physicist, mathematician, or computer scientist to create a program that would analyze notated musical scores based on a complex algorithm.¹¹⁷

A similar attempt to Liebesman’s was done by Alan Lomax, who proposed a systematic musical breakdown called The Global Jukebox, where around 4400 songs were analyzed, based on “36 parameters that could be used to compare musical

¹⁰⁷ *Id.* at 516.

¹⁰⁸ *Id.* at 485.

¹⁰⁹ *Id.* at 492–93; André Barbera, *Pythagoras*, OXFORD MUSIC ONLINE, <http://www.oxfordmusiconline.com/subscriber/article/grove/music/22603> (last visited Apr. 1, 2021). Pythagoras’s importance for music lies in his purported establishment of the numerical basis of acoustics. On passing a blacksmith’s shop, he is said to have heard hammers of different weights striking consonant and dissonant intervals. He discovered that musical consonances were represented by the ratios that could be obtained from the musical intervals: 1, 2, 3, 4. The ratios are relations of string lengths or frequencies. A Pythagorean scale consists of 4ths subdivided in two tones plus the remainder.

¹¹⁰ Gherman, *supra* note 106, at 493.

¹¹¹ *Id.* at 484–85. Basic chord progressions are I-V-I, I-IV-I, I-IV-V-I. An example of a chord progression being prominent across one genre is the twelve-bar blues progression.

¹¹² *Id.* at 496.

¹¹³ Liebesman, *supra* note 6, at 360–61.

¹¹⁴ *Id.* at 347. (for instance, “the harmony aspect of a song is analyzed for about twenty attributes, including keys, modality, and general harmonic structure; vocals are broken down into approximately thirty-five attributes, such as vibrato, range, and gender.”).

¹¹⁵ *Id.*

¹¹⁶ *Id.*

¹¹⁷ *Id.* at 356.

performance styles across cultures.”¹¹⁸ Liebesman’s approach is more complex than Lomax’s approach, and actually builds upon Lomax’s approach, as she considers significantly more musical parameters.

E. Music Theory

Counterpoint Theory has dominated Western musical composition for centuries.¹¹⁹ This Part lays the historical and musical foundation of Counterpoint, a concept that is made up of the four main elements of harmony, melody, rhythm, and structure, and is unsusceptible to political or legal changes. Counterpoint will serve as the basis of the Proposed Method in analyzing notated musical scores in establishing actual copying of an original musical work. One of the eight Counterpoint Rules is used to explain its function and significance, then is used in analyzing the musical compositions of “Blurred Lines” and “Got To Give It Up.” The music theory used by the expert witnesses in *Williams v. Gaye* is broken down and explained.

1. Counterpoint Theory

The earliest surviving notated musical compositions manifest the ever-present universal musical endeavor of creating euphony that has persisted through the centuries.¹²⁰ Euphony is “the quality of being pleasing to the ear, especially through a harmonious combination of words.”¹²¹ The ongoing strive for euphony is rooted in the definition of music itself which demands for a unified production by a continual combination of sounds. Throughout history, music scholars have continually attempted to discover and codify a universal set of rules present within euphony.¹²² Dutch theorist Johannes Tinctoris codified the revolutionary set of eight rules that guarantee euphony known as Counterpoint.¹²³ Counterpoint was adopted by Western music and is still used to this very day, serving as the universal heart of music compositions.¹²⁴

¹¹⁸ Michael Naimark, *Alan Lomax’s Multimedia Dream*, MICHAEL NAIMARK BLOG (Dec. 2002), <http://www.naimark.net/writing/lomax.html>; Liebesman, *supra* note 6, at 346.

¹¹⁹ SCHMIDT-JONES & JONES, *supra* note 2, at 71.

¹²⁰ *Id.* Counterpoint grew out of the early sacred music traditions of *cantus firmus* and *organum* of the Catholic Church into the common practice for composers of the fifteenth through eighteenth centuries.

¹²¹ *Euphony*, MERRIAM-WEBSTER.COM DICTIONARY, <https://www.merriam-webster.com/dictionary/euphony> (last visited Apr. 14, 2018).

¹²² While certain composers that predate him employ many of these conventions in a consistent manner, like Dufay, it is Tinctoris and his more-or-less contemporaries, Ockeghem, and Josquin that codify the revolutionary art of counterpoint as a distinct technique, breaking from descant and early *cantus firmus organum*.

¹²³ See Klaus-Jürgen Sachs & Carl Dahlhaus, *Counterpoint*, OXFORD MUSIC ONLINE, <https://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000006690> (Counterpoint is “the combination of simultaneously sounding musical lines according to a system of rules. It has also been used to designate a voice or even an entire composition . . . devised according to the principles of counterpoint.”).

¹²⁴ See Roland John Jackson, *Counterpoint*, ENCYCLOPEDIA BRITANNICA (Jan. 5, 2020), <https://www.britannica.com/art/counterpoint-music>; see also Marmorstein, *supra* note 19:

Musical groups based on harmony, melody, rhythm, and structure, that are typical in the unique musical characteristics of a musical work, may be identified and analyzed by Contrapuntal analysis. This reigning house of music theory can be explained with rudimentary knowledge of music theory.

Counterpoint is the relationship between polyphonic voices that are harmonically interdependent yet independent in rhythm and contour.¹²⁵ Counterpoint rules mathematically dictate note placement and combination to ensure the human ear's natural strive for euphony during notation-based musical composition. In music composition, counterpoint technique involves the combination of multiple different melodic lines that are played simultaneously.¹²⁶ Tinctoris codified the eight rules of Counterpoint that govern two different staves over the two dimensions.¹²⁷ Counterpoint is separated by species, determined by each added voice against the underlying melodic line known as the *cantus firmus*.¹²⁸

2. The Rules of Counterpoint

The eight Rules of Counterpoint are uniform with slight variations by species.¹²⁹ In first species, there may be one and only one note in the additional melody for each note in the *cantus firmus*. In second and fourth species, there may be two notes for every note in the *cantus firmus*, except for the last note.¹³⁰ In third species, there may be four notes for every note in the *cantus firmus*, except for last note.¹³¹ The adherence

Over the course of history, composers have used counterpoint, but have used it in different manners. In the Middle Ages, counterpoint was used for the combination of different rhythmic groups, in the Renaissance it was used for melodic imitation, and in the Baroque for contrasts between different tone colors. In the Classical period, counterpoint was used within a tonal structure, in the Romantic period it was used for combining short melodic fragments, and in the twentieth century it has been used up until now to contrast tonalities and tone colors.

¹²⁵ Marmorstein, *supra* note 19.

¹²⁶ *Id.*

¹²⁷ *Id.* "The first dimension is the vertical dimension which deals with the relationship between the lines and the intervals between simultaneous notes. The second dimension is the horizontal dimension which deals with the shape, direction, individuality, and independence of each of the lines."

¹²⁸ See *Cantus Firmus*, *ENCYCLOPEDIA BRITANNICA* (July 17, 2007), <https://www.britannica.com/art/cantus-firmus>. During the earliest centuries of Christianity, before the Catholic Church split from the Eastern Orthodox Church, the Western Church sang a body of chants known as plainchant. From the practice of adding voices above a plainchant began the development of the *cantus firmus* organum in the ninth century, marking the beginning of polyphonic music. The earliest surviving polyphonic compositions incorporate *cantus firmus* in its development into organum through the ninth century treatise of *Musica enchiriadis*. *Musica enchiriadis* is the first surviving attempt that establishes a set of rules in polyphonic composition in the history of western music. *Musica enchiriadis* marked the first introduction of the concept of harmony, followed by the element of rhythm. The earliest polyphonic musical compositions typically featured the *cantus firmus* of the Gregorian Chant where the consecutive notes of the chant determined the harmonic progression.

¹²⁹ Marmorstein, *supra* note 19.

¹³⁰ See Samuel Chase, *A Quick Guide to Species Counterpoint*, *HELLO MUSIC THEORY* (July 1, 2020), <https://hellomusictheory.com/learn/species-counterpoint/>.

¹³¹ *Id.*

to the Rules of Counterpoint is considered to be what makes a piece of music “musical” – whether or not the adherence is purposeful upon creation of the music – as the Rules enforce sound harmonies and create melodies all within the rhythmic structure of each species. The Counterpoint Rules vary from permitting the highest note to be played only once, to listing the requirements and prohibitions of the second-to-last notes, to laying out exactly *how* the beginning of a song must start, and *how* the end of the song must finish.¹³² Although these Rules may seem arbitrary, they are the product of the century-long-attempt of music theorists in finding a failsafe mathematical method towards creating music with their musical justification grounded in the science of acoustics. For instance, the purpose of beginning and ending a song with a perfect consonance is to prevent the ending of any song from creating a perceived sense of tension and anxiety that would result in an “unresolved” feeling, as consecutive cadences stagnate the development of a song and hinder its ease in “moving forward.”¹³³ To demonstrate the difference between how perfect consonance exudes a “resolved” feeling and how a dissonant cadence exudes an “unresolved” feeling, listen to SOUND 4A and 4B below at their indicated times.

SOUND 4A: Consonant Cadences at 00:03-00:06 seconds:
https://www.youtube.com/watch?v=WK_mgi3hSJA¹³⁴

SOUND 4B: Dissonant Cadences at 00:26-00:30 seconds:
https://www.youtube.com/watch?v=WK_mgi3hSJA¹³⁵

The Counterpoint Rule regarding parallel motion will be the only Rule elaborated upon in this article. Parallel motion is when two or more notes of different voices move in the same direction and the interval class remains the same.¹³⁶ Consecutive parallel motion of fifths and octaves is forbidden.¹³⁷ Parallel intervals are identified by vertical analysis of all voices within each beat of the staves, as demonstrated by Figure 1 below.

¹³² *Id.*

¹³³ See Ryan Leach, *The Contemporary Musician's Guide to Counterpoint*, ENVATOTUTS+ (Mar. 9, 2010), <https://music.tutsplus.com/tutorials/the-contemporary-musicians-guide-to-counterpoint--audio-4630>.

¹³⁴ 26greg26, *Dissonance example1*, YOUTUBE (June 21, 2012), https://www.youtube.com/watch?v=WK_mgi3hSJA.

¹³⁵ *Id.*

¹³⁶ See Kris Shaffer, Bryn Hughes & Brian Moseley, *Types of Contrapuntal Motion*, OPEN MUSIC THEORY (2018), <http://openmusictheory.com/motionTypes.html#:~:text=In%20parallel%20motion%2C%20two%20voices,voices%20move%20in%20parallel%20motion.>

¹³⁷ See Leach, *supra* note 133.

Figure 1: Consecutive Parallel Motion by Octaves

Figure 1 illustrates three examples of parallel motion by octaves in a musical score. The score is in 4/4 time and features two staves. Example A shows a progression from IV to V, with red brackets indicating forbidden consecutive parallel octaves and fifths. Example B shows a progression from IV to I to V, with green brackets indicating parallel fifths that are not consecutive. Example C shows a progression from I to I, with green brackets indicating consecutive parallel motion that is not parallel.

Example A) in Figure 1 demonstrates forbidden parallel octaves by the red brackets. Here, the first note in the bass is an F and the first note in the alto is an F that is one octave higher, then the second consecutive note in the bass is a G and the second consecutive note in the alto is a G that is one octave higher. Parallel consecutive octaves and fifths spanning over more than one octave are still forbidden.

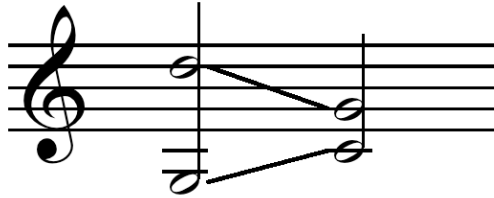
Parallel octaves and fifths that are not consecutive are not forbidden.¹³⁸ There are no consecutive parallel octaves or fifths in Example B) of Figure 1 because they are not written consecutively. Here, there are no parallel octaves but there is a parallel fifth. The first note in the bass is an F and the first note in the soprano is a C, constituting a fifth interval. The third note in the bass is a G and the third note in the soprano is a D, constituting a fifth interval. These parallel fifths, however, are not forbidden because the first and third notes are not consecutive because they are separated by the second notes between them. The presence of the I chord¹³⁹ breaks the consecutive parallel motion of the octaves in the IV chord and the V chord, as indicated by the green brackets. There are no parallel octaves or fifths between the I chord and either consecutive bordering IV and V chords.

Parallel octaves and fifths of the same notes that consecutively repeat are not forbidden. In Example C) of Figure 1, the same notes of the C octave repeat as indicated by the green brackets.

Consecutive fifths moving in contrary motion, as opposed to parallel motion, is permitted. Figure 2 demonstrates consecutive fifths moving in contrary motion.

¹³⁸ *Id.*

¹³⁹ See Samuel Chase, *Chord Progressions in Music: A Complete Guide*, HELLO MUSIC THEORY (Oct. 11, 2020), <https://hellomusictheory.com/learn/chord-progressions> (The I chord signifies that the written notes are part of the scale of the I – the tonic – that the song is in. For example, the I chord in a song that is in the key of B Major will be the B Major chord within the B Major scale).

Figure 2: Consecutive Fifths in Contrary Motion

In Figure 2, the first lower note is a G and the first higher note is a D, creating a fifth. The second lower note is a C and the second higher note is a G, creating a fifth. Although the first notes and the second notes create a fifth, the notes move in different, contrary, directions. The lower notes move in a direction going up and the higher notes move in a direction going down, which is not parallel. Additionally, parallel thirds and sixths are permitted but are limited to three consecutive motions at a time. Four or more consecutive parallel thirds and sixths are forbidden.

III. THE BLURRED LINES CASE: *WILLIAMS V. GAYE*¹⁴⁰

The introduction of music theory as well as the relevant law in Part II allows for its application and extensive discussion in the case *Williams v. Gaye* in Part III.

In 1976, Marvin Gaye recorded “Got To Give It Up,” the number one song on 1997 Billboard’s Hot 100 chart and which has retained popularity to this day.¹⁴¹ In June 2012, Robin Thicke and Pharrell Williams wrote and recorded “Blurred Lines,” which became the best-selling single in the world in 2013.¹⁴² The estate of Marvin Gaye made an infringement demand¹⁴³ on Williams and Thicke after hearing “Blurred Lines”.¹⁴⁴ Williams and Thicke failed to reach an agreement with the estate of Marvin Gaye and subsequently filed a suit for declaratory judgment of non-infringement on August 15, 2013.¹⁴⁵ The Gayes counterclaimed, alleging that “Blurred Lines” infringed their copyright in “Got To Give It Up.”¹⁴⁶

Thicke and Williams testified that they were inspired by Marvin Gaye in their creation of “Blurred Lines,” and that they had access to “Got To Give It Up.”¹⁴⁷ The case then rested on whether there was probative similarity between the two songs, relying on the testimony of the musicologists.¹⁴⁸ The Thicke Parties hired expert witness musicologist Sandy Wilbur and the Gayes hired expert witness musicologist Judith Finell.¹⁴⁹ Both songs in full can be heard by clicking the links below:

¹⁴⁰ *Williams v. Gaye*, 885 F.3d 1150, 1159 (9th Cir. 2018).

¹⁴¹ *Id.* at 1160.

¹⁴² *Id.* (The Grammy-nominated pop song reached number one in over 25 countries and earned 14.8 million in sales)

¹⁴³ *Id.*

¹⁴⁴ *Id.*

¹⁴⁵ *Williams*, 885 F.3d at 1160.

¹⁴⁶ *See Id.*

¹⁴⁷ *Id.* at 1161.

¹⁴⁸ *Id.*

¹⁴⁹ *Id.*

SOUND 1A: “Got To Give It Up”:

<https://www.youtube.com/watch?v=Ayyy-03ITDg>¹⁵⁰

SOUND 1B: “Blurred Lines”:

<https://www.youtube.com/watch?v=yyDUC1LUXSU>¹⁵¹

*A. Methods Used by Expert Witness Musicologists in the Ninth Circuit Blurred Lines
Case: Williams v. Gaye*

Williams v. Gaye relied on expert witness testimony to determine probative similarity between the songs “Blurred Lines” and “Got to Give It Up.”¹⁵² Each party hired expert witness musicologists who analyzed the four musical elements of melody, harmony, rhythm, and structure, in their analyses, and each of whom applied different methods in analyzing each element.¹⁵³ Although the experts used complex music theory in their dissection and analysis of each song, they further took into account how a lay listener would perceive the song.¹⁵⁴

Judith Finell, the expert witness musicologist hired the Gaye family, concluded that “Got to Give It Up” and “Blurred Lines” were substantially similar based on a constellation of eight features that “surpass the realm of generic coincidence, reaching to the very essence of each work.”¹⁵⁵ “Constellations” is a term Finell coins that renders the same meaning as a “combination.” Finell concluded that “Got To Give It Up” and “Blurred Lines” formed a similar “constellation”— or combination — of eight musical features between the songs: 1) the signature phrase in the main vocal melodies, 2) the hooks, 3) the hooks with backup vocals, 4) a repeated four-note backup vocal theme, 5) the backup hooks, 6) the bass melodies, 7) the keyboard parts, and 8) the unusual percussion choices.¹⁵⁶ These eight features making up the similar “constellation” are constructed around the musical elements of melody, rhythm, harmony, structure, and lyrics, which are the elements that a musicologist looks at in determining whether a musical work is substantially similar to the original musical work.¹⁵⁷

Sandy Wilbur, the expert witness musicologist hired by the Thicke parties, disagreed with the eight constellations in Finell’s testimony as she found dissimilarity between the songs by analysis of the typical four musical elements of melody, harmony, rhythm, and structure.¹⁵⁸

¹⁵⁰ Levani KH, *Got To Give It Up – Marvin Gaye*, YOUTUBE (May 22, 2012), <https://www.youtube.com/watch?v=Ayyy-03ITDg>.

¹⁵¹ Robin Thicke, *Robin Thicke 0 Blurred Lines ft. T.I., Pharrell*, YOUTUBE (Mar. 20, 2013), <https://www.youtube.com/watch?v=yyDUC1LUXSU>.

¹⁵² *Williams*, 885 F.3d at 1161.

¹⁵³ *Id.*

¹⁵⁴ *Id.* at 1162.

¹⁵⁵ *See id.* at 1161; *see also* Greg Kanaan, *Why Experts are Necessary*, THE LEGAL ARTIST (Mar. 17, 2015), <https://www.thelegalartist.com/blog/why-experts-are-necessary>.

¹⁵⁶ *Williams*, 885 F.3d at 1161; Pl.’s and Counter-Def’s Evid. re: Mot. in Summ. J. or in the Alternative, Partial Summ. J. at ¶¶ 6–9, *Williams v. Gaye*, No. 15-56880, No. 16-55089, No. 16-55626 (9th Cir. 2018) (ECF No. 91-5).

¹⁵⁷ Decl. of Sandy Wilbur, *supra* note 5, at ¶ 23.

¹⁵⁸ *Id.* at ¶¶ 54-81.

Both musicologists analyzed both the notated compositions and audio recordings of “Got To Give It Up” and “Blurred Lines,” but for the purpose of this paper, the analysis based on audio recordings will be disregarded in this article, even though audio recordings are used here to explain/demonstrate specific musical aspects. Analyzed here are the notes sung by the vocals notated within each composition that serve as the leading melodic voice. Notated compositions are blind of lyrics, lyrics of backup vocals, and instrumentation choices, so the musicologist testimonies regarding these characteristics are disregarded. Both musicologist testimonies regarding the signature phrase in main vocal melodies, hooks, hooks with backup vocals, core themes, bass melodies,¹⁵⁹ and keyboard parts were further scrutinized within the context of harmony, melody, rhythm, and structure.

The main purpose of music theory is to describe various pieces of music in terms of their similarities and differences in these elements.¹⁶⁰ Knowledge of rudimentary musical terms helps understand and convey a deeper description of musical works in terms of their most basic elements of rhythm, melody, harmony, and structure.¹⁶¹ These musical rudiments are used to explain the differing methodologies created and used by Wilbur and Finell.

B. Comparison with Musical Rudiments

Music is written and read from left to right on the five horizontal lines of a staff.¹⁶² Musical symbols that appear on, above, and below the staves, are the actual written music.¹⁶³ Notes, rests, and many other musical symbols such as dynamics help portray how the music should be played.¹⁶⁴ “The pitch of a note is how high or how low the note is.”¹⁶⁵ Different pitches are referred to by their different and corresponding letter names of: A, B, C, D, E, F, and G.¹⁶⁶ These are the names of the seven natural notes within one octave.¹⁶⁷ An octave is a series of eight notes that start and end with the same letter note, with the ending note being double the frequency of the starting note.¹⁶⁸

Both musicologists followed the typical expert procedure of transposing both songs into the same key for the purposes of comparison.¹⁶⁹ The below attachments are the

¹⁵⁹ SCHMIDT-JONES & JONES, *supra* note 2, at 11. A bass melody is a melody that is present in the bass line, the lowest voice, within the musical piece.

¹⁶⁰ *Id.* at 71 (Additionally, music is usually grouped into genres based on similarities in all or most elements.).

¹⁶¹ *Id.*

¹⁶² *Id.* at 3–4.

¹⁶³ *Id.* at 4.

¹⁶⁴ SCHMIDT-JONES & JONES, *supra* note 2, at 4 (defining notes as sounds, rests as silences, dynamics as how loud, how short/long said note should be played, this differs with different symbols).

¹⁶⁵ *Id.* at 15.

¹⁶⁶ *Id.*

¹⁶⁷ *Id.* (Natural notes are all the white notes on a keyboard. Additionally, an octave is a collection of these notes that starts over again after the last note, whatever the order may be).

¹⁶⁸ *Id.* at 117–18.

¹⁶⁹ SCHMIDT-JONES & JONES, *supra* note 2, at 122. The name of the key is further classified into either a major key or minor key, based on the type of scale that is dictated by the sharps and flats of the key signature.

beginning measures of the un-transposed versions of “Got To Give It Up” followed by the un-transposed version of “Blurred Lines.”

Figure 3: Beginning of “Got to Give It Up”

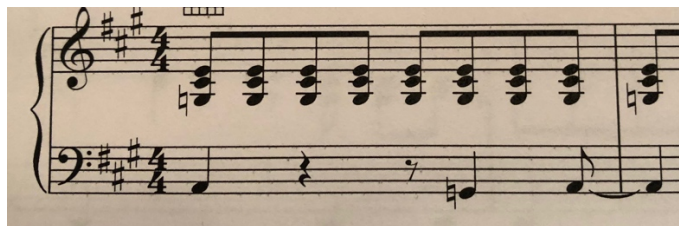
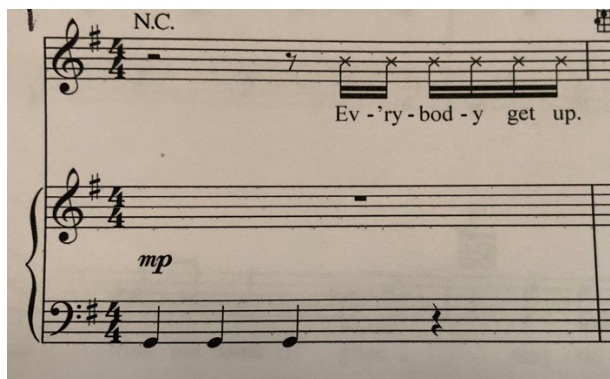


Figure 4: Beginning of “Blurred Lines”



Sharp and flat signs can appear directly in front of the note that they change and are also used as part of the key signature.¹⁷⁰ A key signature is a musical symbol located immediately after the clef that notates sharps and flats on the lines or spaces of the staff, stipulating that all notes on such lines and spaces are to be played the stipulated half step higher or lower.¹⁷¹ A sharp sign on a line or space indicates that all notes on that line or space shall be played one half step higher than the dictated note, and a flat sign indicates all notes on that line or space shall be played one half step lower than the dictated note.¹⁷² The specific grouping of sharps and flats in the key signature dictate which key the music is in.¹⁷³

As shown in the images of the music of “Got To Give It Up” above, there are three sharps on the left of the staff, in order, on the line of F, the space of C, and the line of G. This means that every time any a note is written on any line or space of an F, a C, and a G, respectively, an F#, a C#, and a G# will be played. On a keyboard these sharps are the black keys immediately following these white notes.¹⁷⁴ The specific group of sharps of F, C, and G is associated with the key of A major. Generally, music in a

¹⁷⁰ *Id.* at 17.

¹⁷¹ *Id.* at 18–19.

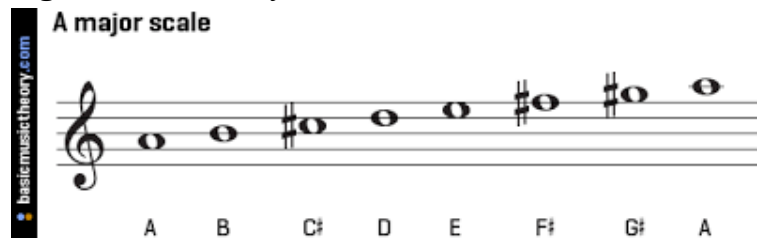
¹⁷² *Id.* at 16.

¹⁷³ *Id.* at 20.

¹⁷⁴ SCHMIDT-JONES & JONES, *supra* note 2, at 21–22.

particular key will only use the notes within the scale associated with that key.¹⁷⁵ A scale is a set of eight notes increasing in pitch over the span of one octave, which is eight notes increasing in pitch, starting with the note that names the key that is known as the “tonic” note, and ending with the note the key is in but double the frequency.¹⁷⁶ The name of the key is further classified into either a major key or minor key, based on the type of scale that is dictated by the sharps and flats of the key signature.¹⁷⁷ Major and minor scales begin with the tonic note and vary in their arrangement of preceding notes.¹⁷⁸ Scales in a major key follow the pattern of whole step, whole step, half step, whole step, whole step, whole step, half step.¹⁷⁹ Scales in a minor key follow the pattern of whole step, half step, whole step, whole step, half step, whole step, whole step.¹⁸⁰ The different patterns of note intervals between major and minor keys result in different sounds and emotional feels, with major keys typically being associated with uplifting and happier sounds, and minor keys typically being associated with tense and sad sounds.¹⁸¹ To demonstrate, below is the A major scale:

Figure 5: The A Major Scale



Three sharps are seen in the key of A, a result of each note’s distance from one another within a major being whole step, whole step, half step, whole step, whole step, whole step, half step. As a result, the key signature for the key of A will be comprised of three sharps – C#, F#, and G#.

“Blurred Lines” is originally in the key of G major, as indicated by the one sharp on the line of F on its staff. Both musicologists transposed “Blurred Lines” into the same key as “Got To Give It Up,” the key of A major.¹⁸² When transposing a song from one key to another, the relationship between the notes – separations of whole steps or half steps and how many – are maintained and within the new transposed key.¹⁸³

¹⁷⁵ *Id.* at 126.

¹⁷⁶ *Id.* at 126–27.

¹⁷⁷ *Id.* at 126–31.

¹⁷⁸ *Id.*

¹⁷⁹ SCHMIDT-JONES & JONES, *supra* note 2, at 127.

¹⁸⁰ *Id.* at 131.

¹⁸¹ *Id.* at 130.

¹⁸² Decl. of Sandy Wilbur, *supra* note 5, at ¶ 26.

¹⁸³ SCHMIDT-JONES & JONES, *supra* note 2, at 242.

C. Signature Phrases in Vocal Melodies

One of the many musical aspects the experts disagreed upon was the similarity of the signature vocal melody of “Got To Give It Up”, that being the phrase “I used to go out to parties,” and the signature phrase in “Blurred Lines”, “And that’s why I’m gon’ take a good girl.”¹⁸⁴ The signature vocal melody of “Got To Give It Up” is first heard 00:18 seconds into the song, and the signature vocal melody of “Blurred Lines” is first heard 00:51 seconds into the song. The excerpts of these signature vocal phrases may be heard by playing the clips below at the designated seconds marks:

SOUND 2A: Got To Give It Up Signature Phrase at 00:18 seconds
<https://www.youtube.com/watch?v=Ayyy-03ITDg>¹⁸⁵

SOUND 2B: Blurred Lines Signature Phrase at 00:51 seconds
<https://www.youtube.com/watch?v=yyDUC1LUXSU>¹⁸⁶

Both signature phrases are played at the same tempo, which is 120 Beats Per Minute (“BPM”). The BPM of a song is another measurement of tempo, which dictates how fast, or how slow, the song should be played.¹⁸⁷ In addition, both signature phrases span the same number of beats: 8 beats. While playing SOUND 1A and SOUND 1B, add the metronome at the speed of 120 BPM as linked below:

SOUND 3: 120 BPM Metronome:
<https://www.youtube.com/watch?v=xpiVrEET-YQ>¹⁸⁸

Because music is heard over a period of time, music is organized by dividing that time up into short periods of beats.¹⁸⁹ Beats are further organized and grouped into measures.¹⁹⁰ A measure is a group of a specified number of beats, and the number of beats within a measure of a song is dictated by the two numbers in its time-signature.¹⁹¹ The top number of a time signature dictates how many beats are in one measure and the bottom number dictates the type of note that spans one beat.¹⁹² Notes are described by the length that they occur between beats.¹⁹³ For example, a quarter note lasts for one beat and a half note lasts for two beats. This is the basic concept of rhythm.¹⁹⁴

¹⁸⁴ Williams v. Gaye, 885 F.3d 1150, 1161 (9th Cir. 2018); Decl. of Sandy Wilbur, *supra* note 5, at ¶ 57; Pl.’s and Counter-Def’s Evid. re: Mot. in Summ. J. or in the Alternative, Partial Summ. J. 89, Ex. B, ¶13, Williams v. Gaye, 885 F.3d 1150 (9th Cir. 2018) (No. 15-56880, No. 16-55089, No. 16-55626) (ECF No. 91-5).

¹⁸⁵ Levani KH, *supra* note 150.

¹⁸⁶ Thicke, *supra* note 151.

¹⁸⁷ SCHMIDT-JONES & JONES, *supra* note 2, at 48.

¹⁸⁸ Drumset Fundamentals, *120 BPM – Metronome*, YOUTUBE (June 22, 2015), <https://www.youtube.com/watch?v=xpiVrEET-YQ>.

¹⁸⁹ *Id.* at 71.

¹⁹⁰ *Id.* at 72.

¹⁹¹ *Id.* at 33.

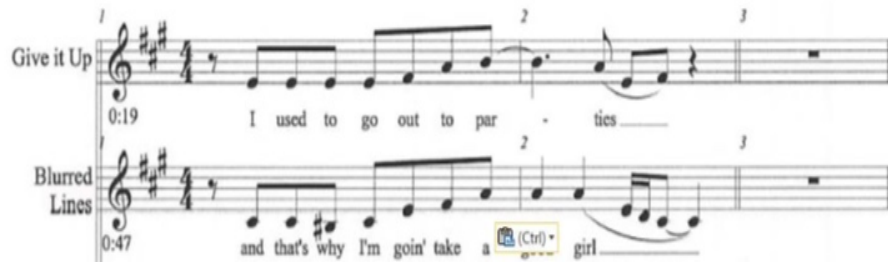
¹⁹² *Id.*

¹⁹³ SCHMIDT-JONES & JONES, *supra* note 2, at 28–29.

¹⁹⁴ *Id.* at 71.

These signature phrases can be described, and measured, another way in addition to counting their presence in seconds. The excerpts of the signature phrases are first seen in the first 19 seconds, and measure 4, of “Got To Give It Up” and in the first 00:47 seconds, and measure 25, of “Blurred Lines.” The notated version of the signature phrases in “Got To Give It Up” and “Blurred Lines” are below on a musical staff:

Figure 6: Signature Phrases of “Got To Give It Up” and “Blurred Lines”¹⁹⁵



Both signature phrases of “Blurred Lines” and “Got to Give It Up” have the same time signature of 4/4. This means that there are four beats in every measure and that a quarter note spans one beat.

“Blurred Lines” was transposed by the experts from the key of G to the key of “Got To Give It Up”, the key of A, as seen by the three sharps in both key signatures. Having both songs in the same key allows for an easier side-by-side comparison. Along with the key signature and the time signature, the beginning of every staff includes either a treble clef or bass clef symbol indicating which of two particular sets of notes are to be read and used within the staff’s lines and spaces.¹⁹⁶ Each clef contains notes that differ greatly in pitch, which together cover the majority of the notes within the range of the human voice and most instruments.¹⁹⁷ The music notation above shows that the notes within the signature phrase of both songs occur within the treble clef.

Finell, the Gaye family expert, concluded that there is similarity between both signature melodic voices, one of the eight similar features making up the “constellation,” and demonstrated these similarities in Figure 7 below with the aid of arrows, letters, and brackets.¹⁹⁸

¹⁹⁵ Pl.’s and Counter-Def’s Evid. re: Mot. in Summ. J. or in the Alternative, Partial Summ. J. 89, Ex. B, at #5, Williams v. Gaye, 885 F.3d 1150 (9th Cir. 2018) (No. 15-56880, No. 16-55089, No. 16-55626) (ECF No. 91-5).

¹⁹⁶ SCHMIDT-JONES & JONES, *supra* note 2, at 7 (clefs differ in regard to what notes they dictate. For example, in a treble clef, the second line to top is a G note whereas on bass clef, second line to top is a B note.).

¹⁹⁷ *Id.* at 11–15.

¹⁹⁸ Pl.’s and Counter-Def’s Evid. re: Mot. in Summ. J. or in the Alternative, Partial Summ. J. 89, Ex. B, at ¶ 13–19, Williams v. Gaye, 885 F.3d 1150 (9th Cir. 2018) (No. 15-56880, No. 16-55089, No. 16-55626) (ECF No. 91-5).

**Figure 7: Signature Phrases of “Got To Give It Up” and “Blurred Lines”
as Analyzed by The Gaye Family Expert, Judith Finell¹⁹⁹**

Musical Example 1A: “Give It Up” Signature Phrase

Musical Example 1B: “Blurred” Signature Phrase

Based on the signature phrases in the main vocal melodies, Finell claims that the following five elements within the signature phrases are substantially similar: 1) repetition of their starting tones, 2) identical particular scale degree sequences, 3) identical rhythms for the first six tones, 4) use of the same melodic “tails” on their last lyric beginning with the same scale degrees, and 5) substantially similar melodic contours.²⁰⁰ Finell uses the musical term “element” in a manner very different from its general usage in the context of harmony, melody, structure, and rhythm, and instead applies the term as she deems fit to characteristics within the songs of her own choosing. Although Finell asserts that the similarities of these five elements proves the feature of similarity in signature phrases between both songs, she did not elaborate on how or why the elements are similar.

1. *Repetitions of Starting Tones*

The starting tones are the first notes within this excerpt and can be seen in Figure 7.²⁰¹ In “Got To Give It Up” the starting tone is E and in “Blurred Lines” the starting

¹⁹⁹ *Id.* at #5.

²⁰⁰ *Id.* at ¶9.

²⁰¹ *Id.* at ¶14(a).

tone is C. The notes within bracket (a) of the attachment point out the repeating starting tones, which repeat three times in “Got To Give It Up” and two times in “Blurred Lines.”²⁰²

Finell, however, fails to note that in “Got To Give It Up,” the starting tone is played a total of five times, and in “Blurred Lines” the starting tone is played a total of four times.

2. Identical Scale Degree Sequences

Finell notes the identical scale degree sequences as indicated out by the two (b) brackets in Figure 7.²⁰³ A scale degree is the number of the note within a scale, ranging from the 1st – the tonic – to the 7th (since the 8th scale degree would be a repeat of the first).²⁰⁴ The first scale degree in the key of A is A, the fifth scale degree is E, and the sixth scale degree is F.²⁰⁵ The first (b) bracket shows the 5th scale degree, followed by the 6th scale degree and the 1st scale degree (“5-6-1”). The second (b) bracket shows the 1st scale degree followed by the 5th scale degree (“1-5”). Although both (b) brackets in Figure 7 consist of the same 5-6-1 sequence of eighth notes,²⁰⁶ Finell fails to note the different durations and notes separating the (b) brackets in Figure 7 between both songs.

The preceding notes before the first “Got To Give It Up” (b) bracket are of the 5th scale degree, which is the same note as the first note within the first (b) bracket – the 5th scale degree. These notes consist of one-half rest and three eighth notes, which lasts a total duration of two beats.

In contrast, the preceding notes before the first “Blurred Lines” (b) bracket are of the 3rd (and sharped 2nd) scale degrees, which is different from the first note within the first (b) brackets – the 5th scale degree. These preceding notes before the first “Blurred Lines” (b) bracket consist of one half rest²⁰⁷ and four eighth notes, which lasts a total duration of two and a half beats.

The subsequent note following the first “Got To Give It Up” (b) bracket and preceding the second (b) bracket is of the 2nd scale degree. The 2nd scale degree is different from the last note’s scale degree within the first (b) brackets – the 1st scale degree. This note lasts a total duration of two beats and is made up of an eighth note and a dotted quarter note that spans over the end of the first measure and the

²⁰² *Id.* at #5.

²⁰³ Pl.’s and Counter-Def’s Evid. re: Mot. in Summ. J. or in the Alternative, Partial Summ. J. 89, Ex. B, at #5, *Williams v. Gaye*, 885 F.3d 1150 (9th Cir. 2018) (No. 15-56880, No. 16-55089, No. 16-55626) (ECF No. 91-5).

²⁰⁴ SCHMIDT-JONES & JONES, *supra* note 2, at 196.

²⁰⁵ Since there is a sharp in the key signature in the key of A, this F is always sharped when it is played, and it is implied that F is sharped here.

²⁰⁶ SCHMIDT-JONES & JONES, *supra* note 2, at 29 (Eighth notes span for half of one beat.).

²⁰⁷ *Id.* at 32 (A rest stands for a silence in music. For each kind of note, there is a rest of the same length. For example, an eighth rest lasts for half of one beat, just like how an eighth note lasts for half of one beat. The symbol representing an eighth rest is shown immediately after the time signatures on the staves of Figure 5.).

beginning of the second measure by the slur indicated by the curved line joining both notes.²⁰⁸

In contrast, the subsequent note following the first “Blurred Lines” (b) bracket and preceding the second (b) bracket is of the 1st scale degree, which is the same as the last note within the first (b) bracket – the 1st scale degree. This subsequent note is comprised of one quarter note which starts on the first beat of the second measure.

3. *Identical Rhythms for the First Six Tones*

The first six tones are the durations of the first six notes played, as seen in bracket (c) in Figure 7. The first six tones within both songs are all comprised of eighth notes. Finell, however, fails to note that aside from the 5-6-1 sequence that is similar in both songs, all other notes are of different pitches. The 5-6-1 sequence is only three tones, half, of the total six tones.

Three notes precede the 5-6-1 sequence, and the three preceding notes in “Got To Give It Up” are different from the three preceding notes in “Blurred Lines.” These three notes preceding the 5-6-1 sequence within both songs are the first three notes of both signature phrases. This overlaps into Finell’s first contention of both songs having similar repetitions of their starting tones.

“Identical rhythms of the first six tones” are merely a combination of the “repetition of their starting tones” element of the (a) bracket and “identical scale degree sequences” element of the first (b) bracket.

4. *Use of Same Melodic “Tail” Device (A Melisma) on Last Lyric*

This is indicated by bracket (d) in Figure 7 as the notes begin with a 1–5 sequence. Finell fails to note that there is one note following the 1–5 sequence in “Got To Give It Up” and there are two notes following the 1–5 sequence in “Blurred Lines”, and that the notes following both 1–5 sequences are different in both pitch and duration.

5. *Similar Melodic Contours*

Finell claims that the melodic contours are based on a combination of all previous contentions, as seen by “similar elements a, b, c, and d, and identical scale degrees [] indicated with arrows[]” in Figure 7.²⁰⁹ Melodic contour refers to the overall shape of a melodic phrase.²¹⁰

²⁰⁸ *Id.* at 60 (When notes are slurred, only the first note under or above each slur marking has a definite articulation at the beginning. The rest of the notes following the first note that are connected by the slur are so seamlessly connected in how they are played that there is no heard break within the notes. If two identical notes are slurred across two measures, then they are played as if the two notes were one.).

²⁰⁹ Pl.’s and Counter-Def’s Evid. re: Mot. in Summ. J. or in the Alternative, Partial Summ. J. 89, Ex. B, at ¶14, *Williams v. Gaye*, 885 F.3d 1150 (9th Cir. 2018) (No. 15-56880, No. 16-55089, No. 16-55626) (ECF No. 91-5).

²¹⁰ Decl. of Sandy Wilbur, *supra* note 5, at ¶ 134.

Wilbur disagreed with Finell's contentions of similarities between the two melodic phrases, claiming that these "so-called similar elements are simply a few of the basic building blocks of musical composition that are present, if not inevitable, in many songs[.]" comparing the melodic phrases to other compositions comprised of similar notes and structure.²¹¹ After doing a very simple analysis based on the four elements of harmony, melody, rhythm, and structure, Wilbur went one by one through Finell's features within the "constellation of similarities," explaining why and how each feature is not similar.²¹² Wilbur additionally included an analysis of the harmonic progressions between both songs with two graphs that demonstrated the dissimilarity between the two songs.²¹³

Both musicologists agreed that transposition to the same key is necessary in properly analyzing two musical works, yet Finell failed to do so in her comparative analysis of the two works when analyzing the core themes and backup hooks.²¹⁴ Finell's methodology of comparing both songs with a "constellation" of similar features differs greatly from Wilbur's classic approach of analysis based on the four basic musical elements of harmony, melody, rhythm, and structure. Although harmony, melody, rhythm, and structure are present in features within Finell's "constellation" and even within the elements of the allegedly similar features, they are broken down and presented in a manner differently than how Wilbur presents them.

D. Counterpoint Analysis Of "Blurred Lines" and "Got To Give It Up"

In order to contextualize The Proposed Method in this article, an objective Counterpoint Analysis of "Blurred Lines" and "Got To Give It Up" is necessary to supplement the analysis discussed by the two expert witnesses above from *Williams v. Gaye*.

Counterpoint analysis of a musical work by analysis of harmonic progression identifies both the presence and the absence of these rules within the notated version and their frequency of occurrence. Therefore, an analysis of which Counterpoint Rules are followed, and which are not followed, are unique to every song and also tell how closely the composer may have striven for secured euphony.

"Blurred Lines" has fifteen total measures with parallel octaves, which are forbidden. "Got To Give It Up" has a total of three parallel octaves. Consecutive parallel octaves are seen below in measure 17 of "Blurred Lines." There are no consecutive parallel fifths present in either song.

²¹¹ *Id.* at ¶ 69.

²¹² *Id.* at ¶ 23.

²¹³ *Id.* at ¶ 43.

²¹⁴ *Id.* at ¶ 190; Pl.'s and Counter-Def's Evid. re: Mot. in Summ. J. or in the Alternative, Partial Summ. J. 89, Ex. B, at ¶9(e) fn.9 and #11-12, *Williams v. Gaye*, 885 F.3d 1150 (9th Cir. 2018) (No. 15-56880, No. 16-55089, No. 16-55626) (ECF No. 91-5) (Comparison of sections of both songs are in two different keys, contrary to what Finell said she was going to do.).

Figure 8: Consecutive Parallel Octaves in “Blurred Lines”

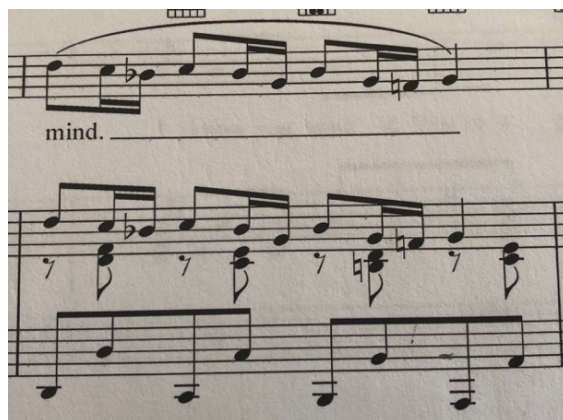


Figure 8 shows the four consecutive octaves spanning each beat from the bass to the soprano, from D to C to B to A, which is from the 5th scale degree, to the 4th scale degree, to the 3rd scale degree, to the 2nd scale degree. This consecutive parallel motion repeats fifteen times throughout the song with different embellishing notes surrounding this pattern.

Figure 9: First Consecutive Parallel Octaves in “Got To Give It Up”

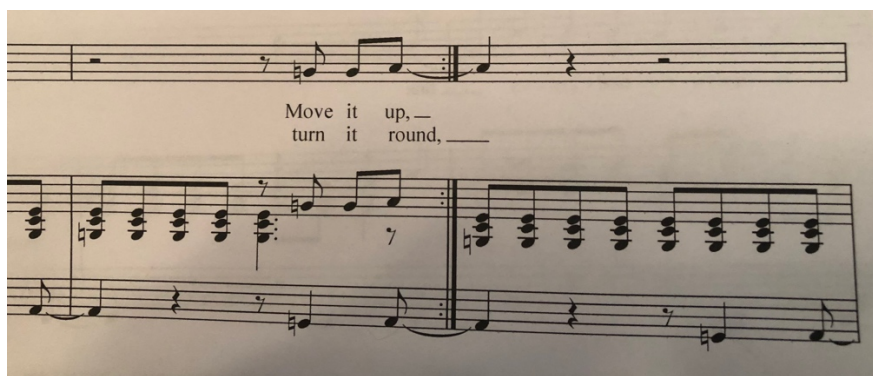
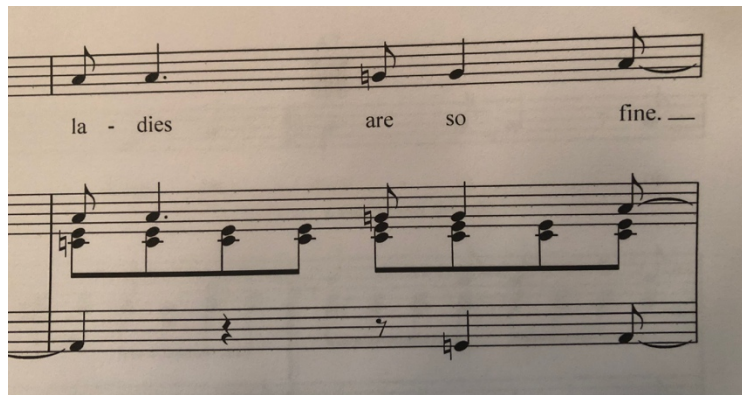


Figure 10: Second Consecutive Parallel Octaves in “Got To Give It Up”



Figures 8 and 9 show the three instances that consecutive parallel motion is present in “Got To Give It Up.” Parallel motion occurs going from G natural in the bass and soprano to A in the bass and soprano, which is from the minor 7th scale degree to the 1st scale degree.

The consecutive parallel octaves in “Blurred Lines” and “Got To Give It Up” are first heard in each song at the designated seconds marked in SOUNDS 5A and 5B below:

SOUND 5A: Consecutive Parallel Octaves in “Got To Give It Up” at 02:12-02:14 seconds: <https://www.youtube.com/watch?v=Ayyy-03ITDg>²¹⁵

SOUND 5B: Consecutive Parallel Octaves in “Blurred Lines” at 00:18-00:21 seconds: <https://www.youtube.com/watch?v=yyDUC1LUXSU>²¹⁶

The consecutive parallel octaves in “Got To Give It Up” can additionally be heard at the following seconds marked: 01:16-01:18 seconds and 02:51-02:53 seconds. The consecutive parallel octaves in “Blurred Lines” can additionally be heard at the following seconds marked: 00:34-00:36 seconds, 00:50-00:52 seconds, 01:06-01:08 seconds, 01:22-01:24 seconds, 01:38-01:40 seconds, 01:54-01:56 seconds, 02:26-02:29 seconds, 02:42-02:44 seconds, 02:58-3:00 seconds, 03:14-03:16 seconds, 03:30-03:32 seconds, 03:46-03:48 seconds, 04:02-04:04 seconds, and 04:18-04:20 seconds.

IV. THE PROPOSED METHOD

A solution to further break down, categorize, and quantify the four elements of harmony, melody, rhythm, and structure is the use of an objective method of analysis that incorporates Counterpoint Theory. This Part builds upon Counterpoint Theory

²¹⁵ Levani KH, *supra* note 150.

²¹⁶ Thicke, *supra* note 151.

and legal scholarship in creating The Proposed Method, where copying is more likely in songs that have a high number of similarities, a high duration of similarities, similar rarities within the items, and conjunctions of the same, or different/rare types of similarities.

By combing through each song to identify the location and frequency of Counterpoint Rules that are adhered to as well as not adhered to, the level of similarities between the two songs can be quantified. Four aspects of similarities are analyzed to calculate how similar the two songs are, and more specifically, how similar the allegedly infringing song is to the copyrighted song, on a scale from 0 to 100. Those four aspects being: the duration of similarities, the commonality – or rarity – of similarities, the number of similarities, and the similarities in conjunction with the song as a whole. These four aspects calculate the horizontal elemental measurements to one another while also calculating them in relation to the vertical measurement of duration and time. A horizontally similar song needs to be vertically similar to a degree that rises to copying. The average of all four fractions will indicate the level of similarity between the songs.

The Proposed Method is demonstrated with the “Blurred Lines” and “Got To Give It Up” musical compositions by applying one Counterpoint Rule to the method, as elaborated upon in sub-section D of section III.

A. Legal Scholarship Influence on the Proposed Method

As Liebesman noted in the proposed MEA method, “[t]he more points of comparison there are, the better one can determine points of similarity between two works and thus achieve a better objective description of a song with fewer changes of over or under-inclusiveness.”²¹⁷ Liebesman’s proposed method, however, implicitly ignores the science behind the creation of music, and also over stresses the audio aspect of a musical work as opposed to the composition aspect. The science behind the creation of music is important to take into account because it serves as the foundation of all music and the innate similarities within music.

Most commercially successful songs contain harmony.²¹⁸ “[Gherman’s] proposed paradigm of harmonic functionality provides a new turf on which the debate regarding copyrightability of harmony can take place.”²¹⁹ Within the harmony of each song, Gherman proposes an analysis on the ratios between consonant and dissonant intervals based on a method developed by Pythagoras.²²⁰ “[Gherman’s] paradigm first and foremost recognizes the commercial value of basic tonal harmony. In the context of the extrinsic similarity test, the proposed paradigm explains harmony from historical and psycho-acoustic perspectives.”²²¹

By implementing the universal guideline of Counterpoint that has been present among all Western musical works throughout history, a mathematically objective

²¹⁷ Liebesman, *supra* note 6, at 331.

²¹⁸ Gherman, *supra* note 106, at 515.

²¹⁹ *Id.* at 516.

²²⁰ *Id.* at 492–93.

²²¹ *Id.*

method towards musical analysis may be obtained. Counterpoint takes into account the presence of consonant and dissonant intervals, as proposed by Gherman.

B. Mathematics and Application of the Proposed Method

The Proposed Method quantifies the similarities and differences between two musical works, along with a more detailed breakdown of the level of similarities. The Proposed Method is designed to give a better, more objective way of determining the extent of similarities for purposes of the “probative similarity” part of the actual copying analysis, plus access. The more similarities there are between the musical works, the more likely there is actual copying.

Two musical works could be further individually categorized and quantified by breaking down each musical element of melody, harmony, and structure into finite groups that can be compared to one another. This allows for the same musical elements that are currently used to be analyzed and broken down upon in a more objective manner. The Proposed Method is able to demonstrate certain levels of similarity present within each genre and render them as elements within a musical piece that should not be accounted for when determining substantial similarity between two pieces.

The Proposed Method identifies which Counterpoint Rules are followed and not followed within each song. Every one of these identified present musical phrases will be subject to a chord progression and melodic analysis that is quantified by frequency and similarity upon comparison to one another.

The four main elements that make up music and are used in expert witness musical analysis are present within a song’s Contrapuntal analysis. The elements of melody, harmony, rhythm, and structure are illuminated by the Rules of Counterpoint as a tool into a standard and objective method of analysis. Music can be measured horizontally in terms of length and duration, as well as vertically in terms of its structure, which is comprised of rhythmic note placements, melodic lines, and harmonic progressions.²²²

Similarities are noted in terms of “RULES.” For purposes of explaining the Proposed Method in this article, SONG 1 is the original song and SONG 2 is the song alleged to have infringed upon the original song as applied to the formulas below in the preceding four sub-sections.

1. Duration of Similar Rules

The level of similarity based on duration is calculated by dividing the frequency that each Counterpoint Rule occurs by the length of one measure. This is a horizontal measurement divided by vertical measurement. Two different units of musical measurement are used to calculate this level of similarity in order to obtain objective

²²² Marmorstein, *supra* note 19 (“The first dimension is the vertical dimension, which deals with the relationship between the lines and the intervals between simultaneous notes. The second dimension is the horizontal dimension, which deals with the shape, direction, individuality, and independence of each of the lines.”).

measurement that takes both duration and length of a song's vertical measurement into account. The reasoning is that the duration in time in a slow song could imply that it is more similar than it actually is. The number of beats within the measure is also used in order to determine length and duration.

$$\text{EQUATION 1A: } \frac{\# \text{ OF BEATS SIMILAR RULE SPANS OVER}}{\# \text{ OF BEATS IN ONE MEASURE}}$$

$$\text{EQUATION 1B: } \frac{\text{DURATION IN TIME SIMILAR RULE SPANS OVER (IN SECONDS)}}{\text{DURATION IN TIME OF ONE MEASURE (IN SECONDS)}}$$

This form of measurement takes into account the issue within the *Bright Tunes Music Corp. v. Harrisongs Music, Ltd.* case, where just two similarities between two songs were found to be enough to constitute an infringement because of how often the similarities were repeated throughout the song.²²³ The average of these calculations are compared to one another by dividing SONG 2 by SONG 1 that will yield a number between 0 and 1 indicating the level of similarity between the songs in regards to duration.

The Counterpoint Rule of parallel motion from "Blurred Lines" and "Got To Give It Up" from Figures 8, 9, and 10 will be applied to EQUATIONS 1A and 1B. Both songs are in the key signature of 4/4, meaning that there are four beats in every measure. The duration of time of one measure in both songs is the same since they both have the same tempo of 120 BPM. 120 beats in 1 minute, equates to 4 beats within one measure being equal to 0.03333 of one minute. 0.03333 of one minute is equal to 1.99999 seconds, as demonstrated by the math below.

$$\frac{120 \text{ BEATS}}{1 \text{ MINUTE}} = \frac{4 \text{ BEATS}}{(X) \text{ MINUTES}}$$

$$120 (X) = 4$$

$$X = \frac{4}{120} = 0.03333 \text{ MINUTE}$$

$$\frac{0.03333 \text{ MINUTES}}{1 \text{ MINUTE}} \times \frac{60 \text{ SECONDS}}{1 \text{ MINUTE}} = 1.99999 \text{ SECONDS}$$

There are four consecutive parallel octaves in "Blurred Lines" that last four beats. There are two consecutive parallel octaves in "Got To Give It Up" that last two and a half beats.

Below is EQUATION 1A applied to SONG 2, "Blurred Lines":

$$\frac{\# \text{ OF BEATS SIMILAR RULE SPANS OVER}}{\# \text{ OF BEATS IN ONE MEASURE}} = \frac{4}{4} = 1$$

²²³ *Bright Tunes Music Corp. v. Harrisongs Music, Ltd.*, 420 F. Supp. 177 (S.D.N.Y. 1976).

Below is EQUATION 1B applied to SONG 2, “Blurred Lines”:

$$\frac{\text{DURATION IN TIME SIMILAR RULE SPANS OVER (IN SECONDS)}}{\text{DURATION IN TIME OF ONE MEASURE (IN SECONDS)}} = \frac{1.99999}{1.99999} = 1$$

The average of both EQUATIONS 1A and 1B are obtained by adding the resulting calculations from both equations and dividing it by the number 2 (the number of equations). Both fractions from EQUATIONS 1A and 1B from SONG 2, “Blurred Lines” are equal to—and average—the number 1. This resulting number signifies that every measure within SONG 2 that this particular Counterpoint Rule of consecutive parallel motion of octaves is present, the Counterpoint Rule is present 100% of the measure.

Below is EQUATION 1A applied to SONG 1, “Got To Give It Up”:

$$\frac{\text{\# OF BEATS SIMILAR RULE SPANS OVER}}{\text{\# OF BEATS IN ONE MEASURE}} = \frac{2.5}{4} = 0.625$$

Because there are 2.5 beats that this Counterpoint Rule spans over, the time in seconds that the 2.5 lasts must be calculated. The math below shows the calculations:

Below is EQUATION 1B applied to SONG 1, “Got To Give It Up”:

$$\begin{aligned} \frac{120 \text{ BEATS}}{1 \text{ MINUTE}} &= \frac{2.5 \text{ BEATS}}{(X) \text{ MINUTES}} \\ 120 (X) &= 2.5 \\ X &= \frac{2.5}{120} = 0.02083 \text{ MINUTES} \\ 0.02083 \text{ MINUTES} \times 60 \text{ SECONDS} &= 1.24998 \text{ SECONDS} \end{aligned}$$

120 beats in 1 minute equates to 2.5 beats within one measure, which is equal to 0.02083 of one minute. 0.02083 of one minute is equal to 1.24998 seconds. 1.24998 seconds is the number used in the numerator for EQUATION 1B.

$$\frac{\text{DURATION IN TIME SIMILAR RULE SPANS OVER (IN SECONDS)}}{\text{DURATION IN TIME OF ONE MEASURE (IN SECONDS)}} = \frac{1.24998}{1.99999} = 0.62502$$

Both fractions average a number of 0.62501. This resulting number signifies that every measure within SONG 1 that this particular Counterpoint Rule of consecutive parallel motion of octaves is present, the Counterpoint Rule is present 62.5% of the measure.

2. Commonality – or Rarity – of Similarities

The level of similarity based on the commonality, or rarity, of similarities is calculated by dividing the number of similar notes between the identified rule within

both songs by the total number of notes within the identified rule of each individual song.

$$\text{EQUATION 2A:} \quad \frac{\# \text{ OF SIMILAR NOTES BETWEEN SIMILAR RULES OF BOTH SONGS}}{\text{TOTAL \# OF NOTES IN RULE WITHIN SONG 1}}$$

$$\text{EQUATION 2B:} \quad \frac{\# \text{ OF SIMILAR NOTES BETWEEN SIMILAR RULES OF BOTH SONGS}}{\text{TOTAL \# OF NOTES IN RULE WITHIN SONG 2}}$$

$$\text{EQUATION 2C:} \quad \frac{\# \text{ OF SIMILAR NOTES BETWEEN SIMILAR RULES OF BOTH SONGS}}{[(\text{TOTAL \# OF NOTES IN RULE WITHIN SONG 1} + \text{TOTAL \# OF NOTES IN RULE WITHIN SONG 2}) / 2]}$$

These fractions take into account the similarity of elements compared to each song and their average. There are zero similar notes, in terms of scale degrees, between “Blurred Lines” and “Got To Give It Up.” The consecutive parallel octaves in “Blurred Lines” move from the 5th scale degree, to the 4th scale degree, to the 3rd scale degree, to the 2nd scale degree, whereas the consecutive parallel octaves in “Got To Give It Up” moves from the minor 7th scale degree to the 1st scale degree.

3. Number of Similarities

This is SIMILARITY BY FREQUENCY OF COUNTERPOINT RULES.

$$\text{EQUATION 3A:} \quad \frac{\text{SONG 2: \# OF COUNTERPOINT RULES FOLLOWED}}{8 (\text{TOTAL \# OF COUNTERPOINT RULES})} \div \frac{\text{SONG 1: \# OF COUNTERPOINT RULES FOLLOWED}}{8 (\text{TOTAL \# OF COUNTERPOINT RULES})}$$

This ratio will yield a number between 0 and 1 that will indicate to what degree song 2 is similar to song 1 in terms of Counterpoint Rules that are followed. The specific rules are not taken into account here but are considered in equations discussed in earlier in this sub-section and the two immediately preceding sub-sections. This ratio should also be applied to the Counterpoint Rules that are not followed in order to determine if the songs have a similar stray from the rules of Counterpoint:

$$\text{EQUATION 3B:} \quad \frac{\text{SONG 2: \# OF COUNTERPOINT RULES NOT FOLLOWED}}{8 (\text{TOTAL \# OF COUNTERPOINT RULES})} \div \frac{\text{SONG 1: \# OF COUNTERPOINT RULES NOT FOLLOWED}}{8 (\text{TOTAL \# OF COUNTERPOINT RULES})}$$

Because only one Counterpoint Rule has been applied for the purposes of this article, these equations cannot be demonstrated.

4. *Similarities in Conjunction with Entirety of the Song*

The two formulas from sub-section 1 of this section are used again to compare the durations and lengths of each similarly followed to the entirety of each respective song in order to get a ratio. The duration of each followed and unfollowed Contrapuntal rule within SONG 2 is compared to that in SONG 1 in order to calculate each song's level of compliance to the Counterpoint Rules.

$$\text{SONG 2: } \frac{\text{DURATION IN TIME EACH SIMILAR RULE SPANS OVER (IN SECONDS)}}{\text{DURATION IN TIME OF ENTIRE SONG (IN SECONDS)}} = X2$$

$$\text{SONG 1: } \frac{\text{DURATION IN TIME EACH SIMILAR RULE SPANS OVER (IN SECONDS)}}{\text{DURATION IN TIME OF ENTIRE SONG (IN SECONDS)}} = X1$$

$$\text{EQUATION 4: } \frac{X2}{X1}$$

Dividing X2 by X1 will yield a number between 0 and 1 that indicates the level of similarity of SONG 2 to SONG 1 in regard to the frequency of the song's compliance to the Counterpoint Rules.

"Blurred Lines" is 04:23 minutes long, which is a total of 263 seconds. Because the consecutive parallel octaves occur fifteen times in "Blurred Lines" and each occurrence of the consecutive parallel octave lasts 1.99999 seconds long, the consecutive parallel octaves occur a total of 29.99985 seconds in the entire song.

$$\text{SONG 1 } \frac{29.99985}{263} = 0.11407$$

This means that the Counterpoint Rule of consecutive parallel octaves is present in 11.4% of "Blurred Lines."

"Got To Give It Up" is 04:15 minutes long, which is a total of 255 seconds. Because the consecutive parallel octaves occur three times in "Got To Give It Up" and each occurrence of the consecutive parallel octave lasts 1.24998 seconds long, the consecutive parallel octaves occur a total of 3.74994 seconds in the entire song.

$$\text{SONG 2 } \frac{3.74994}{255} = 0.0147$$

This means that the Counterpoint Rule of consecutive parallel octaves is present in 1.5% of "Got To Give It Up."

Dividing 0.0147 (x2) by 0.11407 (x1) produces the resulting number of 0.12886. This means that there is a 12.9% similarity between both songs in regard to the presence of consecutive parallel intervals.

C. Shortcomings in the Proposed Method

The Proposed Method does not take lyrics or the sound recording itself into account. Lyrics within a copyrighted song are protected in both the sound recording and the composition.²²⁴ Methods analyzing similarity between song lyrics, however, have already been addressed in *Bright Tunes Music Corp. v. Harrisongs Music, Ltd.* as well as within textual copyrighted works.²²⁵ In addition to a song's composition, the song's sound recording is protected under copyright as well.²²⁶ Particular and unique instrumentations of a song may be considered as a characteristic of the song protected under copyright.²²⁷ The use of similar instrumentations in a copyrighted song could rise to the level of an infringement if other characteristics of the song—such as melody, harmonic progressions, or even lyrics—are found, in conjunction, to be similar as well. Because the Proposed Method does not take instrumentals into account, a significant and unique instrumental in a song, such as the use of a rare and particular drum snare throughout a song, would not be taken into consideration.

Lay listeners may not pick up on many similarities and dissimilarities as a trained and knowledgeable musician would. The intended audience is typically a lay listener, and the Proposed Method does not take the lay listener into account. Poignantly, another expert in the *Gaye* case, Ingrid Monson, states:

Cognitive psychology [] notes that the recognition of similarity between musical passages and pieces is partly the product of local resemblances the length of a note, motive, or phrase and partly due to larger scale coherences (section or form) of syntax and form. Work on the cognitive psychology of musical perception has long concluded that there is a range of variation within which listeners recognize musical similarity between musical events. In other words, there can be notational difference among passages that are recognized by listeners as substantially similar. Local transformation of melodies and rhythms, in other words, are more likely to be judged similar when underlying continuities of syntax and form are present.²²⁸

Counterpoint Rules do not apply to abstract modern compositions, simply homophonic melodies, and Eastern music. Modern compositions are usually electronic and tend to lack any kind of melody or harmony within its structure. Homophonic melodies have only one line (or voice) of music and thus cannot be subject to Contrapuntal analysis since Counterpoint is based around polyphonic music.

²²⁴ NIMMER, *supra* note 6, § 2.05[D].

²²⁵ *Bright Tunes Music Corp.*, 420 F. Supp. at 177.

²²⁶ 17 U.S.C.S. § 102(a)(2) (2021) (protects musical works); 17 U.S.C.S. § 102(a)(7) (2021) (protects sound recordings).

²²⁷ Decl. of Sandy Wilbur, *supra* note 5, at ¶ 73.

²²⁸ Expert Report of Ingrid Monson, *supra* note 30, at *9 (citing Stephen McAdams and Daniel Matzkin, *Similarity, Invariance, and Musical Variation*, 930(1) ANNALS OF THE NEW YORK ACADEMY OF SCIENCES 62, 62–76 (July 2006), <https://doi.org/10.1111/j.1749-6632.2001.tb05725.x> (in an experimental context McAdams and Matzkin created progressively greater variations of original material and tested listeners on their perception of similarity)).

The Proposed Method finds its base in the frequency – the *quantity* – of times that similarities are present within the songs based on Counterpoint Rules but fails to take *quality* into account. The quality of a song takes into account its significant and recognizable musical characteristics that are unique and original to the song. The Counterpoint analysis used in the Proposed Method inevitably takes into account significant qualitative aspects of each song, but the quality of each Counterpoint Rule is given equal weight in the calculations. For example, consecutive parallel octaves in “Blurred Lines” can arguably be considered a signature and unique characteristic of the song as it precedes, and leads, into the hook four times, the song’s theme²²⁹ three times, and then the backup hook²³⁰ three times. In contrast, the consecutive parallel octaves in “Got To Give It Up” do not precede, lead into, or follow neither the hook, the backup hook, nor the theme. Although the Counterpoint Rule of consecutive parallel octaves is a prominent quality in “Blurred Lines” and is a mere camouflaged occurrence in “Got To Give It Up.” The Counterpoint Rule is given equal weight and consideration in The Proposed Method.

An example of quality that is not recognized by the Proposed Method would be a short, but unique, portion of a defendant’s song that is relatively used for long periods of time in a new composition (such as its use as a hook). The Proposed Method could be further expanded upon into a more objective Method that includes a song’s quality in its equations by incorporating Schenkerian Analysis and The Generative Theory of Tonal Music.²³¹

Although the Proposed Method should be used instead of methods created by individual expert witnesses to establish a uniform standard of comparison. However, expert witnesses could potentially disagree in the use and implementation of the Proposed Method and use their own method instead.

The Proposed Method has not yet been developed into a computer program. Many current music composition computer programs are modeled after a few simple variations of Counterpoint used in the Proposed Method. Additionally, the Proposed Method has not been applied to a sufficient set of data to determine its viability.

²²⁹ *Williams*, 885 F.3d at 1161. The theme in “Blurred Lines” has many lyrical variations but maintains a series of alternating chromatic notes – half step intervals – of the 3rd scale degree and the sharpened 2nd scale degree. The lyrics include “if you can’t hear,” “if you can’t read,” “okay now he was close,” “but you’re an animal,” and “that’s why I’m.”. See Pl.’s and Counter-Def’s Evid. re: Mot. in Summ. J. or in the Alternative, Partial Summ. J. 89, Ex. B, #8-10, *Williams v. Gaye*, 885 F.3d 1150 (9th Cir. 2018) (No. 15-56880, No. 16-55089, No. 16-55626) (ECF No. 91-5).

²³⁰ Pl.’s and Counter-Def’s Evid. re: Mot. in Summ. J. or in the Alternative, Partial Summ. J. 89, Ex. B, #11–12, *Williams v. Gaye*, 885 F.3d 1150 (9th Cir. 2018) (No. 15-56880, No. 16-55089, No. 16-55626) (ECF No. 91-5). The backup hooks are the backup vocals following the hook. The backup hook in “Blurred Lines” follows the chromatic pattern of the hook and is comprised the three chromatic steps increasing in pitch, starting with the 4th scale degree, then to the sharpened 4th scale degree, and ending in the 5th scale degree. The backup hook in “Blurred Lines” is set to the lyrics “hey hey hey.”

²³¹ The Generative Theory of Tonal Music and Schenkerian Analysis could be used to better improve The Proposed Method. Both treatises are not within scope of this paper but could be addressed in future a paper Schenkerian Analysis could be used in The Proposed Method of analysis.

D. *Legal Obstacles in Implementing The Proposed Method*

The Proposed Method must meet the standard of admissibility within the Federal Rules of Evidence as laid out in the Daubert Standard, and a jury must be comfortable with relying on the results of such method when offered into testimony.²³²

Expert Ingrid Monson from the Gaye case, in discussing the practice of comparing songs, asserted that:

It is important to compare not only musical notation, but also the sound of the recordings. Resemblances that may not be apparent in the details of measure-by-measure transcription may be perceived in relationship to a larger musical context. Work on the cognitive psychology of musical perception has long concluded that there is a range of variation within which listeners recognize musical similarity between musical events. This means that there can be notational differences among passages that are recognized by listeners as substantially similar.²³³

These cognitive biases that overestimate the likelihood of copying may lead to false finding of actual copying.

“A Daubert hearing is essential [] as part of the Court’s gatekeeper role to exclude the unreliable, if not dissembling opinions of [experts] which are based on pure air and advocacy.”²³⁴ “In its role as gatekeeper, the district court determines the relevance and reliability of expert testimony and its subsequent admission or exclusion.”²³⁵ “Compliance with Rule 702 is gauged by the district court’s assessment of the reliability of the proffered expert testimony Specifically, the district court is charged with determining whether the proffered expert testimony is trustworthy.”²³⁶ In summary, the Proposed Method must be in harmony with the Federal Rules of Evidence before it can be considered a viable standard for music copyright infringement cases.

V. CONCLUSION

In determining whether a musical work is substantially similar to another work, expert witnesses employ a cacophony of inconsistent and subjective methods of musical analysis. The Proposed Method provides a more uniform, rigid, and objective method that quantifies the level of similarity between two musical works to help evaluate whether the alleged musical similarities rise to the level of an infringement

²³² FED. R. EVID. 703.

²³³ Expert Report of Ingrid Monson, *supra* note 30, at *8.

²³⁴ Pls’s Req. for Daubert Hr’g Regarding Ops. of Defs’s. Musicologists That Theme X and the Keyboard Part are Found in the Deposit Copy; Mem. of Points and Authorities: Decl. of Seth Miller, Williams, et al. v. Bridgeport Music, Inc., et al., LA CV13-06004 JAK (AGRx) (ECF No. 91-3), Williams v. Gaye, 885 F.3d 1150 (9th Cir. 2018) (No. 15-56880, No. 16-55089, No. 16-55626) (ECF No. 91-5).

²³⁵ Barabin v. Astenjohnson, Inc., 700 F.3d 428, 431 (9th Cir. 2012).

²³⁶ Barabin, 700 F.3d at 432 (citing Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579, 589–90 n.9 (1985)).

that can be sent to a jury to infer copying. The four musical elements of melody, harmony, rhythm, and structure are illuminated by the Rules of Counterpoint in the Proposed Method as a tool to calculate the level of probative copying between two musical works. Only so many combinations and relationships of musical notes can be produced. Thus, this inherently limitative element of music should be utilized. This theory can be expanded upon by generating a software and by further incorporating Schenkerian Analysis and The Generative Theory of Tonal Music.