

ARTICLE

A MUSICAL WORK IS A SET OF INSTRUCTIONS

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ABSTRACT

A musical work is a set of instructions that typically consists of music notation, which includes notes, and in some instances, musical lyrics. Music copyright infringement cases do not appropriately take account of the nature of music notation as a set of instructions. This leads to analysis in infringement cases that seriously misconstrues the history, uses, and functions of music notation. This misreading is a historical relic of the ways in which copyright has been applied to music. Copyright was first applied to words and was initially visual and textual in orientation. Since the earliest copyright laws, copyright subject matter has progressively expanded from granting rights to protect written expression to other artistic arenas. Copyright law has, however, consistently undervalued the art of performance

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while favoring the written expression of music, which has had a profound impact on varied musical forms. This emphasis on writings has disfavored some plaintiffs who have sought greater protection for their own performance practice, while at the same time disfavored some defendants whose creative, non-notated performance practice should allow a greater scope for their borrowing. This Article suggests that courts in interpreting infringement in music cases must look beyond the visual-textual and take better account of how music is actually perceived and practiced.

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I. INTRODUCTION

A musical work is a set of instructions that may indicate a number of things. Discussions about musical works in copyright discourse and cases do not sufficiently take account of the nature, function, uses, and history of music notation. As a result, courts consistently misread music in copyright infringement cases. This Article suggests that considerations of music copyright infringement should be reread with appropriate understanding of music notation, its history, and its varied uses.

A musical work consists of music notation, which includes musical notes, and sometimes lyrics. The nature of the musical work as a set of instructions may vary and is by no means always determinate. Notation as a set of instructions typically gives information and other indications about performance but may also be used for other purposes. In addition to musical notes, music notation characteristically includes information concerning note duration, dynamics, tempo, expressivity, and other musical features. The musical information contained in notation may differ significantly between composers and may also be used for varied purposes. Music notation has been used in different ways over time, among different musical genres, and by different composers. The now dominant form of staff notation that evolved within the European art music tradition is the source of music notation typically considered in copyright cases.¹

The history of music notation must be considered in the context of the historical development of copyright and its later application to music. Copyright first protected words and other written expression, but with an overriding visual and textual emphasis.² Copyright subsequently expanded to protect a broad

1. See *infra* Part III.B.1 (discussing the notational emphasis of the European art music tradition).

2. See *infra* Part II.B.1 (discussing the visual-textual bias in copyright law and its problems).

range of things, including music compositions and performances, sound recordings, choreography, photographs, movies, and software.³ As it expanded to new arenas, however, copyright retained a dominant visual-textual emphasis that reflects its literary origins. This emphasis has significant implications for both nonvisual and nontextual aspects of creative activities and treatment of performers within copyright. This pervading and insufficiently recognized visual-textual bias has contributed to continuing problems in the application of copyright in a broad range of areas, including music, dance, theater, and Internet contexts.⁴ In the case of music, for example, copyright at first gave rights that protected written musical works—music and lyrics, which created a functional system until well into the twentieth century.⁵ However, music is a performance art in which oral and aural aspects are essential. Music also typically involves oral traditions that may supplement, modify, or even replace aspects of written traditions reflected in notation. Changing technology and musical practices increasingly challenge the privilege granted to written notation in music copyright. Further, since the early twentieth century, the displacement of European art music by syncretic African-based music as a significant basis for popular music has been a key aspect of changing musical practice. This displacement is an important and largely unrecognized factor in continuing contemporary challenges to music copyright.

A copyright focus on notation has contributed to a privileging of the seen over the heard in music, which is problematic in a number of ways. The assumptions underlying this privilege of sight and treatment of music evidence in copyright infringement cases may be inconsistent with neuroscience findings about human cognition and perception of visual and auditory stimuli in music,⁶ which raises fundamental

3. See *infra* Part II.B.2 (indicating how copyright law first applied to literary works and then expanded to protect other artistic fields, including music).

4. See, e.g., Jacqueline D. Lipton, *Digital Multi-Media and the Limits of Privacy Law*, 42 CASE W. RES. J. INT'L L. 551, 551–52, 555–57 (2010) (noting the limitations of the European Union Data Protection Directive, which focused on regulating textual information, but did not adequately address the application of their regulatory model to sound and images, despite being aware that problems might arise in these alternative formats); Rebecca Tushnet, *Worth a Thousand Words: The Images of Copyright*, 125 HARV. L. REV. 683, 688–89, 699–702 (2012) (discussing the ungovernability of images in copyright law and dichotomous copyright treatment of images as either being transparent or opaque).

5. See *infra* Part II.B.2 (indicating how written music was prioritized over oral and aural in copyright treatment of music due to limited technologies).

6. Although the implications of neuroscience research for music copyright infringement have not been deeply explored, applying the insights of cognitive science in

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questions of how evidence is presented and interpreted in copyright infringement cases. A failure to appropriately contextualize the visual and aural in music has led to confusing bases for determinations of infringement and haphazard analysis in music copyright cases.⁷ Visual-textual bias has also led to a level of disregard for the contributions of performers in copyright.

This Article analyzes implications of recognizing that a musical work is a set of instructions and focuses on the origins and impact of the privilege of sight in music copyright. Part II of this Article discusses how copyright considerations of music “read” musical works and the ways in which the visual and aural may be treated in a confusing manner in copyright considerations of music. Part II also considers technology, musical variations, and music perception, focusing on the role of sound recording technologies in musical practice, copyright treatment of musical practices, and the significant differences between music and literary works. Part III discusses the history of music notation and its relevance to music copyright, with a focus on the need to recontextualize music copyright considerations of music with better understanding of the role of notation as a set of instructions. Part IV analyzes selected

intellectual property law has been discussed in relation to copyright fair use, trademark, and other areas of intellectual property. See Laura R. Bradford, *Parody and Perception: Using Cognitive Research to Expand Fair Use in Copyright*, 46 B.C. L. REV. 705, 728, 742–46 (2005); Christopher Buccafusco, *Making Sense of Intellectual Property Law*, 97 CORNELL L. REV. 501, 541–42 (2012) (discussing how copyright law has been applied to works that “appeal to the senses of sight and sound, while patent law has retained jurisdiction over works appealing to the senses of touch, taste, and smell” and arguing that intellectual property law should instead “recognize the unity of sensory experience”); Rebecca Tushnet, *Gone in Sixty Milliseconds: Trademark Law and Cognitive Science*, 86 TEX. L. REV. 507, 513 (2008) (“[C]ognitive research into the way trademarks affect thinking offers hard evidence for the proposition that objective product attributes are not crucial—indeed, not even important—to many consumers.”). The broader implications of neurosciences for the law have also received attention. See, e.g., Brent Garland, *Neuroscience and the Law: A Report*, in NEUROSCIENCE AND THE LAW: BRAIN, MIND, AND THE SCALES OF JUSTICE 3, 4 (Brent Garland ed., 2004) (“The question of how developments in neuroscience might interact with the law led [American Association for the Advancement of Science] and the Dana Foundation to convene a meeting with members drawn from both the legal and neuroscience communities.”); THE MACARTHUR FOUNDATION RESEARCH NETWORK ON LAW AND NEUROSCIENCE, NETWORK OVERVIEW (Sept. 1, 2014), available at <http://www.lawneuro.org/networkoverview.pdf>. (indicating that the Network is seeking to investigate the intersection of law and neuroscience “to help the legal system avoid misuse of neuroscience, and to explore the potential of neuroscience to improve the reliability, fairness, rationality, and effectiveness of the criminal justice system”).

7. M. Fletcher Reynolds, *Music Analysis for Expert Testimony in Copyright Infringement Litigation* xiv (May 19, 1991) (Ph.D. Dissertation, Music Theory, University of Kansas) (discussing musical analysis in music copyright infringement cases, noting haphazard analyses in infringement cases and that “the musically relevant issues were never presented or properly explained by the expert witnesses”).

musical copyright cases and suggests that such cases should be reread with appropriate contextualization of the role and operation of music notation in musical practice.

II. READING MUSIC: WHY LAW PRIORITIZES VISUAL REPRESENTATIONS OF MUSIC

The now dominant system of staff notation that developed within the European art music tradition is just one of a number of potential options for notating music. This particular form of music notation achieved widespread success in part as a compromise solution that was acceptable to both vocalists and instrumentalists.⁸ Notation should be considered in light of the contexts of its usage. Such contexts may, among other things, vary in time, by genre, by composer, and by performer. As a result, the notation of one composer may not necessarily be construed in the same manner as another composer's notation. Similarly, music notation used in jazz, blues, and other musical genres that incorporate significant improvisation cannot be interpreted in the same manner as notation in much twentieth century European art music. These differences of context and interpretation have significant implications for copyright treatment of music notation. Copyright considerations of musical works typically treat visual notated music as the primary source of music with priority over aural versions of the music that might be evident in a sound recording, for example, without appropriately taking account of significant variations in uses of notation in time and space.⁹ This prioritization of the visual and textual has developed in a context of changing technologies that permit replication of music aurally without any use of notation. This has resulted in a persistent tension between the visual-textual and the aural that runs through music copyright. This tension is most clearly demonstrated in music copyright infringement cases, but is pervasive in copyright discourse about music. The interaction of the written, the oral/aural and changing technologies is thus critical for understanding current treatment of written music notation in copyright infringement cases.

8. RICHARD RASTALL, *THE NOTATION OF WESTERN MUSIC* 6 (1982) (attributing the success of staff notation to its providing "enough of the necessary characteristics for singers and instrumentalists alike to read it in the way that they wish to").

9. Kurt Blaukopf, *Westernisation, Modernisation, and the Mediamorphosis of Music*, 20 INT'L REV. AESTHETICS & SOC. MUSIC 183, 190 (1989) ("Copyright protection is only provided for music fixed in notated form. . . . The concept of copyright . . . does not take into consideration the specificity of musics that are partly or totally independent of notational efforts.").

A. Sound Recordings and Musical Transformations

1. *Sound Recordings and Visual and Auditory Representations of Music.* Although many tend to think of the technology changes of the late twentieth century as particularly revolutionary, these changes were made possible by earlier technology shifts that had a significant impact on music. In particular, technologies of the late nineteenth and early twentieth centuries revolutionized how many people created, used, and consumed music. Prior to the sound recording era, musical experiences were typically based on live performances and preserved in writing and in human memory. The advent of sound recordings enabled separation of music creation, performance, and consumption in both space and time. Sound recordings permitted preservation of music in a nonvisual form. The introduction of sound recording technologies has had significant musical, cultural, legal, business, and other consequences.

The contrast of visual with auditory representations of music was evident in the earliest days of sound recording technologies. The earliest known preserved sound recording, created in France in 1860 by Léon Scott,¹⁰ was based on the phonautograph, which was invented in the mid-1850s.¹¹ A phonautograph is a visual transcription of sound that turns audible vibrations from speech or music into written tracings.¹² Léon Scott's invention did not, however, have much of an impact, at least commercially,¹³ and his phonautographs were soon lost in French archives until their recovery and reproduction as sound over a century after Scott created them.¹⁴

10. French inventor Édouard-Léon Scott de Martinville created a phonautograph of "Claire de Lune" in 1860. Phonautographs preserved sound and were meant to be read visually. Jody Rosen, *Researchers Play Tune Recorded Before Edison*, N.Y. TIMES, Mar. 27, 2008, at A1 (Late Edition).

11. See JONATHAN STERNE, *THE AUDIBLE PAST: CULTURAL ORIGINS OF SOUND REPRODUCTION* 31 (2003) (indicating that a version of the phonautograph was invented by Scott in 1857).

12. OLIVER READ & WALTER L. WELCH, *FROM TIN FOIL TO STEREO: EVOLUTION OF THE PHONOGRAPH* 5 (2d ed. 1976) (describing the phonautograph as tracing sound waves for the purpose of visual analysis and noting that "a great step in thinking was required" between the phonautograph and the phonograph); STERNE, *supra* note 11, at 31.

13. See DAVID L. MORTON JR., *SOUND RECORDING: THE LIFE STORY OF A TECHNOLOGY* 2 (2004) (noting that the phonautograph was copied and used in many laboratories and classrooms in the United States).

14. Although Scott's creation was not intended to reproduce sound, a group of American audio historians recently found Scott phonautographs in archives in France and converted the visual images into sound recordings. Rosen, *supra* note 10.

The sound recording era was truly born with Thomas Alva Edison's development of tinfoil phonograph technology in 1877.¹⁵ Although Edison initially conceived the phonograph primarily as a business device to enable stenography,¹⁶ he was aware of the potentially broad range of applications of the phonograph.¹⁷ Following his development of the phonograph,¹⁸ Edison turned his attention to inventions relating to electricity, which gave space for other inventors to improve on phonograph technology. Alexander Graham Bell's activities in developing the graphophone, which replaced Edison's tinfoil cylinder with a wax cylinder, spurred Edison to improve his invention.¹⁹ Various sound recording technologies, as developed and improved by Edison, Bell, Emile Berliner, and others, eventually became the impetus for commercial development of sound recording technologies that soon revolutionized music. Technological innovation in sound recordings was closely related to technological developments in other areas, including the telegraph and telephone, and the phonograph was part of a broader communications revolution in the late nineteenth century that had a profound impact on life in the United States and elsewhere.²⁰

15. Improvement in Phonograph or Speaking Machines, U.S. Patent No. 200,521 (filed Feb. 19, 1878). Although French inventor Charles Cros deposited a sealed packet disclosing a phonograph invention with the Académie des Sciences in Paris in April 1877 prior to Edison's disclosure of his invention in December 1877, Cros never built a prototype. MORTON, *supra* note 13, at 5; *see also* MICHAEL CHANAN, REPEATED TAKES: A SHORT HISTORY OF RECORDING AND ITS EFFECTS ON MUSIC 23–24 (1995) (noting that it is unlikely that Edison knew of the work of Cros and that Edison was the first to develop a working prototype sound recording).

16. CHANAN, *supra* note 15, at 24 (noting that F.B. Fenby of Worcester, Massachusetts was granted a patent in 1863 for a "complicated electro-magnetic device which also was never built but about which . . . Edison must have known, for it was Fenby who coined the word 'phonograph'"); MARK COLEMAN, PLAYBACK: FROM THE VICTROLA TO MP3, 100 YEARS OF MUSIC, MACHINES, AND MONEY xix (2003) (indicating that Edison primarily intended his phonograph to be used as an office dictation machine).

17. Thomas A. Edison, *The Phonograph and Its Future*, 126 N. AM. REV. 527, 532–35 (1878) (listing first dictation, books, and educational purposes above music in describing at least eleven potential applications of the phonograph); *see also* COLEMAN, *supra* note 16, at 9–10 ("When the phonograph failed as a stenographer's tool, Edison turned to music reproduction with mixed results."); STERNE, *supra* note 11, at 202.

18. CHARLES BAZERMAN, THE LANGUAGES OF EDISON'S LIGHT 130 (2002) (noting that the phonograph finally won Edison "a public reputation as a man of science").

19. ALEC FOEGE, THE TINKERERS: THE AMATEURS, DIYERS, AND INVENTORS WHO MAKE AMERICA GREAT 78 (2013) (indicating that Bell's laboratory "developed a wax cylinder technology that improved the accuracy of the sound reproduction" of Edison's tinfoil cylinder and noting that Bell beating Edison to market with his telephone "prompted the always competitive" Edison to "return to the invention that had been his calling card and, once again, begin tinkering with it").

20. ANDRE MILLARD, AMERICA ON RECORD: A HISTORY OF RECORDED SOUND 17–21 (2d ed. 2005) (noting Edison and Bell had inventions in the telegraph, telephone, and

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The transition from Scott to Edison and later inventors marks more than the passage of time. Rather, movement from the phonautograph to the tinfoil phonograph and later sound recording technologies marks a fundamental dividing line between music as visual image as compared with music as auditory message and an important starting point in the development of the era of recorded sound as commercial practice. As sound recording scholar Jonathan Sterne has noted: “There is a yawning epistemic gap between us and Léon Scott, because he thought that the way one gets to the truth of sound is by looking at it.”²¹ The assumptions underlying Scott’s phonautograph parallel in important respects underlying copyright assumptions about the locus of musical expression as being embodied in musical writings. Conceptions of music as visual-textual image and music as auditory message also relate to assumptions about the role of the senses in perception that have broader significance in both time and space, the importance of which extend far beyond music. The era of recorded sound illuminates tensions between conceptions of how music is both received and perceived that have enormous implications for copyright that are not sufficiently recognized.

Commercial production of records for entertainment purposes only began to occur in larger volume at the end of the nineteenth century.²² During the twentieth century, sound recording technologies became widely disseminated and sound recordings became a pervasive aspect of music creation and consumption. The advent of sound recordings has had a significant impact on the music industry and music practice. From a business perspective, sound recording technologies eventually led to the rise of the recording industry, which replaced the formerly dominant sheet music industry.²³ Sound recordings and other twentieth century technologies have also facilitated changes in musical practice. Sound recordings enable

phonograph areas); MORTON, *supra* note 13, at 31, 34 (noting that prior to the gramophone, Berliner was known for an improved microphone for use in the telephone); TOM STANDAGE, *THE VICTORIAN INTERNET: THE REMARKABLE STORY OF THE TELEGRAPH AND THE NINETEENTH CENTURY’S ON-LINE PIONEERS* vii–ix (1998) (discussing changes that accompanied the introduction of the telegraph in the nineteenth century).

21. Rosen, *supra* note 10.

22. See *infra* notes 32–37 and accompanying text (indicating that the gramophone disc technology developed in 1888 eventually became the dominant technology used for commercial music recordings because it introduced new techniques for the duplication of records, allowing for mass production of recorded music).

23. Reebee Garofalo, *From Music Publishing to MP3: Music and Industry in the Twentieth Century*, 17 *AM. MUSIC* 318, 336 (1999) (noting displacement of publishing houses by recording industry as records replaced live performers in radio programming).

permanent preservation of and repeated listening to a broad range of musical activities. Further, digital audio formats enhance our ability to store and retrieve recorded music, which gives musicians unparalleled access today to a wide range of music that can be mixed, manipulated, borrowed, and utilized in ways that were simply not possible even as recently as a few years ago.²⁴ Late twentieth century technologies, however, also underscore the extent to which technology choices by commercial actors and businesses and the effective control engendered by such choices have long played a role in the effective functioning of copyright.²⁵ The recording industry came to control the production and dissemination of phonograph records,²⁶ which were a dominant source of recorded music for much of the twentieth century. For most of the twentieth century, sound recordings were largely unprotected by copyright.²⁷ The application of technology to the music industry thus highlights a continual process in which new technologies challenge existing business models, which generally must adapt or seek legislative remedies in the face of changing technological, business, and creative contexts.²⁸

During much of the twentieth century, recording companies and others in the music industry have often sought to address the challenges of a wide range of practices from unauthorized private uses to piracy and bootlegging to the challenges of new

24. Alan Korn, *Issues Facing Legal Practitioners in Measuring Substantiality of Contemporary Musical Expression*, 6 J. MARSHALL REV. INTELL. PROP. L. 489, 489–90 (2007) (“[A]dvances in digital recording technology have enabled artists and producers to shape and reshape discrete ‘bits’ of musical information to create multi-layered collage-based works that enjoy tremendous popularity. As a result, popular music today borrows (and samples) everything from Bollywood film music to Taiwanese aboriginal folk songs and avant-garde jazz.” In addition, access to new media, such as the Internet and MP3 technology, allows for “instantaneous access to music from across the globe.”).

25. Olufunmilayo B. Arewa, *YouTube, UGC, and Digital Music: Competing Business and Cultural Models in the Internet Age*, 104 NW. U. L. REV. 431, 442–43, 454, 465 (2010).

26. This term is used in its broadest sense to include the phonograph (Edison), graphophone (Bell), gramophone (Berliner and Johnson), and related technologies. See MORTON, *supra* note 13, at 1–50.

27. Although sound recordings did not receive copyright protection until 1971, any written musical composition embodied by the sound recording did receive copyright protection. See Olufunmilayo B. Arewa, *Blues Lives: Promise and Perils of Music Copyright*, 27 CARDOZO ARTS & ENT. L.J. 573, 605–06 (2010); Eva E. Subotnik & June M. Besek, *Constitutional Obstacles? Reconsidering Copyright Protection for Pre-1972 Sound Recordings*, 37 COLUM. J.L. & ARTS 327, 343 (2014).

28. See, e.g., Lisa Gitelman, *Reading Music, Reading Records, Reading Race: Musical Copyright and the U.S. Copyright Act of 1909*, 81 MUSICAL Q. 265, 274–75 (1997) (noting that the introduction of the player piano and phonograph seriously damaged the sheet music industry); Mark A. Lemley, *Is the Sky Falling on the Content Industries?*, 9 J. ON TELECOMM. & HIGH TECH. L. 125, 125–28 (2011) (discussing technology shifts and the content industry).

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technologies and business models through modification of copyright laws and copyright lawsuits.²⁹ For example, continuing concerns about unauthorized dissemination of records and other factors led the recording industry to lobby successfully for sound recording copyright protection,³⁰ which was adopted in the United States in the early 1970s.³¹ The copyright law path, particularly in the face of changing cultural practices and technologies, is likely to be increasingly subject to controversy and dispute in the digital era. Uses of copyright by the recording industry and other leading players in the content space also obscure other factors that may have played a role in past industry outcomes. For example, technology choices in the early twentieth century made it far more difficult to copy phonograph records than might otherwise have been the case, which meant that dominant business models and technologies of the time reinforced copyright restrictions on copying. However, events in both the nineteenth century and now illustrate a changing interaction of technology, copyright, and musical practice.

The development of sound recording technologies and growth of the recording industry in the late nineteenth and early twentieth centuries highlight the potentially complex interaction of technology and music practice that has continuing relevance to contemporary copyright debates. Although several competing sound recording technologies were developed in the late nineteenth and early twentieth centuries, the gramophone disc technology, initially developed by Emile Berliner in 1888 which contained a horizontal turntable, eventually became the dominant technology used for commercial music recordings.³²

29. Michael A. Carrier, *Copyright and Innovation: The Untold Story*, 2012 WIS. L. REV. 891, 936–39, 944–45.

30. Industry sound recording lobbying efforts began in the early twentieth century at the dawn of the sound recording era. See STAFF OF S. COMM. ON THE JUDICIARY, 86TH CONG., 2D SESS., COPYRIGHT LAW REVISION STUDY NO. 26 at 3, 37 (Comm. Print 1961) (Barbara A. Ringer) (noting that legislative attempts to copyright sound recordings go back to 1906 and describing the roles of varied industry players).

31. 17 U.S.C. § 102(a)(7) (2012) (granting copyright protection to sound recordings); Sound Recording Act of 1971, Pub. L. No. 92-140, 85 Stat. 391 (amending the Copyright Act to provide for the creation of a limited copyright in sound recordings for various purposes, including protecting against unauthorized duplication and piracy of sound recordings). The extent to which a sound recording constitutes a “writing” within the meaning of the Intellectual Property Clause of the U.S. Constitution was considered in a House Report discussing the sound recording copyright. H.R. REP. NO. 94-1476, at 56 (1976) (“As a class of subject matter, sound recordings are clearly within the scope of the ‘writings of an author’ capable of protection under the Constitution [Const. Art. I, § 8, cl. 8], and the extension of limited statutory protection to them was too long delayed.”).

32. Geoffrey Jones, *The Gramophone Company: An Anglo-American Multinational, 1898–1931*, 59 BUS. HIST. REV. 76, 79, 83–85 (1985) (chronicling the development of the gramophone and the Gramophone Company).

After cylinder sound recording technology peaked commercially between 1900 and 1910, it was replaced by disc technology.³³ Unlike cylinder technology, which was sold as a player/recorder, gramophone technology was based on discs stamped in factories, which meant that manufacturers rather than consumers made gramophone recordings.³⁴ Gramophone technology introduced new techniques for duplication of records and involved scratching a record of sound on a solid zinc disc coated with wax.³⁵ The resulting disc was then placed in a chromic acid bath, resulting in a shallow groove in the zinc disc, which was then electroplated with a new layer of metal to create a copy for stamping records.³⁶ This technology was not the only technology available at the time it became predominant. It was, however, the best of available technologies for mass reproduction of recorded music, which soon became the most lucrative market for sound recording technology.³⁷

The history of recording technology reveals a deep and continuing relationship between technologies of sound reproduction and musical practice. For example, in contrast to the gramophone, duplication of music using cylinder disc technology frequently involved performances repeated multiple times to create multiple masters to produce cylinders for sale.³⁸ George W. Johnson, an early African American recording star, was said to have performed his hit “The Laughing Song” 40,000 times.³⁹ Although record companies abandoned cylinder technology for music in the early twentieth century, cylinder technology, which enabled consumers to make their own recordings, continued to be used for stenography applications of recording technology to dictation.⁴⁰ The Dictaphone and Ediphone dominated the market for stenography recording, were used through the 1960s, and were unchallenged in their dominance until the 1950s.

2. *Sound Recordings and the Rise of New Popular Music Genres.* Stenography recordings and phonograph records illustrate the potential range of technology choices that were

33. MORTON, *supra* note 13, at 31.

34. *Id.* at 32.

35. *Id.* at 34.

36. *Id.* at 34–35.

37. CHANAN, *supra* note 15, at 5 (noting that cylinder disc technology was unable to satisfy demand and that the gramophone disc enables mass production).

38. MORTON, *supra* note 13, at 27.

39. MILLARD, *supra* note 20, at 87.

40. MORTON, *supra* note 13, at 43–54.

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available at the dawn of the recording era. They also underscore the divergent and varied role of technology in different contexts of use. In the case of recorded music, technological changes throughout the twentieth century, well before the digital age in music,⁴¹ including as a result of radio, the development of analog tape technology,⁴² the commercial availability of playback and recording devices, and other forces over the course of time have given consumers of phonograph records greater ability to control how they use and consume musical content.⁴³

Some consumers of music use existing music to create new musical creations. The advent of hip hop music in the twentieth century underscores one way in which new creations use existing ones in ways that may not be consistent with dominant copyright assumptions.⁴⁴ However, rather than reading hip hop music in isolation as late twentieth century musical form, hip hop must be considered as a recent example of a broader trend that has been evident since the early twentieth century. Hip hop exemplifies the flowering of African American music as a dominant influence on popular music expression. Hip hop and earlier forms of African American-based or -influenced popular music genres, including ragtime, blues, jazz, country, and rock and roll, may fall along a significant fault line in musical perception between the visual-textual and the oral-aural. Further, contemporary music trends as evident in hip hop increasingly challenge music copyright law's notation-centered focus on allocating rights to musical writings as a "primary" source, which often comes with an accompanying assumption that performed music and other nonvisual and nontextual expressions of music are both derivative and secondary.

The global prominence of African American-based music was by no means predictable or inevitable. In the late nineteenth and early twentieth centuries, recording companies needed to create markets for sound recordings. Acoustic recording technologies of the time, however, imposed significant limitations on what could be recorded.⁴⁵ For example, although Enrico Caruso, a tenor,

41. DAVID MILES HUBER & ROBERT E. RUNSTEIN, *MODERN RECORDING TECHNIQUES* 199–233 (7th ed. 2010) (describing digital audio technology).

42. *Id.* at 181–97 (describing analog tape technology).

43. See generally MORTON, *supra* note 13.

44. See generally Olufunmilayo B. Arewa, *From J.C. Bach to Hip Hop: Musical Borrowing, Copyright and Cultural Context*, 84 N.C. L. REV. 547, 561–62 (2006) (defining the term "sampling" and indicating that the cases that address the copyright implications of hip hop's sampling practices illustrate "how hip hop production practices collide with copyright assumptions").

45. CHANAN, *supra* note 15, at 50 (noting the limited dynamic range of the early gramophone).

became a star in large part as a result of his recordings,⁴⁶ some voices could not easily be recorded.⁴⁷ The tenor voice fell within the range of the horn used to capture sound for recordings.⁴⁸ Operatic voices played a special role in the early gramophone business, particularly in the marketing of premium gramophone recordings.⁴⁹ Although trained operatic voices were the first to benefit from improvements in sound recording technology,⁵⁰ all voices did not fare equally well with early recording technology, and the results of the recording process during this time period “were pretty much a gamble.”⁵¹ As a result, although opera was quite popular in the 1890s, some opera stars refused to be recorded for fear that the resulting recordings would not appropriately reflect their voices.⁵² Similarly, live music performances and certain instruments simply did not always record well, and the violin, cello, and piano presented problems for sound recordings.⁵³ Early recordings tended to include whistling, the banjo, xylophone, trumpet, tuba, and trombone.⁵⁴ Recording engineers thus faced significant limitations on what could be recorded and sought additional sources of content. Recording companies found this content in music halls and band stands rather than exclusively in opera houses and concert halls, which represents a key expansion in the cultural realm outside of prior patterns of music and other culture in the United States being imported from Europe.⁵⁵ The recording industry’s search for content for mass consumption thus led directly to military brass bands, minstrelsy and coon songs, and vaudeville.⁵⁶ As a result of the search for content, new sound recording technologies

46. COLEMAN, *supra* note 16, at xviii (noting that Caruso’s 1907 recording of the aria “Vesti la Giubba” from Ruggero Leoncavallo’s opera *Pagliacci* is “a leading candidate for the elusive title of the first million-selling disc”).

47. CHANAN, *supra* note 15, at 30 (noting that singers were the first to benefit from Berliner’s improvements in sound recording technology and that Caruso’s “strong tenor voice (with its baritone quality) helped to drown out the surface noise, so that even on the inadequate apparatus of the time, his records sounded rich and vibrant”).

48. COLEMAN, *supra* note 16, at xviii (observing that bass and soprano voices “were too much for the early recording process”).

49. CHANAN, *supra* note 15, at 30.

50. *Id.*

51. *Id.*; COLEMAN, *supra* note 16, at xviii.

52. MILLARD, *supra* note 20, at 82.

53. *Id.* at 80.

54. *Id.* at 80–81, 83.

55. *Id.* at 82.

56. *Id.* at 83–87; *see also* CHANAN, *supra* note 15, at 6 (noting that the recording industry soon learned to develop its own repertoire and that part of its formula involved transforming “raw” urban and ethnic music into popular culture commodities for mass consumption).

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began an engagement with an emerging body of African American popular music.⁵⁷

By enabling preservation of nonvisual aspects of music and dissemination of music in its aural form, sound recordings and other nonvisual technologies of sound reproduction have made the application of copyright in real world contexts complex and less certain. In addition, sound recordings became a launching pad for the broad dissemination of a variety of forms of popular music. African American-based music presents a particular challenge because creators based in or influenced by such traditions may have embedded norms of creation that may be inconsistent with assumptions underlying the sacralized European art music tradition and copyright that reflect what might be characterized as a privilege of sight. African American-based music thus highlights divergent perspectives on music that reflect longstanding debates about the nature of the senses more generally.

B. Music Notation and Music Publishing

1. *Copyright Law's Focus on Written Musical Notation.* Visual bias in copyright is largely unrecognized because legal training and processes are heavily oriented towards writings, which are given precedence in varied legal contexts. As a consequence, legal practitioners are trained to accept written evidence as dispositive with oral evidence being secondary and typically used in contexts where ambiguities exist with respect to written evidence.⁵⁸ The primacy of writing in varied legal contexts is closely connected to evidentiary considerations relating to questions of proof. In such circumstances, oral evidence may be excluded, which is consistent with the overall policy objectives of ensuring the integrity of information presented by disputing parties in courts and other legal contexts.⁵⁹ In contract law, the parol evidence rule, a substantive

57. LYNN ABBOTT & DOUG SEROFF, *OUT OF SIGHT: THE RISE OF AFRICAN AMERICAN POPULAR MUSIC, 1889–1895*, at xi (2002) (noting the “rise of black popular music in the midst of an American racial cataclysm”).

58. See, e.g., *Segovia v. Equities First Holdings, LLC*, No. 06C-09-149-JRS, 2008 WL 2251218, at *8 (Del. Super. Ct. May 30, 2008) (“If, after careful consideration, the court determines that the contract is an accurate reflection of the parties’ agreement, the interpretation is limited to the four corners of the contract.”).

59. Paolo Torzilli, Note, *The Aftermath of MCC-Marble: Is This the Death Knell for the Parol Evidence Rule?*, 74 ST. JOHN’S L. REV. 843, 845 (2000) (“Generally, the parol evidence rule seeks to exclude testimony of negotiations occurring prior to, or contemporaneous with, the execution of a written instrument. Numerous reasons for the parol evidence rule have been set forth. Two of these policy reasons are universally

common law rule, limits a party's ability to introduce oral and other extrinsic evidence that contradicts or adds to the written contract.⁶⁰ Oral and other extrinsic evidence are thus treated as secondary in a legal regime that sanctifies written documentary evidence.⁶¹

Although the parol evidence rule is not always easily applied in practice, the four-corners-of-the-document emphasis that comes with the rule disfavors oral and other unwritten evidence. This emphasis on written types of proof in the law is not limited to contracts. In patent law, the scope of claims in a patent is determined by the contents of the written patent document rather than by any device or process described in the patent.⁶² Legal treatment of writings in contracts, patents, and other legal areas have surely shaped legal approaches in other arenas that emphasize writing, particularly in the face of oral and other nonvisual evidence. Although treatment of written compositions in copyright may be seemingly similar to these other contexts, notated music is not truly analogous to these other types of writings in practice, which has profound consequences worth examining.

The information conveyed in a musical writing is a set of instructions that typically relates to the performance of the notation musical work. As such, a musical work is in at least some respects a representation intended to foster a certain outcome (e.g., a particular type of performance). Further, music, unlike a patent or contract, is not a legal document, although sound recordings and written compositions may be protected by copyright. As a result, rather than serving as a means of

accepted. First, jurors are generally considered to be extremely impressionable. Second, there is a need for the integrity of a writing to be preserved." (footnotes omitted); *see also* *Am. Underwriting Corp. v. R.I. Hosp. Trust Co.*, 303 A.2d 121, 126 n.2 (R.I. 1973) (stating that the parol evidence rule came into being out of fear of invention by witnesses and to allow courts to prevent juries from making determinations of fact based on their sympathies).

60. 5 MARGARET N. KNIFFIN, *CORBIN ON CONTRACTS* § 24.7, at 37 (Joseph M. Perillo ed., rev. ed. 1998) ("Among such [common law] rules are those stating that words must have one, and only one, true and correct meaning, that this meaning must be sought only by poring over the words within the four corners of the paper, that extrinsic evidence of intention will not be heard, or that evidence of surrounding circumstances is admissible only in instances of ambiguity.").

61. George I. Wallach, *The Declining "Sanctity" of Written Contracts—Impact of the Uniform Commercial Code on the Parol Evidence Rule*, 44 MO. L. REV. 651, 653 (1979) (noting that the parol evidence rule "sanctifies the writing").

62. CRAIG NARD, *THE LAW OF PATENTS* 39 (2d ed. 2010) ("The claims are considered to be the most important part of the patent document because the claims delineate the patent owner's property right. To borrow real property terminology, the claims set forth the metes and bounds of the patentee's proprietary interest.").

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determining what information can serve to define a legal relationship or some aspect of legal rights, the visual-textual bias in music copyright contexts often reduces a nonlegal, and to a significant extent, nonvisual object (music) to its written representation. This representation is then used to make infringement determinations that may be based in part on impressions garnered from listening to sound recordings of the relevant musical works.

Although seemingly objective and based on written documentation of music, this process of reduction is inherently interpretive but is often not recognized as such. Further, this reduction process is problematic given the fact that music has significant extra legal presence and significance that is often not adequately considered in infringement cases. Visual-textual bias causes law to place music and interpretations of infringement in cases involving music into a category analogous to legal documents. Visually biased copyright approaches may thus inappropriately apply a four-corners-of-the-document approach to musical compositions and uses of sound recordings. As a result, the visual-textual bias in copyright has potential to do significant damage in nonlegal realms within which music is created, shared, distributed, consumed, and enjoyed. Although questions of proof of authorship and fixation are factors that may cause courts to focus on visual, written aspects of musical and other creations, current approaches may hinder comprehensive understanding and equitable legal treatment of artistic works that are performed and that include both visual and nonvisual elements and oral and written traditions.

The focus on written music notation in copyright discourse thus reflects an underlying visual-textual bias that is deeply rooted in the law. In addition to factors emanating from legal culture itself, visual-textual bias derives from a number of sources, including historical, linguistic/semiotic and cognitive ones.⁶³ Sacralization is a major historical source of the privilege of sight in copyright.⁶⁴ A core aspect of sacralization was an increasing tendency during the course of the nineteenth century for certain types of musical works to be treated as sacred untouchable works.⁶⁵ Musicologist Richard Taruskin notes,

63. I am indebted to Paul Heald for his suggestions concerning the typology of sources of visual bias.

64. See *infra* notes 181–202 and accompanying text (discussing the rise of sacralization and the history of notation).

65. See *infra* notes 66–67 and accompanying text (explaining how musical notation is “sacralized” by giving it supreme precedence over performance).

“Text-fetishism, the exaltation of scores over those who read or write them, has seriously distorted contemporary performance practice”⁶⁶ The level of text-fetishism in the European art music tradition has become so acute that, as Taruskin highlights, using Prokofiev as an example, even in instances where recordings exist of composers playing their own music differently than the notated version (which Taruskin notes that some describe as a “deviant authorial performance[]”), performance norms typically require adherence to the written notated music rather than the example evident in the performance practice of the composer himself.⁶⁷

The processes and consequences of sacralization have not been read as such within copyright discussions of authorship in music. Rather, conceptions about creation and creativity that had become pervasive in the European art music tradition as a result of sacralization are often taken as norms of creation and music practice within dominant copyright discourse. This is historically inaccurate and reflects a distorted understanding of past and present musical practice. The privilege accorded to the visual senses in copyright discourse is, not surprisingly, typically accompanied by assumptions about creativity that are imbued with sacralized assumptions that are inconsistent with actual musical practices in many genres. A number of copyright scholars have highlighted limitations in dominant copyright visions of creativity.⁶⁸

The privilege of sight also reflects linguistic and semiotic factors related to notation and the problems of representation. Notation by its nature constitutes a reduced and often incomplete version of musical expression. The incomplete nature of notation has significant implications, particularly for aspects of musical

66. Richard Taruskin, *Tradition and Authority*, 20 EARLY MUSIC 311, 319 (1992).

67. *Id.* at 319–20 (noting that “we have evidence of [Prokofiev’s] performance practice such as we shall never have for Mozart”).

68. Rebecca Tushnet, *Scary Monsters: Hybrids, Mashups, and Other Illegitimate Children*, 86 NOTRE DAME L. REV. 2133, 2134, 2140–46, 2149–51 (2011). (“Human creativity, like human reproduction, always makes new out of old in ways that copyright law has not fully recognized.”); see also Peter Jaszi, *On the Author Effect: Contemporary Copyright and Collective Creativity*, in THE CONSTRUCTION OF AUTHORSHIP: TEXTUAL APPROPRIATION IN LAW AND LITERATURE 29, 40 (Martha Woodmansee & Peter Jaszi eds., 1994) (“Copyright law, with its emphasis on rewarding and safeguarding ‘originality,’ has lost sight of the cultural value of what might be called ‘serial collaborations’—works resulting from successive elaborations of an idea or text by a series of creative workers, occurring perhaps over years or decades.”); Jessica Litman, *Copyright as Myth*, 53 U. PITT. L. REV. 235, 246 (1991) (noting that models of authorship in copyright law assume two extremes, one the romantic model, which depicts each work as unique, and the other the rational author, who can plan the authoring process with sufficient precision so as to acquire the necessary permissions in advance).

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expression that are not easily notated. Further, even when musical sounds are taken into account in legal cases, considerations of music may reflect confusion about nonvisual aspects of music and the implications of musical variations for legal outcomes.⁶⁹

Rather than being an objective indication of some underlying musical reality, the meaning of notation and guidance encoded in music notation as a set of instructions may vary depending on various factors, including context and musical genre. This means that courts should take account of the adequacy of notation in context and nature of the set of instructions encoded in a musical work in analyses of both originality and infringement. Tension presently exists in how courts approach notation in contexts where notation may be incomplete. The court's discussion of composition and performance in the *Newton v. Diamond* case highlights this tension.⁷⁰

The privilege of sight also has significant cognitive aspects related to music perception and the senses. A focus on the visual and textual in music assumes that visual and textual images give us understanding about the essence of music itself. Although this is no doubt at least partially the case in some instances, how much knowledge and information one can gain from notation alone is highly dependent on the nature of notation as a set of instructions, which in turn is closely related to musical context and genre. Copyright law gives priority to visual sensation as the primary mechanism by which to gain insight about music, which is unnecessarily limiting. Privileging visual aspects of music presents problems for nonvisual aspects of music, including features such as timbre and rhythm, which may be difficult to represent visually in notation.⁷¹ Timbre refers to the quality of sound that enables listeners, for example, to distinguish among different instruments in an orchestra.⁷² Timbre is an auditory feature of music that plays an important role in music perception.⁷³

69. See *infra* notes 134–40 and accompanying text (discussing the courts' use of sound recordings to determine substantial similarity for the purpose of copyright infringement cases).

70. *Newton v. Diamond*, 349 F.3d 591, 595–98 (9th Cir. 2003); see *infra* notes 156–60 and accompanying text (recounting the *Newton* case's acknowledgment that a particular performing style can add elements distinct from the written notation).

71. Jean-Charles François, *Writing Without Representation, and Unreadable Notation*, PERSP. NEW MUSIC, Winter 1992, at 6, 15 (“Timbre cannot be easily notated.”).

72. Jean-Claude Risset & David L. Wessel, *Exploration of Timbre by Analysis and Synthesis*, in THE PSYCHOLOGY OF MUSIC 113, 113 (Diana Deutsch ed., 2d ed. 1999).

73. See *infra* note 145 and accompanying text (explaining timbre's effect on musical perception).

Discussions of music notation in copyright embed assumptions about writing and objectivity that reflect a privilege of sight deeply rooted in European post-Enlightenment thought: “There is no doubt that the philosophical literature of the Enlightenment—as well as many people’s everyday language—is littered with light and sight metaphors for truth and understanding. . . . [S]ight is in some ways the privileged sense in European philosophical discourse since the Enlightenment”⁷⁴

This privilege of sight is an important underlying source of tension in copyright. This prioritization of the visual and textual may also be inconsistent with how music is actually perceived by listeners. Neuroscience studies of music cognition and perception may suggest avenues by which treatment of music in copyright infringement cases might be reconceptualized.

2. *Music Variations: Expansion of Copyright to Music.* Music copyright history can shed light on the origins and continuing operation of the privilege of sight in music copyright. The expansion of copyright from word to note underscores significant music variations, in part due to differences in available technologies for music reproduction, first in the printing era and then later in the sound recording era.⁷⁵ Copyright was first applied to literary works, which are by their nature primarily visual and textual.⁷⁶ Although literary works can be read aloud and consumed in other ways or presented as drama, the primary method of consumption of such works is reading, which has typically involved visual interpretation of words.⁷⁷ The scope of copyright was later expanded to protect other artistic fields, including music. Copyright, however, has proven to be a less than exact fit for music.⁷⁸ The application of

74. STERNE, *supra* note 11, at 3.

75. See *supra* notes 10–28 and accompanying text (giving an overview of the sound recording era); *infra* notes 101–13 and accompanying text (giving an overview of the print music era).

76. Martin Kretschmer & Friedemann Kawohl, *The History and Philosophy of Copyright*, in MUSIC AND COPYRIGHT 21, 26 (Simon Frith & Lee Marshall eds., 2d ed. 2004) (noting that the Statute of Anne protected “Books and Other Writings”).

77. This visual relationship is not universally the case. Braille, for example, enables reading by touch rather than visual input. Similarly, recent innovations have made nonvisual reproduction of literary works increasingly available through products such as books on tape and applications that convert text to speech, the latter of which have led to copyright disputes between book publishers and providers of text-to-speech technologies. See Kit Eaton, *Authors Guild Says Kindle 2’s Text-to-Speech Violates Copyright*, FAST COMPANY (Feb. 11, 2009, 1:20 AM), <http://www.fastcompany.com/blog/kit-eaton/technomix/kindle-2s-text-speech-infringes-copyright-says-authors-guild>.

78. Arewa, *supra* note 44, at 555–57 (discussing the fit of copyright for music).

copyright to music has raised a number of issues of continuing importance and at times, dispute, particularly since the early twentieth century. A number of these challenges have arisen from the introduction of a series of twentieth century technologies of sound reproduction and changing musical practices facilitated by such technologies.

The application of copyright to music has been progressive and first applied to musical compositions, then musical performances,⁷⁹ and later sound recordings and other technologies of sound reproduction.⁸⁰ Early copyright statutes did not initially protect music. The Statute of Anne,⁸¹ for example, specifically refers to books and writings,⁸² but did not at first cover musical compositions.⁸³ The 1790 U.S. Copyright Act did not protect written musical compositions,⁸⁴ which became protected under the 1831 U.S. Copyright Act.⁸⁵ In the United States, statutory protection of music performance rights was added in 1897 and sound recordings in 1971.⁸⁶

The prioritization of the written over the oral and aural in copyright treatment of music reflects the emergence of copyright during an era when available technologies meant that tangible reproduction of music necessarily took place in written form. Current copyright approaches typically place oral expressions of

79. Isabella Alexander, "Neither Bolt nor Chain, Iron Safe nor Private Watchman, Can Prevent the Theft of Words": *The Birth of the Performing Right in Britain*, in *PRIVILEGE AND PROPERTY: ESSAYS ON THE HISTORY OF COPYRIGHT* 321, 335–42 (Ronan Deazley, Martin Kretschmer & Lionel Bently eds., 2010) (discussing the 1842 extension of the Dramatic Copyright Act to music in Britain).

80. Audio Home Recording Act of 1992, 17 U.S.C. §§ 1001–1010 (2012) (requiring manufacturers of digital audiotape (DAT) machines and tapes to pay a royalty to copyright owners); Sound Recording Act of 1971, Pub. L. No. 92-140, 85 Stat. 391 (amending the Copyright Act to provide for the creation of a limited copyright in sound recordings for various purposes, including protecting against unauthorized duplication and piracy of sound recordings); Copyright Act of 1909, ch. 320, § 1(e), 35 Stat. 1075, 1075–76 (codified as amended at 17 U.S.C. § 115) (providing that copyright owners acquiescing to the use of a copyrighted work on instruments serving to mechanically reproduce the work must permit any other person to make similar use of the copyrighted work upon payment of a royalty of two cents).

81. Act for the Encouragement of Learning, 1710, 8 Anne, c. 19.

82. Although the preamble of Statute of Anne refers to books and writings, the remainder of the statute refers only to books. *Id.*

83. Kretschmer & Kawohl, *supra* note 76, at 27.

84. Copyright Act of 1790, ch. 15, §§ 1–7, 1 Stat. 124, 124–26 (codified as amended in scattered sections of 17 U.S.C.) (providing copyright protection to books, maps and charts).

85. Copyright Act of 1831, ch. 16, §§ 1–16, 4 Stat. 436, 436–39 (codified as amended in scattered sections of 17 U.S.C.) (adding musical compositions, prints, cuts and engravings to the list of copyright protected materials).

86. Act of Jan. 6, 1897, ch. 4, 29 Stat. 481, 481–82; *see also* Sound Recording Act of 1971, Pub. L. No. 92-140, 85 Stat. 391.

music in sound recordings under the rubric of performance. These oral expressions are then presumed to derive from some type of written composition that is assumed to be fully capable of being reflected in written notation. This composition-performance distinction is inconsistent with musical practice in a number of music genres and does not adequately take account of the full spectrum of past or present compositional practices. Moreover, variations in compositional practices have become even more significant since the advent of the sound recording era in the late nineteenth century. As a result of sound recordings and other technologies of nonvisual musical reproduction, music may be composed, performed, reproduced, and distributed without ever being written. Technology now enables the creation and replication of music in varied ways, and even permits the creation of synthetic music, which may be created using computers and other technologies.⁸⁷ New technologies and methods of music generation are likely to pose yet greater challenges to music copyright in the future and also highlight inadequacies of approaches to music that reflect an unquestioned prioritization of the visual and textual.

The historical application of copyright to music is an important starting point for understanding the origins of the music copyright visual-textual bias and the operation of the composition-performance dichotomy in copyright. The expansion of copyright from words to notes has not always been a smooth one. Moreover, because music is a performance art that is typically received in significant part by hearing, technologies of sound reproduction have periodically challenged the application of copyright to music in ways that are not always as relevant to creative forms in other artistic fields.

The progressive application of copyright law to music over time represents one strand of a more complex story.

87. Edward Rothstein, *Is It Live . . . or Yamaha? Channeling Glenn Gould*, N.Y. TIMES, Mar. 12, 2007, at E3 (describing technologies developed by Zenph Studios, which extracted the musical information from mono recordings by Glenn Gould of Bach's Goldberg Variations, replayed the music using a digital file on a Yamaha Disklavier Pro, a computerized player piano, thus recreating the original performance without the hissing and noise, thus creating a new digital recording that is effectively a reperformance of Gould's playing); see also Hugh Davies, *Electronic Instruments: Classifications and Mechanisms*, in MUSIC AND TECHNOLOGY IN THE TWENTIETH CENTURY 43, 52–58 (Hans-Joachim Braun ed., 2002) (categorizing different electronic instruments through the years); Hugh Le Caine, *Electronic Music*, 44 PROC. IRE 457, 457 (1957) (describing early efforts to create an electronic musical instrument); F. Richard Moore, *Dreams of Computer Music—Then and Now*, COMPUTER MUSIC J., Spring 1996, at 25, 26–27 (describing early computer music and speculation about electronic music machines of the future).

Understanding the operation of visual-textual bias in music copyright requires that the expansion of copyright to music be considered in light of significant differences in the nature of the literary and musical arts. These differences were apparent long before the development of sound recording technology and are evident both in terms of the essential core features of the literary and musical arts concerning factors such as creation and performance, as well as in the business models that emerged in response to the printing of words as contrasted with music printing. The collapse of the patronage system and rise of music publishing industry in Europe are also relevant to understanding the development of the music business and music practice, particularly in the presound recording era.⁸⁸ Notably, the impact of copyright in music came later in part due to significant variations in the nature of music and literary works, critical divergences in business contexts of book and music publishing, as well as differences in technologies involved in printing words and notes.

Music is first and foremost a performance art, which distinguishes it from literary works, which are not typically performed, but which are rather read, often silently.⁸⁹ Music notes are often less representational than words,⁹⁰ which makes interpretations of infringement in music copyright contexts potentially fraught with complexities and uncertainties. An obvious difference between words and notes is a quantitative one: The number of available words for expressive activities far exceeds the number of available notes. The number of characters in the English alphabet is twenty-six, while the number of words in the English language is estimated at one to two million.⁹¹ The average educated person has an estimated vocabulary of 35,000

88. William Weber, *Mass Culture and the Reshaping of European Musical Taste, 1770–1870*, 25 INT'L REV. AESTHETICS & SOC. MUSIC 175, 186 (1994).

89. See John G. Cawelti, *Performance and Popular Culture*, CINEMA J., Fall 1980, at 4, 4 (distinguishing performing arts such as music, drama and dance, which require the mediation of a performer, from other arts such as fiction, painting and poetry, and noting that most of the popular arts are centrally involved with performance); Kingsley Price, *The Performing and the Non-Performing Arts*, 29 J. AESTHETICS & ART CRITICISM 53, 62 (1970) (discussing the distinction between the performing and non-performing arts and noting that the performing arts “must be understood by reference to certain performances”).

90. See Susan McClary, *The Blasphemy of Talking Politics During Bach Year*, in MUSIC AND SOCIETY: THE POLITICS OF COMPOSITION, PERFORMANCE AND RECEPTION 13, 16 (Richard Leppert & Susan McClary eds., 1987) (noting that music is nonrepresentational in that musical notes do not involve everyday world phenomena).

91. Caroline Gall, *The Words in the Mental Cupboard*, BBC NEWS MAG. (Apr. 29, 2009), http://news.bbc.co.uk/2/hi/uk_news/magazine/8013859.stm; see also THE OXFORD ENGLISH DICTIONARY xi (2d ed. 1989).

to 75,000 words.⁹² Literary works in English may thus be constructed from among the tens of thousands of words a typical author might know, the close to 300,000 words in entries in the *Oxford English Dictionary* or similar works, or even the one million or more words in the English language.⁹³

In contrast, the Western musical scale includes twelve tones from which musical works may be constructed.⁹⁴ The drastic difference in essential building blocks in literary and musical works has significant implications for repetition in music as compared with works of literature.⁹⁵ Further, although words in literary works are certainly not cobbled together randomly and may have some predictability in order and progression, music is often characterized to a significant degree by particular configurations of notes that may depend, for example, on harmonic progressions or other musical factors. As a consequence, each of the twelve tones in the musical scale is typically not equally likely to be utilized in particular configurations of musical expression in most music genres.⁹⁶ The twelve tones of the music scale are combined in musical expression with harmonic and other structures that constrain compositional choices in important ways that are often not a factor to the same extent in many prose forms of literature.⁹⁷ Within particular musical traditions, for example, certain harmonic chord progressions are typical, which enables practitioners and listeners of such traditions to both construct and anticipate future sequences of notes and harmonic elements based on prior notes and knowledge of expectations within the particular tradition.⁹⁸

92. DAVID CRYSTAL, CAMBRIDGE ENCYCLOPEDIA OF THE ENGLISH LANGUAGE 123 (1997); David Crystal, *How Many Words?*, ENG. TODAY, Oct. 1987, at 11, 11, available at <http://www.davidcrystal.com/?fileid=-4890>; Gall, *supra* note 91.

93. THE OXFORD ENGLISH DICTIONARY, *supra* note 91, at xi, xxiii (noting that the second edition of the Oxford English Dictionary includes about 290,500 words).

94. GEORGE THADDEUS JONES, MUSIC THEORY 10 (1974) (noting the European musical system divides sounds into seven white keys and five black keys of the piano).

95. See *infra* notes 242–47 and accompanying text (describing how composers' distaste for repetition led to the decline of the musical oral tradition).

96. Notable exceptions include Arnold Schoenberg's twelve-note technique, in which the twelve notes of the chromatic scale are used arbitrarily. Richard S. Hill, *Schoenberg's Tone-Rows and the Tonal System of the Future*, 22 MUSICAL Q. 14–37 (1936); Ernst Krenek, *Is the Twelve-Tone Technique on the Decline?*, 39 MUSICAL Q. 513–27 (1953).

97. Certain types of literary expression, including poetry, may have constraints in expression that are similar to those in music, including conventions regarding rhythm and meter. See generally PAUL FUSSELL, JR., POETIC METER AND POETIC FORM (rev. ed. 1979).

98. See, e.g., RICHARD J. RIPANI, THE NEW BLUE MUSIC: CHANGES IN RHYTHM & BLUES, 1950–1999, at 37 (2006) (noting that twelve-bar blues music follows a chord

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Chord progressions and harmonic structure underscore the inherently relational construction of music. The meaning of musical notes is highly context-dependent. The relational nature of music means that the harmonic meaning of a particular note or series of notes depends on the context of those notes.⁹⁹ Varied musical factors, including the nature of the musical scale, cultural and musical conventions that limit musical choices, and the existence of music as a performance art that uses nonrepresentational notes, make a translation from literary copyright to music copyright a far from easy process.¹⁰⁰

In addition to musical factors, business and technological factors have also differentiated music from literary works. The advent of the movable type printing press quickly led to a revolution in the production of books in Europe. In 1450 books in Europe were produced by hand and numbered in the thousands. A revolution in book printing quickly ensued: by 1500, millions of individual volumes of books were in print in Europe.¹⁰¹ Music printing was complex and expensive in comparison, which influenced the rate of adoption of printing technologies for music. *Bach v. Longman*,¹⁰² which clarified the application of the Statute of Anne to music, gave composers clear property rights in their works, but did not lead to a revolution in music publishing on the scale of that evident with printed books.¹⁰³ Early forms of printing technology, such as engraving technologies, were inadequate for the reproduction of certain types of music, including keyboard music, which includes a rapid succession of short notes and dense chords.¹⁰⁴ In addition to being ill suited to

progression (in the key of C) of: C7 C7 C7 C7 F7 F7 C7 C7 G7 F7 C7 C7); FRANK ZAPPA & PETER OCCHIOGROSSO, *THE REAL FRANK ZAPPA BOOK* 187 (1989) (noting that Tin Pan Alley and jazz music often involve a II-V-I chord progression).

99. See V. KOFI AGAWU, *PLAYING WITH SIGNS: A SEMIOTIC INTERPRETATION OF CLASSIC MUSIC* 15 (1991) (discussing music as a relational system and noting that “a given note can take on different meanings depending on the key in which it occurs, and, within that key, the actual chord within which it functions”); RIPANI, *supra* note 98, at 37–38 (noting that the C7 chord (C, E, G, B ♭) in the twelve-bar blues chord progression functions as a tonic in blues chord progression but cannot, for example, function as a tonic chord in conventional Western art music). A tonic note is the first note in a scale that is the key note from which the scale takes its name. *OXFORD DICTIONARY OF MUSIC* 894 (Michael Kennedy ed., 2d rev. ed. 2006).

100. Arewa, *supra* note 44, at 555–57.

101. JOHN MAN, *THE GUTENBERG REVOLUTION* 16 (2002).

102. *Bach v. Longman*, (1777) 98 Eng. Rep. 1274 (K.B.), available at http://copy.law.cam.ac.uk/cam/pdf/uk_1777_1.pdf.

103. David Hunter, *Music Copyright in Britain to 1800*, 67 *MUSIC & LETTERS* 269, 282 (1986).

104. H. Edmund Poole, *Music Printing*, in *MUSIC PRINTING AND PUBLISHING* 3, 40 (D.W. Krummel & Stanley Sadie eds., 1990).

printing technologies such as movable type, music notation required high-quality paper, which increased the expense of printing music.¹⁰⁵

As a consequence of the technological complexity and expense of printing music, vocal and instrumental music was still widely circulated in handwritten manuscript form until at least the beginning of the nineteenth century.¹⁰⁶ Italian opera, which became a dominant force in European musical tastes, was similarly rarely printed in the early eighteenth century, but rather was distributed in handwritten manuscript form.¹⁰⁷ Music continued to be distributed in manuscript form far later than the printed word in part because printed music was difficult to read: “Type was harder to read than handwriting—short note values were particularly troublesome. . . .”¹⁰⁸ The difficult economics of music printing were exacerbated by low rates of music literacy, which limited markets for printed music.¹⁰⁹ The small size of music print runs thus distinguished music from literary works.¹¹⁰ Further, because music printing was so expensive, the economics of music printing only made sense with large print runs.¹¹¹

The technological differences between printing words and printing notes and the complexity and economics of music printing made receiving profits from music printing a “challenging task.”¹¹² The only profitable form of music printing in the seventeenth century was psalm books with music, which was also the only competitive music publishing arena.¹¹³ Further, not until the late seventeenth century did the unauthorized publication of music even become a potentially lucrative endeavor.¹¹⁴

A number of differences thus emerged between printed words and printed notes in terms of technologies and economics

105. Rebecca Herissone, *Playford, Purcell, and the Functions of Music Publishing in Restoration England*, 63 J. AM. MUSICOLOGICAL SOC'Y 243, 247 (2010).

106. Poole, *supra* note 104, at 3 (“During the latter part of the 15th century and the 16th printing became the accepted means by which works of literature, history, philosophy and scientific speculation were multiplied and disseminated in hundreds of copies—school primers by the thousand; but vocal and instrumental music was still circulated in handwritten form. Manuscripts were prepared for sale in this way at least until the beginning of the 19th century . . .”).

107. *Id.* at 80.

108. *Id.* at 100.

109. Herissone, *supra* note 105, at 247.

110. MICHAEL TWYMAN, *THE BRITISH LIBRARY GUIDE TO PRINTING: HISTORY AND TECHNIQUES* 45 (1998).

111. *Id.* at 43.

112. Herissone, *supra* note 105, at 247.

113. Hunter, *supra* note 103, at 270.

114. *Id.*

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of printing and literacy. These differences have important implications for the operation of copyright and illustrate significant music variations that should be recognized and the impact of such differences evaluated. Music differences were intensified during the course of the twentieth century, in large part as a consequence of new technologies and the rise of African-based music as an increasingly influential source for popular music expression. Although the rise of such music was clear by the end of the twentieth century, the emergence of African American music in the nineteenth century was an unlikely starting point for this twentieth-century transformation in the popular music arena.

3. *African American Music, Notation, and the Privilege of Sight.* The engagement of an emerging sound recording in the United States with African American-based music had unexpected consequences that are relevant for copyright. The distinctiveness of African American-based music was likely more marked for many nineteenth century music listeners than is the case today. This is due to a number of factors. Popular expectations about music changed radically over the course of the twentieth century. African American-based music had become commonplace in the popular music scene by the end of the twentieth century:

Narrative accounts of music in the twentieth century ought to (but rarely do) find at their core the succession of Black genres that stamped themselves indelibly on the lives of generation after generation: ragtime, blues, jazz, R&B, gospel, doowop, soul, rock, reggae, funk, disco, rap. This, I would argue, is the most important tributary flowing into today's music Yet my time-traveler from 1900 would no doubt profess astonishment that this displacement of European by African-based musics in Western culture could have occurred.¹¹⁵

As musicologist Susan McClary notes, the rise of African-based musics reflects a reversal that would have likely been impossible to predict 100 years ago. The African American-based music of the late twentieth century would likely have been quite alien to the ears of average listeners from a century before that time. The displacement of European art music resulted in a profound and often insufficiently recognized shift in musical

115. Susan McClary, *Rap, Minimalism, and Structures of Time in Late Twentieth-Century Culture*, in *AUDIO CULTURE: READINGS IN MODERN MUSIC* 289, 294 (Christoph Cox & Daniel Warner eds., 2004).

tastes and dominant forms of musical expression. This displacement has significant copyright implications because the music replacing European art music as popular music to a large extent came to incorporate fundamentally different assumptions about composition and performance and the roles of oral and written traditions than the sacralized version of European art music. From the first emergence of African American musical forms to the broader American population after the end of slavery, African American musical forms came to play an important role in the American popular music scene from the late nineteenth century onwards. By the late 1990s, African American and other African-based musical forms were increasingly coming to dominate global music markets.¹¹⁶

African American-based musical forms draw attention to the privilege of sight in copyright because they “have strongly conventionalized song structures that allow for improvisation, subtle variation, and an emphasis on rhythm and timbre.”¹¹⁷ These conventionalized African American musical features have serious implications for notation because they reflect characteristics of music that are difficult to notate. As a result, they cannot be adequately encompassed by visual representations of music and are inconsistent with the sacralized vision of music creation imbedded in copyright assumptions. Although the inadequacy of notation as a tool of musical representation is a potential issue with virtually all genres of music,¹¹⁸ it is particularly problematic for African American and other African-based music.

The tension between oral and written forms of music was evident in the first collection of slave songs in the United States. The editors of *Slave Songs of the United States*, which was published in 1867, grappled with the fact that conventional notation could not adequately represent slave music, particularly features such as timbre that the collectors perceived to be highly distinctive yet difficult to notate:

The best that we can do, however, with paper and types, or even with voices, will convey but a faint shadow of the

116. Joan Anderman, *Hip-Hop Setting the Beat in First, Black Artists Hold Billboard's Top 10*, BOSTON GLOBE, Oct. 4, 2003, at A1; Gary Graff, *Vanilla Ice: Red-Hot Rapper Hits It Big and Keeps His Cool*, ORLANDO SENTINEL TRIB., Nov. 2, 1990, at 20 (discussing Vanilla Ice's popular success as a rapper); Steve Morse, *Setting the New Market in Sampling: Sellers Are Looking to Make a Deal, but Buyers Are Wary*, BOSTON GLOBE, Mar. 3, 2002, at L1.

117. STERNE, *supra* note 11, at 158.

118. Arewa, *supra* note 44, at 568 (discussing how graphical representations of music result in problems identifying originality).

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original. The voices of the colored people have a peculiar quality that nothing can imitate; and the intonations and delicate variations of even one singer cannot be reproduced on paper. And I despair of conveying any notion of the effect of a number singing together There is no singing in *parts*, as we understand it, and yet no two appear to be singing the same thing—the leading singer starts the words of each verse, often improvising”It is difficult,” writes Miss McKim, “to express the entire character of these negro ballads by mere musical notes and signs.”¹¹⁹

The reaction of early collectors of slave songs underscores how alien the music they heard sounded to them. As a result of displacement and musical takeover, the sound of African-based music became decreasingly alien to a broader range of listeners over the course of the twentieth century. The difficulties of early collectors in notating slave music point out how music genre can have a significant impact on the role of notation in musical practice. Many contemporary musical practices continue to expose the inherent limitations of the notation-based focus in music copyright. Further, notated music in dominant oral music traditions such as blues may be in the form of lead sheets that reflect compositional practices that might include improvisation, for example. Such forms of notation may also merely sketch out a potential basis for performances or alternatively reflect a transcription of orally composed music that may not fully reflect a musical composition or musical work as actually performed. Varied music genres underscore the inherently incomplete and potentially variable nature of notation as a set of instructions.¹²⁰

Interpretations of copyright that implicitly assume that copyright protects primarily written musical expression may fail to take sufficient account of nonvisual (e.g., aural and oral) aspects of music. For example, courts may interpret discrepancies between written compositions and oral expressions of music reflected in sound recordings by assuming that the “true” composition is evident in the written notation. Courts may also assume that oral musical expressions necessarily derive from a written composition and give this written composition heightened copyright protection. The privilege of sight may also mean that the most distinctive and original aspects of certain

119. *SLAVE SONGS OF THE UNITED STATES* iv–vi (William Francis Allen, Charles Pickard Ware & Lucy McKim Garrison eds., DocSouth Books 2011) (1867).

120. Charles Seeger, *Prescriptive and Descriptive Music-Writing*, 44 *MUSICAL Q.* 184, 184–95 (1958) (discussing limitations of conventional notation, noting that the assumption that the full auditory parameter of music is or can be represented by a partial visual parameter is one hazard inherent in music writing practices).

genres of music remain unprotected simply because they were not historically musical features that were notated within dominant systems of notation or simply because such features may be difficult to notate. The copyright emphasis on rights in writings and the related composition-performance dichotomy are incompatible with the actual creation of music in many instances and reflect a privileging of sight that should be recognized and reassessed.

C. *Newton v. Diamond and the Privilege of Sight: Copyright and Music Cognition*

Copyright assumptions that privilege the visual over the aural have significant implications for how courts treat allocations of rights. Because notation tends to be biased towards forms of musical expression that can be encompassed through the visual sense, aspects of musical expression that are nonvisual may be minimized or even excluded. This may mean that notational representations have the potential to level musical differences and potentially make different types of music appear to be more similar than might otherwise be the case. At the same time, music within similar traditions or genres may actually sound similar, making determinations of infringement difficult. Further, once a listener (or jury) is told that one piece is a potentially infringing one, the listener's perception of infringement may in fact be changed and the listener more likely to focus on similarities within a musical realm where much similarity may be found. These are significant issues for copyright analysis of both originality and infringement.

The presence of two copyright holders is not uncommon in musical copyright where copyrights may be split between the composer, who may retain rights in the underlying written composition (notes and lyrics), and recording companies, who typically own the sound recording copyright.¹²¹ The music composition copyright is broader and separate from the sound recording copyright.¹²² The owner of the music composition

121. See *Ulloa v. Universal Music & Video Distribution Corp.*, 303 F. Supp. 2d 409, 412 (S.D.N.Y. 2004) (noting that copyright protection extends to two separate aspects of music, the musical copyright, which includes music and lyrics, and the physical embodiment of a particular performance of the musical composition, usually in the form of a master recording (citing *Staggers v. Real Authentic Sound*, 77 F. Supp. 2d 57, 61 (D.D.C. 1999)); *T.B. Harms Co. v. Jem Records, Inc.*, 655 F. Supp. 1575, 1576 n.1 (D.N.J. 1987) (noting presence of two separate copyrights when a sound recording is made of a musical composition).

122. 17 U.S.C. § 106(1)–(6) (2012).

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copyright has the exclusive right to reproduce the composition, create derivative works, publicly perform, and publicly display the composition.¹²³ In contrast, the sound recording copyright owner can protect against literal reproduction of the sound recording, but does not have a display right and has a only a limited performance right for performances of the sound recording by digital audio transmission.¹²⁴ In a copyright infringement case, the trier of fact determines whether two works are substantially similar.¹²⁵ Although substantial similarity doctrine is far from uniform in application and is murky in many respects,¹²⁶ substantial similarity tests typically involve two separate inquiries, one that determines whether defendant copied plaintiff's work, while the second focuses on whether defendant's copying was an unlawful appropriation or infringement.¹²⁷ Because the first aspect of substantial similarity (i.e., copying) is often determined by circumstantial evidence,¹²⁸ the inquiry for this first prong of the substantial similarity test generally focuses on whether the defendant had access to the work that was allegedly infringed and whether substantial or probative similarity exists between the two works. Probative similarity is thus the second aspect of the copying element.¹²⁹ The copying element is sometimes referred to as an extrinsic test of substantial similarity.¹³⁰ Once copying is established, tests of substantial similarity are also used to determine whether a defendant unlawfully copied plaintiff's work. Unlawful appropriation is determined based on tests of intrinsic substantial similarity, a

123. *Id.* § 106(1)–(5).

124. *Id.* § 106(5)–(6).

125. *Arnstein v. Porter*, 154 F.2d 464, 473 (2d Cir. 1946) (reasoning that jurors, as lay listeners, are peculiarly qualified to determine one song's similarity to another).

126. *See infra* notes 289–93 and accompanying text.

127. *Arnstein*, 154 F.2d at 468 (discussing elements of copying and unlawful appropriation).

128. *Tuff N' Rumble Mgmt. Inc. v. Profile Records Inc.*, No. 95 Civ. 0246 (SHS), 1997 WL 158364, at *4 (S.D.N.Y. Apr. 2, 1997) (“As proof of access, a plaintiff may show that (1) the infringed work has been widely disseminated or (2) a particular chain of events exists by which the defendant might have gained access to the work.” (quoting *Favia v. Lyons P'ship*, No. 94 CIV. 3277 (SS), 1996 WL 194306, at *3 (S.D.N.Y. Apr. 23, 1996))); 4 MELVILLE B. NIMMER & DAVID NIMMER, *NIMMER ON COPYRIGHT* § 13.01[B], at 13-10.1 to -11 (2014) (noting that copying as factual matter typically depends on proof of access and probative similarity).

129. *NIMMER & NIMMER*, *supra* note 128, § 13.01[B], at 13-10.1 to -11 (discussing the “copying” element's twin requirements of access plus substantial similarity).

130. *See Three Boys Music Corp. v. Bolton*, 212 F.3d 477, 482, 485 (9th Cir. 2000) (noting that extrinsic test of substantial similarity requires that plaintiff “identify concrete elements based on objective criteria”).

subjective test based upon a reasonable person standard.¹³¹ Courts in some circuits may exclude expert testimony concerning substantial similarity.¹³²

In analyzing the music composition copyright, consideration of infringement tends to be limited to three principal notated musical features: melody, which is typically given primary consideration, and to a lesser extent harmony and rhythm.¹³³ The reasonable person standard used in court cases does not tend to take sufficient account of how music is perceived, which is a significant oversight. Although music composition copyright cases are based on infringement of the written musical composition, nonvisual aspects of music are not entirely ignored. Rather, music sounds, when presented, are treated in ways that do not fundamentally alter and that may actually reinforce underlying visual bias. Courts in music composition cases may rely on the jury lay listener test for copyright infringement, which asks juries to draw conclusions about written musical compositions by listening to sound recordings.¹³⁴ The presentation of such sound recordings can shape perceptions of infringement in ways that courts do not adequately consider.¹³⁵ The use of sound recordings in such cases also raises a number of questions that merit further consideration. For example, what is the impact of different performance styles and should the finder of fact listen to different performances of the same piece?¹³⁶ Further, if one performance of a defendant's musical work sounds similar to plaintiff's musical work, and a second performance sounds dissimilar, how should the court rule on whether defendant's musical work infringes plaintiff's work, or in other words, is the possibility of just one "substantially similar" performance sufficient to warrant an infringement finding?¹³⁷

As a result of these and other questions, in written composition cases, the jury lay listener test raises significant

131. See *id.* at 485 (noting that intrinsic test of substantial similarity is subjective and based on ordinary, reasonable person standard).

132. Jamie Lund, *An Empirical Examination of the Lay Listener Test in Music Composition Copyright Infringement*, 11 VA. SPORTS & ENT. L.J. 137, 139, 149–50 (2011); Reynolds, *supra* note 7, at 57–58.

133. Arewa, *supra* note 44, at 625 (noting the limited and at times questionable court treatment of rhythm).

134. Lund, *supra* note 132, at 148–49.

135. *Id.* at 147–49 (“[A]llowing jurors to listen to sound recordings of the pieces invites the juror to make the wrong comparison: comparing the recordings, rather than the compositional elements underlying each recording.”).

136. See *id.* at 140 (undertaking an experiment to assess the impact of changing performance styles on perceptions of infringement).

137. I am indebted to Wendy Gordon's comments concerning this.

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questions and may be problematic in that it mingles elements of the visual and aural in potentially confusing ways.¹³⁸ Use of the jury lay listener test is more credible in sound recording infringement cases.¹³⁹ However, uses of sound recordings in both written composition and sound recording infringement cases highlight the unsystematic nature of factual inquiry with respect to fundamental features of music in music infringement cases, even in instances where expert testimony is not excluded.¹⁴⁰

Uses of visual and aural evidence in music copyright infringement cases also raise issues concerning human cognition that should be taken into account in music copyright infringement cases. Many of the tests for music copyright infringement were established during a time period when studies of music cognition were minimal or nonexistent. How the finder of fact perceives visual and auditory aspects of music in music copyright infringement litigation implicates assumptions about human sensation and cognition that merit further scrutiny. Music copyright infringement cases tend to assume that melody, harmony, and rhythm are separate phenomena. These aspects of music may, however, be perceived in fundamentally different ways than might be assumed in copyright infringement cases. Courts may also combine visual and auditory evidence in relation to music, assuming that jurors can appropriately distinguish and interpret the implications of varied types of evidence.¹⁴¹ However, visual and aural perceptions of musical features are not identical and may not be easily substitutable. For example, experimental studies suggest that perception of rhythm is generally more accurate when rhythms are heard rather than seen, which may have significant implications for how evidence concerning rhythm should be presented in music copyright infringement cases.¹⁴² To the extent that the fact finder considers rhythm in an analysis of infringement, studies of music cognition suggest that perceptions of one musical feature may influence others. Rhythmic organization can, for example, influence perceptions of

138. Lund, *supra* note 132, at 147.

139. *See id.* at 148 (“[C]omparison of recorded sound is within the range of a typical juror’s common experience, comparison of written sheet music is not.”).

140. Reynolds, *supra* note 7, at 329–30.

141. *Id.* at 329–31.

142. *See generally* Katri Kosonen & Roope Raisamo, *Rhythm Perception Through Different Modalities*, 2006 PROC. EUROHAPTICS INT’L CONF. 365, available at http://www.researchgate.net/publication/229051945_Rhythm_perception_through_different_modalities/file/79e4150b919b162262.pdf (finding the visual modality to be the least accurate in rhythm perception, as compared with the auditory (the most accurate) and tactile modalities).

pitch, while rhythmic accent can influence memory for melodies.¹⁴³ Perceptions of musical features such as rhythm may vary depending on native language.¹⁴⁴ Music listeners do not necessarily perceive the same thing, and experimental studies suggest, for example, that nonmusicians may be more confused by changes in timbre than musicians.¹⁴⁵

Human perception of visual and auditory sensations related to music is complex, both at the level of practical understanding and the fundamental operation of the human cognition in perceiving different types of stimuli. Different musical activities involve different regions of the brain, and music perception is complex and interactive. Reading music involves the visual cortex, while listening to or recalling lyrics involves the brain's language centers.¹⁴⁶ Listening to music involves the subcortical structures of the brain (e.g., the cochlear nuclei, brain stem and cerebellum), while trying to follow music that one knows or that is stylistically familiar involves additional regions of the brain, including the hippocampus and portions of the frontal lobe.¹⁴⁷ Tapping one's foot to music using the body or the mind involves the timing circuits of the cerebellum.¹⁴⁸ Playing music involves both the frontal lobes of the brain, as well as the motor cortex and sensory cortex.¹⁴⁹ Although music is seemingly accessible to all, it is truly understood by few: "Of all the arts, music is perhaps the most widely enjoyed and the least understood."¹⁵⁰

143. Carol L. Krumhansl, *Rhythm and Pitch in Music Cognition*, 126 PSYCHOL. BULL. 159, 164 (2000).

144. THE NEUROSCIENCES INSTITUTE, ANNUAL REPORT 15 (2005), available at <http://www.nsi.edu/uploads/pdf/ScientificReport.pdf> ("In a large study population, we found that native speakers of English and Japanese perceive a simple rhythm of alternating long and short notes in very different ways: English speakers hear it as composed of repeating groups of short-long notes, while Japanese speakers hear it in the opposite way, as groups of long-short notes.").

145. See Mark A. Pitt, *Perception of Pitch and Timbre by Musically Trained and Untrained Listeners*, 20 J. EXPERIMENTAL PSYCHOL.: HUMAN PERCEPTION AND PERFORMANCE 976, 984 (1994) ("Nonmusicians had difficulty hearing what happened to pitch when timbre varied, regardless of whether pitch changed or stayed the same. Musicians, in contrast, exhibited no such confusion.").

146. DANIEL J. LEVITIN, THIS IS YOUR BRAIN ON MUSIC: THE SCIENCE OF A HUMAN OBSESSION 84 (2006).

147. *Id.*

148. *Id.*; see Jessica A. Grahn & Matthew Brett, *Rhythm and Beat Perception in Motor Areas of the Brain*, 19 J. COGNITIVE NEUROSCIENCE 893, 902–03 (2007) (examining responses of the brain motor areas to rhythm).

149. LEVITIN, *supra* note 146, at 84; see OLIVER SACKS, MUSICOPHILIA: TALES OF MUSIC AND THE BRAIN 32 (2007) (noting that listening to music or imagining it, even without overt movement or keeping time, activates the motor cortex and subcortical motor systems).

150. Reynolds, *supra* note 7, at 113.

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The complexities of music perception have implications for treatment of music in copyright cases. The treatment of the visual and aural in music copyright infringement cases may be based on assumptions about the fact finder's ability to perceive music that are questionable in light of studies of music cognition. Taking better account of auditory aspects of music perception and reception would necessarily entail acknowledgment of complexities of music cognition. Although much remains to be understood about music and the brain, the complexities underlying perception of music are largely disregarded in copyright considerations of infringement. Although a focus on notation may seemingly level out auditory variations in performed music evident in sound recordings, this effect may ultimately be deceptive, particularly because auditory aspects of music may play an integral role in determinations of infringement, even determinations that appear to be based on analysis of the written musical composition. Presentations of infringing musical works to juries should also take account of available studies of music cognition and perception and the ways in which jury experience may shape assessments of infringement. Given that many pieces of music may sound quite similar to some listeners, how two seemingly similar works are presented may play a significant role in perceptions of infringement.

The privileging of the visual results in a significant degree of confusion in music copyright. This confusion is present at the outset of music copyright cases. Decisions to pursue copyright infringement cases are typically based on a plaintiff hearing an allegedly infringing song, even in the case of claims based on infringement of a written composition. Court determinations of musical infringement in written composition cases are in theory based on the written composition. In practice, however, court treatment of infringement and jury determinations of infringement may reflect a continuing confusion between the written and oral and composition and performance aspects of music.

Confusion exists in part because the oral and written are necessarily intertwined in both the decision to bring an infringement case and analysis of whether two works are substantially similar. The rationale for playing sound recordings for jurors in written composition cases highlights the conceptual confusion surrounding presentation of music evidence in infringement cases. Further, recordings are played for jurors in music infringement cases as a "vehicle for presenting evidence of the underlying musical composition" with jurors "being asked to look *beyond* the performance as expressed in the recording, and

focus on the underlying musical ideas embodied in the recording.”¹⁵¹ How juries might effectively undertake this activity is not entirely clear, particularly given potentially varied levels of musical understanding and experience that might exist among jurors. Existing approaches mean that oral expressions of music, when considered, are simply not handled in a sensible way that takes account of existing understandings about music cognition and likely add to existing confusion in music copyright. Better approaches would distinguish visual and auditory musical features that contribute to a finding of infringement in a systematic and informed manner. Considerations of music are also not sufficiently comprehensive in considering the interplay of oral and written in music, as well as the extent to which different musical features are amenable to notation.

The distinctions courts may make between visual and nonvisual aspects of music are evident in the Ninth Circuit’s consideration of *Newton v. Diamond*.¹⁵² This case demonstrates how the privilege of sight can lead courts to have difficulty in dealing with oral musical expressions and performance aspects of music. The *Newton* case involved a suit by jazz flautist James Newton against the Beastie Boys, whose song, “Pass the Mic,”¹⁵³ had sampled a sound recording of Newton’s composition, “Choir.”¹⁵⁴ Although the Beastie Boys had obtained a license for use of the sound recording from Newton’s recording company, they did not obtain a license from Newton for the underlying musical composition.¹⁵⁵ As is typically the case in music copyright, Newton had retained copyright in the musical composition but had granted ECM Records copyright ownership of the sound recording.¹⁵⁶ The *Newton* district court found in favor of the Beastie Boys, holding that the three-note segment that the Beastie Boys sampled from the Newton composition lacked originality and was consequently not copyrightable, and

151. Lund, *supra* note 132, at 139 (emphasis omitted).

152. *Newton v. Diamond*, 349 F.3d 591 (9th Cir. 2003), *amended and superseded by* 388 F.3d 1189 (9th Cir. 2004); Teresa Wiltz, *The Flute Case That Fell Apart*, WASH. POST, Aug. 22, 2002, at C1.

153. BEASTIE BOYS, *Pass the Mic*, on CHECK YOUR HEAD (Capitol Records 1992).

154. *Newton*, 349 F.3d at 593–94; JAMES NEWTON, *Choir*, on AXUM (ECM Records 1982).

155. First Amended Complaint at 17–18, ¶ 36, *Newton v. Diamond*, 204 F. Supp. 2d 1244 (C.D. Cal. 2002), 2001 WL 34396090.

156. *Newton*, 349 F.3d at 592 (“In 1981, Newton performed and recorded ‘Choir’ and licensed all rights in the sound recording to ECM Records for \$5000. The license covered only the sound recording, and it is undisputed that Newton retained all rights to the composition of ‘Choir.’” (footnote omitted)); First Amended Complaint, *supra* note 155, at 12, ¶ 26.

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that the use by the Beastie Boys was in any case *de minimis*.¹⁵⁷ The Ninth Circuit *Newton* opinion affirmed the lower court holding of *de minimis* use.¹⁵⁸

In its discussion of the musical composition and sound recording, the *Newton* appeals court notes:

[Newton's] experts reveal the extent to which the sound recording of "Choir" is the **product of Newton's highly developed performance techniques, rather than the result of a generic rendition of the composition**. As a general matter, according to Newton's expert Dr. Christopher Dobrian, "the contribution of the performer is often so great that s/he in fact provides as much musical content as the composer." This is particularly true with works like "Choir," given the nature of jazz performance and the minimal scoring of the composition. . . . And it is clear that Newton goes beyond the score in his performance. For example, Dr. Dobrian declared that "Mr. Newton blows and sings in such a way as to emphasize the upper partials of the flute's complex harmonic tone, [although] such a modification of tone color is not explicitly requested in the score." . . .

Once we have isolated the basis of Newton's infringement action—the "Choir" composition, devoid of the unique performance elements found only in the sound recording—we turn to the nub of our inquiry: whether Beastie Boys' unauthorized use of the composition, as opposed to their authorized use of the sound recording, was substantial enough to sustain an infringement action.¹⁵⁹

157. *Newton*, 204 F. Supp. 2d at 1253, 1256 ("In the instant case, Plaintiff's three-note sequence (C—D-flat—C) with one background note (C), segregated from the entire piece, cannot be protected, as it is not original as a matter of law."), *aff'd*, 349 F.3d 591 (9th Cir. 2003), *and amended and superseded by* 388 F.3d 1189 (9th Cir. 2004).

158. *Newton*, 349 F.3d at 598 (affirming district court holding of *de minimis* use); *Newton*, 204 F. Supp. 2d at 1256 ("Even if Plaintiff could establish that this three-note sequence is subject to copyright protection, *Pass the Mic* and *Choir* are not substantially similar as a matter of law, as Defendants' alleged infringement was *de minimis*"). *De minimis* use is a doctrine, accepted only in some circuits, that excuses copyright infringement. See *Fisher v. Dees*, 794 F.2d 432, 434–35 n.2 (9th Cir. 1986) (noting that a taking is *de minimis* if the average audience would not recognize the misappropriation). *But see* *Bridgeport Music Inc. v. Dimension Films*, 410 F.3d 792, 801–02 (6th Cir. 2005) (declining to apply the *de minimis* use doctrine). The scope and parameters of *de minimis* use doctrine are uncertain and unpredictable. See David S. Blessing, Note, *Who Speaks Latin Anymore? Translating De Minimis Use for Application to Music Copyright Infringement and Sampling*, 45 WM. & MARY L. REV. 2399, 2408–20 (2004) (discussing different approaches to *de minimis* use); see also Susan J. Latham, *Newton v. Diamond: Measuring the Legitimacy of Unauthorized Compositional Sampling—A Clue Illuminated and Obscured*, 26 HASTINGS COMM. & ENT. L.J. 119, 139–44 (2003) (noting lack of a clear standard for *de minimis* use, including in relation to the *de minimis* use standard, burden of proof and relationship to the fair use defense).

159. *Newton*, 349 F.3d at 595–96 (emphasis added).

Although the appeals court's finding of noninfringement is likely the correct outcome from a copyright perspective, the court's reasoning is infused with assumptions arising from the privilege of sight. In its discussion of Newton's performance techniques, the court assumes that the written score is both the authoritative and complete source of musical expression upon which copyright protection should be based. This emphasis on the visual is too restrictive given the inherent limitations of notation. This is particularly important because music in many genres is defined to a far greater extent by performance than by notation. Although notation plays a significant role in music performance in many genres, a written musical composition in many genres may not effectively serve as a proxy for the entirety of a piece of music.

The divergence between notated music and performed music is thought by many to be particularly evident in genres such as the blues and jazz that have traditionally retained strong oral music elements. However, even in genres in which notation is treated as an authoritative musical source, including the post-nineteenth century European art music tradition, notation may serve as an incomplete representation of music. Some aspects of musical expression cannot be adequately represented by written notation alone. This means that a notation-focused approach is inherently biased towards aspects and types of musical expression that are more easily capable of being encapsulated by written notation. Further, visual-textual bias fails to sufficiently recognize how oral traditions are intertwined with written ones in music practice, even in notation-centered music practice.

The *Newton* decision reflects two levels of analysis by the court, one explicit and the other implicit. On one level, the court's decision rests on Newton's written composition, which was registered with the U.S. Copyright Office.¹⁶⁰ However, on a deeper level, the *Newton* court determination reflects an underlying structure and approach to music copyright that is fundamentally flawed. By focusing on the written notated version of Newton's musical expression, the court essentially engages in a reductionist exercise that is highly problematic because the notation on which the legal claim is based is necessarily incomplete. Further, the structure of analysis underlying the *Newton* court's decision is increasingly problematic given trends in popular music and technology since the early twentieth century.

160. First Amended Complaint, *supra* note 155, at 10–11, ¶ 22 (noting that Newton's copyright Registration Certificate No. PAu-36-947 was issued by the Register of Copyrights on August 4, 1978).

The visual-textual emphasis evident in *Newton* has been evident in music from the earliest days of the twentieth century music technology revolution and is based on a longer standing privilege of sight more generally. The approach of the *Newton* court misconstrues the visual and aural in the context of the allegedly infringed musical work. Examination of the history of music notation illustrates the restrictive and inaccurate nature of many contemporary assumptions about notation.

III. NOTATION AND COPYRIGHT

A. *The Development of Music Notation as a Set of Instructions*

Notation systems that developed in the West can be distinguished from those that developed elsewhere in the world.¹⁶¹ Early systems of music notation functioned as performance models rather than as blueprints for performance.¹⁶² Although some associate musical genres that contain dominant oral expression with particular twentieth century musical forms, such practices are actually quite old. For example, in its earliest centuries, the Gregorian Chant tradition was an oral one.¹⁶³ This oral tradition began to be translated after the ninth century into writing, a process that took centuries and which involved multiple systems of notation.¹⁶⁴ Western notation systems have not had several centuries to absorb the impact of African American and other musical traditions that may relate to and derive meaning from notation in ways other than what came to be dominant in the Western art music tradition of the late nineteenth century.¹⁶⁵

161. HUGO COLE, *SOUND AND SIGNS: ASPECTS OF MUSICAL NOTATION* 7–8 (1974) (noting that notation systems in the East, from their origin to present day, have been used to provide an outline or set out rules for performance, leaving details to improvising performers, while Western notations “have increasingly reflected a view of music as a closely planned activity”).

162. Leo Treitler, *The Early History of Music Writing in the West*, 35 J. AM. MUSICOLOGICAL SOC’Y 237, 237 (1982).

163. *Id.*; see also Helmut Hucke, *Toward a New Historical View of Gregorian Chant*, 33 J. AM. MUSICOLOGICAL SOC’Y 437, 450–67 (1980) (examining the ways that Gregorian Chant reflects oral practice).

164. RASTALL, *supra* note 8, at 2 (“[I]n the West alone many quite different (and not easily-classifiable) [notation] systems have been in operation.”); Treitler, *supra* note 162, at 237.

165. See Treitler, *supra* note 162, at 240–42 (discussing the versatility of pitch notation and its potential uses as a symbolic or iconic representational system). See generally ROBERT POLI, *THE SECRET LIFE OF MUSICAL NOTATION: DEFYING INTERPRETIVE TRADITIONS* (2010) (discussing implications of shifting meanings of musical notation markings).

The most basic definition of music notation would describe notation as a “system of written symbols by means of which a composer records the music that exists in his imagination, and which thus acts as a set of instructions to a performer or performers who will create the sound of the music.”¹⁶⁶ A more nuanced definition of music notation would take account of the varied purposes of notation and existence of notation for purposes other than performance: “The written symbols (which may include verbal instructions) by which musical ideas are represented and preserved for future performance or study.”¹⁶⁷ At its core, music notation is a set of written symbols that convey instructions that typically give information about the musical characteristics of a single musical sound, including pitch, duration, loudness, and type of attack.¹⁶⁸ A combination of such written symbols or notes can also give additional information, such as pitch relationships and duration relationships, including rhythm, tempo and meter, and expression.¹⁶⁹ Music notation thus serves as a visual system of communication or set of instructions that conveys information about music.¹⁷⁰

Notation has been used for varied purposes, including as a reminder of aurally learned music or as a skeleton from which to construct a performance with or without the composer. Music notation may be prepared with sufficient level of detail to provide a performer with varied degrees of latitude in performance, or prepared with a goal to inspire the performer, or as a visual analogue for listeners, or to give instructions in musical procedures.¹⁷¹ Because of the varied uses and purposes of notation, understanding the meaning of any specific piece of notation requires understanding of the context of the creation of notation and the purposes for which the notation has been created. During the course of its development, staff notation, the form of music notation that became the predominant set of instructions for Western art music and much popular music today, and earlier systems of notation experienced innovations, changes, and in some instances, disappearances.¹⁷² The pace of change in music notation decreased after the invention of music

166. RASTALL, *supra* note 8, at 1 (internal quotation marks omitted).

167. *Id.* at 2 (internal quotation marks omitted).

168. *Id.*

169. *Id.* at 2–3.

170. GARDNER READ, MUSIC NOTATION: A MANUAL OF MODERN PRACTICE 23–24 (2d ed. 1979) (noting that staff notation “fulfills many basic requirements for a visual system of communication”).

171. RASTALL, *supra* note 8, at 3–4.

172. *Id.* at 5.

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printing as particular shapes, signs, accidentals, and other aspects of music notation became increasingly standardized as printed music replaced hand copying.¹⁷³

Staff notation has potentially significant limitations in its precision.¹⁷⁴ Notation also typically involves some degree of indeterminacy that may arise from a number of sources, including incompleteness.¹⁷⁵ Timbre, and dynamic and tempo changes are “all vaguely specified” in conventional (staff) notation.¹⁷⁶ The incomplete nature of notation is particularly evident with respect to rhythm. Conventional notation is “severely limited by its bipartite system of note values As soon as a rhythm deviates from these simple divisions and multiples . . . one must resort to makeshift devices.”¹⁷⁷

In addition to changes in notation systems themselves over time, understandings of how notation should relate to performance practice have also experienced change, which highlights the importance of context in any consideration of the uses, meaning or purposes of notation. For example, in line with an increasingly sacralized vision of music, by the late nineteenth century, written music notation had become an authoritative source in the European art music tradition that could not be changed, while performance norms increasingly required strict adherence to notated music.¹⁷⁸ Notation, however, often does not completely embody music. Rather, notation is a form of shorthand that communicates limited visual and textual information about music.¹⁷⁹ Notation alone, however, simply cannot adequately convey nonvisual aspects of music in many

173. READ, *supra* note 170, at 23.

174. RASTALL, *supra* note 8, at 4.

175. COLE, *supra* note 161, at 128.

176. *Id.*

177. Kurt Stone, *Problems and Methods of Notation*, in PERSPECTIVES ON NOTATION AND PERFORMANCE 9, 16–17 (Benjamin Boretz & Edward T. Cone eds., 1976).

178. THEODOR W. ADORNO, TOWARDS A THEORY OF MUSICAL REPRODUCTION: NOTES, A DRAFT AND TWO SCHEMATA 8–9 (Henri Lonitz ed., Wieland Hoban trans., 2006) (“Sketchy as the old score may seem to the modern performer, it fulfilled its function by offering the necessary information in its own day, when the composer and the interpreter were so often one and the same person. . . . Today, the interpreter of contemporary works frequently has little or no personal choice, as he is forced to follow the very strict directions of the composer.”).

179. *Id.* at 8 (“Of course, great composers have superbly transformed their ideas into scores, making the best possible use of music notation. But it is this very notation that is imperfect and may remain so forever, notwithstanding remarkable contributions to its improvement. There are certain intangibles that cannot be expressed by our method of writing music—vital musical elements incapable of being fixed by the marks and symbols of notation. Consequently, score scripts are incomplete in representing the composers’ intentions. No score, as written in manuscript and published in print, can offer complete information for its interpreter.”).

music genres. Further, notation by itself does not answer fundamental questions about meaning. This means that courts interpreting notated forms of music cannot and should not make assumptions about what notation signifies to either writers or readers of or those hearing music.¹⁸⁰ The meanings embodied by notation may change depending on context, genre, and performer. Further, music as a performance art music is also defined in important respects by performance rather than exclusively by writing. The performance and nonvisual aspects of music have significant implications for approaches that emphasize notation.

B. Notation and the Decline of the Oral Tradition in European Art Music

The privilege of sight in music copyright is consistent with dominant and at least partially inaccurate assumptions about creation in the European art music tradition.¹⁸¹ Although the notation focus in copyright has paralleled developments in European art music, it presents a number of problems because of assumptions typically made about oral traditions in music. Oral traditions exist in all musical traditions, even those with a strong notation focus.¹⁸² The relationship between oral and written traditions in music may be complex and varied. Consequently, even in notation-centered traditions, a focus on notation leaves out significant aspects of musical practice because notation is mediated by oral traditions.¹⁸³ Most importantly, from a cultural perspective, the notation focus in the classical tradition came with a decline in that tradition as a living tradition. To the extent that a notation-focused model is embedded in copyright, copyright should tread with care in creating frameworks in which a sacralized and notation-centered view of music becomes a dominant assumption. This is particularly true given significant evidence of creativity in communities that follow nonsacralized approaches to music, for surely one goal of copyright is to

180. Treitler, *supra* note 162, at 243–45 (discussing how early writers and readers of music conceived of what their notations signified).

181. See *supra* notes 63–74 and accompanying text.

182. Taruskin, *supra* note 66, at 313 (“Though we tend to think of the Western musical tradition as a literate one, permanently preserved in written artefacts, the written artefacts have always been mediated by oral traditions of the kind I am describing, as the more reflective historical musicologists—and particularly medievalists—are well aware.”).

183. See Leo Treitler, *Oral, Written, and Literate Process in the Transmission of Medieval Music*, 56 SPECULUM 471, 473 (1981) (recognizing that the oral and written channels of circulating an original composition were not sharply distinct).

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promote the progress of science and the useful arts, which means fostering creativity regardless of its form.¹⁸⁴

1. *Sacralization, Notation, and European Art Music.* The application of copyright to music in the late eighteenth and early nineteenth century came in a context of major cultural and business transitions.¹⁸⁵ Musicians, who formerly operated under a patronage system, experienced the realities of an emerging music publishing industry that by the nineteenth century had significantly influenced the creation and dissemination of music.¹⁸⁶ The dissemination of printed music contributed to the rise of a culture of notation that soon came to dominate the music that became categorized as classical music in the nineteenth century.¹⁸⁷ The prominence of notation reflects the rise of classical music as an invented tradition increasingly mediated by notation during the course of the nineteenth century.¹⁸⁸ The increasing emphasis on notation reflects some of the benefits that notation may offer musicians. For example, notation provided a way of recording performance nuances prior to invention of technologies of sound recording, as well as a means for disseminating music in time and space.¹⁸⁹ Music notation can also enhance music learning.¹⁹⁰

The notation focus that became so dominant in European art music was reinforced by copyright, which in the nineteenth century applied to music in its written visual form. The notational emphasis that came to characterize the European art music tradition is particularly important in terms of its interactions with oral traditions within the classical music context. European art music has historically relied on both oral

184. Olufunmilayo B. Arewa, *Creativity, Improvisation, and Risk: Copyright and Musical Innovation*, 86 NOTRE DAME L. REV. 1829, 1830, 1839–40 (2011); see also Golan v. Holder, 132 S. Ct. 873, 887–88 (2012) (“Congress is empowered to ‘promote the Progress of Science and useful Arts’ by enacting systems of copyright and patent protection.” (quoting U.S. CONST. art. I, § 8, cl. 8)).

185. See generally Michael W. Carroll, *The Struggle for Music Copyright*, 57 FLA. L. REV. 907 (2005) (examining the relationship between composers, performers, and music sellers and music publishers in the seventeenth and eighteenth centuries).

186. Weber, *supra* note 88, at 186.

187. Arewa, *supra* note 44, at 590–96 (discussing the invention of the classical music tradition); see also Weber, *supra* note 88, at 186.

188. McClary, *supra* note 115, at 295.

189. See Estelle R. Jorgensen, *Western Classical Music and General Education*, 11 PHIL. MUSIC EDUC. REV. 130, 135 (2003) (noting that musical notation provides a way of recording the nuances of performance and propagating it widely and disparately in time and space).

190. *Id.*

and written traditions.¹⁹¹ The use of written music also changed over time. In contrast to later periods, as was the case with Gregorian Chant, the early Renaissance music tradition was to a significant extent an oral or “unwritten tradition’, in some ways resembling jazz and related popular genres Like most popular music, it generally did without musical notation, relying instead on memory, improvisation, and stock formulas.”¹⁹² In this tradition, notation was a guide for accomplished performers or a “mnemonic device in written symbols.”¹⁹³ By the late nineteenth century, a pervading focus on notation was associated with formalization of classical music as a category through the identification of canonical classical music works.¹⁹⁴ Prior to this time, the classical tradition reflected combined oral and written traditions in which varied participants changed and modified existing works.

The increasing focus on written notation in European art music involved a process of sacralization, which was part of a broader societal trajectory in the United States, for example, in the nineteenth century in which hierarchical cultural categories began to emerge.¹⁹⁵ Sacralization involved a decline in participation and lessening of a rich shared public culture,¹⁹⁶ and creation of hierarchies of cultural forms.¹⁹⁷ As a result of these processes, forms of cultural production such as Shakespeare, Dickens and opera and places such as museums became increasingly separated from the broader world of everyday culture.¹⁹⁸

191. THE BILLBOARD ENCYCLOPEDIA OF CLASSICAL MUSIC 8 (Stanley Sadie ed., 2004) (noting that Western classical music relies on both oral and written traditions).

192. PETER VAN DER MERWE, ROOTS OF THE CLASSICAL: THE POPULAR ORIGINS OF WESTERN MUSIC 73 (2004).

193. DEREK BAILEY, IMPROVISATION: ITS NATURE AND PRACTICE IN MUSIC 59 (1992).

194. Arewa, *supra* note 44, at 591–96.

195. LAWRENCE W. LEVINE, Highbrow/Lowbrow: THE EMERGENCE OF CULTURAL HIERARCHY IN AMERICA 224 (1988) (discussing hierarchical categories as a set of categories with continuing resonance to the presence that defined and distinguished culture vertically).

196. *Id.* at 9, 207–08; RUSSEL NYE, THE UNEMBARRASSED MUSE: THE POPULAR ARTS IN AMERICA 145 (1970) (noting that nineteenth century theater managers had to please a broad range of tastes and thus might present Shakespeare one night, a farce the next, followed by an equestrian acrobatic troupe).

197. LEVINE, *supra* note 195, at 207–08 (connecting the development of cultural hierarchies to a broader American social climate of increasing fragmentation reflected in subgroups within the culture to set themselves apart, as was evident in the rise of professional specialization, residential patterns in which separation was occurring based on social, economic and ethnic factors and new immigration and an increasingly heterogeneous society as a result of such immigration).

198. *Id.* at 33–34; see Robert R. Roberts, *Gilt, Gingerbread, and Realism: The Public and Its Taste*, in THE GILDED AGE: A REAPPRAISAL 169, 172 (H. Wayne Morgan ed., 1963)

This segregation was accomplished through a process in which audiences, actors, and styles of performance became increasingly separated.¹⁹⁹ An important part of this sacralization process related to conceptions of authorship and contributed to a fetishization of notation.²⁰⁰ For much of the nineteenth century, for example, operatic works were performed as parlor music and sheet music anthologies placed Bellini side by side with Stephen Foster and other nonclassical popular composers.²⁰¹ A complex and interactive relationship existed between written music traditions and oral ones, reflecting practices that became decreasingly acceptable over time.²⁰² During the course of the nineteenth century, it became increasingly unacceptable to alter what were perceived to be high culture aesthetic forms.²⁰³

2. *Aria Insertion and the Power of Nineteenth Century Performers.* Sacralization further contributed to the increasing dominance of written notation in the European art music tradition.²⁰⁴ Sacralization came not long after improvements in printing technology that made widespread dissemination of printed music increasingly common. The widespread use of notation and increasing focus on performing classical music as written bolstered music publishers by giving them an audience

(“Dickens belonged to the world of art and also to the popular culture of the America of the middle and late nineteenth century.”); see also STEVEN CONN, *From South Kensington to the Louvre: Art Museums and the Creation of Fine Art*, in MUSEUMS AND AMERICAN INTELLECTUAL LIFE, 1876–1926, at 192, 193–94 (1998) (noting that process of defining the art museum in late nineteenth and early twentieth centuries helped solidify the “cultural hierarchy” noted by Lawrence Levine with which we live today).

199. LEVINE, *supra* note 195, at 57; Roberts, *supra* note 198, at 173 (“These years saw the rise of magazines and newspapers of mass appeal and of transformation in the theater and other forms of entertainment that produced an increasingly wide gap between popular culture and higher standards of art.”).

200. LEVINE, *supra* note 195, at 69 (noting that by the end of the nineteenth century the sacred Shakespeare emerged triumphant); Roberts, *supra* note 198, at 173–74 (noting that the “familiar schism” between traditional and popular culture “had yet to appear significantly in America in the Gilded Age”).

201. CHARLES HAMM, “Hear Me, Norma”; or *Bel Canto Comes to America—Italian Opera as Popular Song*, in YESTERDAYS: POPULAR SONG IN AMERICA 62, 76 (1983).

202. Treitler, *supra* note 183, at 473 (discussing the relationship between written and oral traditions in the nineteenth century, noting that an “original composition, circulated through print and through performance, was transformed by way of ‘oral’ process into a new version—perhaps gradually, perhaps all at once. The new version then entered its own written and oral channels. These two channels were not sharply distinct, nor were the traditions of the two versions, which seem to have crossed at least once. Each new edition or performance arose as a realization of a model that would be difficult or impossible to specify exactly.”).

203. LEVINE, *supra* note 195, at 43.

204. Philip Tagg, *Open Letter: ‘Black Music’, ‘Afro-American Music’ and ‘European Music’*, 8 POPULAR MUSIC 285, 290 (1989) (noting the notation fetish in Western art music).

that needed the authentic written version of the piece, typically in the form of sheet music. Notation was important for multiple audiences and actors. Prior to the widespread dissemination of printed versions of music in the late nineteenth century, student musicians learned to play by ear.²⁰⁵ Initially, students would imitate passages and thematic patterns played by their teachers, with notation being introduced only as students' musical expression was extended to "musical 'sentences.'"²⁰⁶ Nineteenth century printing technologies enabled amateur musicians to have access to scores, which increasingly replaced musicians' ear training of prior years.²⁰⁷ In instrumental musical training, printed scores increasingly replaced musical "sentences" played by ear and the focus of training "changed from musical development to technical progress."²⁰⁸

Amateur home musicians also emerged as a new audience for sheet music. The piano became an important marker of middle class status in the United States in the nineteenth century; purchases of sheet music by owners of pianos helped expand markets for sheet music.²⁰⁹ Demand for printed music also increased as a result of public concerts, which contributed to the popularity of miniature scores. The growth of the academic study of music and rise of musicology created demand for critical and historical printed music editions.²¹⁰ The widespread use of notation and increasing focus on performing classical music as written bolstered music publishers by giving them an audience that needed the authentic written version of the piece, typically in the form of sheet music.

For much of the nineteenth century because technologies of sound reproduction were either nonexistent or not widely available, reproduction of music in any significant scale

205. Cecilia Hultberg, *Approaches to Music Notation: The Printed Score As a Mediator of Meaning in Western Tonal Tradition*, 4 MUSIC EDUC. RES. 185, 187 (2002).

206. *Id.*

207. *Id.*

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

209. Stephanie Dunson, *The Minstrel in the Parlor: Nineteenth-Century Sheet Music and the Domestication of Blackface Minstrelsy*, 16 AM. TRANSCENDENTAL Q. 241, 243 (2002) ("The parlor . . . was a new kind of space in many American homes and in nineteenth-century America came to be recognized as the central domestic marker of middle-class status. The piano stood as one of the defining features of any well-appointed parlor, which suggests that sheet music serves as a material article that performed . . . (literally and figuratively) a variety of roles . . .").

210. D.W. Krummel, *The Age of Offset Printing 1860–1975*, in MUSIC PRINTING AND PUBLISHING, *supra* note 104, at 117 ("Music designed for study purposes first appeared in the late 19th century . . ."); see also JOSEPH KERMAN, CONTEMPLATING MUSIC: CHALLENGES TO MUSICOLOGY 26–41 (1985) (discussing the development of musicology as a field of academic study).

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necessarily involved the written music composition.²¹¹ The presence of music notation thus became a key defining criteria for copyrightability. In the nineteenth century, prior to widespread deployment of sound recordings, this emphasis on written notation was a necessary element for copyrightability because available technologies effectively limited the scope of copyright to the written note. However, since the twentieth century, when sound recordings have become broadly disseminated, copyright treatment of written notation raises significant questions.²¹² A focus on written music notation evident in both the later classical music tradition and continuing copyright assumptions may also obscure the importance of oral traditions in music composition and performance.

Although written notated music became the key aspect of European art music, oral traditions continue to play a role in classical music that is not always recognized, particularly by those who assume that the music requires a written score to be performed.²¹³ Contemporary discussions of European art music may not sufficiently contextualize the importance of oral traditions and how the role of such traditions in European art music has changed over time. Even in the contemporary era, some prominent musicians within the European art music tradition have engaged in music primarily orally. The 2009 winner of the Van Cliburn competition was Nobuyuki Tsujii, a blind pianist who learns his music by listening and who takes cues from the conductor's breathing.²¹⁴ Other talented musicians have also engaged with music primarily orally. For example, operatic tenor Luciano Pavarotti could not read music, and other famous musicians were poor music readers, including operatic soprano Kiri Te Kanawa.²¹⁵

211. See *supra* Part II.A.1 (discussing reliance on writing prior to the sound recording era).

212. See *infra* notes 277–79 and accompanying text.

213. F.M. SCHERER, *QUARTER NOTES AND BANK NOTES* 33 (2004) (“To perform [music] requires training, instruments, and musical scores.”).

214. Juliet Chung & Miho Inada, *Blazing a New Path in Classical Music*, WALL ST. J., June 12, 2009, at W4 (“He learns new pieces through listening and memorization, rather than reading the notes. The 20-year-old Japanese musician last weekend became the first blind pianist to win the prestigious Van Cliburn International Piano Competition.”).

215. HERBERT H. BRESLIN & ANNE MIDGETTE, *THE KING AND I: THE UNCENSORED TALE OF LUCIANO PAVAROTTI'S RISE TO FAME BY HIS MANAGER, FRIEND, AND SOMETIME ADVERSARY* 116 (2004) (“But when it comes to things like sight-reading, or counting time so he knows when to come in, or any of the other technical things that make up the craft of musicianship, Luciano is a little bit challenged. It doesn't help that he can't read music.”); Andrew J. Waters, Ellen Townsend & Geoffrey Underwood, *Expertise In Musical Sight Reading: A Study of Pianists*, 89 *BRIT. J. PSYCHOL.* 123, 124 (1998) (noting the weak

This increased focus on notation significantly constrained performers. Not surprisingly, the role of performers has changed profoundly since the early nineteenth century in European art music. Aria insertion, which gave performers the power to override written scores and substitute or add arias of their choosing, was pervasive in opera prior to 1850:

“[A]ria insertion” . . . allowed singers to introduce arias of their own choice into opera productions. . . . Insertion arias might replace a portion of an opera (substitutions), or they might dislodge none of the original music (interpolations); they may have been authored by the composer of the opera, or they may have been written by someone else; . . . [S]ingers planned these insertions in advance, and everyone involved in the production . . . was aware of when and where they would occur.²¹⁶

With sacralization, practices such as aria insertion diminished. The presence of oral and written traditions in European art music suggests a topography of music practice that diverges from assumptions many courts and copyright commentators implicitly make about music. Music copyright may also not take sufficient account of variations in musical practice both within and among genres. Uses of oral and written traditions in music may vary significantly among various musical genres and composers. Similarly, compositional practices may vary to a far greater extent than courts may assume.²¹⁷

3. *Living Music and Oral and Written Traditions: Changing Views of Improvisation.* Discussions of the role of oral and written traditions in different music genres may assume the dominance of one strand without appropriately taking account of the other. Consequently, discussions of European art music may focus on written traditions and do not sufficiently consider the role or importance of oral traditions in European art music. Similarly, discussions of other genres, including African-based musics such as jazz and blues, may focus primarily on oral traditions within such genres, without appropriate attention to the role of written traditions and relationships between oral and written traditions in such genres. How one views oral and written traditions, and the extent to which each may be

relationship between performance ability and sight-reading ability and talented performing musicians who are poor readers, citing Kiri Te Kanawa and Artur Rubinstein as examples).

216. HILARY PORISS, CHANGING THE SCORE: ARIAS, PRIMA DONNAS, AND THE AUTHORITY OF PERFORMANCE 3 (2009).

217. Arewa, *supra* note 44, at 564.

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embodied in the compositional process plays a critical but unrecognized role that continues to be played out in copyright discussions. Some, for example, assume that notation is necessarily connected to originality,²¹⁸ which, even if true in specific historical contexts, cannot be generalized across music genres and time periods.

Understanding the fate of oral traditions in European art music has implications for copyright given the focus on written musical traditions that has characterized both European art music and copyright discourse in the twentieth century. The changing role of improvisation, which by the early twentieth century had ceased to play a significant role in most areas of European art music, reflects a fundamental alteration in the interaction between oral and written traditions in European classical music.²¹⁹ Improvisation is one aspect of a range of oral musical traditions that once existed in European art music and that pervades a number of musical genres that have become prominent since the early twentieth century. Improvisation was an indispensable ability for professional musicians well into the nineteenth century.²²⁰ In addition to being an important part of many compositional practices,²²¹ improvisation was a highly valued skill for classical music performers until that point in time. Early operas such as Monteverdi's *L'incoronazione di Poppea* were performed using scores that consisted of figured bass and vocal parts.²²² During performance, singers would add ornamentation, while instrumentalists playing the bass line would turn a single bass line with numbers into a "full harmonic foundation."²²³

218. Jason Toynbee, *Copyright, the Work and Phonographic Orality in Music*, 15 SOC. & LEG. STUD. 77, 81 (2006) ("In other words, notation promoted originality."); see also Arewa, *supra* note 184, at 1843 (discussing the conception that "oral expressions of music . . . derive from an underlying written musical expression").

219. Robin Moore, *The Decline of Improvisation in Western Art Music: An Interpretation of Change*, 23 INT'L REV. AESTHETICS & SOC. MUSIC 61, 63 (1992) (noting that the decline in improvisation was a "radical shift in performance aesthetic" that "occurred without incident and virtually without documentation").

220. BAILEY, *supra* note 193, at 27–28 (noting that "improvisation was an automatically accepted part of performing music" in the Baroque era); Moore, *supra* note 219, at 62–63 (noting that Brahms, Paganini, Chopin, Clara and Robert Schumann, Mendelssohn, Hummel, Cramer, Ries, Spohr, Joachim, and Schubert, among others, were all accomplished improvisers).

221. Lewis Porter, *John Coltrane's A Love Supreme: Jazz Improvisation as Composition*, 38 J. AM. MUSICOLOGICAL SOC'Y 593, 596 (1985) (discussing John Coltrane's use of improvisation in his compositional practice).

222. Carol S. Gould & Kenneth Keaton, *The Essential Role of Improvisation in Musical Performance*, 58 J. AESTHETICS & ART CRITICISM 143, 143 (2000).

223. *Id.*

Many now characterized as great composers were also highly accomplished performers who were most renowned for their skills in performance.²²⁴ An accomplished musician in Johann Sebastian Bach's time would be expected to be able to improvise a complete accompaniment.²²⁵ Johann Sebastian Bach is said to have been an exceptionally fluid and accomplished improviser.²²⁶ Similarly, Beethoven was an accomplished improviser whose improvised works were thought by some to be equal, if not superior to his formal compositions.²²⁷ Mozart also excelled at improvisation, and his "performances were designed to display his talents as improviser, pianist, and composer (that is the order his contemporaries assigned to his gifts)."²²⁸

When J.S. Bach visited his son C.P.E. Bach in 1747 in Berlin, Frederick the Great (Frederick II)²²⁹ asked Bach to improvise a fugue on a theme chosen by Frederick, who was himself a flautist and accomplished musician.²³⁰ Frederick then asked Bach to improvise a six-part fugue, which Bach did based on a Bach-chosen theme.²³¹ The following evening, Bach improvised a second six-part fugue based on a theme chosen by King Frederick.²³² After masterfully demonstrating his improvisation skills, J.S. Bach used the King's theme as a basis for his last completed major work, *The Musical Offering*, which included two fugues, a trio sonata, and more than five canons.²³³

In addition to aria insertion, opera singers would incorporate extended embellishments and improvisations in their performances.²³⁴ Pianists lacking skill in improvisation would actually play memorized preludes so that they could appear to be

224. Robert Levin, *Improvising Mozart*, in *MUSICAL IMPROVISATION: ART, EDUCATION, AND SOCIETY* 143, 143 (Gabriel Solis & Bruno Nettl eds., 2009) ("In the 18th century all composers were performers, and virtually all performers composed."); see also Olufunmilayo B. Arewa, *Making Music: Copyright and Creative Processes*, in *A COMPANION TO MEDIA AUTHORSHIP* 69, 74–75 (Jonathan Gray & Derek Johnson eds., 2013).

225. *THE NEW BACH READER: A LIFE OF JOHANN SEBASTIAN BACH IN LETTERS AND DOCUMENTS* 8 (Hans T. David, Arthur Mendel & Christoph Wolff eds., 1998).

226. *Id.* at 375, 406.

227. *BEETHOVEN: IMPRESSIONS BY HIS CONTEMPORARIES* 15, 22, 28, 30–31, 72 (O. G. Sonneck ed., Dover 1967) (1926); PAUL F. BERLINER, *THINKING IN JAZZ: THE INFINITE ART OF IMPROVISATION* 774 (Philip V. Bohlman & Bruno Nettl eds., 1994).

228. Levin, *supra* note 224, at 143–44.

229. Humphrey F. Sassoon, *JS Bach's Musical Offering and the Source of Its Theme: Royal Peculiar*, *MUSICAL TIMES*, Winter 2003, at 38, 38.

230. Gould & Keaton, *supra* note 222, at 143.

231. Sassoon, *supra* note 229, at 38.

232. *Id.*

233. Gould & Keaton, *supra* note 222, at 143; Sassoon, *supra* note 229, at 38.

234. Gould & Keaton, *supra* note 222, at 143–44.

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improvising.²³⁵ Improvisation was largely eliminated from the European art music tradition by 1910,²³⁶ other than in limited areas such as organ music,²³⁷ a decline that is closely connected to sacralization and the notation fetish that made it increasingly difficult to modify existing music. The elimination of improvisation from this tradition was one consequence of sacralization and the reverence given past music of the canonized classical tradition.²³⁸ Some attribute the decline in the classical tradition as a living musical tradition in which new works are being actively created to the notation fetish and sacralization that made changing existing music and improvisation increasingly disfavored.²³⁹ These patterns eventually led to European art music ceasing to be mainstream popular music, replaced in the twentieth century by music influenced by both Asian and African music.²⁴⁰

The development of the European art music canon was also connected to attitudes that post-canon composers brought to the composition process itself. Young composers came to focus on autonomous composition practices and developing distinctive personal styles that could match the assumed (and actually invented) traditions of their predecessors, but who modeled their creations on their predecessors in an elusive and esoteric fashion.²⁴¹ In the case of some composers such as Arnold Schoenberg, the post-canon composition process involved a battle against repetition.²⁴² Attitudes that view repetition with disfavor

235. Valerie Woodring Goertzen, *Setting the Stage: Clara Schumann's Preludes*, in *IN THE COURSE OF PERFORMANCE: STUDIES IN THE WORLD OF MUSICAL IMPROVISATION* 237, 239–40 (Bruno Nettl & Melinda Russell eds., 1998) (“Improvisation was so highly regarded that pianists who lacked training in the art resorted to memorizing preludes in instruction manuals and published sets; they could pretend to supply these ‘off the cuff,’ in imitation of the gestures of accomplished artists.”).

236. Tagg, *supra* note 204, at 290 (noting that improvisation was virtually eliminated from the European classical tradition by 1910).

237. BAILEY, *supra* note 193, at 19, 29–38 (noting that improvisation is still an active force in the French school of organ performance).

238. See Moore, *supra* note 219, at 79 (“Reverence for the music of past eras is in itself an impediment to improvisation. Spontaneous innovations cannot occur in music which is intended to be more a replication from 1790 than a musical event of today.”).

239. Tagg, *supra* note 204, at 290 (“The ideological aim of this notation fetish . . . was to forestall sacrilege upon the ‘eternal values’ of immutable Masterworks This strategy was so successful that it finally managed to suffocate the living tradition it claimed to hold so dear”).

240. McClary, *supra* note 115, at 292 (noting that the “European classical tradition has ceased to occupy the mainstream” and “no longer qualifies as the protagonist in the history of music—not even in the West”).

241. J. Peter Burkholder, *Museum Pieces: The Historicist Mainstream in Music of the Last Hundred Years*, 2 *J. MUSICOLOGY* 115, 120 (1983).

242. McClary, *supra* note 115, at 291.

may have implications for the potential degree of embeddedness of oral aspects of musical traditions. This is particularly true because many examples exist in literature and music of creative and compositional processes that embed significant aspects of oral traditions, many of which may involve formulaic structures and repetition.²⁴³

Perhaps of most significance to copyright, sacralization and the notation fetish contributed to the decline of classical music as a living vibrant cultural space, which has interestingly led in the twentieth century to attempts to return to past practice in order to bring life to the classical tradition. Attitudes toward improvisation in European art music have changed significantly in recent years. Recognizing some of the implications of the elimination of improvisation from the classical tradition for this tradition as a living tradition, after a gap of a century and a half, some twentieth century performers have reintroduced improvisation into the classical tradition.²⁴⁴ Music schools are now training classical musicians in improvisation.²⁴⁵ One music scholar has even suggested that people today hoping to reinvigorate opera should look to nineteenth century practices like aria insertion as a means of bringing new life to opera.²⁴⁶

243. See, e.g., ALBERT B. LORD, *THE SINGER OF TALES* 5, 46, 53, 103, 198 (2d ed. 2000) (describing processes by which oral poets compose and noting use of repetition in composition process); WALTER J. ONG, *ORALITY AND LITERACY: THE TECHNOLOGIZING OF THE WORD* 26, 64 (2d ed. 2002) (suggesting that formulaic style marks all thought, and expression in primary oral cultures and discussing the spectrum of potential formulaic uses); Bennison Gray, *Repetition in Oral Literature*, 84 J. AM. FOLKLORE 289, 291 (1971) (describing repetition as a servant of oral improvisation and aural memory); Ian MacKenzie, *Improvisation, Creativity, and Formulaic Language*, 58 J. AESTHETICS & ART CRITICISM 173, 173 (2000); Vaira Vikis-Freibergs, *Creativity and Tradition in Oral Folklore or the Balance of Innovation and Repetition in the Oral Poet's Art*, in *COGNITIVE PROCESSES IN THE PERCEPTION OF ART* 325, 327 (W. Ray Crozier & Anthony J. Chapman eds., 1984).

244. See George E. Lewis, *Improvised Music After 1950: Afrological and Eurological Perspectives*, 16 BLACK MUSIC RES. J. 91, 91, 96–97, 110 (1996) (noting reemergence of improvisation after 150-year gap in twentieth century among composers of experimental, new and avant-garde music such as John Cage and among practitioners of improvised music since 1970); Alexandra Alter, *Making Up the Classics*, WALL ST. J., Nov. 28, 2008, at W1 (“It’s not like these are museum pieces under glass,” says Benjamin Zander, conductor of the 29-year-old Boston Philharmonic and an advocate of reviving improvisation. “These are living, breathing pieces, and our job is to bring them to life.”); Daniel Delgado, *Lost Art*, HARV. MAG., May–June 2000, at 36, 36 (discussing Harvard music professor Robert Levin, who is attempting to revive the lost art of improvisation in classical music); NPR’S PERFORMANCE TODAY, *Improvisation* with Robert Levin, NPR ONLINE (Nov. 24, 1999), <http://www.npr.org/programs/specials/milestones/991124.motm.improv.html> (noting that classical music today rarely involves improvisation and discussing the fact that “[m]any great composers were masters at improvisation”).

245. Alter, *supra* note 244.

246. PORISS, *supra* note 216, at 12.

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The decline of improvisation in the European art music tradition and emphasis on autonomous authorial composition and notation have served to both minimize innovation in live performance of existing music in the classical tradition and separate musical composition, which should not involve repetition, from performance, which should involve exact repetition of the written composition.²⁴⁷ This typology separating composition from performance remains a dominant assumption in copyright, which has significant implications for living music traditions that do not incorporate the presumptions of sacralization that came to dominate European art music. Notably, the focus on authorial intention in the European art music tradition has also tended to obscure the key role of music editors, scribes, and publishers as “mediators between composer and audience.”²⁴⁸ Even in the European art music tradition, however, the reintroduction of improvisation into the classical repertoire reflects some level of resistance to the dichotomous formulation that separates composition from performance. It also reflects the diversity of ways in which the oral and written may interact and change over time.

C. Written Traditions in Blues and Jazz

The ascension of African-based music over the course of a century has had significant social, cultural, economic, business, and legal consequences.²⁴⁹ African American music traditions are among a series of African-based musics that developed in the New World among communities of slaves from Africa.²⁵⁰ African American music traditions emerged from the interaction of slaves from a variety of African cultural traditions with the Euro-American world into which such slaves were forcibly delivered.²⁵¹ As is often the case with culture, African American music traditions are intercultural and demonstrate influences of a number of sources, including African, Euro-American, and other

247. Moore, *supra* note 219, at 79 (“Many of the problems facing modern musicians derive from a discrepancy between their own intuitive *understandings* of music, derived from cultural experience, and the aesthetic expectations they have of the music they create and play vocationally.” (emphasis added)).

248. JAMES GRIER, *THE CRITICAL EDITING OF MUSIC: HISTORY, METHOD, AND PRACTICE* 4 (1996).

249. Arewa, *supra* note 27, at 595–96; Olufunmilayo B. Arewa, *Copyright on Catfish Row: Musical Borrowing, Porgy and Bess, and Unfair Use*, 37 *RUTGERS L.J.* 277, 303, 311 (2006); Arewa, *supra* note 44, at 560.

250. DENA J. EPSTEIN, *SINFUL TUNES AND SPIRITUALS: BLACK FOLK MUSIC TO THE CIVIL WAR* 3–17 (2003) (discussing African music and the Middle Passage by which slaves were brought from Africa to the New World).

251. LAWRENCE W. LEVINE, *BLACK CULTURE AND BLACK CONSCIOUSNESS* 5 (2007).

elements.²⁵² African American strands of African-based musics have become particularly prominent because of the connection of African American music with an increasingly ascendant twentieth century American sound recording industry.

The African American-based popular music forms that emerged in the twentieth century were disseminated to a significant extent through sound recordings. Consequently, the rise of African American popular music has paralleled the rise of the recording industry. By the 1930s, for example, jazz had become synonymous with America's popular music.²⁵³ A number of African American musical forms that became increasingly dominant forces in the popular music arena in the twentieth century reflect an aesthetic of composition based on repetition and revision.²⁵⁴ Many of these African American-based musical forms include oral musical traditions to a greater extent than twentieth century European art music. Further, many African-based musical traditions may have significant rhythmic complexity,²⁵⁵ which is difficult to notate in all genres of music, not just African-based ones.²⁵⁶

252. *Id.* at 190–297; see SAMUEL A. FLOYD, JR., *THE POWER OF BLACK MUSIC: INTERPRETING ITS HISTORY FROM AFRICA TO THE UNITED STATES* 6 (1995) (examining the survival of and major role played by African musical traits and cultural practices in the development and elaboration of African American music); EILEEN SOUTHERN, *THE MUSIC OF BLACK AMERICANS: A HISTORY* 308–17, 330–36, 361–65, 504–06 (2d ed. 1983) (discussing ragtime, blues, jazz, and rock and roll); Samuel A. Floyd, Jr. & Marsha J. Reisser, *The Sources and Resources of Classic Ragtime Music*, 4 BLACK MUSIC RES. J. 22, 22 (1984) (noting that classic ragtime emerged from two sources—Euro-American social dance music and Afro-American folk dance movement); Mead Hunter, *Interculturalism and American Music*, PERFORMING ARTS J., Summer/Fall 1989, at 186, 186 (noting that American music has been intercultural from its earliest days, reflecting a heritage of European and African forms); Cheryl L. Keyes, *At the Crossroads: Rap Music and Its African Nexus*, 40 ETHNOMUSICOLOGY 223, 241 (1996) (“Through its creative processes, rap represents a continuity of African-derived concepts consciously as well as unconsciously. But on a non-musica-lingual level, Africanisms are further suggested through posturing, dress, jewelry, and hairstyles, all of which suggest political statements about an artist.”); John Shepherd, *A Theoretical Model for the Sociomusicological Analysis of Popular Musics*, in POPULAR MUSIC 145, 150 (Richard Middleton & David Horn eds., 1982) (noting cross-fertilization resulting from music that slaves from Africa brought to North America).

253. GUNTHER SCHULLER, *THE SWING ERA: THE DEVELOPMENT OF JAZZ, 1930–1945*, at 4, 6 (1989) (describing the swing era as a time when jazz became synonymous with America's popular music, social dances, and musical entertainment).

254. HENRY LOUIS GATES, JR., *THE SIGNIFYING MONKEY: A THEORY OF AFRICAN-AMERICAN LITERARY CRITICISM* xxiv (1988) (“Repetition and revision are fundamental to black artistic forms, from painting and sculpture to music and language use.”); James A. Snead, *On Repetition in Black Culture*, 15 BLACK AM. LITERATURE F. 146, 149–50 (1981) (noting that “[b]lack culture highlights the observance of . . . repetition” and “[r]epetition in black culture finds its most characteristic shape in performance: rhythm in music and dance and language”).

255. Alan P. Merriam, *Characteristics of African Music*, 11 J. INT'L FOLK MUSIC COUNCIL 13, 13 (1959).

256. See KOFI AGAWU, *REPRESENTING AFRICAN MUSIC: POSTCOLONIAL NOTES, QUERIES, POSITIONS* 64 (2003) (noting that problems of notation with respect to rhythm are universal and equally problematic for African music and Western music).

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Although some commentators emphasize the use of oral traditions in African American-based music,²⁵⁷ as is the case with oral traditions in classical music, the actual picture on the ground is more complex, and written traditions have also played a role in African American-based musical traditions in which oral traditions have been prominent. Early blues music, which emerged prior to the advent of the era of widespread dissemination of sound recordings, was initially distributed in sheet music form.²⁵⁸ Blues pioneer W.C. Handy founded a music publishing business that in 2000 remained among the oldest significantly black family owned businesses in the United States.²⁵⁹ The first blues sound recording, recorded in 1914, was a version of Handy's *Memphis Blues*.²⁶⁰

In early jazz music in the 1920s, a written tradition existed that supported the prominent jazz oral tradition.²⁶¹ Considerable variation existed in the musical literacy and technical competence of jazz musicians.²⁶² Early jazz bands included both reading players, who could read music, and "fakers," who could not read music.²⁶³ Trained musicians who sought to play in bands at times pretended to be "fakers" to obtain positions with bands, while most faking bands "had at least one reader to teach the other musicians the written parts."²⁶⁴ Those pretending to be fakers who could actually read music may have been responding

257. Michael Zaken, Note, *Fragmented Literal Similarity in the Ninth Circuit: Dealing with Fragmented Takings of Jazz and Experimental Music*, 37 COLUM. J.L. & ARTS 283, 286 (2014) ("In the early days of jazz, part of the notion that jazz music was linked with improvisation may have been rooted in racist notions about black musicians. Eubie Blake, an accomplished early jazz musician, reported that his band would have to memorize the scores of the music they were playing because white audiences didn't want to believe that black musicians could read music. This memorization sent a clear message: jazz was the antithesis of classical music. It was not composed; it was created on the spot." (footnotes omitted)); see also JOSHUA BERRETT, LOUIS ARMSTRONG & PAUL WHITEMAN: TWO KINGS OF JAZZ 47–48 (2004).

258. ELIJAH WALD, *ESCAPING THE DELTA: ROBERT JOHNSON AND THE INVENTION OF THE BLUES* 15–16 (2004) (noting early blues became popular when recording was still in its infancy and was thus distributed largely in print form with the first published blues song appearing in New Orleans in 1908, composed by an Italian American named Antonio Maggio).

259. Elliott S. Hurwitz, *W.C. Handy as Music Publisher: Career and Reputation* 2 (2000) (Ph.D. Dissertation, Music, City Univ. N.Y.).

260. WALD, *supra* note 258, at 17–18 (noting the first recording of a blues composition in 1914 by the Victor Military Band, which cut a version of W.C. Handy's "Memphis Blues" and the first sung blues on record in 1915 by Morton Harvey).

261. David Chevan, *Written Music in Early Jazz* 2 (1997) (Ph.D. Dissertation, Music, City Univ. N.Y.).

262. *Id.* at 63.

263. *Id.* at 74.

264. *Id.* at 75–76, 81–82.

to broader societal expectations about African American musicians. For example, one orchestra, all the members of which were readers, did not use written music in performances at white dances:

Once the arrangement was worked over, however, it would be memorized and the music would not be brought to the job. Mr. Blake stated that this was to avoid breaking the white stereotype that blacks were too stupid to read music and that their musical ability was a wondrous gift and not the result of hard work. To maintain this illusion . . . when taking requests[,] [he] would ask the patrons to sing a few bars of the melody and ask for a few minutes to “work it out with the boys.” Then he would have the orchestra play the tune exactly as it had been rehearsed, to the accompaniment of amazed remarks by the audience about the natural talent of these Negroes.²⁶⁵

In certain contexts, such as steamboats in the 1920s, players were expected to read music.²⁶⁶ The dominant oral tradition in jazz influenced use of written music by jazz musicians. Even when basing works on a published score, early jazz musicians would “doctor” the score, which involved altering the written music to add riffs, improve, and play out the choruses.²⁶⁷ The practices of modifying music parallels in important respects the way written music was treated in European art music prior to sacralization trends.²⁶⁸ Jazz musicians also relied on stock arrangements when making recordings, which typically involved modifying and supplementing simplified arrangements of the music performed.²⁶⁹

A number of jazz musicians, including Louis Armstrong and Duke Ellington, made significant copyright deposits.²⁷⁰ Jazz copyright deposits have generally been in the form of lead sheets that sketched out a basic melody rather than complete transcriptions of the recorded piece.²⁷¹ Some songs were copyrighted on multiple occasions as they were modified.²⁷² As is

265. *Id.* at 82 (quoting interview with Eubie Blake).

266. *Id.* at 120–35.

267. *Id.* at 178–94.

268. Levin, *supra* note 224, at 145 (“It is revealing that we do not have cadenzas for [Mozart’s] wind and violin concertos, for which he evidently trusted the soloists to improvise. . . . Mozart’s piano sonatas reveal[] that his manuscript versions contain a paucity of dynamics and eschew notation of the returns of principal themes.”).

269. Chevan, *supra* note 261, at 236–37.

270. *Id.* at 251–52 (noting that Louis Armstrong made more than seventy copyright deposits).

271. *Id.* at 242.

272. *Id.* at 249–50.

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the case in a number of twentieth century popular music traditions, the notated music in copyright deposits of jazz music may be incompatible with actual performance traditions.²⁷³ Jazz music copyright deposits of written music notation are often “simplistic representations” of jazz musicality,²⁷⁴ while deposits of sound recordings do not fundamentally address the problem of how copyright should treat notated music emanating from varied types of musical practice and best promote the development of living, evolving cultural forms.²⁷⁵

Blues and early jazz musical practice also reflect varied approaches to and uses of notation that do not fit well within dominant copyright assumptions. Compositional practices in jazz reflect complex, hybrid, and varied practices that might involve both written and oral elements.²⁷⁶ In addition, blues and jazz emerged during an era in which sound recording technology had become widely available. As a result, the impact of copyright on such music can only be understood in light of the impact of technologies of sound reproduction that continue to challenge copyright in the digital era.²⁷⁷

IV. REREADING MUSIC: HOW COURTS SHOULD TREAT MUSIC NOTATION IN COPYRIGHT INFRINGEMENT CASES

A. *Law and Sound Reproduction Technologies: Oral Traditions, Written Traditions, and Music*

Twentieth century technological innovations have laid bare potential areas of tension underlying copyright assumptions about music. The role of oral and written traditions in music is particularly contested and unresolved and at times not even

273. JOCELYN R. NEAL, *THE SONGS OF JIMMIE RODGERS: A LEGACY IN COUNTRY MUSIC* 156 (2009) (noting the “incompatibility between [Jimmie] Rodgers’s performance tradition and the established conventions of music notation and publication”).

274. Lee B. Brown, *Musical Works, Improvisation, and the Principle of Continuity*, 54 *J. AESTHETICS & ART CRITICISM* 353, 362 (1996) (“[J]azz players pay little attention to the simplistic representations of them in published sheet music.”).

275. Sound recordings may be deposited and registered with the Copyright Office. See U.S. COPYRIGHT OFFICE, *CIRCULAR 56A: COPYRIGHT REGISTRATION OF MUSICAL COMPOSITIONS AND SOUND RECORDINGS 1* (2009), available at <http://www.copyright.gov/circs/circ56a.pdf>.

276. Zaken, *supra* note 257, at 286–88 (noting that “Duke Ellington devised hybrid modes of improvisation and composition” while other jazz composers such as Charles Mingus, “would through-compose, or nonrepetitively notate, most of their works in the classical style”).

277. TIMOTHY D. TAYLOR, *STRANGE SOUNDS: MUSIC, TECHNOLOGY AND CULTURE* 3 (2001) (“The advent of digital technology in the early 1980s marks the beginning of what may be the most fundamental change in the history of Western music since the invention of music notation in the ninth century.”).

recognized. Discussions of copyright tend to connect oral traditions to performance of an underlying written composition, which is then considered to have musical primacy. The creation of music in varied genres suggests that this view of creation, notation, and orality is far too restrictive. Instead, oral and written traditions lie along a spectrum. Performance may thus embody performance of an underlying written composition but may also reflect a composition based in the norms and assumptions of an oral rather than a written tradition.

The restrictive view of the role of oral traditions in music is made yet more complicated by the introduction of a range of twentieth-century technologies that have enabled the capture and dissemination of performance through sound recordings. From a copyright perspective, the advent of recording technology has to a significant extent been conceptualized as a new mechanism for dissemination of written musical compositions. Less attention has been paid to the copyright implications of changing musical practices enabled by recording technologies. Recording and other sound capture technologies that became widely available in the twentieth century have facilitated the emergence of genres such as the blues, which, after its initial emergence, was largely based on dissemination of records rather than sheet music.²⁷⁸ These technologies have also fundamentally changed music performance and composition practices, as well as audience expectations about music.²⁷⁹ In the case of classical music recordings, for example, the ability of composers, performers, and audiences to listen repeatedly to performances has led composers and performers to decrease deviations and rhythmic and other eccentricities, as well as modify performances to achieve a desired sound.²⁸⁰

Copyright law responded to the advent of sound recordings and other technologies of sound reproduction by adding layers of copyright protection to capture cultural products made using such new technologies. Thus, in addition to a copyright in the written musical composition, which was the first type of music creativity protected by copyright historically, mechanical license

278. Arewa, *supra* note 27, at 575, 593; *see also* WALD, *supra* note 258, at 17–18.

279. MARK KATZ, CAPTURING SOUND: HOW TECHNOLOGY HAS CHANGED MUSIC 14–31 (2004) (contrasting recorded music with live performance, noting that recorded music is portable and severable from its original setting, and repeatable); Levin, *supra* note 224, at 144 (noting that contemporary performers and listeners of classical music have “experienced the standard repertoire hundreds, even thousands of times more than the composers who wrote these works, making it ever harder to bring to them the daring of the works’ initial effect”).

280. KATZ, *supra* note 279, at 25.

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provisions were added to the 1909 Copyright Act that required those making mechanical copies of music compositions in forms such as sound recordings and pianola rolls to pay compensation to those holding copyrights in underlying written musical compositions.²⁸¹ These mechanical license provisions came to be used for “cover” recordings, which during some segments of the twentieth century were a primary means by which white musicians, who had access to broad consumer markets, copied African American performers, who were limited by recording industry business practices to the smaller “race” records market segment.²⁸² Copyright often rewards the written composition to a far greater extent than performance. Holders of copyrights in written compositions are often able to enforce their rights even in instances where such rights were acquired under questionable circumstances.²⁸³

The displacement of European art music by African-based musics in the popular music arena has significant and often unrecognized implications for copyright. Late nineteenth century European art music, particularly as it increasingly became a sacralized musical museum tradition, was a good fit for underlying copyright assumptions because compositional norms increasingly disfavored repetition, while performance norms emphasized repetition and restricted the ability of performers and others to change existing works. However, the displacement of European art music by African-based musics has significantly challenged copyright, in part because compositional practices in many African-based musical genres may diverge from those

281. Copyright Act of 1909, ch. 320, § 1(e), 35 Stat. 1075, 1075–76 (codified as amended at 17 U.S.C. § 115 (2012)) (providing that copyright owners acquiescing to the use of a copyrighted work on instruments serving to mechanically reproduce the work must permit any other person to make similar use of the copyrighted work upon payment of a royalty of two cents); PAUL GOLDSTEIN, *COPYRIGHT'S HIGHWAY: FROM GUTENBERG TO THE CELESTIAL JUKEBOX* 51–53 (2003).

282. Reebee Garofalo, *Crossing Over: From Black Rhythm & Blues to White Rock 'n' Roll*, in R&B, RHYTHM AND BUSINESS: THE POLITICAL ECONOMY OF BLACK MUSIC 116, 124–25 (Norman Kelley ed., 2002); see Arewa, *supra* note 27, at 600–01.

283. The court in the *Bridgeport* case, for example, assumes that plaintiff will be able to prove ownership of the copyrights. *Bridgeport Music, Inc. v. Dimension Films*, 410 F.3d 792, 796 (6th Cir. 2005) (“Bridgeport and Westbound claim to own the musical composition and sound recording copyrights in ‘Get Off Your Ass and Jam’ by George Clinton, Jr. and the Funkadelics. We assume, as did the district court, that plaintiffs would be able to establish ownership in the copyrights they claim.”). However, the acquisition of George Clinton’s copyrights by Bridgeport remains murky and in dispute. George Clinton has claimed that the acquisition documents giving Bridgeport ownership of the copyrights were forged. See Mike Masnick, *George Clinton Takes on Sample Troll Bridgeport Music Again: The DNA of Hip Hop Has Been Hijacked*, TECHDIRT (June 13, 2011, 11:52 AM), <http://www.techdirt.com/articles/20110613/01234014665/george-clinton-takes-sample-troll-bridgeport-music-again-dna-hip-hop-has-been-hijacked.shtml>.

assumed in copyright, particularly as they relate to oral and written expressions of music.

The dominance of African-based musics came at the same time as a series of technological innovations in music that facilitated oral compositional practices. Consequently, copyright treatment of these new technologies is a critical factor that should be considered within the context of a shifting terrain of twentieth century musical preferences. Copyright treatment of new technologies has been significantly influenced by the 1908 case *White-Smith Music Publishing Co. v. Apollo Co.* where the Supreme Court found that player piano perforated rolls were not copies within the meaning of the Copyright Act of 1870, as amended.²⁸⁴ The *White-Smith* case illustrates some of the problems that courts have faced in trying to apply copyright frameworks to new nonvisual technologies of musical creation and dissemination.²⁸⁵ The legal analysis in *White-Smith* strongly reflects the privilege of sight and is relentlessly visual in its discussion of the nature of music and what it means for something to be a copy:

When the combination of musical sounds is reproduced to the ear it is the original tune as conceived by the author which is heard. ***These musical tones are not a copy which appeals to the eye.*** In no sense can musical sounds which reach us through the sense of hearing be said to be copies as that term is generally understood, and as we believe it was intended to be understood in the statutes under consideration. A musical composition is an intellectual creation which first exists in the mind of the composer; he may play it for the first time upon an instrument. ***It is not susceptible of being copied until it has been put in a form which others can see and read.*** The statute has not provided for the protection of the intellectual conception apart from the thing produced, however meritorious such conception may be, but has provided for the making and filing of a tangible thing, against the publication and duplication of which it is the purpose of the statute to protect the composer.²⁸⁶

The strong visual focus of the Court appears to be largely driven from implicit assumptions made about musical creation and

284. *White-Smith Music Publ'g Co. v. Apollo Co.*, 209 U.S. 1, 18 (1908) (holding that perforated player piano music rolls were not copies within the meaning of the applicable copyright statute); *see also* Copyright Act of 1870, ch. 230, 16 Stat. 198, 198–217, (as amended by International Copyright Act of Mar. 3, 1891, ch. 565, § 4952, 26 Stat. 1106, 1107, and Act of Jan. 6, 1897, ch. 4, § 4966, 29 Stat. 481, 482).

285. Gitelman, *supra* note 28, at 274–75 (discussing issues that arose as copyright confronted new technologies of musical creation and dissemination).

286. *White-Smith*, 209 U.S. at 17 (emphasis added).

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the nature of musical composition. The Court does not even contemplate the presence and existence of oral traditions in music, consideration of which would reveal the court's questionable assumptions about music composition, performance, and practice. Congress responded to *White-Smith* by adding mechanical license copyright provisions.²⁸⁷ Some six decades after *White-Smith*, Congress added limited copyright protection for sound recordings.²⁸⁸

*B. Oral and Written Traditions and Law: Rereading Music
Copyright Cases and Filtering out the Privilege of Sight*

Copyright treatment of sound recordings reflects the limitations of perceptions of music that see but fail to truly hear and incorporate the implications of nonvisual aspects of music. Problems in copyright treatment of sound recordings also reflect broader difficulties in applying substantial similarity doctrine in copyright.²⁸⁹

The substantial similarity test is problematic in a wide range of contexts.²⁹⁰ In addition to significant problems resulting from substantial similarity doctrine, music copyright cases thus may also reflect the consequences of the privilege of sight and the fundamental assumption that visual perception is the basis for musical knowledge. Music copyright cases highlight the continuing difficulty courts experience in grappling with nonvisual forms of musical reproduction. *Bright Tunes Music Corp. v. Harrisongs Music, Ltd.* found that the George Harrison song "My Sweet Lord" infringed the Chiffons' song "He's So Fine" based on theories of subconscious copyright infringement.²⁹¹ In its discussion of Harrison's infringement, the court's analysis focused on the visual representation of individual musical notes, with little or no reference to any nonvisual elements. For example, the court describes the two songs at issue as follows:

He's So Fine, recorded in 1962, is a catchy tune consisting essentially of four repetitions of a very short basic musical

287. See *supra* notes 281–82 and accompanying text.

288. See *supra* notes 30–32 and accompanying text.

289. Olufunmilayo B. Arewa, *The Freedom to Copy: Copyright, Creation, and Context*, 41 U.C. DAVIS L. REV. 477, 534 (2007).

290. Tushnet, *supra* note 4, at 716–38; Mark A. Lemley, *Our Bizarre System for Proving Copyright Infringement* (Stanford Pub. Law & Legal Theory Working Paper Series, Research Paper No. 1661434, 2010), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1661434.

291. *Bright Tunes Music Corp. v. Harrisongs Music, Ltd.*, 420 F. Supp. 177, 180–81 (S.D.N.Y. 1976), *aff'd sub nom.* *ABKCO Music, Inc. v. Harrisongs Music, Ltd.*, 722 F.2d 988 (2d Cir. 1983) (holding that Harrison committed subconscious infringement in copying He's So Fine).

phrase, “sol-mi-re,” (hereinafter motif A), altered as necessary to fit the words, followed by four repetitions of another short basic musical phrase, “sol-la-do-la-do,” (hereinafter motif B). While neither motif is novel, the four repetitions of A, followed by four repetitions of B, is a highly unique pattern. In addition, in the second use of the motif B series, there is a grace note inserted making the phrase go “sol-la-do-la-re-do.”

My Sweet Lord, recorded first in 1970, also uses the same motif A (modified to suit the words) four times, followed by motif B, repeated three times, not four. In place of He’s So Fine’s fourth repetition of motif B, My Sweet Lord has a transitional passage of musical attractiveness of the same approximate length, with the identical grace note in the identical second repetition. The harmonies of both songs are identical.²⁹²

The court’s discussion of these two songs is highly visual and does not extensively discuss other musical features of the two works, particularly features such as rhythm and timbre that are less visual or amenable to notation.²⁹³ The court’s analysis is thus not focused at the relevant music in its fullest iteration, but rather at a written reduction of both pieces that does not fully or fairly represent either piece. More importantly, the approach of the *Bright Tunes* court reflects a curious approach to incentivizing creativity that bears similarity to the dystopian world described by Orson Scott Card in an “Unaccompanied Sonata.”²⁹⁴ This world required the isolation of a child musical prodigy to assure that his creations were original and not derivative of others’ music.²⁹⁵ In this world, the young musician is punished severely and permanently banned from creating music when he listens to Bach, which noticeably influences his musical expression.²⁹⁶ *Bright Tunes* and other cases that use theories of subconscious infringement, essentially punish musicians for listening to the creations of other musicians.

Theories of subconscious infringement are also problematic from a music perception perspective. Once two musical works are identified as being similar enough to be infringing, that categorization likely influences listeners’ perceptions of

292. *Id.* at 178 (footnotes omitted).

293. *Id.* at 178–81; Arewa, *supra* note 289, at 532.

294. See generally ORSON SCOTT CARD, *Unaccompanied Sonata*, in UNACCOMPANIED SONATA & OTHER STORIES 244 (1981). I am indebted to Wendy Gordon for directing me to this work.

295. *Id.* at 244–45.

296. *Id.* at 249–52.

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similarity between the two pieces. As a result, playing two pieces prior to disclosing the existence of an infringement lawsuit may yield different responses from listeners who may be more likely to find infringement once they are aware of the allegations of infringement. Given that some insignificant portion of music may sound similar, court considerations of infringement need to determine better ways to sift through the potential morass of similarity and musical perception.

The *Three Boys Music Corp. v. Bolton* case reflects some of the problems of similarity and perception that may arise in infringement cases. A theory of subconscious infringement also arose in a case involving Michael Bolton, who was found liable for infringement of an Isley Brothers song.²⁹⁷ The Ninth Circuit's discussion of the jury verdict in this case (*Three Boys Music Corp. v. Bolton*) is also instructive. In discussing the evidence of substantial similarity at trial, which included testimony from the appellant Bolton's expert witness regarding the combination of unprotectible elements in the Bolton work, the court notes: "On the contrary, [the Bolton expert] testified that the two songs shared a combination of five unprotectible elements: (1) the title hook phrase (including the lyric, rhythm, and pitch); (2) the shifted cadence; (3) the instrumental figures; (4) the verse/chorus relationship; and (5) the fade ending."²⁹⁸ A number of these unprotectible elements, including cadence, the verse/chorus relationship, and the fade ending, involve nonvisual characteristics of the relevant songs. This outcome reflects the assumptions of visual-textual bias, particularly as they relate to nonvisual elements of the songs.

The court's analysis in the *Three Boys* case reflects common failings of current legal approaches to striking similarity in cases involving musical works.²⁹⁹ Further, the *Three Boys* outcome underscores the confusion of current legal approaches in parsing out and interpreting the significance of aspects of musical works other than the visual-textual elements.³⁰⁰ This is clearly reflected in the *Three Boys* court's analysis of the Bolton work tape, which demonstrates Bolton's compositional practice in creating his work.³⁰¹ The use of the work tape is ironic because the court implicitly takes the tape, a nonvisual form of reproduction, to

297. *Three Boys Music Corp. v. Bolton*, 212 F.3d 477, 480 (9th Cir. 2000).

298. *Id.* at 485.

299. Arewa, *supra* note 289, at 536–37.

300. *See id.* at 536; *see also Three Boys*, 212 F.3d at 483–84.

301. *Three Boys*, 212 F.3d at 484 (explaining that Bolton would compose his music by reviving the soul sound of the 1960s in part by covering old songs).

reveal something about Bolton's compositional practice, while at the same time relying on highly visual concepts in affirming the jury finding of infringement.

The *Bright Tunes* and *Three Boys* cases, taken together, reflect assumptions about musical composition and practice that fail to take adequate account of the collaborative nature of composition in many popular musical areas,³⁰² as well as the significance of nonvisual musical features. Although distorted views of music creation have long been a part of copyright considerations of music, changing musical practices with respect to uses of sound recordings challenge copyright assumptions about contemporary music creation.

Music is now often created in the sound recording studio or with use of methods and technologies that do not involve written compositions.³⁰³ Further, the most visual-textual aspect of a musical work, the musical composition, may in fact be derived from the nonvisual medium of the sound recording.³⁰⁴ In *Selle v. Gibb*, the court notes that the Bee Gees do not read or write music.³⁰⁵ They composed their songs in the recording studio; a staff member then transcribed their songs into a written musical composition.³⁰⁶ The Bee Gees creation processes are characteristic of much contemporary popular music creation.

The movement from the sound recording to written composition or the nonvisual to the visual in contemporary music contrasts significantly with dominant copyright assumptions. Copyright discussions of music creation tend to remain focused on written compositions (i.e., music and lyrics), particularly with respect to their visual-textual aspects, as reflective of musical composition and sound recordings as evidence of musical performance of an underlying written musical composition. This

302. Arewa, *supra* note 44, at 629 ("Existing copyright structures should be modified to reflect the commonplace nature of musical borrowing and other collaborative practices in the production of musical works.").

303. Paul Théberge, *Technology, Creative Practice and Copyright*, in MUSIC AND COPYRIGHT 139, 141 (Simon Frith & Lee Marshall eds., 2d ed. 2004) ("With the introduction in the 1960s of multitrack recording technology and the recording practices associated with it, popular musicians began to explore the possibilities offered by the recording medium, to regard sound recording not simply as a means of reproducing music but as an integral part of musical creation.").

304. Arewa, *supra* note 27, at 596 (noting that important nonvisual elements in compositions and performances were not likely derived from visual sheet music tradition).

305. *Selle v. Gibb*, 741 F.2d 896, 899 (7th Cir. 1984); *see also* M. Fletcher Reynolds, *Selle v. Gibb and the Forensic Analysis of Plagiarism*, 32 J.C. MUSIC SYMP. 55, 64 (1992) (explaining that the Bee Gees do not read or write music and noting that "How Deep" was written "through a process of trial and error while gathered at the piano with a cassette recorder").

306. *Selle*, 741 F.2d at 899.

means that written music is often taken as a true indication of compositional practice, an assumption that may be not entirely reflective of actual music creation today in many musical genres. The emphasis on written musical forms reflects the privilege of sight and a continuing emphasis on visual forms of musical reproduction as authoritative representations of musical composition and intent. This visual/nonvisual distinction parallels the distinction frequently made between composition and performance evident in the court's analysis in *Newton v. Diamond*.³⁰⁷

C. *Improvisation, Living Music, and Copyright's Goals*

Newton v. Diamond reflects the false dichotomy between composition and performance evident in a number of copyright cases. Further, the *Newton* court does not sufficiently consider the aesthetics of compositional practices in jazz and other musical forms that incorporate varying degrees of improvisatory practices. Although the court acknowledges *Newton's* improvisatory practices, it does not take sufficient account of the musicality embedded in jazz composition practices.³⁰⁸ The notation focus in *Newton* and other cases tends to diminish the learning inherent in improvisation and the forms of oral and nonvisual forms of representation embedded in improvisatory practices.³⁰⁹ For example, jazz improvisers must learn stock musical figures and phrases in order to be able to construct their own solos, as well as be able to perform a wide range of musical forms, including meters, and chord progressions.³¹⁰ Such musical forms provide a framework for the direction of improvised solos.³¹¹

In the case of jazz and other dynamic, living musical forms, improvisatory practices present a challenge to copyright assumptions and raise questions about the best means of achieving copyright's core goals of promoting the progress of

307. See *infra* notes 308–10 and accompanying text.

308. *Newton v. Diamond*, 349 F.3d 591, 597 (9th Cir. 2003), *amended and superseded* by 388 F.3d 1189 (9th Cir. 2004).

309. BERLINER, *supra* note 227, at 774 (“The emphasis that the Western art music community places on formalized education and the written symbols of musical knowledge—from notation systems to music degrees—has made it difficult for members to recognize and appreciate, as a learned system, the knowledge that improvisers transmit through alternative education systems and through alternative forms of representation, some oral, some altogether nonverbal.”).

310. Lee B. Brown, “Feeling My Way”: *Jazz Improvisation and Its Vicissitudes—A Plea for Imperfection*, 58 J. AESTHETICS & ART CRITICISM 113, 115 (2000).

311. *Id.*

science and the useful arts.³¹² Improvisation practices are risky for musicians but potentially an important source of musical creativity and transformation.³¹³ Jazz musicians improvise, “embellish and rhythmically displace notes within a melody.”³¹⁴ The copyright emphasis on written notation may discourage important creativity in improvisatory forms such as jazz.³¹⁵ This has fundamental implications for music itself that should not be ignored. As music scholar and pianist Robert Levin notes:

Apart from organists, few classical performers improvise any more, even though the information that would enable them to learn to do so is available. Today’s performers, shaped in the crucible of competitions and recordings, learn early to avoid risk as a threat to consistency and accuracy. There is nothing more risky than improvisation, but there is nothing more devastating to music’s dramatic and emotional message than avoidance of risk.³¹⁶

Further, contrary to the discussion of the *Newton* court, improvisation cannot merely be characterized as a product of “highly developed performance techniques,” “unique performance elements,” or reduced to a mere performance quirk.³¹⁷ Rather, improvisation is fundamental to music itself and is potentially a critical factor in music risk-taking and creativity.³¹⁸

Another line of cases involving hip hop music adds complexity to copyright considerations of uses of sound recordings themselves as parts of new creations. In *Grand Upright Music Ltd. v. Warner Bros. Records*, hip hop artist Biz Markie was found liable for infringement of the Gilbert O’Sullivan song “Alone Again

312. See U.S. CONST. art. I, § 8, cl. 8 (“To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.”).

313. Brown, *supra* note 310, at 119 (“The risk-taking process itself becomes an ingredient in the result.”).

314. Chevan, *supra* note 261, at 239.

315. Stephen R. Wilson, *Rewarding Creativity: Transformative Use in the Jazz Idiom*, PITTSBURGH J. TECH. L. & POL’Y, Fall 2003, at 1, 3–5, available at <http://tlp.law.pitt.edu/ojs/index.php/tlp/article/view/11/11> (noting problems of current copyright frameworks for jazz artists who create “cover” versions of existing works, noting that such jazz versions are derivative works that need the original copyright owner’s permission, and that without such permission, the creators of the jazz version of the work cannot receive any copyright protection for their artistic contributions); see also Note, *Jazz Has Got Copyright Law and That Ain’t Good*, 118 HARV. L. REV. 1940, 1941 (2005) (noting that copyright law provides little protection for improvised material and thus “discourages vital reinterpretation” in musical forms such as jazz).

316. Levin, *supra* note 224, at 147.

317. *Newton v. Diamond*, 349 F.3d 591, 595–96 (9th Cir. 2003), amended and superseded by 388 F.3d 1189 (9th Cir. 2004).

318. See generally Arewa, *supra* note 184, at 1840–41.

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Naturally,” without any analysis concerning the nature or basis of infringement and use of the Seventh Commandment of the Bible (“Thou Shalt Not Steal”) as a primary source of legal authority for the decision.³¹⁹ The reuses of music in the case of Biz Markie and other hip hop artists are highly nonvisual in nature and often involve significant repetition and borrowing through practices that include sampling and looping. The undertone and low opinion of hip hop as a form of musical expression in the *Grand Upright* opinion reflects perspective on hip hop that is strongly influenced by visual bias. The *Grand Upright* court likely has reservations about hip hop musicality and the extent to which this particular form of creativity constitutes theft or a valid cultural product. Hip hop creation and performance, which is based on reuse of sound recordings, challenges copyright both by virtue of its extensive borrowing and use of nonvisual aspects of music as embodied in sound recordings.

In *Bridgeport Music, Inc. v. Dimension Films* case, the Sixth Circuit held that sound recordings may not be used without authorization of the copyright owner.³²⁰ The *Bridgeport* case involved a two-second sample of an arpeggiated guitar chord from a song by George Clinton and the Funkadelics.³²¹ The *Bridgeport* decision effectively applies a sacralized notion of authorship to a sound recording. This decision thus paradoxically takes a key-defining feature of notational-focused approaches that reflect a sacralized view of music composition and applies it to the nonvisual medium of a sound recording. *Bridgeport* ends up with an interpretation of infringement in the sound recording context that is even more stringent than interpretations applied in contexts involving written compositions. The assumptions underlying the privilege of sight may explain at least some aspects of the court’s holding. Because sacralized visions of music assume that the written composition is the locus of musical creativity, the court appears to be unable to see any form of creativity in the use of sound recordings as an aspect of compositional practices. Taken from this perspective, *Bridgeport* is consistent with copyright frameworks that reflect a privilege of sight that embeds significant visual-textual bias. As a result, the *Bridgeport* court conceptualizes its limitation on uses of a sound recording as preventing something akin to theft rather than a

319. *Grand Upright Music Ltd. v. Warner Bros. Records*, 780 F. Supp. 182 (S.D.N.Y. 1991).

320. *Bridgeport Music, Inc. v. Dimension Films*, 401 F.3d 647, 655 (6th Cir. 2004) (noting that the analysis for determining infringement of a musical composition is not the same as the analysis applied to determine infringement of a sound recording), *amended* by 410 F.3d 792 (6th Cir. 2005).

321. *Id.* at 652–53; *see also* Arewa, *supra* note 44, at 574.

policy posture that might potentially block certain forms of creativity. The *Bridgeport* holding is based on outdated assumptions about the nature of musical composition and creativity that do not take sufficient account of the ways in which sound recordings have become reflective of composition practice and tools used to enable composition itself.³²²

Reflecting continuing problematic assumptions about nonvisual musical reproduction, at one time, even those who sought to register sound recording copyrights encountered problems with the Copyright Office because it:

consistently refused to *register copyright in a musical composition as a published work where the registration was sought based on a recording embodying the composition*. The Office, instead, would advise applicants that, to be registered as a published work, *visually perceptible copies of the work*—that is, sheet music copies—had to have been sold or offered to the public. Where only recordings had been sold, the Office would suggest registration of the musical composition as an unpublished work.³²³

This visual-textual emphasis, combined with conceptions of authorship deeply embedded in copyright, gives primacy to written musical traditions. This means that compositional practices in genres such as jazz that involve improvisation and other aspects of oral musical traditions are disfavored by copyright. Further, the conception of derivative work in copyright gives owners of copyrighted works exclusive rights with respect to improvisations derived from copyrighted works they own. The derivative work concept may hinder the creation works based on improvisation in part because the musicians in jazz and other genres that create such works may not be able to receive effective copyright protection for their creations.³²⁴ Conceptions of authorship and the notion of a derivative work in copyright make incorporation of oral compositional practices an issue of continuing tension in music copyright.³²⁵

322. Arewa, *supra* note 44, at 575–76.

323. *Pre-1978 Distribution of Recordings Containing Musical Compositions; Copyright Term Extension; and Copyright Per Program Licenses: Hearing Before the Subcomm. on Courts and Intellectual Prop. of the H. Comm. on the Judiciary*, 105th Cong. 19 (1997) (statement of Edward P. Murphy, President and CEO, National Music Publishers' Association, Inc.) (emphasis added).

324. Note, *supra* note 315, at 1941 (“The contributions and compositions created by jazz artists are not considered original because, technically, they occur within the parameters of an underlying work and are therefore considered ‘derivative.’”).

325. 17 U.S.C. § 101 (2012) (defining a derivative work as “a work based upon one or more preexisting works”); *Williams v. Broadus*, No. 99 Civ. 10957 MBM, 2001 WL 984714, at *2 (S.D.N.Y. 2001) (“[A] work is not derivative simply because it borrows from a pre-

V. CONCLUSION

The emphasis on notated forms of music evident in copyright misconstrues composition and performance in musical practice. This emphasis is rooted in history but must be reassessed in light of actual, not idealized, musical practice. This is of far more than theoretical importance and may well shape musical practice itself. Changing technologies of sound reproduction continue to challenge music copyright, while new artistic movements in music may be shaped or impeded by dominant assumptions about notation, composition, and performance. It is unlikely that staff notation will evolve to accommodate twentieth century popular music practice, nor should it do so. Rather, copyright analyses of infringement must better accommodate the existence of music notation as a set of instructions and the concomitant necessity that analyses of infringement in music cases must take better account of notation in context and actual musical practices. The need to better appreciate context is all the more necessary in our current context of continuing technological innovations that influence music creation, performance, and consumption. In the past, the deeply rooted assumptions of sacralization embedded in copyright existed in an artistic arena where significant creativity existed outside of this sacralized realm. In the digital era, however, collisions between formerly separate artistic spheres are increasingly evident.³²⁶ If not handled with care, legal responses to these colliding spaces could significantly harm creativity. Changing digital era contexts thus mandate recognition of the fact that a musical work is a set of instructions, acknowledgment of the implications of a musical work as a set of instructions, and reexamination of the role of the privilege of sight and visual-textual bias in copyright.

existing work. . . . When deciding whether a work is derivative by [§ 101], courts have considered whether the work 'would be considered an infringing work' if the pre-existing material were used without permission.”).

326. MATT MASON, *THE PIRATE'S DILEMMA: HOW YOUTH CULTURE IS REINVENTING CAPITALISM* 6 (2008) (noting that, unlike the past, in the digital era, “[i]llegal pirates, legitimate companies, and law-abiding citizens are now all in the same space, working out how to share and control information in new ways”).