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Tradition, Pedagogy, and Internet Open-Access Music Libraries

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Abstract

In this paper I take up the topic of open-access digital music libraries, specifically the ways performance and pedagogical traditions interact with and are impacted by open-access or public domain sheet music libraries on the internet. I first consider how traditions of performance and pedagogy have become misaligned in the case of viola repertoire and its historical context. I then turn to questions of copyright on the internet and copyleft practices as they relate to internet open-access libraries such as IMSLP, finding that they often are simply a new medium through which to uphold existing patterns, despite their apparent potential to revolutionize music. In conclusion, I analyze the specific case of the Kronos Performing Arts Association's *50 for the Future* project, which has a specific focus and consists of a narrow repertoire. I argue that such a targeted approach has the power to help rectify the disconnect between what is taught to students and what is demanded of professionals.

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Table of Contents

Introduction.....	4
Tradition and Pedagogy.....	6
Internet Public Domain Music and Open-Access Libraries and Repositories.....	13
<i>The Journey of The Horizontal People</i> by Raven Chacon and the Kronos <i>50 for the Future</i> Learning Repertoire.....	25
Appendix.....	32
Bibliography.....	33

Introduction

As a young musician I frequently find myself in an interesting situation: the corpus of music I would like to play and the corpus of music I feel equipped to play are, despite their overlap, two distinct categories. Much of this is the natural consequence of having yet much to learn and much music to familiarize myself with, but there are ways in which this phenomenon may be the result of various sociocultural factors that can be identified, reflected upon, and perhaps rejected in favor of other approaches.

In the first chapter of his book *Copy, Rip, Burn*, David Berry writes, “Our lives are increasingly mediated through digital technology.”¹ He is referring, in part, to music; what music we make and how we make it. He is also referring to science, law, technology, health, and a myriad of other topics. It is hard to separate out discrete parts of “our lives,” particularly in the context of the digital medium to which much of the world is now intrinsically tied. This ubiquitous influence of the internet is present in the realm of music-making, impacting what music is available, what accessing that music means and looks like, and the traditions that dictate what music gets played and studied.

The particular case examined in this paper is that of a Western classical instrumental tradition - a living yet lengthy lineage - struggling to find balance between the old and the new in a digital age. Nonetheless, neither the dilemmas found in the repertoire nor the fact that the tradition intersects with the internet is unique to Western classical music. In observing the interplay between viola repertoire, both pedagogical and performance-oriented, and internet, it becomes apparent that the digital realm both reinforces and rectifies the shortcomings in this tradition. Projects undertaken to utilize the internet to increase access to music and democratize the Western canon often bear underwhelming results by merely reproducing existing norms in a

¹ David Berry, *Copy, Rip, Burn: The Politics of Copyleft and Open Source* (Pluto Press, 2008), 10.

new context. However, used intentionally, the same structures can help address less-than-ideal discrepancies found in the sedimented patterns of musical repertoire.

Tradition and Pedagogy

The connection between the traditions that develop surrounding music and how it is taught and learned is complex. Numerous factors influence all aspects of modern music performance, among these being approaches to teaching and the ways in which music is accessed. This thesis argues that various musical traditions of pedagogy and repertoire, as well as how these traditions get built and maintained, significantly dictate how we interact with music. I use the term “sedimented tradition” to refer to the processes and effects of this phenomenon. The concept of sedimentation is drawn from the work of Jacques Derrida in relation to language and deconstruction, where it has to do with a consolidation or layering of meaning. The idea involved taking for granted that the meaning of a word is inherent and self-evident when the meaning is instead the result of instances of agreed upon structures that have built up over time and acquired the appearance of stability. With regard to music, the concept of sedimentation illuminates how musical traditions develop over time, reinforce themselves, and thus become seemingly stable while being actively engaged in their own reproduction.²

An example of a sedimented tradition is the Western classical performance and pedagogical repertoire of the viola and it serves as a good case study due to the clarity with which various musical-historical factors can be mapped. Molly Gebrian and others have written about this tradition in detail. For much of its history, the viola was not regarded as a solo instrument.³ Thus, less solo repertoire, as well as pedagogical material, was written specifically for the viola when compared to the violin or cello, and much of what was written has been forgotten. Most viola teachers from the 17th to 19th centuries were also violinists who would use

² This idea that traditions are constructed and self-replicating rather than inherent and fixed is highly congruent with Eric Hobsbawm’s concept of *invented tradition*, though Derrida is more interested in semiotics than tangible social activities. See Jacques Derrida’s essay “Signature Event Context” in *Limited Inc.* (Evanston: Northwestern University Press, 1977), 1-24 and Eric J. Hobsbawm and Terence O. Ranger, *The Invention of Tradition*, (Cambridge: Cambridge University Press, 1983).

³ Simon Értz, “Beyond Extended Techniques: Fundamental Techniques in Viola Spaces of Garth Knox,” (DMA diss., University of North Carolina - Greensboro, 2016), 4.

etudes and methods that they were familiar with from the violin; similarly, their students were also frequently violinists.⁴ While a substantial body of educational material for the viola was published by violists, especially in the late 19th century, it rarely became standard and is largely out of print.⁵ Today, the dominant etude studies used by violists are still transcriptions of violin etude books, and material written originally for the viola is supplemental. Thus, we see that the pedagogical traditions established historically maintain a strong influence today.

When the viola was regarded as auxiliary to the violin this trend was not a problem; an instrument without a robust solo tradition has little need for dedicated studies. However, given the contemporary instrument's independence, modern viola pedagogy and repertoire face unique challenges. William Primrose stated that the history "of any importance" of the viola begins with Lionel Tertis.⁶ While Tertis (1876-1975) is no doubt a significant figure, he is also a relatively recent one for an instrument that came into being in the 16th century.⁷ David Boyden and Ann Woodward outline in detail the viola's relatively undistinguished early history, noting various factors that contributed to the timeframe given by Primrose. Surveys of repertoire reveal that the viola was increasingly treated as a solo instrument in the first few decades of the 20th century, and has retained this position while continuing to benefit from a significant amount of new works ever since.⁸ When considering the whole of solo repertoire for the viola, a significant amount was written in the 20th and 21st centuries, and a far larger proportion of the repertoire might be considered modern than that of instruments with extensive catalogs written in or before the 19th century. Thus, techniques that were not around when common etude books were written will appear in this corpus of music at a higher rate. That standard pedagogical material does not

⁴ Molly Gebrian, "Rethinking Viola Pedagogy: Preparing Violists for the Challenges of Twentieth-Century Music," (DMA diss., Rice University, 2012), 23, 25.

⁵ Molly Gebrian, "Rethinking Viola Pedagogy," 23.

⁶ David Dalton, *Playing the Viola: Conversations with William Primrose* (Oxford: Oxford University Press, 1988), 1.

⁷ David Boyden and Ann Woodward, "Viola," *Grove Music Online* (2001).

⁸ David Bynog, "The Viola in America: Two Centuries of Progress," *Notes* 68, Vol 4 (2012): 744; Katie White, "A Pedagogical Introduction: Viola Repertoire From 1987-2013," (DMA diss., University of Oregon, 2014), 1.

reflect the skills necessary for this music is a topic well-covered by Gebrian, Katie White, Jordan Warmath, Simon Értz, and Emily Jensenius. Gebrian writes;

The majority of standard solo repertoire that violists perform was written in the twentieth century, but the pedagogical materials violists study are largely transcriptions of violin etudes, studies, and scales, which were all written in the nineteenth century or earlier. Music written in the twentieth century uses a language and techniques that are quite different from those found in older, tonal music. Because of this, violists are often unprepared for the challenges of their standard solo repertoire, and the pedagogical materials they study do not fulfill their purpose: to educate students in the skills necessary for successful musical performance.⁹

Many have noted this misalignment between the largely 20th- and 21st-century performance repertoire and the standard 17th-19th century etudes that are used to prepare students for higher-level performance. Warmath described these standard etudes as “largely antiquated transpositions of 18th century classicism whose application proves less helpful as the decades pass by. No longer do the tonalities of Ševčík, Kreutzer, and Mazas bear resemblance to the music they attempt to help facilitate. How does one rectify a pedagogy that has fallen so far behind in preparing its acolytes for the true challenges of its repertoire?”¹⁰ More succinctly, Jensenius states, “despite the fact that so many prominent contemporary composers have written for the viola, most of the etude repertoire used by viola teachers is tonal and was composed in the nineteenth century or earlier.”¹¹ Thus, the specific case of viola repertoire reveals a tension between the skills studied in pedagogical material and the skills demanded by the repertoire.

⁹ Molly Gebrian, “Rethinking Viola Pedagogy,” abstract.

¹⁰ Jordan Warmath, “The Contemporary Revolution—Evolution of Viola Repertoire,” DMA diss., (University of California - Santa Barbara, 2017), abstract, 6.

¹¹ Emily Jensenius, “An Annotated Bibliography of Selected Viola Works for Pedagogy of Contemporary Musical Styles and Techniques,” PhD diss., (Florida State University, 2014), 2. Jensenius also mentions on page 4 that the fairly-common Suzuki method books are skewed towards baroque repertoire. While this may be largely a reflection of the need for graded difficulty, the dominance of music from a period so divorced from what many will be called to perform later in life no doubt contributes to this trend.

The concern over a disconnect between educational and performance material is not necessarily a new issue, despite being temporally linked to the present. For decades, people have sought to draw attention to the need to train students in the unique technical demands of contemporary music. In the 1960s, for example, Joachim Chassman showed an awareness of the friction between pedagogical material and repertoire for the violin:

A life long diet of Kreutzer, Fiorillo, Rode, Dont and Paganini plus the solo repertoire of Bruch, Mendelssohn, Wieniewski [sic] and Lalo, derived as they are from traditional scale and arpeggio patterns molded into simple time forms of 4/4, 6/8 or 3/4, will not erase that look of helpless bewilderment when we're face to face with Stravinski's [sic] *Histoire du Soldat* or the Bartók *Concerto* for the very first time.¹²

In the half-century since, Bartok and Stravinsky have almost become antiquated when compared to some of the music being written and performed today, making this pedagogical issue all the more pressing. The ability to perform beyond traditional approaches to diatonicism, rhythm, and playing techniques proves essential in approaching modern additions to the viola repertoire, and yet these skills are outside the scope of common etude and scale books such as Kreutzer, Ševčík, Mazas, Flesch, Galamain, and Primrose. Such skills thus seem unusual to most musicians studying viola.¹³ The prevalent etude canon for the viola is entirely tonal and, while the standard etude books are certainly adept at developing essential skills, they lack secondary techniques entirely.¹⁴

As an example of how to go about addressing this issue, Gebrian calls for the study of a shifting technique designed for octatonic and whole-tone scales, which appear frequently in

¹² Joachim Chassman, "New Music And Old Technic," *American String Teacher* 14, Vol 2 (1964): 20.

¹³ Molly Gebrian, "Rethinking Viola Pedagogy," 31.

Jensenius writes "All of these collections are excellent for developing students' knowledge of the fingerboard and of basic bowing idioms such as martelé, spiccato, and legato, but not secondary techniques like ponticello or col legno, and certainly not mixed or asymmetrical meter." Jensenius, "An Annotated Bibliography," 3.

¹⁴ This is an issue that perhaps extends past even the contemporary repertoire to which these techniques directly apply. Értz suggests that the study of extended technique may benefit the development of fundamental techniques and thus is essential to integrate into primary study. Simon Értz, "Beyond Extended Techniques," 1.

more recent music but are generally absent from scale studies. She explains that “playing whole-tone scales in which one gradually ‘creeps’ up or down the fingerboard can be uncomfortable to players used to discrete positions and hand-frames.”¹⁵ Creeping up and down the fingerboard (something that Gebrian also refers to as “crab fingerings”), wherein one gradually moves up or down a step or so at a time, is very useful in 20th- and 21st-century whole tone music.¹⁶ Traditional shifting methodology works well for the music it was built for and with, but it was developed without regard for the demands of music being written today. No doubt it *can* be used, and many do use it, but Gebrian suggests that other methods might work just as well or better, hence the need for pedagogy that is equipped to address the demands of modern music.

Works such as Garth Knox’s *Viola Spaces* (2009), Michael Kimber’s *Twentieth-Century Idioms for Viola* (2012), and Alfred Uhl’s *Zwanzig Etüden für Viola* (1975) attempt to address these issues, but they are not currently canonical pedagogical material as some believe is necessary.¹⁷ *Viola Spaces* in particular focuses on a single extended technique at a time, dedicating an etude to each, thus addressing Knox’s observation regarding the complex and intimidating demands of contemporary music: “the real problem is that there are too many problems all at the same time—notation, rhythm, unfamiliar symbols, and an array of seemingly ‘new’ techniques, all to be tackled simultaneously.”¹⁸ Knox also has videos of all of the etudes on his YouTube page, a resource that proves to be valuable for studying these less-familiar techniques. However, Warmath writes that when making use of Knox’s *Viola Spaces*, she “needed more microtonal etudes to aid in my mastery of Ligeti’s technical demands but resigned

¹⁵ Molly Gebrian, “Rethinking Viola Pedagogy,” 38.

¹⁶ Such pieces sometimes “don’t fit neatly in one (or two) positions” or “is so fast that shifting is not an option,” Molly Gebrian, “Rethinking Viola Pedagogy,” 42.

¹⁷ Jordan Warmath, “The Contemporary Revolution,” 5. Adding to the difficulty of studying such techniques is the availability of etude books via public domain internet repositories. Modern etude books are not in the public domain, and even older studies transcribed from violin editions are more likely to be under copyright due to the viola editions being published later than the original.

¹⁸ Garth Knox, *Viola Spaces: Book 1* (Schott Music New York, 2009), preface.

myself to make do with what I had.”¹⁹ Despite being described as a “seminal work in contemporary viola pedagogy,”²⁰ and generating demand for Knox’s *Violin Spaces, Viola Spaces* alone cannot bridge the gap between pedagogy and contemporary performance practices.

With the above resources available for students, Warmath recommends the following change be made to the graded study of repertoire: “Now the student can play a progressive curriculum that includes more contemporary works (post-1945) and omits some classical and baroque transcriptions that serve as place holders for better suited works that have yet to be popularized (largely due to the fact that our pedagogy has no means of preparing their introduction technically).”²¹ Whether this is a good or even necessary change may be up for debate, but here Warmath proposes a way to ease the tension between pedagogical and performance material by moving both in a similar and more modern direction.

Despite what this paper may thus far imply, there is not in fact a dearth of solo viola repertoire from before the 20th century. Primrose writes in *Violin and Viola* that “there are certain beliefs, unsupported by evidence, which have a monstrous power of survival against clear proof of their fallaciousness. One of the more durable is [...] that the repertoire available to violists is exiguous, despite evidence to the contrary.”²² So why is it that the repertoire’s reputation is so different from reality? What the viola lacks is not music written for it, but a tradition as a solo instrument. Likewise, it is not that violists have failed to write pedagogical material for the viola, but that violin transcriptions became more popular for reasons already discussed. And it is not

¹⁹ Jordan Warmath, “The Contemporary Revolution,” 5.

²⁰ Emily Jensenius, “An Annotated Bibliography,” 28.

²¹ Jordan Warmath, “The Contemporary Revolution,” 10.

²² Yehudi Menuhin et al, *Violin and Viola* (New York: Schirmer Books, 1976), 184. Primrose references Franz Zeyringer’s *Literatur Fur Viola* which contains roughly 14,000 entries according to the Primrose International Viola Archive (PIVA). While a significant portion of these were relatively recent compositions (a reflection of the aforementioned blossoming of the instrument’s repertoire in the 20th century), far more pieces from throughout the instrument’s history can be found than are commonly performed. Additionally, the PIVA’s supplement to *Literatur Fur Viola* includes both works published since the 1985 edition and many pre-20th century works that were not published or known when Zeyringer compiled his work. See David Dalton, “Primrose International Viola Archive,” Brigham Young University, accessed Dec, 2021, <https://viola.lib.byu.edu/research/zeyringer/>

that there are no etude books addressing modern viola techniques; the issue is that they are not (yet) commonly used.

In sum, as Gebrian's work illustrates, the canonical pedagogical material that viola players learn from does not fully equip them for 20th- and 21st- century music. While this particular example is highly specific and perhaps unique (as different instruments have distinct repertoire and pedagogical material), the disconnect between what common etudes teach and what contemporary repertoire demands is not. The fact that the viola has historically amassed a largely unique repertoire despite not being considered a solo instrument for much of its time, yet has a far less distinct collection of pedagogical material, is but one example of the ways in which traditions sediment and influence music making. There is much music now written for a variety of instruments in a contemporary idiom, and the issue of how or whether to include the non-traditional techniques that musicians may come across in standard pedagogical material is one that contemporary educators must confront. It is clear that, at least within the realm of Western classical viola material, traditions of what music is commonly played and studied restrict engagement with the music that is actually available. Much of the plethora of both pedagogical and performance material written for the viola within the Western classical tradition throughout the instrument's history is buried under these sedimented social-musical traditions. Within these same traditions, the canonical performance material diverges from its pedagogical counterpart. This fascinating relationship between traditions and accessibility has further implications when it comes to internet music repositories and the public domain.

Internet Public Domain Music and Open-Access Libraries and Repositories

The internet has significantly impacted the way in which musicians interact with and access music. With this comes new questions and concerns with regard to rights. Questions of copyright are fundamental to the internet itself. David Berry writes in chapter 1 of *Copy, Rip, Burn*:

Burn:

[W]hen using the Internet with a browser, the digital processes taking place behind the scenes operate on the basis of making copies. The browser is continually downloading web-pages and displaying them for the user to read and view, held locally as a 'copy' of the web files located on the website. In fact this is a critical issue when understanding how control over copyrights indicates who will have power over the digital environment in the future. To place a file on the web server or computer hard disk is to make a copy, to send via email is to make multiple copies, even to play a file as an MP3 or edit it as a document is to work on copies downloaded and opened temporarily into memory. These copies can then lurk in caches that are hidden in often-unexplored areas of the computer hard disk. But they are all copies, and copying is expressly a right that is controlled by a copyright holder. [...] Digital technology functions by copying and manipulating digital files, an issue that conflicts directly with the copying right held by IPR [intellectual property rights] owners. It is no surprise, then, that copyrights should become a key source of conflict in the information society as the common-sense dichotomy over 'legal' private copying (that is, as fair-use/dealing) is challenged when digital technology and networking are combined. When every node on a network can share an identical copy of any file, the difference between a public and private use becomes extremely blurred.²³

In the most basic use of the internet, then, copyright is hazy. Questions about what copyright means, both in terms of the laws themselves as well as the social and moral dimensions, are constantly in play due to the fact that copies are everywhere on the internet, and breaking copyright laws can be as easy as clicking the wrong link.

²³ David Berry, *Copy, Rip, Burn* 12.

It is thus no surprise that the internet has seen mass copyright infringement, as it is so natural for the medium.²⁴ This has frequently led to conflict, as copyright holders seek to maintain their rights in the way that most benefits them while others advocate greater access to protected material for the sake of the public interest.²⁵ Simultaneously, many believe that copyright law frequently controls information to the point of being unreasonably restrictive when it comes to accessing and interacting with cultural products, and the process of getting permission to use a work can be “cumbersome, if not prohibitive.”²⁶ Further, while U.S. copyright law is designed to facilitate interactions with print media, it is less compatible with digital approaches.

“Copyleft” is a movement, licensing practice, and philosophy that utilizes and centers open source, open access, and public domain models of ownership, licensing, and use. It grew out of software development communities and projects. Creative Commons and FLOSS (Free License and Open Source Software²⁷) are two significant copyleft projects that address and negotiate information and rights on the internet. A product of the Creative Commons non-profit organization, the Creative Commons license builds upon existing copyright law to facilitate collaboration. Users can license their work with some rights reserved, such as requiring that derivative works include attribution, limiting derivation to non-commercial works, or requiring that

²⁴ Minjeong Kim, “The Creative Commons and Copyright Protection in the Digital Era: Uses of Creative Commons Licenses,” *Journal of Computer-Mediated Communication* 13, Vol 1 (2007): 188.

²⁵ Minjeong Kim, “The Creative Commons,” 187.

²⁶ Adrienne Goss, “Codifying Commons: Copyright, Copyleft, and the Creative Commons Project,” *Chicago-Kent Law Review* 82, Vol 2 (2007): 963. Minjeong Kim, “The Creative Commons,” 188; David Berry, *Copy, Rip, Burn* 4-6; Jason Mazzone, “Copyfraud,” *New York University Law Review* 81, Vol 3 (2006): 1027-1028.

²⁷ While the difference between free and open source may seem semantic, they are in fact ideological competitors. Functionally, both promote the same thing, but free software is based on moral/ethical/social ideals of freedom and access, while open source is more interested in business/production efficiency. Berry uses ‘FLOSS’ in an attempt to not privilege either group philosophy over the other. Sometimes the L is taken to stand for ‘libre’ rather than ‘license’, and FOSS is also used. David Berry, *Copy, Rip, Burn* 13.

derivative works be similarly licensed (“sharealike”).²⁸ Creative Commons and similar licenses serve as both a disintermediary and intermediary force;²⁹ on the one hand, they cut out the intercessor by facilitating access without having to go through a copyright holder, and on the other they are themselves a negotiation of rights. Functioning similarly, Open Access is a license that allows people to access and use scholarly research. The project cites the need to update methods for sharing research and posits that their work will better research as well as the world.³⁰ Thus, Creative Commons and similar projects take advantage of the resources and possibilities of the internet while maintaining rights people wish to hold over work.

FLOSS is explicitly interested in software. As mentioned before, copyleft has close ties to software development.³¹ Perhaps the most successful and influential open source project is Linux, a fully functional operating system created by people around the world who coordinated their efforts largely online and received no compensation.³² Barry writes that Linux

[C]hallenged our understanding of the production of complex software projects... GNU/Linux eschews traditional methods of copyright protection and code secrecy in favour of a common-ownership model (known as copyleft). It is then freely distributed with the source code for little or no cost and encourages contributions, comments, criticisms and bug-fixes from its users and developers. This has led to an exponential rate of growth.³³

Multiple versions of Linux are available online for people to download and use for free, and it is taken seriously as a viable operating system and competitor.³⁴ The Android operating system

²⁸ David Berry, *Copy, Rip, Burn* 3; Adrienne Goss, “Codifying commons,” 964; Niva Elkin-Koren, “Creative Commons: A Skeptical View of a Worthy Pursuit,” *The Future of the Public Domain*, Kluwer Law International, (2006): 6.

²⁹ Michael Carroll, “Creative Commons and the New Intermediaries,” *Michigan State Law Review* 2006, Vol 1 (2006): 47.

³⁰ SPARC, “Open Access.” The term is also used more generally to refer to things that are not behind a paywall. I use “Open-Access” in this way in the title of this paper and section to refer to sheet music that is accessible on the internet without further barriers to access, rather than to specifically reference this type of license.

³¹ The Free Software Foundation was established 36 years ago with the mission of maintaining computer users' right to use, study, copy, modify and redistribute programs. David Berry, *Copy, Rip, Burn* 13.

³² David Berry, *Copy, Rip, Burn* 14.

³³ David Berry, *Copy, Rip, Burn* 3.

³⁴ David Berry, *Copy, Rip, Burn* 3.

used in many phones is based on Linux, as is Google's Chrome operating system.³⁵ "The Internet is built upon a constellation of technologies that were written under free software licenses that expressly allowed the copying and reproduction of their code."³⁶ The large-scale commercial use of two Linux-derivative operating systems (not to mention the use of free-licensed Linux) is an important example of the immense potential of online collaborative work, as well as the significance of digital open-source, free, Creative Commons, public domain, and related projects. Thus, Creative Commons, FLOSS, and Linux demonstrate that there is an established tradition of copyleft projects being something that everyone can access and build on. Frequently, these projects serve some sort of public service or good in the access and collaboration that they facilitate. The nuances of access, intent, and impact (mentioned before in regards to viola pedagogy and repertoire) have further relevance in music-related projects that fit within the legacy that copyleft has established.

Music has a complex relationship with copyright law. Various court cases have delved into the intersection of art and legislature, attempting to form clear-cut understandings of rights when it comes to music. A relatively simple aspect of music copyright is the concept of the public domain, as there are standards laid out to determine when a work, either an original work or a substantial modification of an existing one, is no longer protected by copyright. Even if said standards are rather convoluted, they lead in principle to the binary result of music either remaining protected or entering public domain under a particular country's legal system. As of 2021, the copyright on works from 1925 and earlier expired and they are now in the public domain. This seemingly straightforward aspect of the law is complicated by the prevalence of "copyfraud." Copyfraud refers to the practice of claiming to hold the rights to a work that is in fact

³⁵ Source, "Android Open Source Project," and The Chromium Projects, "Chromium OS." Android is licensed as Apache 2.0, a free software license, and further FLOSS-style work and derivations are encouraged though it is overseen and trademarked by Google and most phones that use Android also have proprietary software installed. This raises the question of ethics of open-source projects, wherein people do work for no pay and Google ultimately profits from it. IMSLP, to be discussed later in this section, features a similar scenario in which volunteers did work upon which their employees now make their living.

³⁶ David Berry, *Copy, Rip, Burn* 14.

in the public domain, typically associated with statements forbidding the reproduction of the work in question.³⁷ When it comes to music, copyright claims appear on subsequent editions of music that may be in the public domain on the basis that editors changed enough to make the particular edition original and thus protected, though “the parameters of the applicable legal standard are hazy.”³⁸ Upon examination, Paul Heald found that the changes are frequently insufficient to make the work protected according to court precedent.³⁹ Given that it is often unclear to the average consumer whether an edition or arrangement is sufficiently original as to be protected by copyright, “music publishers, taking advantage of this uncertainty, intimidate the public into buying what they already own by affixing copyright symbols to virtually all public domain music as well as trivially different arrangements of public domain music.”⁴⁰ Editions that should be public domain are treated as copyright-protected solely because such a claim is printed on the sheet music, leading to a fraught relationship between music and law.

Parallel to the legalities of music copying is its distribution, including in libraries. Michael Carroll describes the function of libraries as collecting and preserving information, disseminating information, indexing information, and enabling the search of the index.⁴¹ While in the US, these functions have historically operated in tandem with copyright law, the significant changes that have resulted from the internet require new negotiations of rights and access. Carroll writes that “Creative Commons licenses facilitate a rebalancing that frees libraries to better perform their

³⁷ Jason Mazzone, “Copyfraud,” 1028.

³⁸ Paul J Heald, “Reviving the Rhetoric of the Public Interest: Choir Directors, Copy Machines, and New Arrangements of Public Domain Music,” *Duke Law Journal* 46, Vol 2 (1996): 242-244.

³⁹ Paul J Heald, “Reviving the Rhetoric,” 255-271. This is not to say that every instance in which publishers attempt to protect the rights of their subsequent edition of a work is done with ill-intent. Heald parses through legal language and attempts to map it to music, finding that while some cases are clearly copyfraud, others exist in a fuzzy middle ground where the difficulty of attempting to code musical originality into legal language are revealed. As Professor Bandy likes to say, “writing about music is like dancing about architecture.” Writing law about music is thus even more challengingly incongruent, and it is therefore inevitable that the relationship between law and music will be an unsteady one.

⁴⁰ Paul J Heald, “Reviving the Rhetoric,” 245; Jason Mazzone, “Copyfraud,” 1030, 1038.

⁴¹ Michael Carroll, “Creative Commons and the New Intermediaries,” 51.

traditional roles as well as new ones called for by the digital environment.”⁴² Thus, internet libraries that evoke copyleft principles can be highly effective in today’s world.

The proliferation of copyleft (and copyleft-adjacent) projects, including various digital libraries of public domain works, suggests that it was only a matter of time before the principle was applied to public domain music. The most notable internet public domain music library is the International Music Score Library Project (IMSLP), also known as the Petrucci library. IMSLP is a user-generated repository of public domain music. It began in February 2006 when Edward Guo, then in his second year at the New England Conservatory, scanned and uploaded Beethoven’s piano sonatas.⁴³ IMSLP received cease-and-desist orders in 2008 and had to come down for a time; ever since, it has been very careful to observe copyright as necessary so as to remain operational.⁴⁴ As of March 2022, the site reports to host over 197,000 works, over 24,000 composers, and over 638,000 scores.⁴⁵ Over a decade ago, when IMSLP contained less than a tenth of the music it does today (over 61,000 scores), Casey Mullin wrote that “IMSLP rivals many brick-and-mortar music libraries in coverage.”⁴⁶ Presumably, it has now substantially overtaken libraries of all varieties, being perhaps the largest repository of its kind and an essential source for musicians, students, teachers, and researchers.⁴⁷ Nearly all of the work required to get to this point was done freely by volunteers, much like FLOSS projects and other user-generated undertakings such as Wikipedia.⁴⁸

⁴² Michael Carroll, “Creative Commons and the New Intermediaries,” 51.

⁴³ Adrian Horsewood, “Internet Score Libraries,” *Early Music* 48, Vol 2 (2020): 265; Casey Mullin, “Review of International Music Score Library Project/Petrucci Music Library,” *Notes* 67, Vol 2 (2010): 377.

⁴⁴ Casey Mullin, “Review of International Music Score Library Project,” 377-378.

⁴⁵ Edward Guo et al, “IMSLP Petrucci Music Library,” International Music Score Library Project (IMSLP)/Petrucci Music Library, accessed Dec 2021, https://imslp.org/wiki/Main_Page.

⁴⁶ Casey Mullin, “Review of International Music Score Library Project,” 377.

⁴⁷ Adrian Horsewood, “Internet Score Libraries,” 265; Jantien Dubbeldam and Katie Lai, “When Music Goes Digital,” *Fontes Artis Musicae* 61, Vol 3 (2014): 240; Sophie Brady, “Review: International Music Score Library Project [IMSLP],” *Journal of the American Musicological Society* 72, Vol 3, (2019): 929.

⁴⁸ Casey Mullin, “Review of International Music Score Library Project,” 378; Sophie Brady, “Review: International Music Score Library Project,” 929.

In May 2006, a few months after its release, the home page read, “IMSLP is a project that attempts to create a virtual library containing all musical scores that are in the public domain, as well as taking score submissions from composers who are willing to share their music with the world without charge.”⁴⁹ In 2010, it read, “we at the IMSLP believe that music should be something that is easily accessible for everyone. For this purpose we have created a music library to provide music scores free of charge to anyone with internet access, with several other projects in planning. IMSLP is also entirely collaborative, and all contributions are greatly welcome.”⁵⁰ Since October 2012, it simply reads, “sharing the world’s public domain music,” with links to “How to Contribute Works” below.⁵¹ These statements reflect the idealistic aspirations and intent of the copyleft projects mentioned previously.⁵² Even the more recent homepage statements, brief and lacking in some of the explicit idealism seen in earlier iterations, emphasize the collaborative nature of the library by inviting contribution.

The impact this project has is quite significant. For one, IMSLP hosts public domain music, which includes much work that is out of print and would otherwise be very difficult (sometimes impossible) to track down. Additionally, a number of living composers have chosen to put their music on IMSLP under public domain in the form of a Creative Commons license.⁵³ The project has also likely influenced the growing trend of using digital scores and parts. Perhaps IMSLP’s most obvious impact is how it makes music scores available to people who may not otherwise be able to easily access or purchase sheet music⁵⁴ While many libraries and

⁴⁹ Edward Guo et al, “Main Page,” International Music Score Library Project (IMSLP)/Petrucci Music Library, 2006,

https://web.archive.org/web/20060524145814/http://www.imslp.org/index.php?title=Main_Page.

⁵⁰ Edward Guo et al, *imslp.org*, International Music Score Library Project (IMSLP)/Petrucci Music Library, 2010, <https://web.archive.org/web/20100209110752/http://www.imslp.org/>.

⁵¹ Edward Guo et al, “IMSLP Petrucci Music Library,” International Music Score Library Project (IMSLP)/Petrucci Music Library, 2012, <https://web.archive.org/web/20121026044833/http://imslp.org/>; Edward Guo, “IMSLP Petrucci Music Library,” 2021.

⁵² This requires treating IMSLP as a library and largely overlooking its impact on publishing.

⁵³ Casey Mullin, “Review of International Music Score Library Project,” 377. I discuss the significance of making more recent work available in the next section of this paper.

⁵⁴ Timothy Hagen, “Best of Flute Classics/French Music of the 19th and 20th Centuries,” *The Flutist Quarterly* 44, Vol 1 (2018): 71.

higher education institutions have music collections, they have never individually been as extensive as IMSLP because of the practical limits of cost, space, and demand. “IMSLP contains a large number of scores ‘mirrored’ from other online archives... Thus, the site functions as a portal to digital collections worldwide, with the potential of eventually serving as a single access point for all digitized public domain scores available on the web.”⁵⁵ IMSLP allows anyone with access to the site to download thousands of scores, removing some of the barriers that restrict access to sheet music. In doing so, it has undoubtedly achieved the status of a “public good.” IMSLP functions especially well in instances where users know what they’re looking for with some specificity. It is in part for this reason that researchers benefit from IMSLP so greatly, especially when it comes to working with original manuscripts or comparing varying historical editions. It is “invaluable for modern musicological research” in how it has aggregated scores, including rare ones, that otherwise would all have to come from different sites and sources.⁵⁶

IMSLP has also had an impact in vastly different realms of music. For example, Peachnote is a melody search engine and n-gram viewer.⁵⁷ It allows users to enter a fragment of music and search for instances in which that music appears. Vladimir Viro, one of the creators of Peachnote, wrote that they “chose the Petrucci library as our first data source because of the low entry barrier: both the scores and their scans at the IMSLP are free from copyright, and so we were free to use them without asking for permission. Therefore at the beginning of the development it was the easiest collection to work with.”⁵⁸ IMSLP’s collection of

⁵⁵ Casey Mullin, “Review of International Music Score Library Project,” 378.

⁵⁶ Adrian Horsewood, “Internet Score Libraries,” 266. IMSLP includes the Bach-Gesellschaft Ausgabe, the Sibley Music Library at the University of Rochester, and the Bibliothèque nationale de France. Jantien Dubbeldam and Katie Lai, “When Music Goes Digital,” 240; Colleen Hoelscher, “IMSLP/Petrucci Music Library,” *Reference Reviews* 31, Vol 7 (2017): 27.

⁵⁷ An n-gram viewer is a graphical representation of n-grams, which are contiguous sequences of n items from a given sample. For example, Google’s phrase usage n-gram graphs depict items (given phrases/words) from a sample (all searches). Peachnote’s items are sequences of musical notes and their sample is optically-encoded IMSLP scores. See Appendix.

⁵⁸ Vladimir Viro, “Peachnote: Music Score Search and Analysis Platform,” *International Society for Music Information Retrieval* (2011): 359. Peachnote also provides an interesting perspective on what music is present on IMSLP. Peachnote’s ngram viewer can map the presence of

public domain music allows Peachnote easy access to a significant body of music to search, an example of IMSLP's ability to facilitate creative projects and a variety of research. IMSLP's impact has been so significant that it has changed the monetary value of some music scores and therefore music publishing. Timothy Hagen writes, "its popularity has prompted many publishers to release beautifully printed collections of works at a lower price point than any one of those works may have cost just 10 years ago," and Sophie Brady notes that "the digital format of the scores on IMSLP marks a paradigm shift in the value and role of notated music for performers, composers, and audiences everywhere."⁵⁹ IMSLP is changing how people interact with, consume, and even make music, to an extent that has yet to be completely understood.

Despite these progressive innovations, IMSLP has received various criticisms. Most relevant to this project is the fact that, for all its radical democratizing potential, IMSLP tends to uphold the Western canon rather than push beyond it. Brady writes that "most downloaders use IMSLP to find music they already know, rather than to discover something new or unusual."⁶⁰ True to its origins, the most downloaded score on IMSLP is Beethoven's String Quartet no. 13, op. 130.⁶¹ While Beethoven is no longer around to benefit from IMSLP's contribution to his reputation, one must nonetheless reconcile the fact that, while providing unparalleled levels of access, this internet library serves to further sediment the status of already elevated composers and works.

There are various possible explanations for this situation. For one, IMSLP is a crowdsourced resource consisting largely of music from institutions' public domain collections and users' personal libraries; as such, there is bound to be uneven distribution of material.⁶²

Additionally, not all music is suited to IMSLP's format. Brady elaborates that "while IMSLP's

melodic/horizontal intervals in pieces, and was used in the referenced text to graph all 12 intervals in all IMSLP scores. See Appendix.

⁵⁹ Timothy Hagen, "Best of Flute Classics," 71; Sophie Brady, "Review: International Music Score Library Project," 933.

⁶⁰ Sophie Brady, "Review: International Music Score Library Project," 931.

⁶¹ As of 2019. Sophie Brady, "Review: International Music Score Library Project," 927.

⁶² Casey Mullin, "Review of International Music Score Library Project," 377; Colleen Hoelscher, "IMSLP/Petrucci Music Library," 27.

philosophy implies universality, in practice 'making music available to everyone' actually means 'making Western, notated music available to everyone with a highspeed Internet connection.'⁶³ IMSLP is situated to host certain music, rather than all music. However, the trend has more to do with patterns of what music is played than realities of what music is available, and access is far more complicated than making a digital file available for free online. While IMSLP may impact how people interact with sheet music and how music is disseminated, that alone has not revolutionized what music is performed.

Critical is the fact that not all music in IMSLP is equally accessible, particularly given that it uses a browsing-based interface.⁶⁴ On the one hand, perhaps the easiest way to find a composition is to enter the composer's name in either the site's search bar or into a general search engine with "IMSLP." This function works well for finding the work of well-known composers. For more obscure figures, however, this interface only maintains the status quo. Most people who come to IMSLP for music will not spend time browsing to find hidden gems that they would never have heard of, and it takes far more effort to locate such pieces than it does for more familiar ones. Thus, the fact that lesser-known composers' works are to be found on the same website as canonized pieces does not level the playing field as much as one might expect.⁶⁵ Accessibility is not simply a matter of being on IMSLP, but also being subject to the social forces that create awareness. Thus, "the ways musicians use the site are of a type with practices that have been deeply ingrained in the Western classical canon for centuries."⁶⁶ Again, the availability of music proves less powerful than the traditions that establish certain pieces as part of the repertoire. These traditions, as with viola repertoire and pedagogy, create and reinforce a body of music that performers feel familiar with and are equipped to play.

⁶³ Sophie Brady, "Review: International Music Score Library Project," 927.

⁶⁴ Casey Mullin, "Review of International Music Score Library Project," 379.

⁶⁵ Sophie Brady, "Review: International Music Score Library Project," 931.

⁶⁶ Sophie Brady, "Review: International Music Score Library Project," 935.

Whereas it appears the access of IMSLP alone is not enough to kickstart significant change in *what* music we interact with, only *how*, a more targeted approach may address these shortcomings. IMSLP's vast coverage results in user behavior in many ways that matches pre-existing patterns rather than challenging them. A library with a more intentional, niche scope can avoid this pitfall. For example, the American Viola Society's American Viola Project (AVP) provides free downloadable pdfs of viola pieces by American composers (or composed in America), including living composers who either license their work as public domain/Creative Commons, or who have a special agreement with American Viola Society where AVP is the exception to *all rights reserved*.⁶⁷

As part of a larger effort to make scores available for research and performance, the American Viola Project aims to collect, publish, and preserve viola music from the United States by making scores freely accessible on the society's Web site... The digital project includes compositions that are newly published under the AVS Publications name, scanned copies of previously published compositions, and works provided directly from contemporary composers. All pieces are either in the public domain or authorized for inclusion by the copyright holders.⁶⁸

Additionally, most of this music is more recent than a lot of repertoire in libraries such as IMSLP. David Bynog writes that "for most violists, 1919 marks the beginning of the instrument's history in America."⁶⁹ While the instrument was present earlier than that, little was written and even less survived. However, with everything written after 1925 still protected by copyright, very little American viola repertoire is available in this way online. The AVP collection is small compared to IMSLP and consists of very little that users are likely to already know, but it is a very specific category, and focusing on it has the potential to slightly broaden the typical viola repertoire to include pieces from the project, effecting change rather than perpetually maintaining the present. The AVP approach implicitly emphasizes non-canonical repertoire; thus, methods of

⁶⁷ Katie White, "A Pedagogical Introduction," 55; David Bynog, "The Viola in America," 729. see <http://www.americanviolasociety.org/Resources/American-Viola-Project.php>

⁶⁸ David Bynog, "The Viola in America," 729.

⁶⁹ David Bynog, "The Viola in America," 749. 1919 is the year in which Rebecca Clarke composed her Viola Sonata for a viola composition competition sponsored by Elizabeth Sprague Coolidge, which she narrowly lost to Ernest Bloch.

interacting with music that uphold enmeshed traditions become less inherent due to the nature of this library.

AVP, IMSLP, and numerous other comparable projects provide a type and degree of access that was not possible before the internet. However, access is not as simple as it appears on the surface, and it often reflects the sedimented traditions that develop to reinforce historical trends rather than the contemporary realities of music. The internet's role in these processes is complex and unique, since as Elizabeth Hoffman argues, "through the mediation of public repositories, new notions of authorship, ownership, authenticity, access, canonization, and value systems are being imagined and implemented."⁷⁰ These libraries either encourage or challenge - implicitly or explicitly - the ways in which people have become inclined to interact with music. Challenging norms is sometimes essential, as in the case of repertoire and pedagogical material becoming out of sync, and thus these repositories have the potential to address disconnects in existing practices.

⁷⁰ Elizabeth Hoffman, "What is at Stake in the Politics of Digital Music? A Brief Look at Some Evolving Issues," *Array* (2016): 50.

***The Journey of The Horizontal People* by Raven Chacon
and the Kronos *50 for the Future* Learning Repertoire**

The Journey of The Horizontal People by Raven Chacon is a string quartet commissioned in 2016 by the Kronos Performing Arts Association as part of their *50 for the Future* Learning Repertoire. Chacon writes the following about the piece:

The Journey of the Horizontal People is a future creation story telling of a group of people traveling from west to east, across the written page, contrary to the movement of the sun, but involuntarily and unconsciously allegiant to the trappings of time. With their bows, these wanderers sought out others like them, knowing that they could survive by finding these other clans who resided in the east, others who shared their linear cosmologies. It is told that throughout the journey, in their own passage of time, this group became the very people they were seeking.⁷¹

The score of this piece begins with two pages of instructional material detailing the techniques and notations that performers are required to play throughout. The instruction is a necessity given the unfamiliar nature of many of the techniques to those with background in traditional string quartet performance. Over the years, the Kronos Quartet has contributed significantly to expanding string quartet repertoire through both performance and commissions, helping to establish pieces with unfamiliar technique as a normal occurrence.⁷² *50 For The Future* can be seen as a natural extension of that interest.

50 for the Future functions similarly to the American Viola Project in that it curates a very specific collection with a goal in mind: in this case, string quartet pieces commissioned for the repertoire so as to aid student quartets in learning the skills required to play contemporary string quartet music. The self-professed goal of the project is to provide a “coordinated body of work devoted to the most contemporary approaches to the string quartet, designed expressly for the

⁷¹ “Raven Chacon,” *50 For The Future*, Kronos Performing Arts Association, accessed Mar 2022. <https://50ff.kronosquartet.org/composers/raven-chacon>.

⁷² Jordan Warmath, “The Contemporary Revolution,” 13.

training of students and emerging professionals.⁷³ 40 pieces are available thus far on the website, consisting of a wide variety of styles, difficulty, notational approaches, and degrees of adherence to traditional tonality. The repertoire includes, for example, a quartet written on pipa by Wu Man, standard minimalism by Phillip Glass, and a piece by Mark Applebaum that asks the performers to do hand gestures, use flashlights, and carry a small potted plant on stage with them. Though Kronos does not report specific demographic data on its site, it is worth noting that the composers of the Learning Repertoire are likely considerably more diverse than those whose music is frequently downloaded from IMSLP.⁷⁴ The composers are roughly evenly split between men and women, and various races, nationalities, and musical backgrounds are represented. *50 for the Future* is clearly having an impact, given that it boasts over 20,000 downloads in nearly 100 countries.⁷⁵

Noteworthy are the resources necessary for undertaking such a project, specifically financial and social capital, which exposes one of the limitations of Create Commons and similar endeavors. Kronos' success and reputation have put them in a unique position that enables the creation and influence of the Learning Repertoire. One can speculate about the benefit of the Kronos Quartet's existing relationship with composers for the feasibility of this project, relationships they have cultivated over their notable career and which are not available to others. Thus, the idea that access to music should not be dependent upon degree of privilege exists in tension with the reality that groups that seek to provide said access must themselves occupy a position of privilege. This tension is unlikely to be resolved by any given individual project involving music access, whether that of Kronos or otherwise. Nonetheless, it seems that

⁷³ "About Kronos' 50 For The Future," *50 For The Future*, Kronos Performing Arts Association, accessed Dec 2021, <https://50fff.kronosquartet.org/about>.

⁷⁴ It is perhaps a reasonable conclusion that given its large scope, IMSLP also includes quite a diverse list of composers. Due to factors already discussed, though, IMSLP usage tends to skew toward the most canonical European ones. The *50 For The Future* composers and their works can be seen at <https://50fff.kronosquartet.org/composers>

⁷⁵ "About," Kronos Performing Arts Association.

the Learning Repertoire attempts to mediate various factors involved in comparable internet projects, such as the social-economic politics of the public domain for living composers.

The *50 for the Future* pieces are not Creative Commons or public domain; they are under traditional copyright, with each page reading “Kronos, All Rights Reserved.” Creative Commons licenses would not necessarily be the best choice in this scenario because financial barriers to access are a part of how composers make their living. Yet at the same time, music is frequently believed to be something that everyone should be able to enjoy, drawing on a discourse of “justice, equality, and public good.”⁷⁶ Creative Commons, despite its significant potential for positive impact, does not have the tools to reconcile the needs of professional musicians to be able to pay their bills with the presumed right of everyone to access music. The Kronos project manages this dilemma quite well, embodying some of the values of Creative Commons while working within the bounds of modern music composing and publishing methods. The right to perform this piece is based not on purchasing the score or paying licensing fees, but on presenting the following disclaimer (see also figure 1):

Please help spread the word about Kronos’ Fifty for the Future project by including the credit below along with the title and composer of the work. This information should be included in printed programs, press announcements, performance videos, websites and when announcing the work from the stage. “This piece was commissioned for Fifty for the Future: The Kronos Learning Repertoire, a project of the Kronos Performing Arts Association. The score and parts are available for free online. kronosquartet.org.”⁷⁷

Kronos takes on the barrier to access themselves in commissioning the pieces, facilitating both the financial needs of the composers and access for interested musicians with an internet connection. This essential balancing act is what makes *50 For The Future* possible as a modern project, rather than a more historically-oriented one such as IMSLP.

⁷⁶ Peter Golding and Graham Murdock, “Culture, Communication, and Political Economy,” *Mass Media and Society*, (Edward Arnold London, 2000), 72-73.

⁷⁷ Raven Chacon, “The Journey of the Horizontal People.” (Kronos Performing Arts Association, 2016).

material and those found in repertoire is a gap that musicians must bridge on their own.⁷⁸ Alongside each of these pieces, Kronos provides on their website instructional videos covering unusual techniques that appear in the piece to help performers in learning their parts (see figure 2), as well as interviews with the composers to give more insight into the piece than the composer's program note can offer (see figure 3). These are examples of asynchronous distance learning which was increasingly being integrated into music pedagogy prior to 2020 and has become more prevalent since then due to restrictions caused by the coronavirus. Alisa Seavey states that technology- and media-based learning are quite effective at supplementing the education of higher-level students, though the quality of the resources available varies greatly.⁷⁹ In providing instructional videos and composer interviews, Kronos takes advantage of the accessibility inherent in the medium of open access internet pages to further their mission of being an educational resource and encouraging the performance of the Learning Repertoire.



Figure 2: Sunny Yang, cellist of the Kronos Quartet, demonstrates Chacon's double pizzicato technique in a video available on the Kronos *50 for the Future* website.⁸⁰

⁷⁸ For some of the pieces, there exist multiple recordings by various quartets on YouTube. For others, including *The Journey of the Horizontal People*, the Kronos Quartet's recording is the only one to be found.

⁷⁹ Alisa Seavey, "Distance Learning and Its Effect on the Future of One-on-One String Instruction," (DMA diss., Northwestern University, 2015), 17-36. YouTube's offerings can range from recordings of masterclasses hosted by reputable institutions to flawed instructional videos made by confident-sounding amateurs.

⁸⁰ "Raven Chacon," Instructional Video, Kronos Performing Arts Association.



Figure 3: Raven Chacon discusses his piece *The Journey of the Horizontal People*, stating that, “The piece is designed so that the quartet, as they move through measures, will get lost. It’s designed that the quartet will lose their place.”⁸¹

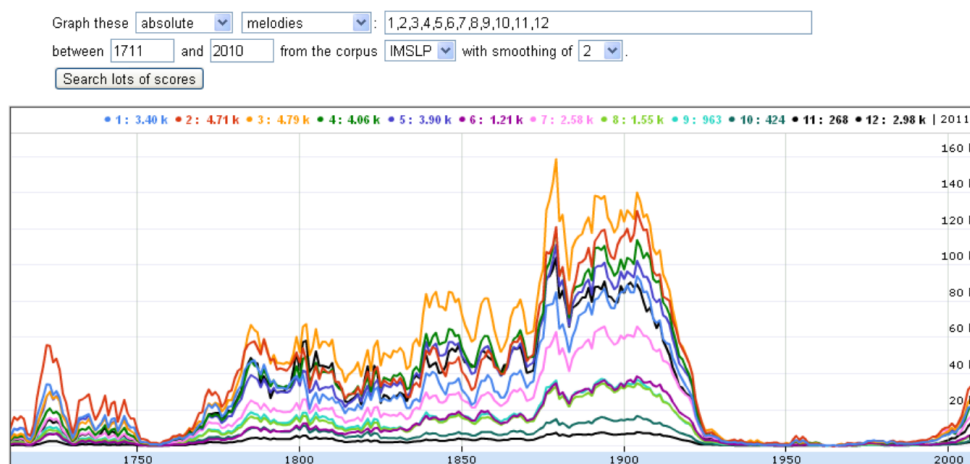
Music such as *The Journey of the Horizontal People* with its unusual notation, techniques, and tonality, has become a significant part of the repertoire and can no longer be considered an anomaly. Various factors intersect to work against such music being performed and this thesis has addressed two of them in particular: the fact that copyright by necessity makes it more difficult to access this music than older alternatives; and that educational material is limited, generally lacking a systematic way to learn the skills necessary to perform the music. In addressing both of these factors, *50 for the Future* facilitates a different kind of access than more general libraries like IMSLP. As mentioned before, the issue of access is far more complicated than availability and barriers to access; traditions that build up around music have a significant impact on accessibility. The Learning Repertoire consists entirely of freely-available, educationally-aimed contemporary string quartets with additional material to help performers learn the music. In addition to supporting the repertoire that it directly includes, this project also perhaps makes other contemporary string repertoire more accessible in how it helps musicians learn the techniques necessary to perform it, even though such music is not available for free online in the same way.

⁸¹ “Raven Chacon,” Composer Interview, Kronos Performing Arts Association.

In the editor's note of a special edition of *Fontes Artis Musica* entitled "When Music Goes Digital," Jantien Dubbeldam and Katie Lai write that "technology and the digital revolution continue to change what we know, what we work on, and what we can see from around the world in the field of music and musicology."⁸² The sedimented traditions of any musical practice exist within this context, and the internet has had (and will continue to have) a considerable influence on what music we make, how we make it, and how we access and interact with that music. IMSLP and similar projects seem to abide by the natural progression of things – music following the path that the world is taking. When considering such digital public domain repositories and the demands of modern music, ideas of tradition and access take on new meaning. This is particularly relevant given how existing traditions and access have impacted the realities of what music is available or is being performed. *50 for the Future* and similar projects exist in this fascinating intersection of forces but a fraction of the internet-music relational activities that are currently developing alongside music everywhere.

⁸² Jantien Dubbeldam and Katie Lai, "When Music Goes Digital," 240.

Appendix



The above image is a Peachnote graph made by Viro of every occurrence of all 12 intervals harmonically/horizontally in the melodies of every optically-encoded score from IMSLP. While the trends of what intervals are present in melodies can be seen and may be of interest for history or theory purposes, this graph more directly shows what eras are represented on IMSLP. Viro notes the “gap between 1925 and 2000 is due to scores still being under copyright protection and hence unavailable on IMSLP. Modern composers, however, are free to upload their own compositions, and indeed they do so, as the bump on the right tells.”⁸³ 1875-1925, the most recent 50 years in the public domain, appear to make up the bulk of IMSLP scores.

⁸³ Vladimir Viro, “Peachnote: Music Score Search and Analysis Platform,” 3.

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