

A PRAGMATIC APPLICATION OF LEFT HAND FRAMING IN MODERATO OF THE
CELLO CONCERTO IN C MAJOR, HOB. VIIIB:1, BY JOSEPH HAYDN (1732–1809)

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Dissertation Prepared for the Degree of
DOCTOR OF MUSICAL ARTS

UNIVERSITY OF NORTH TEXAS

May 2026

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ACKNOWLEDGEMENTS

This dissertation project is the culmination of a journey made possible by the support of numerous individuals and institutions. I extend my sincere appreciation to the Toulouse Graduate School and the University of North Texas College of Music for this opportunity, and to the Bancroft Family for their generous support of the music program and scholarships.

I owe a profound debt of gratitude to my major professor and committee chair, Dr. Contreras. Without your steadfast support, guidance, and the opportunity to complete this final project under your mentorship, I would not have been able to finish this program. Along with Dr. Olschofka, whose pivotal encouragement during the difficult transition following the loss of my first major professor was essential, your collective belief in my potential allowed me to persevere and reach this milestone. I am also deeply thankful to my related field professor and committee: Dr. Couturiaux, for teaching me to see the "big picture" of music and leadership; and Prof. Bradetich and Andres Diaz, for their invaluable expertise and time. I also thank Dr. Dubois and Prof. Ruzevic for the encouragement provided throughout my studies.

To my family – Eun Seo, Lia, Hoe Yon, Hyeryun, Sean, Daisy, Jin, Tommy, and Johan: thank you for being my constant source of strength and for your endless understanding throughout my life. I am profoundly grateful for your unwavering patience, as this project would not have been possible without your love and support every step of the way.

Finally, I wish to honor the memory of two mentors who fundamentally shaped my path. Prof. Eugene Osadchy helped me begin this journey and provided the foundations for my career; his support was invaluable. Dr. George Papich was an exceptional pedagogue and a great human being who inspired growth through kindness and music. While their absence is deeply felt, I carry their lessons with me and hope this work serves as a worthy tribute to their legacies.

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CHAPTER 1

PURPOSE

The mastery of left-hand cello technique, which encompasses hand position, shifting, fingerings, and intonation, is fundamental to achieving proficiency on the instrument. While numerous pedagogical resources provide comprehensive frameworks for developing these skills, a discernible gap exists in the literature regarding their explicit and detailed application to full works from the standard repertoire. This doctoral project seeks to bridge that gap by synthesizing established methodologies, with a particular focus on *Framing Your Left Hand – Progressive Double-Stop Combinations for the Cello* (2020)¹ as a pedagogical tool and applying them systematically to the first movement of Haydn's Cello Concerto in C Major. The purpose of this study is to demonstrate a pragmatic, repertoire-specific approach to left-hand technique, thereby providing performers, educators, and young students with a clear and effective model for both teaching and practice.

¹ Horacio Contreras, *Framing Your Left Hand* (2020).

CHAPTER 2

SIGNIFICANCE AND STATE OF RESEARCH

This project utilizes *Framing Your Left Hand* by Horacio Contreras, a modern method book designed for today's learners. Its concise exercises efficiently address essential skills for young cellists, specifically focusing on developing accurate framing. Moreover, the tonal nature of the first two parts of the book provides a musically significant environment for learning.

The legendary cellist Pablo Casals (1876–1973) posited that intonation is a chain of interconnected notes, arguing that it is a consequence of what has been and what will be.² This philosophical approach to intonation is directly related to the practical application of finger combinations. It underscores the importance of fluency in left-hand positioning, where the emphasis lies on continuity of motion rather than the disjointed action of dropping individual fingers.

In the execution of specific intervals, cellists employ various finger combinations. For instance, utilizing the first and fourth fingers for a double stop in lower neck positions yields a major third when fingered as 1 on the upper string and 4 on the lower string; conversely, fingering 4 on the upper string and 1 on the lower string produces a minor seventh.

The technique of finger replacement stands as a critical aspect of left-hand proficiency in string playing, allowing musicians, particularly cellists, to articulate specific intervals and musical passages through diverse finger combinations. However, the execution of this technique necessitates a corresponding essential movement—namely, shifting, or a position change. Shifting is the mechanism by which the entire left arm moves to guide the hand and fingers to a

² Ana Llorens, “Understanding expressive intonation: Casals’ Bach beyond conscience,” *Quodlibet. Revista de Especialización Musical* 76 (2021): 161.

new location on the fingerboard. The movement is not merely confined to the fingers, but involves the coherent motion of the entire arm toward the new destination.

To illustrate this relationship, consider a pedagogical example. The cellist begins in the second position, sounding a minor sixth—specifically, D-flat on the A-string played with the second finger and F-natural on the D-string with the first finger.³ To initiate the first stage of finger replacement while maintaining the identical pitches (D-flat/F-natural), the arm must execute a shift to the first position. The notes remain acoustically constant, yet the fingering is altered to the third finger on the A-string and the second finger on the D-string. Following this, a subsequent arm motion facilitates a shift to the half position. The pitches are again unchanged, but the fingering is replaced once more, now utilizing the fourth finger on the A-string and the third finger on the D-string.

As this sequence demonstrates, the notes themselves remain unchanged. Instead, the arm executes a precise change of position to accommodate the desired finger replacement. Crucially, the left hand requires a high level of disciplined execution to change position without compromising the pitches or tonal clarity. While finger replacement ultimately aids in developing an understanding of the fingerboard's geography, its practical realization is fundamentally dependent on the active and coordinated movement of the entire arm to perform a position change.

The impact of finger replacement on intonation is determined by two primary factors. The first is the precise placement of the new finger. Small adjustments in finger position can significantly alter pitch, with a slight lean upward causing the note to become sharp and a

³ Louis R. Feuillard, *The Young Violoncellist's Method* (Paris: Edition Delrieu, 1953), 33-34, 38. Feuillard defines the second position as the placement where the first finger is located on C-natural or C-sharp on the A-string, F-natural or F-sharp on the D-string, B-flat or B-natural on the G-string, or E-flat or E-natural on the C-string.

downward lean making it flat. To maintain a smooth transition and consistent pitch, a cellist must meticulously replace the old finger's position with the new one. Inconsistent finger placement due to a lack of technical discipline can lead to highly unreliable intonation. The second factor involves the physical nature of the string itself. As pitch ascends, the spacing between notes on the fingerboard gradually narrows. Therefore, after a finger replacement, a cellist must possess a strong foundation of muscle memory to make the minute adjustments in spacing required for accurate intonation. This awareness of string geography is crucial for maintaining pitch consistency, especially in higher registers. For instance, when shifting from the octave of A3/A4 to D4/D5, the initial position for A3/A4 involves the thumb on the A located in the fourth position⁴ on the D string and the third finger on the A string, a perfect fourth above the thumb. This forms the foundational hand shape.

To transition to the D4/D5 octave, the thumb must shift and replace the third finger's previous position on the A string. This new placement of the thumb will produce D4 on the D string, while the third finger, now positioned in the new frame of the thumb, will sound D5. A key observation is that the hand frame for the D4/D5 octave is significantly narrower than that for the A3/A4 octave. Such complex shifts demand a high level of sensation, aural discipline, and anticipation. Therefore, cellists must engage in systematic practice of various finger replacements to ensure seamless execution and technical mastery in performance.

Contreras's comprehensive method in *Framing Your Left Hand* delineates an extensive range of finger combinations, thereby facilitating access to diverse intervals in a manner that

⁴ Louis R. Feuillard, *The Young Violoncellist's Method* (Paris: Edition Delrieu, 1953), 30-32, 38, 71-74. Feuillard defines the fourth position as the placement where the first finger is located on E-natural or E-flat on the A-string, A-natural or A-flat on the D-string, D-natural or D-flat on the G-string, or G-natural or G-flat on the C-string.

prioritizes simplicity. The work further proposes practical exercises designed to address difficulties associated with left-hand technique, ultimately aiming to enhance strength and dexterity among cellists. These principles align with the physiological observations of Gerhard Mantel (1930–2012), who notes that a specific degree of pressure (approximately 2 lbs.) is required for each string in the left hand.⁵ This pressure doubles when playing a double stop, making this practice highly effective at strengthening the fingers. However, Mantel also notes significant limitations due to individual anatomical differences in finger length and finger strength.⁶ Consequently, it is imperative to develop a flexible and adaptive left-hand frame. This involves understanding how to effectively extend the fingers, leveraging forearm rotation (supination/pronation), determining optimal angles for specific intervals, and building muscle memory for the distinct distances within each position.

Alfredo Piatti (1822–1901), an Italian composer, cellist, and pedagogue, holds a central place in the history of string performance. Renowned pianist Franz Liszt hailed him as the "Paganini of the cello," a testament to his virtuosity. Piatti's 12 collection of Caprices for Solo Cello, Op. 25 (1865), is a foundation of the cello repertoire, valued not only for its technical demands but also for its profound musicality. Each caprice explores a distinct technical challenge and offers a unique musical character, making the collection a staple for major auditions and competitions. The Caprice No. 2 is particularly a significant etude for developing the left hand, as it requires the execution of double-stops in both melodic and harmonic contexts. Piatti's approach integrates two-part polyphony, wherein a primary melodic voice sounds simultaneously

⁵ Gerhard Mantel, *Cello Technique: Principles and Forms of Movement* (Bloomington: Indiana University Press, 1995), 65–85.

⁶ J. Leijnse et al., "Connections Between the Tendons of the Musculus Flexor Digitorum Profundus Involving the Synovial Sheaths in the Carpal Tunnel," *Cells Tissues Organs* 160, no. 2 (1997): 112–22, <https://doi.org/10.1159/000148003>.

with a secondary accompanying line. While executing these challenging double-stops, the cellist must ensure the melodic line remains prominent. Furthermore, shaping musical phrases with nuance is essential. Consequently, this caprice serves not only as a rigorous exercise in left-hand technique but also as a crucial study for musicality and artistic phrasing. This is why this caprice is a critical source for this project. The progression from single-line melody to polyphony enhances left-hand framing and further develops the musical ideas necessary to shape phrasing based on harmony. The undeniable importance of this caprice is further evidenced by its frequent inclusion in the audition programs of major institutions and organizations. For example, its presence on the Texas Music Educators Association (TMEA) 2025–2026 All-State/Region audition list specifically underscores its continued pedagogical significance within musical training curricula.

Matthew A. Ryan-Kelzenberg, in his 2009 doctoral dissertation, "A Guide to Pedagogy and Technique in Alfredo Piatti's Twelve Caprices, Op. 25 (1865),"⁷ provides a detailed analysis of the style and technical requirements of each caprice. He consistently draws parallels between the caprices and comparable technical passages from the broader cello literature, making his work a valuable resource for cellists. However, the dissertation's focus is on analytical comparison rather than practical application; it does not offer creative exercises for mastering the technical elements within specific musical contexts.

The Cello Concerto in C Major, Hov. VIIb:1, by Joseph Haydn, is a prominent work in the classical cello repertoire, frequently performed since its rediscovery by musicologists in the mid-20th century. Its enduring significance lies in its dual demands for both technical mastery and profound stylistic comprehension. The concerto requires a wide range of expression,

⁷ Matthew A. Ryan-Kelzenberg, "A Guide to Pedagogy and Technique in Alfredo Piatti's Twelve Caprices, Op. 25 (1865)" (Doctoral dissertation, Arizona State University, 2009).

necessitating seamless navigation across various registers and demanding exceptional fluency and dexterity from the left hand. These technical attributes must be integrated with Haydn's characteristic classical style, which is defined by its elegance and intricate ornamentation. Consequently, the study of this work is essential for developing both the technical and interpretive skills required to perform the classical repertoire. Its stature is reflected by its inclusion in the audition repertoire for many prestigious college and professional appointments.

The first movement, marked 'Moderato,' exhibits a playful character with stylish embellishments. Intriguingly, its form blends elements of both the ritornello form and the emerging sonata form. This structure features three solo sections—Solo 1 functioning as the exposition, Solo 2 as the development, and Solo 3 as the recapitulation, which returns to the tonic key. This combination of forms results in varied technical demands and musical challenges, particularly with changes in register and the reuse of musical material.

This portfolio project will contribute to enriching pedagogical resources for the efficient practice of cello repertoire. This project's creative workbook, therefore, will serve as a valuable benchmark for effective practice strategies, which can be applied to any repertoire. Additionally, the accompanying tutorial videos will provide an excellent resource for enhanced understanding. Janos Starker, in his work *An Organized Method for Cello Playing*,⁸ combines theoretical exercises in double-stops with practical applications for important cello literature. However, this book does not contain exercises specific to the Cello Concerto in C Major by Haydn.

⁸ Janos Starker, *An Organized Method of String Playing* (New York: Peer International, 1961).

CHAPTER 3

METHOD

This professional portfolio, a culmination of creative and analytical work, comprises a workbook and an accompanying teaching video. Both resources are original pedagogical materials I designed and produced specifically to address the technical demands inherent in the Moderato movement of the Cello Concerto in C Major by Joseph Haydn. The workbook, the core component, focuses on a detailed approach to left-hand technique through the entire movement, offering in-depth analysis and technical preparation for every measure of the cello solo part.

The primary objective is to create a workbook that is highly accessible (i.e., sight-readable for most intermediate to advanced students) while simultaneously providing meaningful engagement to significantly enhance dexterity, strength, agility, and intonation. Based on the consensus among string pedagogues, many students become discouraged or abandon practice when the methodology presented is overly difficult, unnecessarily lengthy, or excessively complicated. Consequently, this workbook represents a synthesis of critical exercises drawn from established cello literature, combined with practical pedagogical insights derived from extensive teaching experience.

The core of the methodology lies in generating double-stop exercises aimed at reinforcing left-hand framing and thereby enhancing performance stability. The workbook adopts the comprehensive approach outlined in Contreras's *Framing Your Left Hand*,⁹ which explores every possible fingering combination to access all types of intervals in the simplest way possible.

⁹ Horacio Contreras, *Framing Your Left Hand* (2020).

The consistent practice of double stops is crucial for helping cellists discover their ideal hand position and establish good hand shape.

The exercises of this workbook are specifically designed in a theme-and-variation style. The overall structure is tripartite, corresponding to the three solo sections separated by the orchestral ritornelli. Within each part, the material is subdivided into short musical phrases. Beneath the original solo line, which serves as the Theme, a simplified double-stop version converted directly from the original solo part will be presented, followed by two to four corresponding Variations (technical exercises) for each sectional phrase. All the thematic double-stop exercises are designed by extracting key notes—both musically and technically—from the original passages. The variations presented are specifically influenced by renowned pedagogical methods from masterworks by Cossmann,¹⁰ Feuillard,¹¹ and Vamos.¹²

The workbook uses specific indications to clarify certain techniques: an "x" indicates an extension, while boxed numbers with an "x" inside them, such as [2x1], denote finger replacements. For example, the notation [2x1] signifies that the second finger (the new finger) has replaced the first finger (the old finger). The proposed fingerings that underpin this methodology have gained widespread acceptance among numerous prominent cellists, including the legendary cellist Mstislav Rostropovich.¹³ Furthermore, various international publishers,

¹⁰ Bernhard Cossmann, *Violoncello-Studien*, ed. Martin Müller-Runte (Mainz: Schott Music, 1990), 2–11

¹¹ Louis R. Feuillard, *Daily Exercises for Violoncello* (Mainz: Schott Music, 1984), 37.

¹² Roland Vamos, *Exercises for the Cello in Various Combinations of Double-Stops*, arranged by Horacio Contreras (New York: Carl Fischer Music, 2018).

¹³ Source: Joseph Haydn, *Cello Concerto in C Major*, Hob. VIIb:1. Based on the public domain urtext edition by Miloš Sádlo and Mstislav Rostropovich (Prague: Editio Supraphon, 1963). All notation newly engraved by the author; all fingerings and variations are original.

spanning regions from the United States¹⁴ to Russia,¹⁵ have included these specific fingerings in their authoritative editions, and their pedagogical utility is further confirmed by their appearance in highly regarded method books, such as the *Suzuki Cello School*.¹⁶ The workbook is designed to be accessible to a wide audience, including those who have not yet learned the Haydn concerto, making it a valuable resource for anyone seeking to improve their left-hand technique. I anticipate the completed workbook will comprise approximately fifty pages. I am confident that this methodological approach will make a significant contribution to string pedagogy, and its principles can be readily adapted and applied to any repertoire for string instruments.

The second component of this professional portfolio is a teaching video related to the content of the workbook. To enhance learning efficiency, the video will be divided into three parts, as in the workbook, following a style similar to that of the online music platform, Tonebase.¹⁷ Following the project's completion, this video can be expanded to cover other topics, ensuring the long-term sustainability of the resource.

Both components of this portfolio will be featured on the website for ParkNa Studio,¹⁸ an online and in-person music studio for violin, viola, and cello. Founded in 2021, the studio is based in North Texas and has served hundreds of students, with numerous gaining admission to

¹⁴ Franz Joseph Haydn, *Concerto in C Major; Hob. VIIb:1—Cello and Piano*, ed. Mstislav Rostropovich and Miloš Sádlo (New York: International Music Co., 1967).

¹⁵ J. Haydn, *Cello Concerto in C Major with Orchestra. Piano reduction* (Moscow: Muzika Publishing House, 2008).

¹⁶ Shinichi Suzuki, *Suzuki Cello School, Vol. 9: Cello Part & Accompaniment Book* (Miami, FL: Summy-Birchard Inc., 1996).

¹⁷ "Online Cello Lessons, Courses, LIVE Workshops, Community & More," Tonebase, accessed September 12, 2025, <https://www.tonebase.co/cello>.

¹⁸ "For Violin, Viola, and Cello," Parkna Studio, accessed September 12, 2025, <https://www.parkna.studio/>.

prestigious music schools such as Juilliard School, Eastman School of Music, Cleveland Institute of Music, New England Conservatory of Music, and San Francisco Conservatory of Music.

CHAPTER 4

PORTFOLIO COMPONENTS

Workbook Component: Tentative Index of Exercises

Part 1

This solo part is also considered the *Exposition* from the perspective of sonata form. The exercises are designed to enhance the balance, agility, and strength of the left hand. Furthermore, the exercises are designed to facilitate a smooth transition from a regular hand frame to an extended thumb position using the second finger and finger replacements.

Exercise 1: Measure 22–26

Exercise 2: Measure 27–32

Exercise 3: Measure 32–36

Exercise 4: Measure 36–39

Exercise 5: Measure 40–44

Exercise 6: Measure 44–47

Part 2

This solo part is considered the *Development* from the perspective of sonata form. The rapid, arpeggiated triplet passage characteristic of this section requires the clear articulation and agility of the underlying harmonic progression.

Exercise 1: Measure 59–63

Exercise 2: Measure 64–67

Exercise 3: Measure 67–71

Exercise 4: Measure 71–78

Exercise 5: Measure 79–80

Exercise 6: Measure 81–83

Exercise 7: Measure 83–86

Exercise 8: Measure 87–89

Part 3

This solo part is considered the *Recapitulation* from the perspective of sonata form. The exercises designed for this section are intended to instill discipline in the thumb position, specifically by developing a ready hand shape for immediate entry following an open string. The transition to the mid-register after an open string can be technically challenging due to the elevated string height. Repeated practice of these chords is therefore crucial for cultivating the necessary muscle memory and ensuring performance stability.

Exercise 1: Measure 97–101

Exercise 2: Measure 102–104

Exercise 3: Measure 105–109

Exercise 4: Measure 110–117

Exercise 5: Measure 118–123

Exercise 6: Measure 124–127

Video Component: Tentative Outline

This section outlines the structure and content of the accompanying teaching video, titled "Left-Hand Framing in Haydn's *Cello Concerto in C Major, Hob. VIIb:1*." The video is designed to serve as a practical companion to the workbook, providing visual and auditory demonstrations of the pedagogical concepts.

1. Introduction

This segment will introduce the central works of the project: the *Haydn Cello Concerto in C Major* and the method book by Contreras, *Framing Your Left Hand*. The introduction will establish the conceptual framework for the video and provide an overview of how to effectively apply and execute the exercises from the workbook. (The duration is approximately 1–2 minutes.)

2. Main Content: Workbook Demonstration

This section will analyze and demonstrate exercises from the Dominic Na Workbook. The primary goal is to illustrate the pedagogical concepts behind each exercise and provide a clear, practical demonstration of their efficient and effective execution. This will serve as the core instructional component of the video, allowing the audience to see the techniques in practice. (The duration is approximately 15–20 minutes).

3. Conclusion

This final segment will provide a concise summary of the video's contents. It will also offer guidance on how the methods and exercises presented can be developed and applied to other pieces of cello repertoire, ensuring the long-term applicability of the concepts beyond the scope of this project. (The duration is approximately 1 minute).

CHAPTER 5

LOGISTICS AND BUDGET

The production of this professional portfolio will be managed with a clear plan for both logistics and budget. The workbook will be digitally released, and the accompanying video content will be filmed in a private studio, which is fully equipped with all the necessary devices. If required, a formal request will be submitted to GAPD for an off-campus location.

All equipment and resources required for this project will be drawn from those already in use for my existing business. Any additional items needed will be purchased out of pocket, ensuring the project remains on schedule and within budget.

Estimated Budget for Equipment

The following is a breakdown of the estimated costs for equipment required for the production of the workbook and video:

- PC and Laptop: \$3,500
- Software: \$1,000
- Cameras: \$2,500
- Microphone and Audio Equipment: \$1,500
- Other Items (e.g., lighting, chairs, stands): \$1,000

The total estimated time for the entire production process is 3–4 weeks.

CHAPTER 6

PROJECT SUMMARY

Overview

This professional portfolio presents a pragmatic pedagogical application of left-hand "framing" for the cello, specifically applied to the first movement (*Moderato*) of Joseph Haydn's *Cello Concerto in C Major, Hob. VIIb:1*. This project defines the "Frame" as the foundational spatial relationship between the first and fourth fingers (or thumb and third finger in thumb position). By establishing a stable frame, cellists can achieve greater precision, reliable intonation, and consistent hand shape, which serves as both a technical foundation and a preventative measure against playing-related injuries.

Workbook Component

The centerpiece of this portfolio is an original creative workbook structured in a "Theme and Variations" style. The workbook utilizes Dr. Contreras's *Framing Your Left Hand* as a primary pedagogical reference, employing double stops to reinforce the physical and conceptual understanding of hand geometry throughout the fingerboard.

The musical text for the Haydn excerpts in this workbook was sourced from the 1963 *Editio Supraphon* urtext edition (edited by Miloš Sádlo / Mstislav Rostropovich), accessed via IMSLP. This edition is in the public domain, as the editorial intervention was based on the original Prague manuscript and does not meet the threshold of originality for modern copyright protection. All excerpts were newly engraved by the author using Sibelius. The subsequent themes, variations, and all pedagogical markings (fingerings and bowings) are the original work of the author.

Detailed list of the workbook:

- Structure: 645 Bars, 49 pages total
- 3 parts total
 - Part 1 – Exposition
 - Part 2 – Development
 - Part 3 – Recapitulation
- 20 Exercises total
 - 6 exercises in Part 1
 - 8 exercises in Part 2
 - 6 exercises in Part 3
- Preface, Glossary, Project Summary, and Bibliography are included

Consistent with the project proposal, the workbook includes the specified number of exercises and meets all predetermined pedagogical objectives. No deviations from the original plan were made.

The workbook may be accessed via the ParkNa Studio official website.¹⁹

Video Component

To support the written text, the portfolio includes a comprehensive instructional video divided into four segments. This media component provides visual and aural guidance, demonstrating the "aural blending" and slow, deliberate practice methods advocated in the workbook. It serves to bridge the gap between the printed exercise and the physical realization of "framing" in performance.

¹⁹ www.parkna.studio/dissertation

Detailed list of the video:

Structure and Duration

- INTRO: 07:35
- PART 1: 17:39
- PART 2: 17:00
- PART 3: 17:18

For the reader's convenience, the video demonstrations have been consolidated into a single file rather than four separate clips.

- Total duration: 1 hour
- Type: MOV File
- Size: 22.54 GB

The final video content exceeds the scope originally outlined in the initial document. While the project's proposal anticipated approximately 20–30 minutes of instructional video across three components,²⁰ the advisory committee and I determined that more extensive, full-length demonstrations would significantly enhance the utility of the workbook for the reader.

The video content may be accessed via the ParkNa Studio official website.²¹

²⁰ See 14 above.

²¹ www.parkna.studio/dissertation

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