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Solutions for Problematic Cello Passages in Selected Chamber Music

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UNIVERSITY OF MIAMI

SOLUTIONS FOR PROBLEMATIC CELLO PASSAGES IN SELECTED CHAMBER MUSIC

By

Chia-Li Yu

A DOCTORAL ESSAY

Submitted to the Faculty of the University of Miami in partial fulfillment of the requirements for the degree of Doctor of Musical Arts

Coral Gables, Florida

December 2015
UNIVERSITY OF MIAMI

A doctoral essay submitted in partial fulfillment of
the requirements for the degree of
Doctor of Musical Arts

SOLUTIONS FOR PROBLEMATIC CELLO PASSAGES IN SELECTED CHAMBER
MUSIC

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Solutions for Problematic Cello Passages in Selected Chamber Music  
(December 2015)

Abstract of a doctoral essay at the University of Miami.

Doctoral essay supervised by Professor Ross T. Harbaugh.
No. of pages in text. (96)

The purpose of this essay is to provide detailed performance solutions for cello in the standard chamber works. The collection of works has been compiled from the career repertoire of Professor Ross Harbaugh, a renowned and accomplished soloist, instructor and founding member of the New World String Quartet and Bergonzi String Quartet. Excerpts of chamber works were chosen based on their technical or musical challenges. Annotations and suggestions of bowings and fingerings are based on Professor Ross Harbaugh’s performance notations. A brief historical description of each piece is provided. This paragraph can be used for program notes by the reader. The essay is intended to provide bowing, fingering, and musical solutions for selected chamber works to aid students, amateurs, and chamber music professionals in their preparation of these pieces.
ACKNOWLEDGEMENT

My deepest gratitude goes to Professor Harbaugh, my advisor, for his constant encouragement and inspiration during the six years I have studied in the U.S.A. He not only suggested this topic but also offered valuable advice and insight that allowed me to complete this project. I am also grateful to my committee members Professor Pamela A. McConnell, Dr. Brian Powell and Dr. Scott Stinson for their feedback and support. In addition, I would like to thank Dr. James Britton for his continuous guidance as I revised this doctoral essay.

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CHAPTER 1
INTRODUCTION

Chamber music is an essential genre in the music field and features equal status and intimate relationships between each player. Originally, it was primarily music for amateurs to play for their own pleasure within the smaller confines of a chamber.\(^1\) The music of the ensemble comes alive only when all the members have similar musical tastes and interpretations. Every position in a chamber music ensemble is important, because each part is unique; every voice has its own role. As a result, communication among ensemble members and the ability to listen and adjust sensibly to one another is constantly needed.\(^2\)

The vast majority of string chamber ensembles call on the cello to provide the foundation for the ensemble’s structure. Haydn considered the role of the cello “as something more than a mere amenable bass to the harmony”.\(^3\) The tuning of chords comes from the root, which is the lowest voice, usually played by the cello. Therefore, the cello takes the responsibility of setting the intonation. In addition, the cello has the widest-register range, and is often called on to play high-register melodies as well as low-register melodies. Because of its extensive range, the cello is often heard as much as the

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\(^3\) Norton, 31.
first violin, and is vital to establishing intonation, ensemble dynamics and musical character.

The bowing and fingering solutions of the selected chamber works in this essay are based on Professor Ross Harbaugh’s performance notations. He points out that the bowings and fingerings are the essential tools for enabling an accurate and proficient performance of passages. The works presented were frequently programmed during the successful careers of the New World and Bergonzi Quartets from 1975 to present. As a result, Professor Harbaugh has been studying this repertoire for many years, and has found successful solutions for the challenging passages which contain technical and musical complexities.

Professor Harbaugh was a founding member of the New World Quartet, which was formed in 1975. Four years later, the quartet won the 1979 Naumburg Chamber Music Competition, one of the most prestigious prizes for chamber music. The quartet recorded fourteen records and CD’s for Vox, MCI Classic and IMP Masters, and CRI. In 1992, the Bergonzi Quartet was formed by four faculty members in the Frost School of Music. These musicians continue to perform all musical genres, including classical masterpieces, Latin works and a number of classical and popular genre arrangements by quartet members and they have also recorded a number of CD’s for Centaur, Fleur de Son, and Musical Heritage. The Bergonzi Quartet tours the U.S yearly, and has been invited to Netherland, Singapore, Korea and Taiwan.

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5 Ross Harbaugh, interview by author, Miami, April 8, 2014.
Professor Harbaugh has served as a judge for the Fischoff Chamber Music Competition, and is an active chamber music performer, who has kept all his chamber music annotations from many years of rehearsals and performances. Besides accurate intonation and rhythm, the bowings and fingerings are essential components for expressively performing a musical passage, making his markings particularly useful. These annotations are not only crafted within a practice room, but during chamber rehearsals and performances with other chamber professionals as they sought the best possible musical interpretation. This essay provides the opportunity for musicians to access these valuable notes.

Justification for the Study

Significance of Studying Chamber Music Excerpts

Chamber music, like orchestra, music theory and music history, is an important subject of musical study. Performance major students are required to rehearse and perform in chamber groups as part of their degree requirements. Learning a new complete chamber work every semester is an ideal plan for every group. It only can be accomplished when all the members in a chamber group have a similar playing ability, and all have the same sense of responsibility to rehearse regularly. However, with the many complexities of college life, rehearsal is frequently postponed. In this case, studying the part individually ahead of the rehearsal is necessary for each instrumentalist in order to have productive rehearsals in the limited time.

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6 Tim Woodall, "Four into One." Strad 124, no. 1481 (September 2013): 55.
7 Christensen, 3.
When preparing an ensemble part, it is invaluable to reference an experienced chamber player’s solutions to challenging passages. While practicing these works alone, it is also difficult to define where the interpretational and ensemble difficulties are. For these reasons a chamber music excerpts book is essential. With the annotated excerpts contained in this essay, chamber musicians will become familiar with their parts in an efficient way. When each member comes to rehearsal with a well-prepared part, groups can focus on interpretation and ensemble balance, dynamics, tonal nuances, and phrasing, instead of using valuable time resolving technically difficult passages.

Broadening the repertoire allows for more performance opportunities. If a chamber group is able to perform different types of works, they will have more opportunities to perform in different occasions, and their audiences will not tire of hearing them. The presenters always ask performers to play certain works, such as Pachelbel’s *Canon in D Major*, not because they really like these works, but because they are not familiar with other works. As a result, chamber groups should be prepared to perform a variety of works for each audience, enhancing the musical appreciation of both performers and audiences.

**Addressing the Scarcity of Chamber Music Excerpts Books for Cello**

There is a vast amount of chamber music commentary in existence. The majority of this literature is related to historical aspects and composition perspectives. They either provide a detailed study for music students and professionals, or they provide a brief description for amateurs and music lovers. A paucity of literature is written for performers, which includes the style of works and performance notes for ensemble. The

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8 Christensen, 2.
existent materials are The Art of String-Quartet Playing, \(^9\) by Herter Norton and Chamber Music: Notes for Players\(^{10}\) by James Christensen. However, there is a lack of chamber music performance guidance for cello alone.

Books and doctoral essays of chamber music excerpts exist on other instruments including: Flute and Piccolo Orchestral and Chamber Excerpts\(^{11}\) and Clarinet Orchestral and Chamber Excerpts.\(^{12}\) The two volumes present a vast repertoire of both orchestral and chamber excerpts, without any preparation advice and annotation. Two doctoral essays both present detailed study and pedagogical analysis for problematic passages. Lynn F. Ledbetter’s "A Compendium of Chamber Music Excerpts (1750-1890) Selected and Organized Pedagogically for the Violin According to Technical Requirements" selects four-hundred and one excerpts from chamber music compositions written between the years 1750 and 1890, categorized by twenty-two technical problems.\(^{13}\) In Kristin L. Pisano’s "Twentieth-Century Chamber Music Excerpts for Clarinet with a Pedagogical Analysis", not only is preparation advice given, but also brief historical information about each work and biographical information on composers.\(^{14}\)

\(^{9}\) Norton.

\(^{10}\) James Christensen, Chamber Music: Notes for Players (Plantation, FL: Distinctive Publication, 1992).


\(^{13}\) Lynn F. Ledbetter, "A Compendium of Chamber Music Excerpts (1750-1890) Selected and Organized Pedagogically for the Violin According to Technical Requirements" (DMA essay, University of Texas at Austin, 1984), 3.

\(^{14}\) Kristin L. Pisano, "Twentieth-Century Chamber Music Excerpts for Clarinet with a Pedagogical Analysis." (DMA essay, University of Miami, 2005), 2.
Statement of Purpose

The purpose of this study is to provide helpful resources for cello students and amateurs concerning problematic excerpts from chamber works, to broaden understanding of the repertoire and to help musicians learn the music more quickly. This detailed study of pedagogical guidance includes solutions for bowings and fingerings, as well as tonal nuances, bow stroke, articulation, and phrasing for the purpose of polishing ensemble playing.

Research Questions

A. Why is Studying Chamber Music Excerpts as Important as Studying Solo Pieces and Orchestral Excerpts?

“Quartet playing means four individuals who must make a unified whole yet remain individuals.”\textsuperscript{15} The soloist is an individual, the one who leads the music, to whom other instruments have to adjust for. On the other hand, orchestra members lose their individuality, because they have to follow the conductor and blend into the section. A good chamber music player needs to be in sync with others and remain an individual at the same time. As a result, the only way to master these two abilities is to study the role and the music meticulously.

Initially, quartet members have to learn their parts independently. \textquotedblleft They should familiarize themselves first, then start rehearsing together and discover the problems, before returning to solo practice again. It is a constant step-by-step procedure.\textquotedblright\textsuperscript{16} There is a lot of work that needs to be done before the first rehearsal: studying the background of

\textsuperscript{15} Norton, 18.

\textsuperscript{16} Woodall, 55.
the piece, understanding the form and structure, listening to recordings and videos, and figuring out the bowings and fingerings in the problematic passages. Therefore, individual study is an essential element to move toward the next level of ensemble playing.

**B. In Addition to Bowings and Fingerings, What Kinds of Performance Techniques are Needed in Order to Refine Chamber Music Performance?**

The bowings and fingerings are the essential tools for enabling an accurate and proficient performance of passages. However, a mature performer will cover more details to polish the playing skill, making the music as perfect and effective as possible.

For example, discovering the appropriate tempos and dynamics, which are the basic elements utilized to make the ensemble play together and establish a well-balanced sound. Furthermore, the detailed interpretation techniques such as appropriate phrasing, tonal nuances, bow stroke, bow distribution, texture, intonation, articulation and cueing should be noted and marked in the music. Besides unanimous agreement among the performers on the written markings, a consensus must be achieved among the performers that accommodates the limitations and nuances of their individual instruments.

“The first requisite for a good ensemble is that each player shall have the sense of the whole.”\(^{17}\) Except for focus on these solo playing techniques, understanding the other parts is equally important. Examining the score carefully to indicate when a significant cue occurs in other parts, or where a rhythm and melody played by other parts needs to integrate the cello. Since chamber music is an ensemble work, it needs constant listening and adjusting to play sensibly.

\(^{17}\) Norton, 22.
CHAPTER 2
LITERATURE REVIEW

There is a scarcity of chamber music excerpts for the cello. The related literature pertains to history, orchestral cello excerpts, chamber music excerpts (for other instruments) and ensemble rehearsal practices.

The History of Chamber Music

Historically chamber music referred to a group of two to ten musicians playing different instruments with individual parts, all of which could fit into a smaller space, such as a “chamber.” Ensemble playing, however, has a longer history tracing back to 600 BC. For instance, the Bible speaks of “the cornet, flute, harp, sackbut, psaltery, dulcimers, and all kind of music”, most likely referring to early ensemble playing.

Along with the evolution of the musical world, ensemble playing has been categorized within different genres in different historical times. Before the seventeenth century, ensemble performance included singers in an accompanying role or served as integral components within court or church. It took centuries to develop into the modern forms of chamber music with which we are familiar.

In the Classical era, chamber music flourished because of the amateur middle-class musicians. They play chamber music for their own pleasure at home. This necessitated the writing of music that was simpler both in style and in technical demands.

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18 Headington, 1.
19 Daniel. 3:15 (King James Version).
20 Headington, 3.
than earlier pieces written for professionals.\textsuperscript{21} The modern form established by Joseph Haydn in his middle period string quartets has the same four-movement pattern as in the symphony. The expanded proportions and expressive range of these quartets set the pattern for later quartets and have lasted two centuries since.\textsuperscript{22}

In the nineteenth century, with the advanced design of piano and stringed instruments, chamber music moved from private palace chambers into concert halls. Additionally, the collapse of the aristocracy forced musicians to make a living on their own. The major audiences of classical music concerts became the middle-class public. More genres of music were established in order to attract more audiences. Chamber music is one of these.

**Orchestral Excerpts on Cello**

Music literature excerpts are a gathering of musical examples from various chamber or orchestral works, edited by an experienced cellist. Orchestral excerpt books are more common compared to the limited volumes of chamber music excerpts published. Leonard Rose’s *Orchestral Excerpts from the Symphonic Repertoire, for Cello*\textsuperscript{23} is one of the earliest and most well-known resources for orchestral excerpts. This collection has three volumes, listing famous excerpts from classic orchestral pieces. The bowings and fingerings are included; however, there are no annotation or further information among the works.

\textsuperscript{21} Headington, 25.

\textsuperscript{22} Burkholder, Grout and Paliska, 542.

As a result of increased competition for orchestra positions in current years, more and more excerpt books filled with practice advice are being published. In the realm of cello, Glenn Garlick’s *The Big Cello Book* \(^{24}\) is a standard model of excerpt books in the English world. *The Big Cello Book* is an orchestra audition preparation book, compiling the challenging excerpts from often requested repertoires. In addition to the suggested bowings and fingerings, the book provides the recommended tempo and detailed pedagogical guidance for each excerpt. The advice and tips for playing in the auditions are provided as well.

Outside the English-speaking cannon, another book combines the program notes and excerpts presented by MinHsien Pan: *Orchestra Excerpts for Cello: Key Points and Difficult Excerpts* published in Chinese.\(^{25}\) The collection has six volumes, includes two hundred and fifty orchestral works from a variety of genres, such as symphonies, concertos, operas, ballets and Chinese music style orchestral pieces. The excerpts are focused on the techniques, musical interpretation, and rhythm, providing bowing, fingerling and the conductor’s rhythmical cue signs in order to practice along with the beat. Aside from the excerpts, the collection provides background of the pieces, compositional structure, and translates the musical terms into Chinese.

An existing doctoral essay *A Detailed Study of Selected Orchestral Excerpts* by Susan Moyer focuses on the technical aspects of the excerpts.\(^{26}\) She asserts there is a lack

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\(^{26}\) Susan Elizabeth Moyer, "A Detailed Study of Selected Orchestral Excerpts for Cello," (DMA essay, University of Miami, 2009).
of available materials containing instructional assistance for students. Moyer listed fifteen of the most requested audition excerpts by a survey, and provides pedagogical guidance for each excerpt. She also compiled and compares the fingering and bowings by five principal cellists from five major orchestras in the United States for comparison. Moyer believes each excerpt should consider multiple stylistic facets, rather than only focusing on notes.27

**Chamber Music Excerpts for Other Instruments**

Two doctoral essays in chamber music excerpts are available for clarinet, both focusing on technical aspects. Barbara Specht’s *Selected Chamber Excerpts for Clarinet Taken from the Repertoire of the Mixed Wind Quintet* provides excerpts and performance annotations from the woodwind quintet repertoire.28 Specht states that clarinet parts in the wind quintet repertoire are quite difficult and it is important that the clarinetist is able to perform these works.29 The excerpt material was chosen with two considerations: the interest of the excerpt and the difficulty level of the passage. Performance annotation is provided, presenting solo performance problems and also ensemble issues of intonation, rhythm, expressive markings and balance. Brief background, the date of composition and premiere are provided as well. Furthermore, a discussion of the role of the clarinet in regard to that particular passage in the piece is also included.

*Twentieth-Century Chamber Music Excerpts for Clarinet with a Pedagogical Analysis* by Kristin Pisano provides pedagogical analysis of six twentieth-century

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27 Moyer, 18.

28 Barbara Ann Specht, "Selected Chamber Excerpts for Clarinet Taken from the Repertoire of the Mixed Wind Quintet." (DMA essay, The Ohio State University, 1996).

29 Specht, 20.
chamber works for clarinet. Brief historical information about each work, as well as biographical information on composers, are included. Pisano asserts that young clarinetists should familiarize themselves with twentieth-century woodwind chamber works. As a result, he believes this study will enable students to practice fundamental aspects of clarinet performance. These include articulation, intonation, phrasing, breathing, texture and fingerings within the context of this literature. Pisano also emphasizes the importance of maintaining the player’s individual approach and individual practice. He asserts that chamber music is an intimate form of music making, and believes chamber music demands much more independence and endurance than playing in a large ensemble.

There is a lack of literature devoted to chamber music excerpts for stringed instruments. *Flute and Piccolo Orchestral and Chamber Excerpts* and *Clarinet Orchestral and Chamber Excerpts* are published by the Australian Music Examinations Board. The two literatures present a vast repertoire of both orchestral and chamber excerpts, without any preparation advice and annotation.

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30 Kristin L. Pisano, "Twentieth-Century Chamber Music Excerpts for Clarinet with a Pedagogical Analysis." (DMA essay, University of Miami, 2005).

31 Pisano, 28.

32 Pisano, 8.

33 Pisano, 1.

34 Australian Music Examinations Board.

35 Australian Music Examinations Board,
Ensemble rehearsal technique is a popular topic for discussion. Many articles and books contain advice by experienced string players. In this literature, individual study is the topic almost every author mentions.

Professor Ross Harbaugh’s article “Ensemble: An Owner’s Manual” lists strategies for seven problems which all-level ensembles might encounter during rehearsal.\(^3\) He states that some of the problem solving should be done ahead of the rehearsal. For example, the strategy for solving the intonation problem is to understand the instrument’s role in a chord. Determining whether the individual player’s voice is placed in the root, third, fifth, or seventh should be a process of self-discovery. In addition, individual study of the score can also clarify which voice is more important in a given passage. Reading the historical setting of the work is also helpful to grow a mature interpretation.\(^3\)

In Herter Norton’s *The Art of String Quartet Playing*, she offers useful advice on all aspects of quartet playing.\(^3\) She includes an overview of musical styles, practice strategies, and detailed guidance of interpretation by demonstrating the ensemble techniques from selected scores. Norton discusses that a good ensemble allows each player to have a sense of the whole, and points out the importance of each part, even the

\(^{36}\) Harbaugh, 81.

\(^{37}\) Harbaugh, 82.

\(^{38}\) Norton, 9.
inner line of harmony. She also emphasizes that quartet playing requires just as much vitality of interest as any solo performance.\footnote{Norton, 24.}

The importance of maintaining the player’s individual voice, which is the result of individual study, is also mentioned in David Blum’s \textit{The Art of Quartet Playing: The Guarneri Quartet in Conversation with David Blum}.\footnote{David Blum, \textit{The Art of Quartet Playing: The Guarneri Quartet in Conversation with David Blum}. (New York: Random House, 1986).} The author makes a metaphor for quartet rehearsing: “It is like four sculptors working away at a stone from all sides, while keeping sufficient distance to envisage the whole.”\footnote{Blum, 7.} He also states that “The players’ technical command and level of musical development allow them to enjoy a measure of freedom at the heights, to disport with the music—not arbitrarily and irreverently, but creatively and imaginatively, in the spirit and at the service of the artwork.”\footnote{Blum, xi.} The book clearly presents the thoughts of four Guarneri quartet members on different aspects of quartet playing, including an individual interview and detailed performance practice of Beethoven’s \textit{Quartet No. 14 in C-sharp Minor}.

Some practical notes are provided in James Christensen’s \textit{Chamber Music: Notes for Players}. Christensen discusses eighteen rules to establish a solid chamber group, step by step.\footnote{Christensen, 5.} He also states that to master a part and the optimal use of rehearsal time requires separate study by each player; in addition, players should know the work as a
whole, not just one instrumental part. His purpose is to encourage a wider performance of these works at home and in private, the place where chamber music began.\textsuperscript{44}

In the pedagogical aspects, many articles emphasize the importance for quartet coaches to teach groups how to think rather than just how to play. Margaret Berg’s article \textit{Promoting “Minds-On” Chamber Music Rehearsals} provides four strategies to help chamber music students become more independent and understand the works they learn.\textsuperscript{45} Berg asserts that students should be engaged in “minds-on rather than hands-on learning” via assistance from teachers.\textsuperscript{46} She states that teachers should give decreasing assistance during the rehearsal cycle, which teaches students how to think rather than how to play. This can help maximize student learning and engagement when playing in a chamber music ensemble and at the same time foster an interest in lifelong chamber music participation.

Tim Woodall’s article “Four into One” interviewed five distinguished chamber music players, examined their thoughts on chamber music and explored their coaching strategies.\textsuperscript{47} Edward Dusinberre, who is a violinist in Takacs Quartet states that he encourages ensembles to improve as much as possible, however, it is also important to develop a range of skills that will stand students in good stead later on in different areas of the profession. For example, he encourages groups not to spend too many hours working together, but rather to be efficient in their use of time. And he teaches them how

\textsuperscript{44} Christensen, 35.

\textsuperscript{45} Margaret H. Berg, "Promoting "Minds-on" Chamber Music Rehearsals." \textit{Music Educators Journal} 95, no. 2 (December 2008): 49.

\textsuperscript{46} Berg, 51.

\textsuperscript{47} Tim Woodall, "Four into One." \textit{Strad} 124, no. 1481 (September 2013): 56.
to organize the structure of a rehearsal. As another violist Radim Sedmidubsky said “I am not there to tell them how to interpret, but I lay out the options for them.”

Gunter Picher points that the first thing a new formed quartet has to learn is to listen and react to each other. This is more a question of listening than playing. He also states that an equal balance between personal study and group rehearsal is strongly recommended.

Another doctoral essay that considers coaching strategies and rehearsal techniques is Dorianne Cotter-Lockard’s *Chamber Music Coaching Strategies and Rehearsal Techniques that Enable Collaboration.* She states that “an important goal of the interpretative process is to develop a deep, empathetic relationship with the composer”. She also asserts that a major goal of the coaching process is to help students “embrace the interpretive process . . . as artists”. As Cotter-Lockard said “Chamber musicians are like actors in a play,” chamber players must interpret their own lines and make it attractive, in order to have a resonance with the audience.

Aside from the advice of individual practice and teaching strategies, a lot of articles and books focus on various technical aspects of quartet playing categorized by several concerns based on different criteria. Table 2.1 lists the technical criteria from four sources:

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48 Woodall, 58.

49 Woodall, 60.


51 Cotter-Lockard, 88.

52 Cotter-Lockard, 95.
In Blum’s book, each of the Guarneri Quartet members describes their experience of solving the following rehearsal technique problems: Bowing, dynamics, intonation, note lengths, pizzicato, tempo, texture, tonal nuances and vibrato. Blum states that there is nothing more beautiful than a vibrato shaped with artistic sensitivity, however, it is the most difficult to analyze or teach.

Norton’s *The Art of String Quartet Playing* also focuses on detailed technical aspects in the second half of the book. She includes dynamics, intonation, note lengths, pizzicato, phrasing, tempo, texture, and vibrato. Norton emphasizes the importance of tempo by suggesting that “the tempo binds rhythm and phrase and harmony in continuous progress to a whole, therefore it controls the life of a piece”. She asserts that the dynamics of chamber music are difficult, because they are purely relative. Not only are the dynamics relative between each voice, but they are relative to the entirety of the music.

Seven common rehearsal problems listed by Professor Harbaugh in his article “Ensembles: An Owner’s Manual” include five technical aspects: cueing, dynamics, note lengths, phrasing, and tempo. He suggests that each instrumentalist checks for appropriate bow placement, direction, and contact point for each dynamic, in order to

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53 Blum, 26.
54 Blum, 35.
55 Norton, 50.
56 Norton, 86.
57 Harbaugh, 81.
sound uniform. Six aspects included in Cotter-Lockard’s dissertation are bow stroke, cueing, dynamics, phrasing, tempo, and vibrato.\textsuperscript{58}

*Table 1. A comparison of technical aspects by Blum, Norton, Harbaugh and Cotter-Lockart*

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\textsuperscript{58} Cotter-Lockard, 106.
CHAPTER 3

METHOD

For performance major students, the time spent in the practice room for chamber music is often less than for orchestral excerpts, and certainly less than for solo pieces. The importance of individual practice of chamber music has been unfortunately minimized. To address this concern, this essay offers essential information performers will need when they practice chamber music individually.

Procedures for Answering the Research Questions

This entire essay revolves around two main questions: “Why is studying chamber music excerpts as important as studying solo pieces and orchestral excerpts?” and “In addition to bowings and fingerings, what kinds of performance techniques are needed in order to refine chamber music performance”? The first question has been posed and answered in the first and second chapter. To answer this question, existing literature, doctoral essays and journal articles are viewed and presented in the chapter two. The second question has also been posed and answered in both first and second chapters. The ideas will be further applied in the performance practice of chapter four. The author will discuss in narrative detail tempo, dynamic balance, phrasing, tonal nuances, bow stroke, bow distribution, texture, intonation, cueing and articulation (combining note lengths, pizzicato, and vibrato).
Data Collection

The data in this essay contains problematic passages found in standard chamber music literature, categorized by string quartets, piano trios, and piano quintets. Each excerpt was chosen because of its unusual difficulty in fingerling or bowing, for which Professor Harbaugh developed an especially successful solution. The excerpts are ordered by the composer’s names alphabetically and by the opus number.

These works were compiled by Professor Ross Harbaugh in consultation with the author. The string quartets are from works frequently programmed by New World and Bergonzi Quartets from 1975 to present. The repertoire was originally chosen with balanced programming in mind, as well as interesting and challenging music that was either chosen or suggested by concert presenters. The trios and piano quintets were also programmed by the quartet members in consultation with the guest performers and presenters.

Material Analysis

This essay focuses on excerpts from thirteen chamber music master pieces. Each excerpt represents the most difficult and problematic bowing, fingering, or musical challenge of the work.

Each excerpt presented begins with a brief historical description, followed by specific solutions and pedagogical analyses. To acquire the historical genesis for each work, the following accounts were consulted: Christensen’s Chamber Music: Notes for Players, Cohn’s The Literature of Chamber Music, Headington’s The Listener’s

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59 Christensen.

Guide to Chamber Music\textsuperscript{61} and Keller’s Chamber Music: A Listener's Guide.\textsuperscript{62} In consultation with Professor Harbaugh, the essay’s pedagogical guidance begins with the passage’s main technical issues, including bowing, fingering, intonation, vibrato; and ensemble issues, such as dynamic balance, tonal nuances, bow stroke, articulation, texture, tempo, phrasing; as well as cueing, and other aspects as they apply.

**Material**

The material contains the scores and excerpts from individual cello parts. All the materials are in the public domain, so obtaining permission from the publisher is unnecessary. To ensure better visual quality, all the music presented in this essay was transcribed by Sibelius.

\textsuperscript{61} Headington.

\textsuperscript{62} Keller.
CHAPTER 4

PRESENTATION OF THE EXCERPTS

Ludwig van Beethoven: String Quartet in F minor, Op. 95 (1809)

The F-minor quartet is the last string quartet in Beethoven’s middle period; after this piece, he did not work in this genre for more than a decade. The name “Quartett Serioso” is inscribed on the manuscript, which is the only time he named a quartet. He also used in the tempo marking of the third movement “Allegro assai vivace ma serioso.” 63 The quartet lasts just twenty minutes, which is relatively short compared to the others in Beethoven’s middle and the late period. However, the work is distinctive for its contrasting character and various tempo changes, which seem to foreshadow the multi-movement quartets of the late period. 64


The quartet starts with an energetic theme, in which the four voices are rhythmically unified. Beginning on the string, down-bow, creates a clear and powerful sound for the opening four notes. Using a vertical *spiccato* and remaining at the frog gives the

63 Keller, 61.

64 Headington, 47.
following eighth-notes focused intensity. A compact bow stroke should then be used for the following three measures. When the phrase comes to the end at m. 5, playing the separate Cs at the frog provides a clear and energetic character.

Example 2. L. Beethoven: *Quartet in F minor, Op. 95* mvt. 1, mm. 10-17.

In mm. 10-12, the cello is exposed in the fast ascending arpeggios, which are played over a sustained chorale played by the violins and viola. Because of the marked *decrescendo*, the runs must end quietly although the register goes up, which can be achieved by using less bow and moving the contact point closer to the fingerboard. Linking the quarter note in the first beat of mm. 14 and 15 achieves a better bow distribution.

Example 3. L. Beethoven: *Quartet in F minor, Op. 95* mvt. 1, mm. 90-103.
The contrasting theme consists of a quarter note that is tied into a triplet. The mood of this theme should have relaxed feel; however, the quarter notes tend to be held too long, which delays the triplet, making it sound like two sixteenths at the end of the second and fourth beats. To play the rhythm accurately, it is important to think of a long line, with strong forward motion, and to play the triplet earlier than feels comfortable. The fingering in mm. 99-100 avoids the half position, giving the passage a milder tone quality.


The second half of the main theme in the *allegretto ma non troppo* movement is introduced by the cello, followed by the viola. When the theme returns an octave higher in mm. 121-127, in an echo of the opening, the atmosphere is more calm and pure. Slowing the bow and minimizing the vibrato will focus the sound. At m. 126, staying in thumb position by string-crossing ensures playing in tune and avoids the awkward register of the A string.

Example 5. L. Beethoven: *Quartet in F minor, Op. 95* mvt. 2, mm. 151-156.

At m.154, the shift from F-sharp to D is very challenging to play in tune and with a pure sound. This can be achieved by employing an old finger shift (shift on the first finger to B
before placing the third finger on D). Another solution is to go to the high register earlier in m. 151, and to stay on the D string for the upcoming D, which is in the same position on the A string. The trill in m. 155 consists of D-E-D-C-sharp-D; repeat the first two notes of the trill if possible. The following F-sharp requires a steady vibrato and longer bow to emphasize the highest note of the passage.


The Finale is introduced by a *Larghetto* beginning on an off-beat, and all the voices present the swell in unison. At m. 5, the beginning figure appears again in the second half of the first beat. To emphasize this new beginning, separate the sixteenths from the following E with a slight breath, which indicates the new phrase. The second phrase is more intense than the beginning because of the richer harmonies and wider register between the different voices; taking another down-bow at G helps to provide more intensity.

Example 7. L. Beethoven: *Quartet in F minor, Op. 95* mvt. 4, mm. 71-82.
In mm. 71-77, the cello part is challenging due to its high register, while the other voices are even higher with similar melodic figures. Breaking the slur in mm. 76 and 77 frees the sound and facilitates the *crescendo*. This section reaches its climax with off-beat *sforzandos*, in dynamic unison throughout the ensemble in mm. 80-82.

Example 8. L. Beethoven: *Quartet in F minor, Op. 95* mvt. 4, mm. 94-104.

For the cello solo from m. 94, the *sforzandos* can be emphasized with vibrato; changing the bow in the *sforzando* notes makes it easier for them to speak loudly. In the following four measures, the cello starts the arpeggio and passes it over to the inner voices. When using the upper fingerings, it is suggested to vibrate the top note C of the arpeggio, so the C in the A string can sound warmer. In mm. 102-104, the alternative fingerings below start on the D string, and maintain the same position all the way through. The *subito piano* is tricky in m.104. It is easier to play with an up-bow at the tip, which is achieved by pulling the down-bow to the tip during the preceding note F.
Alexander Borodin: String Quartet No. 2 in D Major (1881)

This quartet is one of the most well-known compositions by Borodin, who composed the work in the summer of 1881. The romantic work is dedicated to his wife as a present to mark the twentieth anniversary of their engagement. Borodin was a chamber music lover, who played cello in the chamber music gathering. His understanding of the instrument is reflected in the cello moments, during which the cello really stands out. The Nocturne of the third movement is often performed separately, and it has been adapted to different arrangements, including the musical *Kismet*. The quartet received a warm reception from the public after its premiere, and it substantially influenced Debussy and Ravel when writing their quartets.


The quartet opens with a joyful and lyrical theme played by the cello. Starting up-bow and slurring the whole measure gives this melody more unity while also leading to the next measure. The upper fingering keeps the passage on the same string, which produces a more unified sound. To avoid the continuous large interval slides, reach the fourth beat F-sharp in m. 2 by extending the fourth finger. In m. 3, hold the first B longer to make the time between the large intervals sound more natural.

65 Keller, 86.

66 Christensen, 39.
Example 10. A. Borodin: *Quartet in D Major, Op. 10* mvt. 1, mm. 56-60.

In this passage, the cello and the first violin play in octave unison. Starting in the upper half of the bow and keeping each bow stroke short maintains the *piano*. Because of the quiet dynamic, the accents should be emphasized only with vibrato rather than by pressing the bow. This also applies to the A after the *crescendo* in m. 58.

Example 11. A. Borodin: *Quartet in D Major, Op. 10* mvt. 1, mm. 75-80.

The cello is again featured in the subordinate theme in A major. The challenge in this passage is that the rhythm of an eighth note and two sixteenth notes tends to sound like a triplet because of the ties. To solve this, the quarter and the tied eighth note should be subdivided to make sure that it maintains its full value. The register for this passage is awkward for the cello; employing an even vibrato on the long notes helps to add warmth to the sound.

Linking notes in mm. 134 and 138 avoids unwanted accents. Breaking slurs in mm. 136-139 helps the bow distribution and avoids awkward string crossings in one bow. To facilitate the crescendo that begins in m. 141, a slow bow should be used with no vibrato on the B until the viola plays the same figure, which is in the fourth beat of m. 142.


![Example 13](image1)

The subordinate theme returns again, in octave unison with the first violin in the original D major. In m. 256, shifting down and placing the thumb on D helps the intonation of the high E by extending the third finger, instead of sliding to it. To produce a good quality of sound in this high register, keep the bow close to the bridge and use more bow to relax the sound.


![Example 14](image2)

The arpeggio is a cello solo while the other voices hold a D major chord for three bars. Since the melody line by the violins is not finished until m. 300, the diminuendo in m. 296 can be delayed. To make the sweet ascending arpeggio as expressive as possible, rich vibrato and a steady, flexible bow hand should be used. In the final gesture, the ensemble should pause before the last chord, and then ease into the ending note with non-vibrato.

The scherzo contains two contrasting subjects, one with a lively character and the other with a lyrical one. The movement is written in sonata-form rather than an ordinary scherzo ABA format. In mm. 21-24, the separate bowing in the third beat maintains the same effect with its original marking; however, it is easier to play in a rapid tempo.

Playing the staccatos on the string with a short bow stroke and lengthening the first note of the slur helps to emphasize the accent and aids the bow distribution. Starting every figure in thumb position actually relaxes the hand by keeping the fingers in closed position.


The Nocturne opens with a justifiably famous and tender melody by the cello, a melody that repeats throughout the movement in different voices and textures. The tuneful love
song requires rich vibrato and song-like phrasings. In m. 5, making the shift with a little slide on the A string is expressive; however, if making the long shift twice in a row seems too active, using a string-crossing is another option. Based on the simple “large interval takes more time” rule, lengthening the A-sharp to emphasize the distance of the interval better imitates vocal technique. In this solo section, the accent markings should be understood as expressive notes rather than louder notes. Giving those accented notes a richer and wider vibrato gives them the attention they deserve.


The passage is rhythmically unified with the first violin. To facilitate the crescendo on the ascending sixteenths, keep the bow on the string and then lengthen the top note B with wider vibrato. The following eighth notes in mm. 97-99 also require using more bow and a wider vibrato.
Example 18. A. Borodin: *Quartet in D Major, Op. 10* mvt. 3, mm. 503-531.

This is the subordinate theme of the Finale. The solo is handed off by the first violin, and again the cello has the opportunity to present the theme. The challenge of the passage is the intonation, because of the high register and numerous, rather unpredictable accidentals. Staying in the thumb position in mm. 515-520 helps to prevent frequent shifts. In this range of the cello, the sound tends to be thin, adding more vibrato on every pair of notes enhances sense of security, and provides a warmer sound.

**Johannes Brahms: Piano Trio No. 1 in B major, Op. 8 (1854/1889)**

Two dissimilar versions of the *Piano Trio* exists, both published with Brahms’ permission, which is a rare occurrence. The first version was completed in 1854 and published in the same year, as his first official chamber work. Thirty-five years later, after Brahms had become an internationally known master composer, he decided to revise the piece when his new publisher planned to print a new edition of his early works.67 The revision is condensed to two-thirds length of the original, with an increased

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67 Keller, 90.
intensity and richer texture, while still reflecting the composer’s young genius. Although both editions are accessible today, the latter is more commonly performed.

Example 19. J. Brahms: *Piano Trio in B major* mvt. 1, mm. 4-20.

After a short introduction by the piano, the cello presents the theme of this sonata allegro movement. Since the delicate tonal theme is accompanied by the piano without the violin playing, the main challenge is the intonation. In mm. 16-17, to avoid the round trip shift down and up, it’s recommended to cross to the B-natural on the D string and then simply extend the third finger to reach the high B with an old finger shift. The bowings in this opening theme can be varied as long as the passage is *legato* and flowing. In the bowings above, the two up bows in m. 9 unify the bow speed; a pause should still be employed to give the impression of separate bows.

Example 20. J. Brahms: *Piano Trio in B major* mvt. 1, mm. 145-149.

This melody is passed from the violin to the cello, while the piano continues the stormy figure under the melody. It is difficult to verify the position of notes in such a high register. Minimizing the hand movement by keeping the fingers in the closest position
and shifting mostly in half step helps to secure the intonation. To reach the F in m. 147, replacing the B with the thumb during the rest makes it easier to find.


The stately first theme introduces the coda section. In mm. 275-277, the cello sings this very intimate melody in response to the violin. Since the cello is all alone, the cellist should take all the time necessary to fully express the *ritardando*. Although the four notes ascend, a *decrescendo* should be made from the B to D-sharp as the music evanesces. The following passage continues the noble character of the movement, contrasting with the energetic ending. Use a steady compacted bow and even vibrato to play the passage as smoothly as possible.


The cello alone introduces the scherzo movement in this unaccompanied solo. The spiccato must be even and extremely clear, while maintaining the dynamic of *piano*. Starting on the G string offers a softer sound. The challenge of this movement is for players to synchronize their passage work, since groups of short notes tend to rush;
therefore, feeling the pulse of the rhythm is imperative. For example, in the opening passage, adding a slight accent on the downbeat helps to establish the pulse. In m. 3, taking two up-bows allows the passage to end with a down-bow, which allows the last note to ring as the left hand applies vibrato.

Example 23. J. Brahms: *Piano Trio in B major* mvt. 3, mm. 32-43.

This G minor melody is the second theme of the slow movement, presented by the cello with piano accompaniment. It is worth mentioning that Brahms rewrote most of the third movement in the 1898 version, keeping only the first theme and the reprise of the theme in the end from the original. In the new version, this sentimental second theme and its development entirely replaced a fast section of the old version. To play this section expressively, the cello should take time to cultivate each note and phrase as if playing a solo piece. From m. 40, separating the slurs frees the sound in a high register as the melody approaches its climax.

Example 24. J. Brahms: *Piano Trio in B major* mvt. 4, mm. 1-4.
The Finale opens and ends in B minor, which is very rare because a major-mode work rarely ends in the minor. Among the few examples from the standard repertoire are Haydn’s *String Quartet Op. 76* and Mendelssohn’s *Italian Symphony*. There are two potential bowings for this dotted rhythm theme. In the upper bowing, starting in the upper half of the bow, then playing the dotted rhythm at the frog gives the figure a more connected feeling. The lower bowing provides an energetic opening by taking separate bows in the dotted rhythm at the frog. Both interpretations are worth trying and discussing with the ensemble.

Example 25. J. Brahms: *Piano Trio in B major* mvt. 4, mm. 80-87.

This passage consists of three repeating phrases, which ascend and arrive at the E in m. 87. The cello and piano are in octave unison in mm. 80 and 82; thus the intonation is a central issue for the strings. The minor third from E-sharp to G-sharp is very challenging in m. 82; reducing the vibrato in these two notes greatly helps the finger to find the note more easily. Breaking the bowing in mm. 85-86 provides more volume in a low register and emphasizes the dotted quarter notes.

**Johannes Brahms: Piano Quintet in F minor, Op. 34 (1864)**

The piano quintet was completed by Brahms in the summer of 1864, after attempting the original as a string quintet and a two piano version (published as Op. 91).
By this point, he was already a master chamber music composer; however, this was his first attempt at this instrument setting, and also the last. In the final version of the piano quintet, which combines the strings-only and the keyboards-only forms, the ensemble finds its balance by equally addressing their parts, making the work full of rich textures and harmonies. Also, the accessible musical style and technique requirement has over time been popular among all level of players and listeners.

Example 26. J. Brahms: Piano Quintet in F minor mvt. 1, mm. 68-81.

In mm. 68-73, the cello presents the melody with an accompaniment from the first violin and the piano on F-sharp major. The printed bowing indicates Brahms’ phrase concept. However, taking more bows helps the cello to stand out from the active piano part. In the slurred melody of mm. 74-79, the strings unify rhythmically. It is important to note that when the cello is in rhythmic unison with the other voices, the phrasing may Occasionally be best served by avoiding exactly the same bowing. This is demonstrated in mm. 75 and

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69 Christensen, 193.
79, where the C-string passages require extra care from the cellist to avoid scrapes and barks (doesn’t speak).

Example 27. J. Brahms: *Piano Quintet in F minor* mvt. 1, mm. 264-275.

The strings dominate the major key section from m. 261, which is a short release from the tragic mood. In this very intimate section, the cello sings out with the first violin and must be as legato as possible. Applying the steady slow bow and relaxing the arm of the bow hand, while also using the fingering which minimizes the movement of the left hand, will greatly help to produce this smooth passage.


The first violin and the cello start their duo in rhythmic unison in m. 83, while the piano serves as an accompaniment. Separating the sixteenth notes allows every measure to have the same bowing and phrasing. The sixteenths should be played on the string in the upper half of the bow because the slurs are over the staccato marks in the original
marking. The grace note in m. 92 should start on the downbeat and can be treated like a reverse dotted rhythm, which rhymes with the downbeats of mm. 83-84.

Example 29. J. Brahms: *Piano Quintet in F minor* mvt. 4, mm. 41-54.

In the Finale movement, after a gloomy introduction, the cello plays a plaintive Hungarian melody which is the main theme of the Allegro. The theme contains two contrasting characters, one lively with staccatos, the other connected with legatos. For the first character, the staccatos should be articulated clearly by slightly lifting the bow on the up-bows. In the second character, which starts in m. 49, the hairpin is enhanced by vibrating the top notes to emphasize its intensity.

Example 30. J. Brahms: *Piano Quintet in F minor* mvt. 4, mm. 152-161.

The main challenge of this passage is to play extremely smoothly. Linking the bowing and maintaining the fingers in the closest position is one of the requirements. Also, lifting or lowering the right arm before string-crossings helps to smooth the passage. For the repeating phrase in mm. 157-161, a softer ending can be produced by staying on the D string in the second repetition.
Johannes Brahms: String Quartet No. 2 in A minor, Op. 51, No. 2 (1873)

This quartet, which was completed at a summer resort in Tutzing during 1873, is paired with the Op. 51 No. 1, which was completed in the same summer. Brahms regarded the string quartet as a particularly important genre. Before he published Op.51, he had destroyed many of his string quartets. As a result, the piece is well-developed and organized in the structure, and is filled with expansive lyricism and diverse musical style.

Example 31. J. Brahms: Quartet in A minor mvt. 1, mm. 18-31.

The half-note syncopation starts on the second beat of m. 20, with the notes falling into pairs. To help with the phrasing of the first violin, slightly accent the D-sharp and E, followed by relatively calm E’s in the next measures. The same process also applies to the following four measures. At m. 26, the passage begins to climb, and reaches the first climax of the movement in m. 30. Begin this passage at a slightly lower dynamic to clarify the musical intention. The dramatic low C in m. 30 requires a good sound quality; using a slower bow and angling the bow tip toward the bridge helps to establish the strong sound.

70 Christensen, 43.
Example 32. J. Brahms: *Quartet in A minor* mvt. 2, mm. 1-8.

The second movement opens with an A major lullaby by the first violin, while the cello and viola play eighth notes in unison to maintain the rhythmic flow. Instead of holding chords to support the melody, the lower voices supply an undulating eighth note counter melody which outlines the harmony. The last note of every group of four provides melodic interest by using a color tone, and thus should be brought out with vibrato and time-taking. Vibrating every note and relaxing the bow hand facilitates the legato of the string crossings and bow changes. In m. 6, the downbeat *piano* in the cello part should be on the G-sharp in order to remain unified with the other voices.

Example 33. J. Brahms: *Quartet in A minor* mvt. 2, mm. 8-13.

The first climax of the movement occurs in mm. 11-12, with a diminished arpeggio introduced by the viola, which gives a new color to the relatively stable A major tonality. The passage starts to build the volume and direction from the second half of the third beat in m. 8, stated by the cello. Using a slower bow and wider vibrato on the long notes increases the tension of the passage. The slurs in mm. 12 and 13 can be broken to facilitate the powerful *forte* sound.
Example 34. J. Brahms: *Quartet in A minor* mvt. 2, mm. 34-38.

In this passage, the cello plays a leading role while the other voices sing a chorale in a close register. The alternative bowings and fingerings are as follows:

Example 35. J. Brahms: *Quartet in A minor* mvt. 2, mm. 34-38.

In m. 35, the large interval of the first two notes requires more time for setting the low D. The phrase continues all the way through to m. 38, with the upper three instruments taking over the moving line in m. 36 while the cello rests. The music starts to calm down from the highest note in the cello part in m. 37; thus, taking two bows allows the *ritardando* to be achieved more comfortably.


The furious B section opens in m. 43, featuring the violin and cello in canon, while the inner voices create a stormy tension with forte tremolos. To achieve the desperate
character and sustain the volume, the pick-up sixteenth note should stay close to the frog, except m. 44, where the F-sharp crescendos more effectively on an up-bow. In m. 47, the bowing helps smooth out the growling C string in the diminuendo.

Example 37. J. Brahms: *Quartet in A minor* mvt. 2, mm. 93-102.

This is a beautiful moment for the cello to shine. The cello needs to project the sound enough to stand out from the other voices while maintaining the sweet sounding lullaby character found in the beginning of the movement. To project the sound, rich vibrato and slower bows are helpful. Because the upper voices have constant eighth notes, the cello should ensure that the pick-up eighth notes fit with them. In m. 99, shifting from D to F-sharp is awkward, and the intonation is difficult; aiming the phrase trajectory to the A and omitting the vibrato at F-sharp will achieve the intonation more easily.

Example 38. J. Brahms: *Quartet in A minor* mvt. 2, mm. 115-124.
In mm. 116-117, the cello plays a counter melody, responding to the lovely melody of the first violin. In m. 117, an attractive option is to slide from D to harmonic A with an expressive poco portamento. In m. 120, a crescendo should be maintained through the rest, beginning the B in forte, to lengthen the melodic line. In the following measure, delay the diminuendo on the third beat for a more expressive phrase. For a more pure tone quality, the vibrato can be omitted in the last three double stops.


The cello begins the third movement with a quarter note, which should be given a warm vibrato. However, the double stops in the following measures will produce a more pure sound and solid tone quality without vibrato. Changing the bow in every measure establishes a pulse, which leads the other voices and unifies the forward momentum.


In this passage, the cello, viola, and first violin are in rhythmic unison, in piano leggiero.

As a result, the cello has to play very lightly, while keeping an accurate and steady
rhythm. In the staccato sixteenth-notes, the challenge is to play *spiccato* beyond the balance point. Usually this stroke is executed below the balance point, while *sautillé* is executed above the balance point. Playing *spiccato* beyond the balance point requires careful control of the bow’s natural tendency to bounce in a resultant motion.

Example 41. J. Brahms: *Quartet in A minor* mvt. 3, mm. 68-71.

The extension between first and second fingers to play F-sharp and D-sharp in mm. 69-70 necessitates an uncomfortable stretch, but it is a solution which avoids even more difficult shifting. In m. 71, since all voices are in unison, playing the high E with the third finger instead of the fourth helps to make the ensemble intonation more secure.

Example 42. J. Brahms: *Quartet in A minor* mvt. 3, mm. 73-78.

There is an unusual but relatively secure fingering for this very awkward spot starting in m. 75. One can keep the first finger on E throughout by using the thumb to play the G-sharp. The alternate fingering is to shift back to half position on first and fourth fingers. This fingering is more comfortable for playing the third, but requires much more shifting, and is therefore less accurate. Since all the upper-voice melodic notes derive their intonation from the cello’s low E, having a very secure and accurate fingering for the low E is of the utmost importance. By the same token, it is important to play the low E a little
more loudly than the melodic cello notes. To accomplish this, the player should balance the bow toward the C string.

Example 43. J. Brahms: *Quartet in A minor* mvt. 4 mm. 58-63.

In mm. 58-62, the quartet is in rhythmic unison. All voices should feel the silent second beat to achieve the best ensemble. Because the staccato quarter note is more of a phrasing marking then an indication of duration, make sure to give a space between the quarter notes. To achieve a broader sound, free the bow arm and use a long bow stroke. The top notes in the mm. 60 and 62 require vibrato to warm the sound, and additional accents to emphasize the notes.

Example 44. J. Brahms: *Quartet in A minor* mvt. 4 mm. 293-301.

The cello plays a lilting melody followed by the first violin in canon. As the marking indicates, the passage needs to sound *espressivo* but tranquil. Using a light flowing bow and continuous vibrato are necessary to achieve this. Another challenge of the passage is the intonation because of the accidental notes. Playing the half step intervals closer than usual helps to improve intonation following the expressive accidentals of the melody. Furthermore, playing the first notes of each phrase on the A string brings out the two
voices of the melody. For the interval from F-sharp to A in m. 300, simply extend the finger instead of shifting to a new position. To achieve the *subito piano*, lengthen the high B before the downbeat.

**Claude Debussy: String Quartet in G minor, Op.10 (1893)**

The *G minor Quartet* is one of Debussy’s early works and his only contribution to the genre, composed when he was thirty-one years old. The quartet is considered the most formal and academic work that Debussy ever wrote, because it is the only work in which he attached both the opus number and key designation to the title, and because he used formal form in the structure. Although the composer identified the work to a key of G minor, the writing often settles into the Phrygian mode on G instead. The quartet takes a cyclical form, which was made popular at the time by another French composer, César Frank. The opening motto theme appears throughout the piece disguised in different harmonies and textures. The music is new for the era based on its unconventional chords, rhythms, and key changes. Nevertheless, the Ysaÿe Quartet, to whom the piece was dedicated, premiered the quartet in 1893 with great success, and its fame continues until today.

71 Christensen, 46.
72 Keller, 160.
73 Cohn, 653.
Example 45. C. Debussy: *Quartet in G minor, Op. 10* mvt. 1, mm. 1-3.

\[\text{Animé et très décidé} \quad \text{d}=63\]

\[\begin{array}{c}
\text{f} \\
\text{§}
\end{array}\]

Debussy reveals his unique harmonic taste in the first two chords, with the second half-diminished chord established by the cello’s A-flat. This remarkable note should be emphasized with a down-bow and rich vibrato. In m. 2, employing two up-bows makes it easier to create the crescendo. The alternative bowing can emphasize the syncopation although it delays the crescendo. Both interpretations are reasonable for the beginning passage.

Example 46. C. Debussy: *Quartet in G minor, Op. 10* mvt. 1, mm. 13-16.

The lower three voices unify in a wave-like sixteenth-note pattern, while the first violin sings above them. To maintain the pianissimo and unify the tone color, keeping the runs on the D string is desirable. The bowing also helps to create the dynamic wave naturally.
Example 47. C. Debussy: *Quartet in G minor, Op. 10* mvt. 1, mm. 26-30.

The theme comes back at m. 26 in the first violin with a relatively optimistic key. The passage is quiet and smooth, requiring a flowing smoky sound, like an alto flute. The linked bowings help to achieve the effect and reduce the accents from the bow change.

Example 48. C. Debussy: *Quartet in G minor, Op. 10* mvt. 1, mm. 61-64.

A new section starts with the cello solo at m. 61. The intonation is challenging because of the unique harmonies and the low register. It is acceptable to play the G of the triplet on open string to achieve more perfect intonation. Playing the whole passage on the C string produces a more unified tone quality. Although there is no *ritardando* marking, the G in the fourth beat of m. 62 can relax, with a warm vibrato to set the mood for the tempo change in m. 63.

Example 49. C. Debussy: *Quartet in G minor, Op. 10* mvt. 1, mm. 74-78.

Since all the voices play the theme in double stops at mm. 75-78, the harmonic texture is very rich. For the cellist with small hands, the top F of the double stops in the octave can be eliminated to secure intonation in the low F. With this approach, the whole passage
can be played in the first position. A new section introduced by the A in the fourth beat of m. 78, is difficult because the cello and viola are in unison. The best solution for ensuring the intonation is to play on the open string.

Example 50. C. Debussy: *Quartet in G minor, Op. 10* mvt. 1, mm. 113-118.

Once again, all the voices are unified in rhythm and bowing. The slur in every group of six is an opportunity to make sure everyone lines up. Adding an accent and executing a fast bow on the top notes of the slur achieves this. The solo cello’s *bariolage* bow stroke beginning in m. 118, and lasting for fourteen measures requires a relaxed bow arm and hand waving motion with slight accents on the first notes of each triplet.

Example 51. C. Debussy: *Quartet in G minor, Op. 10* mvt. 1, mm. 149-154.

The cello takes the melody again in m. 149. The challenge of the phrase is to sing above the upper three voices, which are unified in rolling triplets. In order to achieve more volume, use a lot of bow on each note with a faster vibrato. In m. 151, the intonation of E-flat in the first beat is risky when shifting from C to E-flat, so it is suggested to shift early on the eighth notes of B-flat to C, and extend the third finger to E-flat.
Example 52. C. Debussy: *Quartet in G minor, Op. 10* mvt. 1, mm. 189-191.

In the last section of the first movement, all the instruments play the sixteenths in unison. It is challenging for the cello to move as fast as the violins. To achieve a rapid bow stroke, use a much shorter bow and release the right arm. The fingerings in m. 190 relax the left hand, allowing to stay in a comfortable shape and execute the intonation more perfectly.


The second movement is a scherzo, in which the insistent main theme is derived from the first movement, first dominated by the viola, and then passed to the other voices. A repeated pattern in pizzicato begins from m. 37. Using the index finger in a vigorous downward stoke for the first chord brings out the bass, and give the downbeat more power. For the last duplet in m. 46, using a left hand pizzicato on the open D helps the cello to be on time in the next measure with *arco*. The cello presents the theme of the movement in m. 47, keeping the fingering exclusively on C string eliminates the string crossing and provides a more unified tone.
Example 54. C. Debussy: *Quartet in G minor, Op. 10* mvt. 2, mm. 124-129.

The challenge of the pizzicato section is to keep the right hand from locking up, since the cello is the only voice playing the pizzicato. The advantage of playing the upper fingerings is that it reduces the frequency of string crossings, which is confusing after several measures of continuous playing. However, for the cellist with a small hand, the lower fingerings would be more comfortable.

Example 55. C. Debussy: *Quartet in G minor, Op. 10* mvt. 2, mm. 166-169.

The cello plays alone from the last two notes of m. 167 to m. 168. Shifting from the last F to the next measure would be too active to maintain quiet in this intimate moment, and would make it challenging to play in tune. For a smooth transition, play in the position close to the sixteenths and extend the fingers for F and D.

Example 56. C. Debussy: *Quartet in G minor, Op. 10* mvt. 3, mm. 11-15.
In the intimate slow movement, the cello has many opportunities to present the melody. In mm. 13-14, the cello reinforces the suave theme for a third time after the first violin’s two statements. To make the melody stand out, use an extra slow bow and rich vibrato on the first note of the solo. In addition, since the chorale in the other voices is in the same register, the cello has to employ a soloistic piano to stand out from the texture. In m. 14, taking an up-bow aids the crescendo, and then the dynamic should be maintained in the rest of the bar to contrast with the following subito piano.

Example 57. C. Debussy: *Quartet in G minor, Op. 10* mvt. 3, mm. 19-25.

At m. 19, the cello continues the violin and viola duet melody with the second violin in thirds, which is followed by the climax of the first section. At this point, the cello and the second violin play a broad counter melody to support the first violin. Freeing the bowing and using a wide, intense vibrato on each note helps the cello to stand out. The opening material then returns, with the dotted eighth notes requiring extra rich vibrato.

Example 58. C. Debussy: *Quartet in G minor, Op. 10* mvt. 3, mm. 73-84.

After an extended section of ever-climbing melodic figures from m. 61 played by the second violin and the cello, the expressive climax finally arrives at m. 75, with the violin
singing out the melody while the others accompany in rich harmonies. The quartet creates an urgent wave movement at mm. 79-81; starting up-bow produces a rich hairpin effect.

Example 59. C. Debussy: *Quartet in G minor, Op. 10* mvt. 3, mm. 103-105.

The cello plays alone in mm. 103-106. To maintain the tone quality of this intimate passage, stay on the G string and use a slow bow close to the bridge. The repeated D in mm. 104-106 should be given a different tone color in each measure. Applying a richer vibrato on the second D and changing to near silence at the last D makes the phrasing more expressive.

Example 60. C. Debussy: *Quartet in G minor, Op. 10* mvt. 4, mm. 1-8.

The Finale opens with an expressive cello solo cadenza. Because the C string does not always speak easily when executing an up-bow at the tip, try angling the bow tip up and lengthen the E-flat to solve the problem. In mm. 5 and 6, the quartet plays triplets in rhythmic unison, with each note articulated to create a *parlando* effect. A good way to connect mm. 7 and 8 without breaking the sound is to bar (play across two strings with
one finger) the A-flat with the finger pad in m. 7, to prepare the D-flat in the next measure.

Example 61. C. Debussy: *Quartet in G minor, Op. 10* mvt. 4, mm. 15-23.

\[
\text{En animant peu à peu } \quad \frac{4}{4} = 108
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Begin m. 15 quietly in a slow tempo—well below the printed tempo—to exaggerate the accelerando which arrives at full tempo in m. 21. The C natural should be lengthened to give the whole passage a strange and exotic flavor. From m. 17, as the other voices begin to join in, the music gradually becomes more animated and energetic. The suggested bowing helps to maintain the same bow stroke for the repeated pattern. At m. 21, applying an accent and long bow for the quarter note D ensures enough bow for the up-bow trill.

Example 62. C. Debussy: *Quartet in G minor, Op. 10* mvt. 4, mm. 27-29.

The suggested fingering for the triplets avoids continuous string-crossings, which muddies the articulation, tires the bow hand, and confuses the player. The *spiccato* triplets should start with a long bow stroke to play the *forte* and unify with the other voices. After the other voices gradually drop out from m. 28, the cello can use a short
bow stroke for a clear and extremely fast articulation. At m. 29, playing *quasi-ponticello* allows for an added clarity.

**Example 63.** C. Debussy: *Quartet in G minor, Op. 10* mvt. 4, mm. 45-52.

The passage builds from *mezzo piano* to *fortissimo*, while the melody flows between the violins and the cello. One of the ways to obviously express the *crescendo* is to lengthen the bow stroke along with the dynamic. Therefore, in mm. 49-52 where the cello takes over the melody, executing a fast whole bow on each long note can easily provide the volume required. In this cello melody, the upper fingerings secure the intonation for this awkward register, while the lower ones emphasize a more expressive sound.

**Example 64.** C. Debussy: *Quartet in G minor, Op. 10* mvt. 4, mm. 171-180.

The cello connects rhythmically with the first violin in mm. 171-174, while the second violin takes over the melody. To facilitate the *crescendo* in m. 174, use fast, long bow strokes and emphasize the first note of each pair in a hemiola. In the following four
measures, three instruments play the same notes in three octaves; continue to use fast, long bow strokes to make the triplets louder and broader. When the music reaches its peak in m. 180, add as wide a vibrato as possible to make the *molto crescendo* continue into the last measure.

Example 65. C. Debussy: *Quartet in G minor, Op. 10* mvt. 4, mm. 250-259.

The double stop as seen above in m. 253 was originally an octave on F; however, it is extremely difficult to play this interval in tune at this rapid speed. A possible solution is to replace the octave with a fifth, since the same register F is being played by the viola. At m. 256, the quarter notes marked down-bow should be played energetically with plenty of ring. Play the pizzicato in m. 259 with a downward stroke for maximum resonance in the bass.

In the last passage of the piece, the lower three voices begin to climb toward the climax in triplets, with the first violin joining the texture in m. 349 in a half note hemiola. At m. 352, use a whole bow for maximum ring on the forte harmonic D, in order to support the first violin’s virtuosic G major scale. The four voices line up at m. 353 in a G major chord; using a slow up-bow angled into the bridge (heavy frog) creates an exciting crescendo all the way to the downbeat. A final G major chord with plenty of bow speed brings this piece to an energetic and satisfying conclusion.

**Antonín Dvořák: Piano Quintet in A major, Op. 81 (1887)**

Dvořák was a prolific chamber music composer, having written over forty chamber works with strings, which includes diverse settings such as string quartet, string trio, piano trio, piano quartet and piano quintet. *Piano Quintet Op. 81* was first started as a revision of one of his early works, *Piano Quintet in A major Op. 5*; because of his dissatisfaction with the music, he destroyed the manuscript after the premiere in 1872. However, he then abandoned the revision process and embarked on a new piano quintet in the same A major key, but with a larger scope.74 This large-scale work lasts forty minutes and includes formal structures, such as a Dumka and a Bohemian Dance in the middle movements, with continuously arresting melodies typical of his characteristic folk-flavored style. The sound is well-balanced between the piano and the strings much like the composer’s other chamber works, and the musical expression is equally presented by each voice. Therefore this masterpiece is favored by performers and has become part of the standard repertoire in the genre.

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74 Keller, 174.

With the piano accompaniment, the cello introduces this warm and slightly melancholy opening theme. An expressive vibrato should be used throughout the passage, its speed varying with the rise and fall of the phrase. Separating the slur in m. 8 helps to naturally achieve the *crescendo* and resulting release of the gesture. In m. 14, playing the pick-up note with a down bow at the tip facilitates a *pianissimo* for a contrasting character.


The second movement is a Dumka, a form of Slavonic folk ballad, which Dvořák often employs in his compositions. The Dumka features sudden changes from melancholy to exuberance, which forms the movement in A-B-A-C-A-B-A; the A theme is in F-sharp minor, led by the lower voices of viola and cello, contrasting with a D major B section.
and a fast C section both dominated by the violins. The cello takes over this gloomy theme in the second A section in a rich quintet texture. As the tension increases, separating the sixteenths in the slurred figures frees the sound and offers more expressive options. The passage consists of many interval leaps, which might encourage one to choose string-crossings to avoid the long shifts; however, maintaining the fingering on the A string unifies the tone quality, and the subsequent sliding sound makes the passage even more attractive.


This is the climax of the C section, where all the voices demonstrate their virtuosic skill. The cello and viola fill out all the rests with the sixteenth-note triplets, which line up easily by following the clear beat provided by the piano. In mm. 176-183, maintaining the fingering on the C string helps to achieve the rapid tempo and provides a strong bass sound.

In this rapid Furiant movement, the cello mostly plays a supporting role while the violins and the piano are in charge of the virtuosic passages. In mm. 46-48 and m. 56, the extended fingering avoids the string-crossings over more than two strings, which would make the bow too active during this fiery tempo. The cello can blur the arpeggio figures into de facto chords so the cello can focus on its harmony and dynamic effect instead of playing each note clearly.


This furious section is presented in a canon from m. 224, first started by the second violin, and then passed to the first violin and viola, with the cello and the piano joining at the end in unison. To execute the low-register sixteenths clearly, adding an accent in the first note of the second beat helps to coordinate the left and the right hand, and also helps to line up the cello part with the ensemble. In mm. 241-244, playing the eighth notes at the frog gives them more clarity and energy.

This passage is the final climax of the piece, in which the five instruments in six voices are in unison. Because of the rapid tempo, shifting around when playing the sixteenths is not advised. Staying in the same position by using thumb positions makes the passage remarkably clear. Using the lower fingering is also possible, but not as clear, since it requires over-extending the fingers to reach all the notes of the passage.

**Maurice Ravel: String Quartet in F major (1903)**

This string quartet was completed in 1903, when Ravel was twenty-eight. The quartet is dedicated to G. Fauré, who was a mentor of Ravel in his Paris Conservatory years. Fauré offered adverse criticism to the form of the fourth movement; however, Debussy told Ravel “do not touch a single note of what you have written in your Quartet.” It is essentially a Classical work in structure, and it also uses a cyclic form in which the theme recurs from movement to movement. It is often compared with Debussy’s string quartet, written a decade before. The opening movement is in sonata allegro form, with an atmosphere of brightness and delicacy. It opens with a rising theme which recurs throughout the movement. The second movement scherzo has an energetic opening in pizzicato, which is displayed in cross-rhythms. Several critics describe the scherzo as producing the effect of a Javanese gamelan orchestra. The *lent* legato trio is presented in the middle section, providing contrast. The third movement is a formless rhapsody, which gives diverse colors to the four voices. The conversation between the instruments creates the calm and impressive movement. The fourth movement presents in

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75 Headington, 111.

76 Cohn, 2239.
a relatively complicated 5/8 meter, with the thematic material from first movement employed extensively. Both wild and serene characters are displayed in the Finale.

Example 73. M. Ravel: *Quartet in F major* mvt. 1, mm. 1-12.

The quartet starts with a scale in cello and the second violin as a counter melody, which some call the most beautiful F major scale ever written. Starting up-bow helps produce a natural phrasing, and will lead to an attractive *pianissimo* in up-bow at m.5. Extending the fourth finger to the D in m. 10 and vibrating after the double stops helps to create an expressive tenuto, while slurring the bow maintains the sonority of the passage.

Example 74. M. Ravel: *Quartet in F major* mvt. 1, mm. 44-48.

In m. 45, the cello plays an exotic scale by itself, which leads into a one-measure chorale by the upper instruments. Because the cello line is unaccompanied, the scale can move forward into the next downbeat with a slight accelerando. The murmuring A to B-flat in the measure before the scale can me more dramatic by elongating the downbeat, flowing forward, and then settling into the following measure’s downbeat A with a slight *rallentando*. In m. 45, the upper fingering minimizes shifting, ensuring a smoother scale
to the A. For maximum seamlessness, move subtly from the D string to the open A string half way through the measure. The second scale evaporates upward in a *diminuendo* toward a gently rocking chorale of all four voices. It is easier to stay in tune using the upper fingering because of the minimal finger movement; the alternative fingering avoids playing the B-flat on the A string, which is necessary for cellists who have an edgy A string.

Example 75. M. Ravel: *Quartet in F major* mvt. 1, mm. 92-98.

In this passage, the cello joins with the first violin in octaves to answer the viola’s melody in the previous six bars. As a result, the three voices must coordinate their phrasing for the ensemble to work. Emphasizing the hairpin and carefully managing the bow distribution helps achieve this. The *expressif* viola solo needs rich vibrato. The violin and cello can echo this with a haunting non-vibrato sound.

Example 76. M. Ravel: *Quartet in F major* mvt. 1, mm. 106-109.

At m. 106, using very little bow for the broken chord figure and exaggerating the dynamic creates a shocking wave-like effect with the first violin. At m. 107, the cello and first violin take the melody from the viola. The third finger on the fourth beat of m. 108
gives a more relaxed and looser vibrato than does the first finger, while also allowing opportunity for a gentle *portamento* slide from A to F-sharp.

Example 77. M. Ravel: *Quartet in F major* mvt. 1, mm. 172-181.

In the Recapitulation, the analogous passage to mm. 44-49 is in F minor. The fingering suggested goes into fifth position on the D string for three notes and returns to raised fourth position before crossing over to the A string. In the *pianissimo* at m. 176, using less bow while staying in the upper half, and reducing the vibrato, presents a pure, ethereal sound until the *crescendo* begins. For the new section after the *crescendo*, the first pizzicato is best plucked by the left hand to allow the phrase to start on time.

Example 78. M. Ravel: *Quartet in F major* mvt. 2, mm. 8-12.

In the pizzicati second movement, the challenge is the *hemiola* rhythm against the other voices; at this point, subdividing constantly on the eighth notes helps lock in the beats. At mm. 8-10, because of the fast tempo, it is suggested not to keep the right thumb against the fingerboard; instead, have the thumb support the index finger (like a guitar pick), suspend the arm, and execute the pizzicato with a rapidly repeating arm motion. To execute the *crescendo*, move the *pizzicato* gradually down to the *ponticello* position for a
harder and louder sound. At mm. 11-12, making a conscious effort to set the hand lower than usual, with a slight forward rotation, helps the intonation of the chord. Playing the two eighth notes in m. 11 with the index finger stroking downward, and playing the next measure with the thumb stroking upward leads to an excellent acoustic result.

Example 79. M. Ravel: *Quartet in F major* mvt. 2, mm. 17-22.

Beginning in m. 13, the cellist needs to feel the rhythm in a swinging duple pulse. This pulse needs to be felt very strongly in order to maintain the integrity of the duple pulse against the 3/4 triple pulse of the other three voices. For the double stops in every measure, pluck with two fingers to imitate a guitarist. It should be noted that the Durand, Kalmus, and International editions include a misprinted note in m. 19. Here, a C-sharp should replace the B-natural as it is found in other parts of the piece.

Example 80. M. Ravel: *Quartet in F major* mvt. 2, mm. 89-94.

This slow trio-like section is introduced by an A under a fermata in the viola. The cello enters with the same pitch in the same register, and can begin with a harmonic that increases in vibrato. Although the cello line is accompanied, the cellist should feel free to push and pull the phrasing for maximum expressiveness. There are no printed dynamics, but again the cellist should use dynamic “hairpins” to emphasize the contours of the melody. The passage can begin either up or down bow. Starting the passage on the first
finger produces a more expressive vibrato. In this case, to reach the D with minimal *portamento*, the third finger should be extended and the first finger dragged a half step toward the destination pitch. The cellist with large hands can reach the D with no *portamento* at all. For the cellist with small hands, the thumb can be placed on the harmonic note to avoid extending the third finger.

Example 81. M. Ravel: *Quartet in F major* mvt. 2, mm. 107-112.

The second violin and the cello must under play the viola from m. 107, using a light bow stroke in the upper half of the bow to maintain a transparent dynamic. Beginning the passage in the raised fourth position instead of extending the second and third finger allows the hand to remain in a closed position which facilitates the calm movement of mm. 107-110. In mm. 111-112, it is challenging to keep track of where the beat is because the tempo varies. Listening to the thirty-second notes from the inner voices is critical because they have the responsibility to set the tempo.

Example 82. M. Ravel: *Quartet in F major* mvt. 3, mm. 5-9.

To maximize the expressive character of this passage, a slow bow with fast vibrato on the dotted half note and no vibrato with a fast up-bow for the eighth note should be used. At m. 7, separating the last two eighth notes by shortening and lifting the D, and then giving
an extra rich vibrato to the C-sharp is desirable and effective. After the long C-sharp, the tremolo should be played at the tip to blend with the other voices.

Example 83. M. Ravel: *Quartet in F major* mvt. 3, mm. 45-51.

![Example 83](image)

Playing mm. 45 and 46 with one bow eliminates awkward bow changes and enhances the *pianissimo*. The cello starts the recitative section with a *crescendo* in m. 47. At m. 48, playing the F and the triplet at the frog emphasizes the accents. Separating the last note E-flat in m. 50 guarantees a clear beginning, which is desirable since it serves as the bass for the following five measures.

Example 84. M. Ravel: *Quartet in F major* mvt. 3, mm. 60-64.

![Example 84](image)

The cello takes the melody to conclude this stormy section. In m. 63, shifting to the G-flat on the D string allows for an extremely clean and secure B-flat, which is more exposed. Although this is a moment for the cello, it must keep the tempo since the other three voices have different rhythms in the third beat of m. 63. Changing the bowing at the same time in the tremolos will make the upper voices lock in more easily.
Example 85. M. Ravel: *Quartet in F major* mvt. 3, mm. 92-96.

During mm. 89-92, the violin and cello create a gauzy texture for the viola solo, quietly blending duplets and triplets. When the cello emerges as a soloist in m. 92, opening the bowing allows the cellist to stand out from the complex texture. The D in m. 95 ends in down-bow because the tremolo in the next measure has to be executed at the tip to achieve the *subito pianissimo*.

Example 86. M. Ravel: *Quartet in F major* mvt. 3, mm. 117-119.

In m.117, shifting to the A on the D string sets up the intonation of the last two measures of the movement. The shift can be slow and languid with a slow bow; the down-bow and harmonic than create a beautiful diminuendo. In the end, all four voices meet in a high register playing a major chord based on G-flat, with the intonation set by the cello. Playing the last note close to the bridge and applying a steady slow bow with even vibrato helps to produce a relaxing but firm sound to aid the upper strings’ tuning.

Example 87. M. Ravel: *Quartet in F major* mvt. 4, mm. 94-97.
The lower three voices accompany the first violin by playing the burbling figure in a very fast tempo. Applying a fast bow stroke and changing the bow at the same time makes the three voices line up more easily. The minor chord pizzicato should be played firmly and with confidence, as it helps to verify the timing of the downbeat in m. 98 for the other voices.

Example 88. M. Ravel: *Quartet in F major* mvt. 4, mm. 154-162.

In this sixteenth-note figure, it is suggested to stay in the half position because of the rapid tempo. From m. 158, the sixteenth-note figure is switched to the upper three voices, while the cello takes the solo. Using fast vibrato and condensed bow strokes on the accents produces an *appassionato* character.

Example 89. M. Ravel: *Quartet in F major* mvt. 4, mm. 207-213.

The cello has a short and difficult solo from the third beat of m. 210. In m. 211, the cellist can take time on the *portando* from F to C since this measure has the feel of a cadenza. Taking time also helps with the exposed position change. Using a down-bow from the D allows the slide to fade out naturally. Arriving on the high C with the second finger is
recommended to allow plucking the next harmonic note with a left hand pizzicato by the fourth finger. The alternative fingering is to use the third finger for the slide and play the next two notes as harmonics with tiny up-bows (quasi pizzicato).

Example 90. M. Ravel: *Quartet in F major* mvt. 4, mm. 275-278.

The four voices are unified in a strongly accented triplet rhythm and crescendo together to the exciting final chord. In the last chord, breaking the four notes two and two helps the cello and viola to line up with the violins. The ensemble can play the low notes of the chord together in the same time value as the previous quarter note (triplet) taking the same tempo from the previous two bars. This helps the ensemble to play the last note perfectly together.

**Franz Schubert: String Quartet in D minor, No. 14 D. 810 (1824)**

*Death and the Maiden*

*Death and the Maiden* is Schubert’s most famous string quartet among his fifteen quartet works. The title is named after the theme of the second movement, which he quotes from a song of the same name he wrote in 1817. However, it is still debated whether the quartet is absolute or program music. Some scholars state that the depressed mood and the triplet figure of first movement is suggestive of the struggle against Death, and also that relentless *tarantella* in the Finale is a dance of death.\(^{77}\) Schubert suffered

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\(^{77}\) Cohn, 2492.
from poor health and depression at the time he wrote the D-minor quartet. Nevertheless, the intense piece shows his mastery of compositional skill and his ability to convey the charisma from music itself. The quartet was not published until three years after his death in 1831, and the public premiere took place two years later in Berlin.\textsuperscript{78}

Example 91. F. Schubert: \textit{String Quartet in D Minor, No. 14} mvt. 1, mm. 87-94.

\begin{music}
\begin{example}
\end{example}
\end{music}

In mm. 87-88, the cello takes over the B Theme melody, alternating statements with the viola, while the first violin plays continuous sixteenth notes. Listening to the first violin helps to unify the ensemble. When the cello takes up the sixteenth-note figure, accenting the first note of the third and fourth beats helps to coordinate the left hand with the bow hand, while also helping the other voices synchronize the timing of the beat. In m. 91 re-taking a down-bow on the 2\textsuperscript{nd} beat gives power to the syncopation, and sets up the next measure. Avoid using too much bow on the half note.

Example 92. F. Schubert: \textit{String Quartet in D Minor, No. 14} mvt. 1, mm. 141-146.

\begin{music}
\begin{example}
\end{example}
\end{music}

\textsuperscript{78} Keller, 401.
In m. 142, the viola and cello play the theme in thirds, with the second violin joining in. Starting the sixteenth note at the tip and using a fast, airy bow gives this passage a sweep and shape that begins the development with a fresh and optimistic feeling. If the player elects to use the original bowing (shown below the passage), it is necessary to save the bow through the passage to maintain the *piano*. Either way, staying in the fourth position instead of the A string helps to create a softer sound.

Example 93. F. Schubert: *String Quartet in D Minor, No. 14* mvt. 1, mm. 156-163.

Starting the triplet up bow gives more power to the D down-bow. Using a full bow on the D and a shorter bow on the following C-sharp sets up the pick-up to the third beat. For intensity and rhythmic power, make sure the sixteenth note pick-up belongs to the next note not the previous. When the four voices unify in mm. 160-161, staying on the C string provides a stronger and more stable bass.
Example 94. F. Schubert: *String Quartet in D Minor, No. 14* mvt. 2, mm. 51-75.

The second movement is comprised of a theme and five variations, based on Schubert’s lied “Death and the Maiden”. The cello presents the theme in the second variation, while the inner voices play the accompaniment figure with the first violin tracing the theme in sixteenth notes in a high register. With such a thick texture, it’s necessary for the cello to use a soloistic sound. Using a wide, even vibrato and slow, concentrated bow speed projects the cello sound over the texture in a satisfying, vocal manner. Since the first violin has the smallest note value, the other voices including the solo cello should match it rhythmically.
Example 95. F. Schubert: *String Quartet in D Minor, No. 14* mvt. 2, mm. 137-152.

The cello controls the first half of the fifth variation. After the quiet and sentimental fourth variation, the triplets in the cello part create a feeling foreboding which *crescendos* into a violent storm. A slight accent at the beginning of each triplet, especially the second and fourth triplets of each measure, clarifies the rhythm for the rest of the ensemble. A slight accelerando heightens the drama and drive of the *crescendo*. In the second half of the variation, mm. 137-144, the cello melody dominates the texture. The challenge for the cellist is to play loud enough to be heard over the higher three voices’ continuous sixteenth-note figures, while maintaining control of intonation on all strings. Staying on the C string for the descending and ascending triplets provides a much clearer and stronger sound. The following four measures demand virtuosic interval leaps and frequent trills. To maintain an effective bow distribution, use more bow to play the dotted eighth note of the second beat. Then stay in the upper half for the third beat. The tempo gradually slows from m. 149 and settles into the original tempo in the serene coda section. In general, forcing the sound and pressing too hard would adversely affect the intonation.
Example 96. F. Schubert: *String Quartet in D Minor, No. 14* mvt. 4, mm. 1-12.

The tarantella starts with the four voices playing a frenetic rhythm in unison. Staying in the upper half of the bow and using extremely short strokes keeps the volume down. The grace notes are a special challenge because of the tempo. One solution is to think of the first half of the measure as an eighth and two sixteenths, instead of a quarter, eighth and grace note. The typical tarantella rhythm in mm. 7-8 appears many times in the movement, and must be absolutely together. The ensemble can rehearse this rhythm separately before running through the movement, making sure everyone breathes together and uses the same bow stroke.

**Dmitri Shostakovich: Piano Trio No. 2 in E minor, Op. 67 (1944)**

After the first denunciation in 1936, Shostakovich split his composing into two directions: one for the public, which Soviet authorities would favor, and the other for personal expression; his chamber music works, including this trio, are in the latter category. The somber trio is dedicated to the memory of musicologist Ivan Sollertinsky, who was a close friend of Shostakovich. It is also a wartime work that shows the composer’s compassion for the victims of the concentration camps, from the sorrow-filled third movement to the use of the Jewish tune in the Finale. The work is filled with

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79 Keller, 431,
various color by the plentiful use of special sound effects, which include the harmonics in the opening, the pizzicatos in the Scherzo and Finale, as well as the muted sound and *col legno*. This is a challenging piece for each instrument, from both the technical difficulties and the musical expression; however, its distinctive style and the depiction of sentiment make the players and audiences identify with the deep feeling of the composer.


This is one of the most challenging cello solos in the chamber music repertoire, because the passage should sound very simple despite how awkward the harmonics are to play. Not only is the intonation hard to control, but maintaining a pure tone on the artificial harmonics is difficult in the slow tempo. The cello creates such high pitches that when the violin enters, it serves as a bass to the cello’s melody. Placing the bow close to the bridge helps the artificial harmonics speak well. Vibrato can be applied in the longer
notes to emphasize them, and to also relax the tension in the hands. Long shifts in
artificial harmonics work better when the top note is played up-bow in the upper half of
the bow. In m. 7, the violin enters, so a slow bow creates a more focused sound. Playing
the half notes up-bow and the quarter notes down-bow accomplishes this. In the pick-up
to m. 11, switch to artificial harmonics at the fifth by extending the thumb back a whole
step from the same position (the thumb is placed at D and the third finger lightly touches
the A). Whenever the thumb is over a natural harmonic while producing an artificial
harmonic with the third finger, it helps relieve hand tension to play the natural harmonic
with the thumb. The artificial harmonic will still sound clearly (examples are downbeats
of mm. 2, 3 and 17). In mm. 20-21, using artificial harmonics at the fifth alternating with
the fourth, eliminates unnecessary shifting. In mm. 22-25, keeping the artificial harmonic
at the fifth is more secure in the high register. The same is true in mm. 28-37.


The main challenge of the scherzo movement is to play fast, virtuoso passages in high
positions. This passage is first played by the violin, with the cello imitating it directly
afterward in both tempo and articulation. Starting the passage on the G string is unusual;
however, it avoids any risky shifts.

Based on the key of G major, this is the happiest theme in the entire trio. The bowing suggested for the quarter notes provides the passage a natural phrasing while still being lively, instead of the continuous down-bows in the original marking.


This passage belongs to a section started in m. 286, which repeats the melody from the very beginning of the trio. The intensity is enhanced by the continuous runs in the piano and the muted but *fortissimo* strings, while the violin’s and cello’s voices from the trio’s beginning are exchanged. The large intervallic leaps make the music exciting but more difficult to play. Employing “old bow shift” technique (reaching the destination position before changing the bow) on these long shifts is perhaps safer, but “new bow shifts” to the second finger are more thrilling. A very good alternative is presented in the lower fingering in mm. 312-313. For cellists with thick fingers, try rocking the second finger between B and C in mm 315-317.
Dmitri Shostakovich: String Quartet No. 8 in C minor, Op. 110 (1960)

The Eighth quartet is the midpoint in his total fifteen quartet works, pairs with the Seventh quartet, which was written in the same year. The despairing atmosphere of the work reveals the difficult time the composer had suffered.\(^80\) The quartet is not only dedicated in its inscription indicated “In memory of the victims of fascism and war”, but also to the composer himself. The quartet is rich in allusions to the composer’s other works, which includes his First Symphony, E minor Piano Trio, Cello Concerto No. 1 and a love theme aria from *Lady Macbeth of Mtsensk*.\(^81\) The five-movements are played without a break.


The first movement opens with DSCH motif, which was the monogram-theme of Shostakovich. The motif is shown in every movement, and is the basis of the third movement’s faster theme. At the very opening, the theme is introduced by each instrument, with the transposition adding texture to the theme. As a result, the twelve semitones are represented as the four voices present the theme. However, the work is not intended to follow twelve-tone processes as it settles into the key of C minor afterwards. The opening’s somber intervals tend to drag. Because of this, the passage requires direction, since the cello needs to pass on the melody to the viola. Creating the opening’s


\(^{81}\) Keller, 436.
bleak feel requires starting in the middle of the bow with a lightly concentrated bow stroke.


The challenge of these four notes in the Allegro molto is to keep playing for twenty-five measures clearly and rhythmically in octave unison with the viola, while the violins blast out the melody. The string crossing is confusing after repeating the pattern many times. To avoid this confusion, one can maintain the pattern on the G string in the third position with a half-step shift and quick extensions. This fingering keeps the left hand moving and very active. Another option is to do the string crossing while keeping down the third finger on B, and only moving the first and fourth finger, resetting the fingers every four bars.


To achieve the *fortississimo* in this very exposed cello passage, it is suggested to treat the dots over the Gs as tenutos, in order to maintain a heavier sound. Playing the first two notes on the same string also gives the passage more intensity.

The cello is given a haunting solo passage in the trio section of the Scherzo movement, with the violins murmuring chromatic figures in a high register. For this flowing cello melody, use a lighter bow to free the sound. In mm. 165-167, the upper fingering crosses strings and is a secure solution for the D-flat in m. 168. The lower fingering option maintains a consistent sound by staying on the A string. However, the shift from the F to D-flat should be delicate to maintain the ethereal mood. The position change can be treacherous.


The major-key arioso in mm. 133-159 is quoted from the *Lady Macbeth of Mtsensk*. This is the second opportunity in the work for the cello to stand out in a high register, with the cello flowing above all the other voices. Going to the D string at m. 140 eliminates the shifting and maintains the purest sound in this exquisite moment.
Bedřich Smetana: Quartet in E minor, Op.116 (1876) *Aus meinem Leben*

The E-minor quartet was composed in 1876, written during the tragic final years of the composer’s life, when he was suffering from deafness and depression. Smetana was Bohemia’s first nationalist composer. He established a folk-music idiom early in his life and he retained it throughout his career. He was the first composer to write a programmatic piece for chamber ensemble. His two quartets, both subtitled *Aus meinem Leben*, are the reflections of an old man on his life. Smetana spoke of his *Aus meinem Leben* thusly: “the quartet has created its own form. I wished to depict in music the course of my life.” The first movement depicts the composer’s early love of art, Romantic feelings, and yearnings. The second movement, featuring a romping polka, reflects his carefree youth and recalls the composer’s reputation as a passionate dancer. The third movement opens with a melancholy theme in the cello, which the composer once claimed recalls his first love. The Finale, which is built of rhythmic dance tunes, celebrates his discovery of the nationalistic musical idiom that he used in composition. The high E in the first violin that interrupts the dance tune is considered to be an allusion to the onset of his deafness. The quartet ends in a mood of sadness and resignation.


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82 Christensen, 150.

83 Cohn, 2607.

84 Christensen, 151.
This passage is extremely awkward as printed. In mm. 35-36, the *sforzando* B’s are the root of a dominant chord, which is completed by the violins. Slurring through the triplets to the *sforzando* with wider and faster vibrato on the quarter notes makes the accents more easily heard and also avoids frequent bow changes on the darker G string.


![Example 107](image)

In m. 48, the cello plays the triplets alone, while the upper voices hold a whole note. To make sure the triplets are moving forward, start up-bow close to the frog and then follow with a *crescendo* to the next measure. Keeping the triplets on the C string creates a clearer and firmer sound. In mm. 53-56, the slurs make the passage smoother and matches the chorale of the violin’s voices. To make the third phrase in m. 55 more expressive, maintain the fingers in the C string for a warmer sound.


![Example 108](image)

The drum-like rhythmic pattern beginning in m. 69 is fairly simple except for the ties between the Gs in the original marking. Therefore, to maintain its simplicity and to bring out the “pointed” notes on the downbeats, it is recommended to rearticulate the note with
an up-bow. At m. 69, bringing the bow back to the frog after the first down-bow helps the bow distribution for beginning the repeated pattern.


This is the first time that the cello presents the theme, which is passed over from the first violin. In m. 130, using an up-bow on F-sharp makes it easier to emphasize the note at the end of the *crescendo*. The dots above the quarter notes can be interpreted as an accent instead of an indication of note value. With this in mind, play the quarters full value while applying a wide vibrato makes them more expressive. Instead of using string crossings in mm. 133-134, keep the fingering on the C string to ensure the same smooth tone quality and accurate intonation in the triplets.


The cello introduces the second movement with an energetic low F. Because many cellos have a wolf tone at F, it is recommended to use no vibrato on this note to achieve a more
reliable intonation and stable sound. Following this, the whole quartet plays a pentatonic scale in unison. The bowing above is one option that would allow the whole quartet to coordinate the bowing and phrasing so the ensemble will sound unified. Keeping the fingering in the same string avoids string-crossings and creates a smoother passage.


This passage contains two contrasting characters, the slurred figure in *forte* and the *leggiero* staccato in *piano*. Use a deep, longer bow stroke to play the slurred figure in a loud, exaggerated manner, and use a light, shorter bow stroke to contrast with the playful eighth notes, which emphasizes the humor of the passage.


This passage also contains two characters—the staccato accompanying figure and the slurred melody which answers the viola. To use the suggested upper fingering of the two sixteenths, the slight connecting sound that results from the position change gives this passage a drunken feel. To achieve this, it is recommended to use old finger shifts, in which the first finger slides down a half step. While less interesting, the fingering below the notes provides a securer intonation. Although it is not indicated in the score, the
staccatos should be played more softly since it is the accompanying figure. Also, playing the eighth notes with off-string staccatos provides greater contrast with the slurs.


The cello takes a leadership role in this movement, presenting a recitative solo at the beginning and a melodic solo in the middle section. In the opening, a slow bow and steady vibrato ensure a premium tone quality on the A string. To make the passage sound more expressive, m. 4 may have a slight accelerando at the triplets and a return to the original tempo at the sixteenths at the end of the measure. The alternative bowing below the notes gives the triplets more variety in the note groupings, in comparison to the original three note units.

This solo offers a wonderful opportunity to employ a heart-felt bel canto sound production. This is achieved by utilizing a wide, forte vibrato along with a light, fast bow speed. Opening the bowings of the solo in m. 67 frees the passage, allowing it to be more expressive and providing more volume. In m. 68, the sweet theme begins softly and delicately. As the melody repeats itself higher and higher, the volume should be gradually increased with faster and wider vibrato.


In the opening passage of the Finale, the quartet plays in rhythmic unison; therefore, the ensemble must coordinate its bow strokes. Since the notes do not have dots, a long and fast bow stroke should be applied on each note. To bring out the accents, even more bow speed is needed to emphasize them. In m. 4, the lower fingering in the raised fourth position provides a milder sound on the B.


In mm. 97-98, playing the sixteenths on the G string is relatively easy but sounds muffled because of the rapid tempo. By using the thumb position on the C string, the notes speak clearly and powerfully, allowing the other three instruments to line up each beat more easily.
Along with the crescendo from m. 189, a longer bow stroke and wider vibrato throughout the passage facilitate the dramatic character. In mm. 191, 192, and 195, the eighth notes should be emphasized by pausing from the previous note and retaking the bow.

**Hugo Wolf: Serenade in G major for String Quartet (1887) Italian Serenade**

This lighthearted quartet is a self-contained one-movement work in a rondo form. This is one of Wolf’s few works other than his Lieders. The work was originally written for string quartet and named "Serenade in G major". Three years after the piece was written, Wolf arranged an orchestral version of the piece, which he titled “Italian Serenade”. The musicologist Eric Sams proposed that when Wolf wrote the quartet he had the plot of Eichendorff’s novella *The Life of a Good-For-Nothing* in mind because Wolf that year wrote a series of songs for the novella. The lively piece lasts merely seven minutes, making it a favorite encore piece for the string quartets.

Example 118. H. Wolf: *Serenade in G major for String Quartet*, mm. 82-92.

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85 Keller, 493.
The cello’s main role in this piece is to provide rhythmic energy and momentum; however, the time for the cello to shine is when it plays a pattern other than the eighth notes. The first exposed moment is in m. 87. To prepare the solo, it is suggested to delay the *decrescendo* until m. 86 for better phrasing with other three voices. Although it is not indicated in mm. 89-90, it suits the style better to play the D and E with a slight lift. Playing the D in m. 91 with an open harmonic relaxes the hand and creates more resonance.

**Example 119.** H. Wolf: *Serenade in G major for String Quartet*, mm. 302-314.

The dramatic cello recitative beginning in m. 302 is the emotional high point of the movement. The cellist is free to stretch the tempo and emote with abandon until the *a tempo* marking in 307 and 315 when the rest of the quartet enters together. In mm. 307 and 315, the *a tempo* should begin from the sixteenth pick-up in the cello. If the other instruments wait to hear these pick-ups before playing, they will be late. The cellist must give a strong upward cue to indicate the new tempo before playing the two sixteenths. The *fortissimo* dynamic should not be static, but increase in intensity with each entrance of the passage, which reaches its peak in m. 318. Utilizing slides when shifting is acceptable in this section in order to create drama, which helps to evoke the extreme emotional states often found in the musical style of the late-Romantic period.
Example 120. H. Wolf: *Serenade in G major for String Quartet*, mm. 335-338.

The *ricochet* bow stroke continues over 40 bars from m. 335 with the viola. There are two different strokes, the *ricochet* down-bow and the *staccato* two up-bows. Starting the *ricochet* in the middle of the bow and relaxing the bow hand lets the bow bounce naturally. For the following two up-bows, holding the bow firmly helps to create a clear sound. To address this non-stop pattern, the right hand should stay flexible, so the two bow stroke can be executed in quick succession.

Example 121. H. Wolf: *Serenade in G major for String Quartet*, mm. 479-484.

The repeating pattern appears again with the viola in m. 479. Because of the raised dynamics, change the bow stroke from *ricochet* to a rapid separate stroke. For the rapid tempo, it will be easier to play the sixteenth-note *detache* and the two eighth notes by using an extremely short bow stroke.
CHAPTER 5
SUMMARY AND CONCLUSION

Chamber music is collaborative music, which reaches its fullest potential when musicians with similar playing ability devote time and effort to the music. In chamber music, each player is responsible for a single voice; thus every member must take responsibility to master their own part. Although chamber music requires all members of the ensemble, each player must practice individually in advance to make the rehearsals worthwhile. Practicing individually first allows players to bring their interpretation and understanding of the piece to the rehearsal. After playing together and sharing their thoughts during the rehearsal, players take their discoveries back to the practice room to refine their parts. This sequence is never ending. As a result, chamber music requires as much dedication and effort as other genres such as a solo piece or orchestral excerpts.

During the process of preparing a chamber music rehearsal, listening to recordings and studying the historical background of the work are essential. When approaching the individual part, a cellist should first identify the solo sections and the exposed passages; analyze the phrasings and dynamics; and then focus on the techniques, such as bow stroke, bow distribution, intonation, and vibrato. Mastering the technical issues before the rehearsal allows the cellist to focus on collaboration with the other instruments during the rehearsal. In addition to the exposed passages, the cellist may discover during the rehearsal that those accompanying sections are just as essential since they often take on the role of setting the intonation, tone color, and tempo. Therefore, finding the most secure fingerings and subdividing the rhythm are critical. When the cello
is in unison with other voices, coordinating the phrasings and bowings are fundamental for the chamber group to sound as one.

In chapter four, seven basic templates of interpretational technique are found and widely applied: **Bowing:** When the cello needs to produce more sound or play expressively, change bow more frequently. However, keep in mind that slurring the bow makes the passage smoother and quieter. **Fingering:** Staying on the same string tends to unify tonal color. Minimizing left hand motion by avoiding too many slides improves intonation. **Intonation:** Old bow shifts help secure intonation because they allow time to prepare the destination note, and actually are easier for the ensemble to anticipate. New bow shifts can be used for dramatic effect, but are in general less secure, and harder to anticipate. **Vibrato:** vibrato speed should be generally equal and consistent. For expression, wider and more vigorous vibrato helps to emphasize a note. Slower vibrato creates calmer or sadder moods. Non-vibrato creates special colorless moments. **Bow Stroke:** Slow bow strokes give a firmer sound. Fast bow strokes produce an airy sound. Subito dynamics require a change of contact point: a subito *piano* following a *fortissimo* passage requires everyone’s bow to move closer to the fingerboard; lengthening the last note of the *fortissimo* ensures beginning the new dynamic together. **Texture:** When the cello has motoric eighth notes, use a higher, more vertical spiccato to be heard clearly in texture. Study the score to know when the cello part is more or less important, to know where to dominate or blend. When playing in unison with other voices, coordinating the phrasing and bowing are essential. **Phrasing:** Large interval takes more time. *Crescendo* through dots and ties across bar lines. Avoid accenting last notes of phrases. In general, follow the contour of the musical line—*crescendo* when the line goes up, and
decrescendo when the line goes down. The ensemble should practice ending notes together. **Articulation:** In fast passages, slightly accenting the first note of every grouping of notes helps to unify the ensemble. Dots over notes are often played too short; consider the context and composer’s style. Short notes following a dotted note can begin either from the string or after a slight break.

This study delves into thirteen of the most commonly performed chamber works, starting with brief background on each piece and then presenting passages with famous solos or with technical challenges. However, these works are “a drop in a limitless ocean;” there are still thousands of works waiting for players to explore. It is hoped that the reader can use this essay as a reference for working on new pieces, and applying the process to many other chamber works, thereby discovering the essential appeal of chamber music. One of the great joys of chamber music is the search for perfection with like-minded colleagues. The author wishes the reader success in this life-long quest.
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