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Feng Zhao

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**The Expansion of Cello Technique: Thumb Position
in the Eighteenth Century**

Committee:

K. M. Knittel, Supervisor

Phyllis Young, Co-Supervisor

Vincent Frittelli

Eugene Gratovich

Lorenzo Candelaria

Cristina Cabello de Martinez

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in the Eighteenth Century**

by

Feng Zhao, B.M; M.M.; M.A.T.

Treatise

Presented to the Faculty of the Graduate School of
The University of Texas at Austin
in Partial Fulfillment
of the Requirements
for the Degree of

Doctor of Musical Arts

**The University of Texas at Austin
August, 2006**

Dedication

I would like to dedicate this study to my wife Lian Feng Yuan, my son Mike, and daughter Victoria . Thank you for your support.

The Expansion of Cello Technique: Thumb Position in the Eighteenth Century

Publication No. _____

Feng Zhao, D.M.A

The University of Texas at Austin, 2006

Supervisor: K.M. Knittel and Phyllis Young

Starting in the middle of the Eighteenth Century, the cello gradually emerged as a virtuoso solo instrument, leaving behind its former role as Basso Continuo of the orchestra or ensemble. In order to investigate this transformation, this study will investigate passages from cello concertos composed by the cellist composers Giovanni Battista Cirri, Anton Filtz, Luigi Boccherini, and the non-cellist Joseph Haydn. It is in the concertos of the period that the expansion of cello technique can be most fruitfully examined, for these works all demand much from their performers.

Jean-Louis Duport's 1806 treatise *Essai sur le doigté du violoncello et sur la conduite de l'archet* systematically catalogued the new cello techniques that those Eighteenth Century composers such as Cirri, Filtz, Boccherini, and Haydn had already employed in their cello concertos from around the middle of the Eighteenth Century. Among these new advanced cello techniques, one of the crucial factors for the emancipation of the instrument was the development and application of thumb position.

This technical evolution enables cellists to have more opportunity to display their virtuosity by playing more comfortably in the higher registers. The expanded range permits the composer to exploit contrasting characters within the instrument. Such advanced cello techniques are among the many factors that helped to free the cello from its role in the bass line, thus allowing it not only melodic material but virtuosic material as well. By examining the use of thumb position in these concertos this treatise will illuminate an important transitional period in the history of the cello.

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Introduction

The Eighteenth Century is one of the greatest eras in the history of the cello. Once the cello won the battle with the viola da gamba in the Seventeenth Century, it became increasingly popular and replaced the viola da gamba almost everywhere in Europe. Dimitry Markevitch suggests there were four stages before the war was won:

In the first stage, the cello took the part of the continuo and made only rare attempts to depart from the given line.

In the second, it began to take a little liberty, combining its own harmony with the basso, playing—sometimes on the octave, sometimes alone or with another instrument—a melodic line that contained some elements of counterpoint.

In the third, it became independent and no longer played conjointly with its partners. It was accompanied in its own right by a harpsichord or other continuo.

In the fourth, or final stage, it had total freedom and might play alone, as the solo instrument in a concerto, as a partner of equal importance in a duo (sonata), or as part of an ensemble with complete technical liberty. This is the role in which we see the cello functioning today.¹

Therefore, through these four stages, the cello gradually took over as the melodic instrument of choice, replacing the viola da gamba which had previously held this position. The cello thus left behind its former role as basso continuo of the orchestra or ensemble, emerging as a virtuoso solo instrument.

One of the crucial factors for the emancipation of the instrument was the development and application of thumb position. Speaking of the early stage of thumb position development, Suzanne Wijsman comments,

Virtuoso left-hand techniques, such as the use of thumb position, were developed early in the 18th century by Italian cellists such as Salvatore Lanzetti (c1710–80). The origins of thumb position are unclear, although it may be linked

¹ Dimitry Markevitch, Cello Story, (New Jersey: Summy-Birchard Music, 1984), p. 125-126

to the technique of playing the trumpet marine,² on which harmonics were produced by placing the left thumb lightly on the string and drawing forceful bow strokes. Corrette's *Méthode* [1741] contains the first documented reference to the use of thumb position, although earlier cello compositions indicate that thumb position was already being used by Italian cellists at this time.³

Advanced cello techniques such as thumb position are among the many factors that helped to free the cello from its role in the bass line, thus allowing it to perform not only melodic material but virtuosic material as well. The expanded range also permits the cello to create contrasting voices within the instrument, providing opportunities for composers to discover new sounds and possibilities on the cello, which clearly attracted many great composers.

How did the cello become a solo instrument? What effect does the development of advanced techniques have on the compositions written for the cello? What role did the development of thumb position have in the emergence of the cello as a virtuoso instrument? The Eighteenth Century solo cello concerto—a genre designed to display advanced techniques on the instrument—is a perfect lens through which to examine these questions. This study will discuss and quote a number of examples from the Eighteenth Century cello concertos, in order to examine how composers approached this new advanced technique—thumb position—in their music. The goal of this treatise is to show

² “A bowed monochord equipped with a vibrating bridge...in common use from the 15th century until the mid-18th. In its fully developed form the instrument is capable of sounding all of the pitches of the harmonic series up to the 16th partial.” (Cecil Adkins. “Trumpet Marine,” The New Grove Dictionary of Music and Musicians, Ed. by Stanley Sadie and John Tyrrell, 2nd ed, 29 vols, Macmillan Publishers Limited, New York: 2001, XXV: 841. Hereafter, New Grove II.)

³ Suzanne Wijsman, “Technique,” New Grove II, XXVI 752-753.

how the development of advanced techniques in thumb position allowed the cello to become a virtuoso solo instrument.

Part I of Chapter One quotes passages from the *Essai* by Jean-Louis Duport (1749-1819) and identifies the advanced techniques—thumb position, blocked hand position, thumb position extension, and thumb position double stops. The quotations serve to simplify and classify basic technical concepts in order to examine how these advanced techniques effect virtuoso cello music in both performing and composing in later chapters.

Part II of Chapter One examines cello concertos by Giovanni Battista Cirri (1724-1808) and Anton Filtz (1730-1760) to illustrate how composers could use these advanced techniques both alone or in combination in their music. These examples suggest that the application of advanced techniques in thumb position eventually inspired composers to write virtuoso passages in the high register just as complicated as in the lower register.

Through quotations of cello concertos by Luigi Boccherini (1743-1805), Chapter Two demonstrates how these advanced techniques were employed by this great cellist and composer. His extensive employment of thumb position reveals his desire to explore the high registers. The quotations from Boccherini display his increasing use of the advanced techniques as they appear chronologically in the concertos. Boccherini's examples demonstrate a development in the application of the advanced techniques in music to a maximum level during the Eighteenth Century by a cellist-composer.

Chapter Three quotes a number of passages from the Cello Concertos in C and D major, Hob.VIIIb: I and Hob. VII: 2 respectively, by Joseph Haydn (1732-1809) to show how a non-cellist composer utilized these advanced techniques in his compositions.

Examples from Haydn's concertos display his own understanding of the advanced techniques. Although many places show technical awkwardness, the advanced techniques in thumb position certainly enrich Haydn's compositional ideas by creating a variety of sounds in different registers and different timbres. The cellist Anton Kraft (1749-1820) may have participated in the composition of Haydn's D major Cello Concerto, and by examination of certain passages from the concerto, it becomes clear that this rumor is probably true. Therefore, it is interesting to observe the differences between the Concerto in C and the Concerto in D.

Why did the cello become so popular? How did these advanced techniques help the cello obtain its recognition? What are these advanced techniques that permit a composer to write virtuosic passages for the cello and how are they employed? Through passages composed by the most celebrated cellist and teacher Duport; the cellist Cirri from Italy; Mannheim cellist Filtz; the great cellist and composer Boccherini; and the great non-cellist composer Haydn; this study examines how advanced cello techniques in thumb position help to emancipate the cello to create a virtuoso solo instrument. Furthermore, this treatise examines how such advanced cello techniques freed the composer's pen for high register virtuosic passage writing, assisting the cello in gaining its popularity by freeing it from its limited position in the bass line.

Chapter 1: *From basso continuo to solo Voice*

I. Duport's Treatise as a compendium of evidence

According to Suzanne Wijsman,

The use of thumb position, in which the thumb is placed horizontally across the strings, thereby acting as a moveable nut, is documented in compositions dating from the 1730s....Thumb position was based on the interval of a 4th between the thumb and the third finger when playing on one string, or an octave when playing on two strings. This octave spacing became the basis from which thumb position developed as a technique to expand the instrument's range and capacity for virtuoso playing....A characteristic feature in [The] use of the thumb was the employment of blocked hand positions across two or more strings in thumb position, from which a wide range of virtuoso devices could be executed.⁴

The discovery and development of the principle of blocked hand position helped cellists to perform anywhere on the fingerboard of the cello with comfort by avoiding frequent shifting. It facilitates cellists in obtaining better intonation in the high register. The application of thumb position expands the range available on the cello, thus allowing it to truly become a melodic, even upper, voice. In addition, the invention of thumb position techniques permits the composer to create contrasting characters from a wide interval range, and new possibilities for exploring different timbres.

Some of the earliest uses of thumb position can be traced in method books. For example Jean-Louis Duport (1749-1819), a very celebrated cellist and teacher, includes thumb position exercised in his *Essai sur le doigts du violoncelle et la conduite de l'*

⁴ Suzanne Wijsman, "Bowed Strings: Double Bass," *New Grove II*, VIII: 849

archet, avec une suite d'exercices (Essay on the Fingerings and Bowings for the Cello with a Collection of Exercises). Wijsman explains that

J.-L. Duport's *Essai* (C1806), which credited Berteau with the development of technical principles for the cello, is an advanced exposition on both left-hand and bowing techniques. Although it is unknown how many students he taught, the methodical, thoroughly tested principles presented in the *Essai* shows Duport's extensive experience as a teacher. His systematic standardization of fingering and bowing principles, and the *21 exercices* (Paris, c1813) that comprise the second part of the *Essai*, influenced successive generations of cellists and remain an important part of the advanced study repertoire to the present day.⁵

In addition to his establishment on the principles of the new system of fingering and bowing, the *21 Studies* collects and demonstrates most of the advanced techniques that had been practiced on the cello during the last century. It is here that examples of early uses of thumb position can be explored.

Blocked Hand Position (Covering three and four strings)

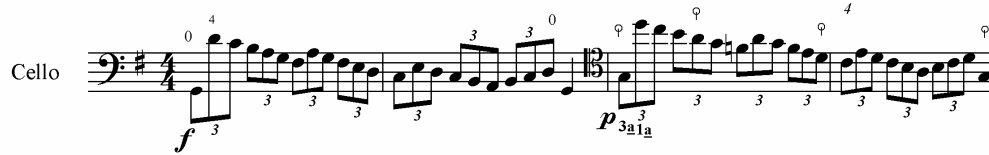
Among Duport's *21 Studies*, 17 of them are designed as thumb position exercises. For instance, Study #6 quotes one of the works of Martin Berteau (1708-1771).⁶ In this quote, Berteau demonstrates the utilization of a blocked hand in thumb position.

⁵ Suzanne Wijsman, "Violoncello," New Grove II, XXVI: 757

⁶ "French cellist. He was the founder of the French school of cello playing. Among his pupils were Tillière, Janson, Cupis and the elder Duport. He began by playing the bass viol, studying in Germany with Kozecz, the Bohemian performer on that instrument. After hearing the Italian cellist Francischello he gave up the viol for the cello...."(Mary Cyr, "Berteau, Martin," New Grove II, III: 456)

Figure 1.1: Duport . Essai. Study # 6. mm. 1-4

Allegro



Measures 1 to 4 in Figure 1.1, exhibits a basic method of employing the blocked hand position in thumb position, in this case covering three strings. Such a stationary blocked hand position enables the cellist to stay in one position in order to complete a passage in the high register. By utilizing this advanced technique, a wider interval range in the upper registers could now be executed more accurately. Thus, it not only permits the cellist to perform such passages more comfortably, but it also creates contrasting voices within the cello from measure 1 and 2.

Figure 1.2: Duport . Essai. Study # 6. mm. 29-36

Allegro

Cello

The quotation in Figure 1.2, also from Berteau's etude, demonstrates similar principles as Figure 1.1. Here we now find figures with grace notes. The difference between this quotation and the previous one is the shifting from one blocked hand position to another in measures 32 to 33, demonstrating that a blocked hand position can be applied anywhere on the fingerboard.

Figure 1.3: Duport . Essai. Study # 6. mm. 52-54

Allegro

Cello

Also from Study #6, measures 52 to 54 in Figure 1.3 are also similar to the two preceding Figures but display yet another way of using the blocked hand position in a high register virtuoso passage. The melodic octave (sometimes two octave) leaps create a very

impressive passage both aurally and visually. Only by applying the stationary blocked hand position makes this rapid string crossing passage become executable. Otherwise, cellists must shift from wide interval range after every note.

Therefore, the advanced technique of blocked hand position helps the cellist to perform music composed in the high register more comfortably without frequent shifting, thus creating better intonation. It can be located anywhere on the fingerboard, and assists cellists in exploring new heights. Thus, extremely high pitches in cello compositions have now become possible, giving composers more possibilities for creating a new voice for the cello.

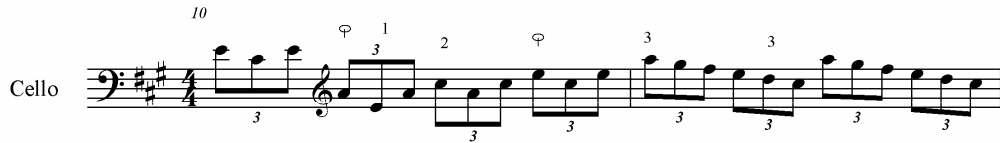
Though the blocked hand position was utilized with caution during the Eighteenth Century, it is noticeable that this advanced technique was often applied by covering only two strings instead of three or four. Applying the blocked hand position in such manner, I believe it reveals an understanding that the coverage of more than two strings may cause unclear musical projection from the slower responding, thicker C and G strings.

Using Thumb Position Principle

Study #10 of J.-L. Duport's *Essai* is a quotation from a work of his older brother, Jean-Pierre Duport—his own early teacher and one of Berteau's most distinguished pupils. The most noticeable advancement Jean-Pierre Duport made here from Berteau is the expansion of the interval range up to a".

Figure 1.4: Duport . Essai. Study # 10. mm. 10-11

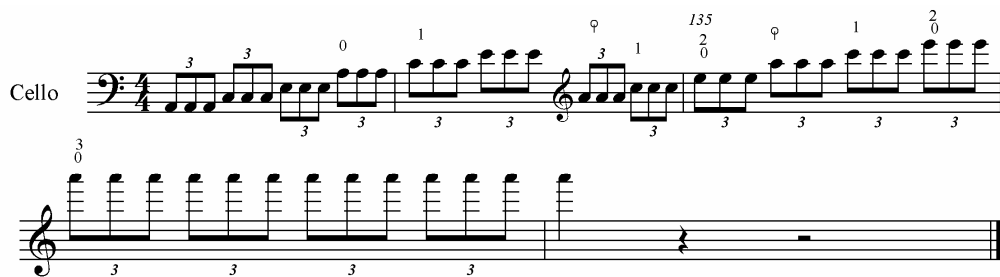
Allegro



In this quotation from measures 10 to 11, J.-P. Duport composes for a blocked hand position once again. Even though this advanced technique is only applied on two strings, it foreshadows the cello's virtually unlimited high register. On the second beat of measure 10, the shift containing a perfect fifth illustrates that the blocked hand position does not have to be limited to shift by step, as seen in Figure 1.2.

Figure 1.5: Duport . Essai. Study #11. mm. 133-137

Allegro



This passage of Study #11, a composition written by Duport himself, reaches one of the highest notes on the cello fingerboard—a⁵—and covers nearly five octaves of the cello's range. Starting at measure 133, Duport begins the arpeggio passage on the note A (on the G string). After two leaps, each of a perfect fourth—the first on the third beat of measure 134 and the second on the second beat of measure 135—the cellist finally can reach the

highest note a''' with his extended third finger. By achieving the a''', Duport has opened up an incredible registral space now available on the cello, which allows composers to create even sharper contrasting voices within the cello.

These Figures 1.2 and 1.3 relevantly illustrate the expansion of the cello's range during the Eighteenth Century. From Berteau's highest note e'' in Study #6, to J.-P. Duport's a'' in Study # 10, and now to J.-L. Duport's a''' in his Study #11, a space of nearly five octaves was established for the cello.

Thumb Position Double Stops

Thumb position double stops are another important advanced technique developed during the Eighteenth Century. More than half of the studies from Duport's *Essai* relate to double stop exercises.

Figure 1.6: Duport . Essai. Study #1. mm. 104-112

Andante

Cello

Figure 1.6 written by J.-L.Duport, demonstrates how thumb position double stops can also be used to create contrasting voices. Measures 108 to 112 display a passage of thumb position double stops in thirds. Thumb position double stops can be used in passages to provide a bold contrast in the high register from a single melodic line to a

different texture, and similarly to make a contrast to double stops in the low and middle registers. A new sound effect is thus available. This advanced technique certainly enriches compositional possibilities with varieties of both registers and textures.

Figure 1.7: Duport . *Essai*. Study #14. mm. 33-39.

Andante grazioso

The image shows a musical score for Cello, measures 33-39 of Study #14 by J.-L. Duport. The score is in 3/4 time with a key signature of one flat. It features complex double stops and technical markings such as 'f', 'p', 'sf', and '2a'. The score is divided into two systems. The first system contains measures 33, 34, 35, and 36. The second system contains measures 37, 38, and 39. The notation includes various fingerings, accents, and dynamic markings.

Figure 1.7 is also composed by J.-L. Duport. Measures 33 to 39 of Study #14 demonstrate a combination of third, sixth, and octave double stops in the high register. The blocked hand position must be used here covering three strings. In measures 33 and 35, Duport exhibits another common way of writing double stops for cello—holding one note down on one string while other fingers play a second voice on other strings creating “double stops” over the drone. It can be heard as a contrasting device for both timbre and texture from regular double stops. The pseudo-sequential passage in measures 37 to 39 also illustrates a practice in thumb position double stops using a blocked hand position. By descending step-by-step in each measure, Duport illustrates that double stops are not limited to a single position. This example demonstrates the development of blocked hand position enable cellist to perform double stop in high register with complexity and variety

of positions from wider interval ranges. Thus, it permits more flexibility for composer to write double stops in the high register for the cello.

The above two quotations establish that double stop technique is no longer limited to the lower registers. Assistance by the blocked hand position, the high register thumb position double stops provide new possibilities in different textures. These allow composers to create more interesting cello music from different registers and texture.

Thumb Position Extension

Figure 1.8: Duport : Essai. Study #4. mm. 33-35.

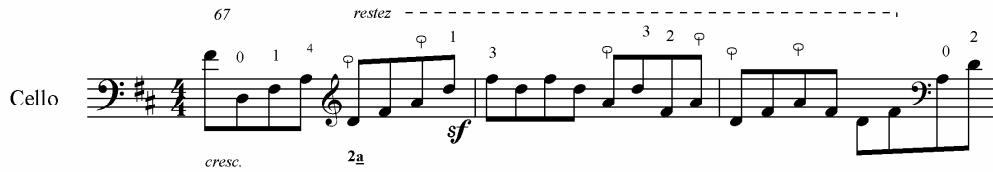
Allegro moderato e marcato

The image shows a musical score for Cello, measures 33-35. The key signature is two flats (B-flat and E-flat), and the time signature is 4/4. The score starts at measure 33 with a treble clef. The first measure (33) has a thumb position double stop (C2 and G2) with a first finger on D2. The second measure (34) has a thumb position double stop (C2 and A2) with a first finger on B1. The third measure (35) has a thumb position double stop (C2 and G2) with a first finger on D2. The fourth measure (36) has a thumb position double stop (C2 and A2) with a first finger on B1. The fifth measure (37) has a thumb position double stop (C2 and G2) with a first finger on D2. The sixth measure (38) has a thumb position double stop (C2 and A2) with a first finger on B1. The seventh measure (39) has a thumb position double stop (C2 and G2) with a first finger on D2. The eighth measure (40) has a thumb position double stop (C2 and A2) with a first finger on B1. The score is marked with *f* and *ff*. The word "restez" is written above the staff with a dashed line extending to the end of the passage. Fingerings are indicated by numbers 1 and 2. A breath mark (V) is present above the staff in measure 37.

Figure 1.8 demonstrates a very rarely used technique in the Eighteenth Century—the thumb position extension, in which normal thumb position coverage exceeds the interval of a fourth. The word “*restez*” (remain) asks the cellist to stay in that position to complete the passage without shifting, thereby creating a thumb position extension. In order to play the extension and reach a"-flat with his third finger, the cellist is required to keep his thumb on c", then to place his first finger one step higher, where the second finger would have been. This advanced technique permits the cellist to perform a thumb position passage with an interval range wider than a fourth when playing on one string, or more than an octave when playing on two strings, without shifting.

Figure 1.9: Duport : Essai. Study #20. mm. 67-69

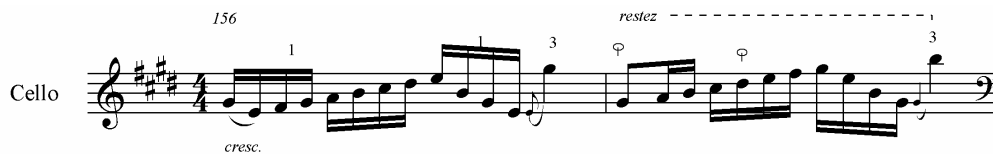
Allegro



In measures 67 to 69 of the Study #20, Duport displays an even wider thumb position extension. Here, the cellist places his first finger where the third finger would normally go so he can reach an interval of a tenth with his third finger without shifting. Therefore, this invention helps cellists perform an interval range of up to a tenth while playing in two strings, allowing the composer to write music with more melodic flexibility and a wider interval range.

Figure 1.10: Duport : Essai. Study #12. mm. 155-157

Allegro moderato, quasi Andante



Perhaps the most striking case can be seen in Figure 1.10 of measure 157 the word “*restez*” asks the cellist stay in the same position in order to perform a sudden wide melodic leap of a tenth. A cellist should be able to play this large interval without shifting by using an extreme thumb position extension. Here we can see how the concept

of the extension has been pushed (perhaps) to its limits in an attempt to write ever more impressive passages.

Through the collection of his predecessors' and his own music, Duport displays a full picture of the development of thumb position techniques on the cello, including normal thumb position, blocked hand position, thumb position double stops, and thumb position extension. The application of these advanced techniques enables cellists to not only play virtuosic passages in the lower register, but also comfortably in the middle and high registers as well. The combination of these advanced cello techniques in music helped to free the cello from its limited role in the past; by expanding the instrument's range; increasing the possibilities for melodic participation and flexibility; allowing the player to perform a difficult passage (such as high registral melodies or double stops) with greater ease; and exploiting the various timbres inherent in the cello.

While Duport's treatise is of limited use because of its purpose—it is, after all, a collection of studies, not a collection of solo works—it nevertheless provides both a catalogue and a possible chronology for these advanced techniques. The Eighteenth Century solo cello concerto, on the other hand, provides a more realistic forum in which to examine the application of advanced techniques in more depth. As we have a number of works written from the Eighteenth Century, we can better understand the emancipation of the cello by looking more closely at works written expressly for that purpose.

II. The cello concertos

Giovanni Battista Cirri

The Italian celebrated cellist and composer Giovanni Battista Cirri (1724-1808) composed nine cello concertos. He was born in Forli, near Ravenna. Cirri became a cellist and composer at the Basilica of S Petronio in Bologna in his early years. From 1764 to 1780 he was in London where he was working for the Duke of York as a cellist, and the Duke of Gloucester as a music director. His brother Ignazio (1711-1787), was one of his teachers.⁷ Cirri's general style can be described as follows:

Cirri's compositions demonstrate skilful harmonic and structural organization within intimate chamber forms, his obbligato cello parts of the 1760s and 70s reflecting the increasing attractiveness and acceptance of the instrument in a melodic role. While emphasizing tunefulness over technical display, his solo writing employs comfortable use of the upper registers, with scale, arpeggio and string-crossing figurations based on stationary, block hand positions.⁸

Despite his apparent preference for “tunefulness over technical display,” how much do these advanced techniques enrich his compositional ideas? How does Cirri create a melodic role for the cello, at a time when the instrument did not yet have a place in the virtuoso world? Several quotations from Cirri's Cello Concerto Op. 14 n.6 will serve as examples to illustrate how Cirri applied advanced techniques—particularly in relation to his use of thumb position. These advanced techniques that will be show in the following

⁷ Owain Edwards/Valerie Walden, “Cirri, Giovanni Battista,” New Grove II, V: 867

⁸ Owain Edwards/Valerie Walden, “Cirri, Giovanni Battista,” New Grove II, V: 867

examples not only display the performer's talent, but also represent by utilizing the expansion of the range on cello, Cirri composed virtuoso passage in the high register.

Thumb Position or Blocked Hand Position

Figure 1.11 illustrates possibilities of application by either normal thumb position, or blocked hand position from the advanced techniques. Measures 31-40, display how a normal thumb position principle may employ with frequent shifting in option one.

Figure 1.11: Cirri: Cello Concerto for String Orchestra and Cembalo, Op. 14, No. 6, 3rd movement, mm. 31-40

Allegretto

Option one:

The musical score for Cello, measures 31-40, is presented in three systems. The first system (measures 31-34) features a melodic line with various fingering patterns (1, 3, 4, 1, 2, 3, 1, 4, 1, 3, 1, 4, 1, 2, 1, 3, 2, 1) and includes first position markings (1a) and a mezzo-forte (mf) dynamic. The second system (measures 35-38) shows a more technically demanding passage with rapid sixteenth-note runs, including second position markings (2a, 1a) and a trill (tr) in measure 38. The third system (measures 39-40) continues the melodic line with a trill (tr) in measure 40.

Option two:

The image shows a musical score for Cello, labeled "Option two". It consists of three staves of music. The first staff is in 6/8 time and features a melodic line with various fingering numbers (1, 2, 3, 4) and accents. The second staff continues the melodic line with more complex fingering (1, 2, 3, 4) and includes a dynamic marking of *mf*. The third staff shows a more rhythmic passage with many sixteenth notes, including a trill (*tr*) and various fingering numbers (1, 2, 3, 4). The score is written in a standard musical notation with a treble clef and a key signature of one sharp (F#).

Under a tempo mark *Allegretto* in Figure 1.11, the cellist can play the difficult passage more comfortably by applying the advanced technique—blocked hand position. Since the cellist already settled in thumb position at the beginning of the passage, thereby, the second option of fingering would be the better for him. It keeps him in that position to finish the entire passage without frequently shifting from lower position back and forth to the thumb position. No matter which advanced techniques the cellist would chose (option one with normal thumb position has frequent shifting, or option two with block hand position without), through these advanced techniques now the composer is able to write cello music in the high register as well as the low and middle registers. This application of high register notes represented a new phase in cello music composition—a sharp contrasting voices within the instrument becoming possible.

Thumb Position Combined With Thumb Position Extension

Figure 1.12: Cirri: Cello Concerto for String Orchestra and Cembalo, Op. 14, No. 6, 3rd movement, mm. 88-94

Allegretto

The image shows a musical score for Cello, measures 88-94, in 3/8 time. The score is written on two staves: a treble clef staff (top) and a bass clef staff (bottom). The tempo is marked *Allegretto*. The key signature has one sharp (F#). The score includes fingerings (1, 2, 3) and dynamic markings (*mf*, *f*). Measure 88 starts with an ascending scalar gesture. Measure 89 features a melodic leap down to e' and then re-bounces back to b'. Measure 90 shows a descending arpeggio figure with a melodic leap up to e''. Measure 91 begins with bass notes d, illustrating thumb position extension. The score ends with a repeat sign at the end of measure 94.

In measures 88-94, Cirri presents a virtuosic passage in the high register. Starting at measure 88, an ascending scalar gesture takes cello up to d". Suddenly, in the measure 89 Cirri makes the melodic leaping down to e' and then re-bounces back to b' followed by another melodic leap up to e" in measure 90 in a descending arpeggio figure. By presenting the bass notes d in measure 91, Cirri creates new exciting moment by displaying a passage of more than two octaves within four measures. The repeating a' and the e" indicate that Cirri composed this passage with thumb position in mind. In measure 90, the interval of a fifth in thumb position on the A string is exceeded if utilizing normal thumb position on a single string within an interval range of fourth. Therefore, a thumb position extension may be used. By employing this advanced technique, the cellist can reach the e" without shifting. Exceeding normal thumb position—a fifth instead of a fourth—illustrates a new possibility of interval range in high register cello music composition especially beneficial in rapid passages. It certainly

provides more flexibility in interval range for a composer writing a virtuosic passage for the cello.

Blocked hand position (covering three strings)

Figure 1.13: Cirri: Cello Concerto for String Orchestra and Cembalo, Op. 14, No. 6, 3rd movement, mm. 151-163

Allegretto

The musical score for the Cello part, measures 151-163, is presented in three staves. The key signature is one flat (B-flat major/D minor) and the time signature is 6/8. The tempo is *Allegretto*. The passage begins in measure 151 with a *mf* dynamic. It features a series of sixteenth-note patterns with various fingering indications (1, 2, 3, 1a, 2a, 3a) and phrasing slurs. Measure 152 includes a triplet of sixteenth notes. Measure 153 shows a descending scalar motive. Measure 154 contains a trill on the highest note. Measure 155 starts with an ascending broken chord. Measure 156 features a descending scalar motive. Measure 157 has a dynamic change to *f* and a triplet of sixteenth notes. Measure 158 includes a trill. Measure 159 shows a descending scalar motive. Measure 160 begins with a trill on the highest note. Measure 161 features a descending scalar motive. Measure 162 has a dynamic change to *mf* and a descending scalar motive. Measure 163 concludes the passage with a final note.

The quotation in Figure 1.13, Cirri displays an impressive passage under the tempo *Allegretto*. Starting in measure 155, an ascending broken chord takes the cello up to the high register. On the highest note e", Cirri asks for a descending scalar motive in measure 157 as sixteenth notes. These rapid sixteenth notes lead the cello to fall one and a half octaves to b-flat in the lower register. After one measure, a leap of a perfect fifth up to f' with a trill in measure 160, the cello again reaches the highest note e"-flat. Cirri once again presents a descending scalar motive in sixteenth notes. Instead of falling down to b-flat as the previous two measures, Cirri makes the cello reach g—two scale-

degrees lower. It is followed by an ascending broken chord figure quickly reaching up to e"-flat the third time, and finally falling back to e-flat. Therefore, Cirri creates an impressive passage within one-and-a half octave, three times shifting up and down within seven measures.

The constant e'-flat and b'-flat in Figure 1.13 once again illustrates that Cirri was thinking of the principle of blocked hand position as he composed for the cello. In measures 151 to 163, a stationary blocked hand position must be employed by setting the thumb on e'-flat and b'-flat in order to complete the passage. Especially the sixteenth note passage with the large leaps in measures 158 to 160, which immediately back to e"-flat followed by fast sixteenth notes, indicate a place that cannot be played without blocked hand position covering three strings. It is the only passage that contains blocked hand position covering three strings in this movement. In addition, measures 160 to 161 also demonstrate shifting in blocked hand position. In order to reach the low g and quickly return to e", the cellist must shift a half step down and directly back up to the previous position to complete the passage of nearly two octaves. This passage interestingly reveals how comfortable Cirri was when he composed the cello solo in the high register with the scalar and arpeggio figures.

Cirri's Cello Concerto for String Orchestra and Cembalo displays how the advanced techniques can be applied for virtuoso effect. Unlike the etudes that are structured primarily with regular rhythmic patterns, the concerto employs many more complex rhythms. These examples illustrate the combination of advanced techniques, rather than a focus on any particular one. One might also notice that the blocked hand position has not been used covering four strings as it had been introduced by Duport

Essai. Even though the blocked hand position is only applied over two strings, the string crossing can cause a sudden change in timbre which Cirri seems to want to avoid. In this concerto, Cirri composes the music with blocked hand position covering three strings only once and mostly utilizes two strings which exhibits a common practice of using this technique in writing cello music during Eighteenth Century. Furthermore, the examples present the advanced techniques—normal thumb position, blocked hand position, and thumb position, extension employed in performed music. In addition, here Cirri demonstrates that these advanced techniques not only help the cellist gain comfort playing music in the high register, but also that these advanced techniques provide new possibilities for the composer writes cello music in the high register with more flexibility.

Anton Filtz

The German cellist and composer, Anton Filtz (1730-1760), composed four concertos. He was a very talented young virtuoso cellist originally from Eichstätt, Bavaria, and later joined the famous orchestra at Mannheim. Leopold Mozart called the orchestra “undeniably the best in Germany”.⁹ According to Roland Würtz and Eugene K. Wolf,

The Mannheim court was an important centre of cello playing in the 1750s. Anton Fils wrote numerous works for cello while employed at the Kapelle in 1754-60, including four concertos, sonatas and chamber works. They show an innovative approach to left-hand technique in the use of stationary, blocked hand positions for virtuoso passage-work, especially in thumb position. He also used thumb position on the G and C strings as a technical effect for contrasting registers....¹⁰

⁹ Roland Würtz/Eugene K. Wolf, “Mannheim,” *New Grove II*, XV: 773

¹⁰ Wijsman, “18th-century use, performers and Repertory,” *New Grove II*, XXVI: 755

Edmund S.J. van Der Straeten, speaking of this young, talented musician, relates that:

Anton Filz was, in 1763, a violoncellist and composer of great talent. He died in early manhood, in 1768, member of famous Mannheim orchestra. Schilling relates that, according to tradition, he died of eating spiders, which, he said, tasted like strawberries....¹¹

Before Filtz's rather remarkable demise, he composed a quantity of works for and including the cello. His cello music clearly represents the great tradition of cello technique at Mannheim. Several of the following quotations from his Concerto in G major for Violoncello and String Orchestra illustrate how he utilized the advanced techniques in his music. These quotations from Filtz's Concerto suggest that the cello as a melodic and virtuoso solo instrument has been progressed to a different level. By more often utilizing the advanced techniques with rhythmic complexity and demonstrating more flexibility in the high register, these examples show that Filtz was regarding the cello as a solo instrument.

Combination of Thumb Position and Blocked Hand Position (covering two or three strings)

Figure 1.14: Filtz. Concerto in G major. 1st movement mm. 71-75

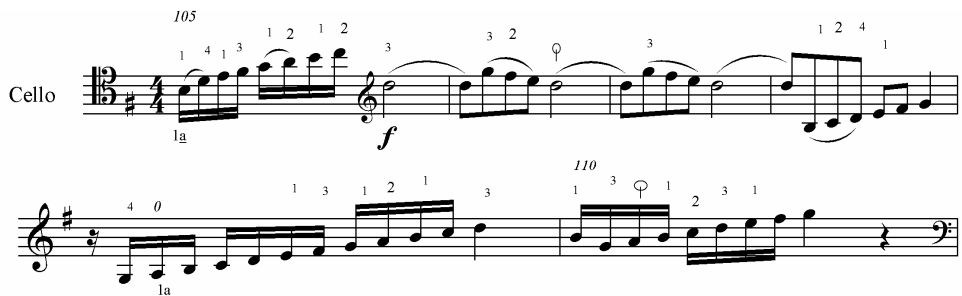
Allegro moderato



Measures 71-75 show a combination of both rhythmic and technical complexity which illustrate Filtz's great talent in composition music for cello. In measures 71 to 73, in order to bring the cello up to e" in the high register, Filtz has the cello shift gradually. Here Filtz explores new possibilities in the high register, but furthermore demonstrates how the advanced techniques can be applied with rhythmic complexity as well. Such an abundance of turns, sixteenths, thirty-seconds, sextuplets, and dotted sixteenths in the high register, signals to the listener that the cello has become a melodic and virtuoso solo instrument.

Figure 1.15: Filtz. Concerto in G major.) 1st movement, mm. 105-110

Allegro moderato

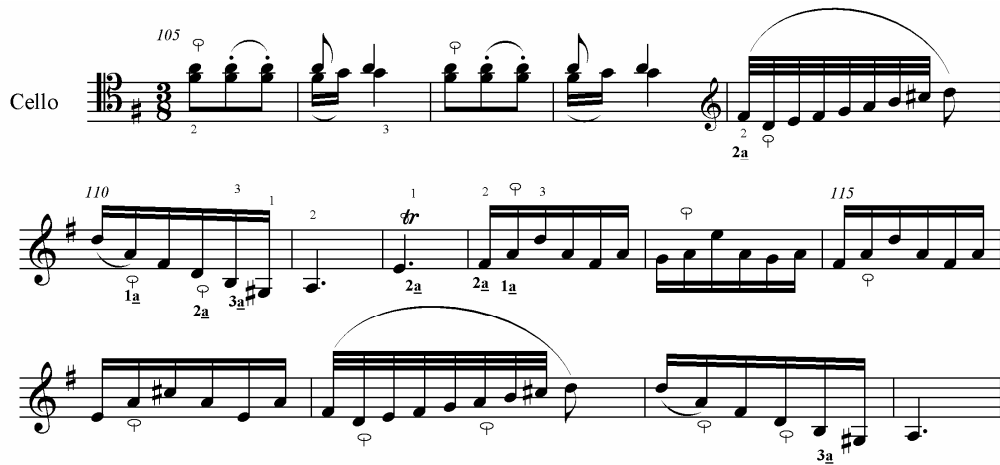


¹¹ Edmund S.J. van Der Straeten, *History of the Violoncello*, (London, William Reeves Bookseller Ltd.,

In the high register lyrical passage from measure 105 to 108, a number of advanced techniques are employed. It is quite fascinating to observe Filtz expanding the interval range to the highest note g'' in this passage. Instead of carefully managing the gradual shift, Filtz asks for an impressive melodic leap to the g''. This impressive melodic leap is repeated, and then it followed by a minor tenth leap from d'' which falls to b in measure 108. Switching from sixteenth to half and eighth notes here, Filtz slows down the rhythm to emphasize a lyrical melodic line. In contrast to the slow lyrical passage in measures 106 to 108, Filtz ends this impressive passage with fast sixteenth notes ascending two octaves scalar motive from g to g'' in measures 109 to 110. Switching from sixteenth to half and eighth notes here, Filtz slows down the rhythm to emphasize a lyrical melodic line. In contrast to the slow lyrical passage in measures 106 to 108, Filtz ends this impressive passage with fast sixteenth notes ascending two octaves scalar motive from g to g'' in measures 109 to 110.

Figure 1.16: Filtz. Concerto in G major. 3rd movement, mm. 105-119

Presto, non troppo



Measures 105 to 119 in Figure 1.16 demonstrate a high register virtuosic melody that cannot be performed without a blocked hand position. However, this quotation is a perfect example to show Filtz's different approach toward the employment of blocked

hand position covering two and three strings. The passage can be performed with blocked hand position covering two strings with the exception of measures 110 and 118. Here, blocked hand position covering three strings must be applied. Compared to the extremely fast thirty-second note scalar motive in measure 109 and 117, the sixteenth notes passages in measures 110 and 118 are much slower. This may be why Filtz employs blocked hand position covering three strings here instead of two, because the slower speed allows the thicker string to have time to respond. Such an employment of blocked hand position covering three strings provides wider interval coverage in the high register. Even though Filtz composed passages that require blocked hand position covering three strings more often than Cirri, he still uses it with caution.

Combination of extension in thumb with blocked hand position

Figure 1.17: Filtz. Concerto in G major. 3rd movement, mm. 257-280

Presto, non troppo

The image shows a musical score for Cello, measures 257-275. The score is written in treble clef with a key signature of one sharp (F#) and a 3/8 time signature. The tempo is marked *Presto, non troppo*. The passage begins at measure 257 with a piano (*p*) dynamic and a fermata over the first note. It features a series of sixteenth-note patterns with various fingering indications (1, 2, 3) and accents. Measure 260 has a first finger (1) fingering. Measure 265 has a first finger (1) fingering. Measure 270 has a first finger (1) fingering. Measure 275 has a first finger (1) fingering. The passage includes dynamics of *p*, *cresc.*, *f*, and *decresc.*. The passage ends with a fermata over the final note.

The passage in Figure 1.17 exhibits Filtz’s creativity by combining two advanced techniques—blocked hand position and the thumb position extension—to create a highly technical and impressive passage. These advanced techniques must be utilized due to the constant strings crossing combined with the more than one-and-a half octave interval range of the passage. By setting the pedal tone d' as the middle voice, Filtz crafts two melodic lines around it under a tempo mark *Presto, non troppo*. Since the pedal tone d' repeatedly followed by a note exceeding fourth in the high register, the cellist must set his thumb on d' and applying a thumb position extension in measures 268-272 in order to reach the highest note g'' with the player’s third finger. By employing the thumb position extension, Filtz creates a wide interval range up to an eleventh while the extension is played on two strings. In addition, Filtz certainly generates a more impressive virtuosic passage than Cirri does in Figure 1.12 from application of the advanced techniques with

rhythmic complexity. It permits the composer to create more impressive show passage in the high register.

The quotations from Filtz's Concerto in G major exhibit how those advanced techniques which were discussed in J.-L. Duport's *Essai* have been more consistently utilized in Filtz's composition when compared to Cirri. By employing advanced techniques in such a way, Filtz shows us more clearly a new phase in performed music composition, where the cello is clearly a melodic instrument. Perhaps this is due to Mannheim being a center of cello performance where advanced cello techniques had been further developed by the middle of the Eighteenth Century.

These quotations from Cirri and Filtz clearly present a progression in application of the advanced techniques in performed music composition. From Cirri to Filtz, these examples clearly give us some understanding of how the cello gradually became a melodic solo instrument.

Chapter 2: *Luigi Boccherini*

In regard to the Italian cellist-composer Luigi Boccherini (1743-1805), Campbell states:

Boccherini was one of the first of the Italian school to give expression to the solo and virtuoso aspects of the instrument through the building out of the thumb position into the soprano range. He extended beyond his predecessors the playing of double stops as well as fast passages that require great facility in performance.¹²

It was Boccherini's extraordinary talent as a performer that allowed him to make greater and greater use of advanced techniques. In addition to setting a new standard for composition, he also placed greater technical demands on the performer. It is possible to see these ever increasing challenges in his works for cello especially when they are examined chronologically.

Four Boccherini's cello concertos are examined in this chapter in order to illustrate how he utilized these advanced techniques in his cello music, and how these advanced techniques inspired the great composer to place the cello continually higher up in the cello's register. Such a progression in technical difficulty is perhaps best explained by an important period of Boccherini's career. When these concertos were written, the young Boccherini had just returned to his home town of Lucca, having finished cello studies with Giovanni Battista Costanzi,¹³ 1704-1778 in Rome. Thus, longing to make a

¹² Margaret Campbell, *The Great Cellist*, (Victor Gollancz LTD, London, 1988,) p.54.

¹³ “[Giovanni Battista Costanzi], Italian composer and cellist. He was probably a pupil of G.L. Lulier. He entered the employ of Cardinal Pietro Ottoboni in Rome in 1721, serving first as *aiuto da camera* and then in 1737 as *capo d'istromenti* in succession to Corelli. After the brilliant success of his opera *Carlo Magno* in 1729, he was appointed, through Cardinal Ottoboni's patronage, to a number of the most important posts of *maestro di cappella* in Rome: at S Luigi dei Francesi in 1729, at S Lorenzo in Damaso (the cardinal's titular church) in 1731, at S Marco and S Maria in Vallicella (in succession to G.O. Pitoni) in 1743, and at S Pietro (Cappella Giulia) in 1755. His growing reputation as an instrumentalist and composer brought him a succession of honours....” (Hans Joachim Marx, “Costanzi, Giovanni Battista” *New Grove II*, VI: 527

name for himself as a virtuoso cellist, he seems in each subsequent concerto to demand more from himself. While on the surface, the increase in numbers and types of advanced techniques may seem a simple progression, they were in fact being driven by the very real circumstances of Boccherini's life and his desire for a performing career.

Early 1760

C major concerto, No 4

The first three examples are from Boccherini's C major Cello Concerto No. 4, which, according to Walter Lebermann, was written in the early 1760's.¹⁴ This cello concerto displays how young Boccherini employed advanced techniques in his early cello music. Although it is one of his early cello concertos, it demonstrates Boccherini already consistently employing the advanced techniques in the high register.

Figure 2.1: Boccherini: C major concerto, No 4, 1st movement, mm. 24-38

Allegro moderato

The image displays a musical score for Cello, titled "Allegro moderato". The score is written in 4/4 time and consists of six staves of music. The notation includes various techniques such as triplets, grace notes, and double stops. The first staff begins with a triplet of eighth notes, followed by a grace note and a triplet of sixteenth notes. The second staff features a triplet of eighth notes, a grace note, and a triplet of sixteenth notes. The third staff starts with a triplet of eighth notes, followed by a grace note and a triplet of sixteenth notes. The fourth staff includes a triplet of eighth notes, a grace note, and a triplet of sixteenth notes. The fifth staff begins with a triplet of eighth notes, followed by a grace note and a triplet of sixteenth notes. The sixth staff starts with a triplet of eighth notes, followed by a grace note and a triplet of sixteenth notes. The score is marked with "Cello" and "Allegro moderato".

What is notable in Figure 2.1 is the extensive length of time in which the cello remains in the high register. This, in itself, is quite different from the works composed by Cirri and Filtz. It also shows a combination of several advanced techniques. In this passage, Boccherini combines thumb position, thumb position double stops, and blocked hand position with rhythmic complexity—sixteenths, thirty-seconds, triplets and grace notes—to create a long virtuosic section. In contrast to those composers who briefly employed these advanced techniques as contrasting devices to the low register, Boccherini perhaps

¹⁴ Walter Lebermann, *Konzert No.4 für Violoncello und Klavier*, (New York: B. Schott's Söhne, Mainz,

(by staying in thumb position for an extended amount of time) does the opposite by using the low register as a contrasting device to the high register notes. The intensive use of advanced techniques with rhythmic complexity also illustrates how the cello no longer is limited as melodic instrument in the low and middle registers, but can utilize the high register as well. By using the advanced techniques in such an extensive manner, Boccherini identifies himself as a unique virtuoso in both cello performance and cello music composition.

Figure 2.2: Boccherini: C major concerto, No 4, 1st movement, mm. 80-90
Allegro moderato

The image displays a musical score for Cello, labeled 'Cello' on the left. It consists of seven systems, each with two staves. The left staff is in bass clef and the right staff is in treble clef. The music is written in 4/4 time and features a virtuosic passage over a dominant pedal tone. The score includes various fingering numbers (1, 2, 3) and breath marks (φ). The first system starts at measure 80. The notation shows frequent melodic leaps and complex rhythmic patterns, characteristic of a virtuosic exercise.

Figure 2.2 shows a long virtuosic passage over a dominant pedal tone in which the blocked hand position must be employed. Only by placing his thumb on d' on the D string can such a virtuosic passage be executed. Musically, the frequent great melodic leaps in the high register are very impressive with the constantly drone of notes from the low and middle registers. The pedal tone on the open G string provides a bass line on which to construct a section that has more than two octaves of frequently melodic leaps from the low register to the high register. Boccherini thus creates a virtuoso passage over two octaves in range—virtuosic both visually and aurally.

Figure 2.3: Boccherini: C major concerto, No 4, 2nd movement, mm. 49-75

Adagio



Boccherini composed the second movement of his C Major Concerto mostly in treble clef. Figure 2.3 once again shows a lengthy section of music in a combination of advanced techniques. It is quite remarkable to observe how Boccherini managed to compose a gradual shift within a blocked hand position that eventually reaches g"; it is even more interesting to see how Boccherini, assisted with the knowledge of the blocked hand position and thumb position extension, made this into an impressive passage. Starting at measure 53, by setting the thumb on the g' pedal tone on the A string, and by having the other fingers play another melodic line on D string, Boccherini displays the

first double stops of the passage with thumb position extension. This thumb position extension in measure 53 allows him to reach g' with his third finger on the D string. Two measures later, in measures 57-58, by shifting the thumb one step higher to the pedal tone a', Boccherini creates the second set of double stops with the thumb position extension. Then by setting his thumb on d'', Boccherini allows himself to reach the highest note g''. Here, by holding the pedal tone d'' on the A string with his thumb, Boccherini reach d'' on the D string with his third finger. Thereby, he creates a unison chord by applying the thumb position extension. This example demonstrates a long virtuosic section that cannot be played without the knowledge of the blocked hand position and the thumb position extension. Also, it reveals that only with expertise in knowledge these advanced techniques, the composition idea such as Boccherini displayed in this example become viable.

Examples from Boccherini's C major Cello Concerto from the early 1760's show how this great cellist and composer boldly employed advanced techniques in his composition. Generally speaking, the most remarkable phenomenon in the composition is the extreme length of time that he has the cellist stay in the high register. Although in Figures 2.1 and 2.3 the highest note is only g'', which is the same as it has been for Filtz's and Cirri's cello concertos, in his C major Concerto, Boccherini has increased the usage of the extended range and other advanced techniques to a differ level. Such an extensive application of the advanced techniques in combination with rhythmic complexity demonstrates not only his great talent as a cellist and composer, but also his ambition in exploring the new sounds and new possibilities in the high register for the cello.

1766

Concerto No. 11 in D major

According to Yves Gérard, the compiler of the definitive 1969 catalogue of Boccherini's works, Boccherini composed the Cello Concerto No. 11 in D major (G573) in 1766.¹⁵ There is an obvious change in the solo writing compared to the Cello Concerto in C major No. 4. The most notable difference is that the Cello Concerto No. 11 shows Boccherini's mastery in applying multiple stops in the cello solo.

Figure 2.4: Boccherini: Cello concerto No. 11 in D major, 1st movement, mm. 25-43

Maestoso

The image shows a musical score for Cello, measures 25 to 47. The score is written in 4/4 time and consists of two staves. The first staff is in bass clef and the second is in treble clef. The music is marked 'Maestoso'. The score includes various rhythmic patterns, including triplets, sixteenth notes, and eighth notes. Fingerings are indicated by numbers 1, 2, 3, and 2a. There are also accents and slurs. The score ends with a trill (tr) and a fermata.

The passage in Figure 2.4 contains high register thumb position double stops in thirds, fourths, sixths, and triple stops. It creates an obvious contrast of texture from the single

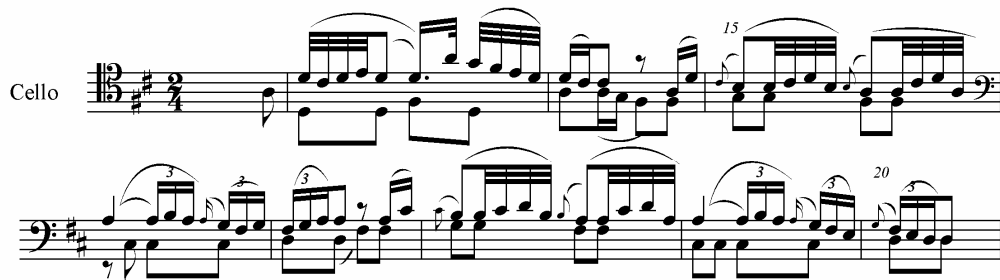
¹⁵ Elizabeth Cowling, *The Cello*, (Charles Scribner's Sons) New York. p.116; Aldo Pais, *Concerto N.11 in to maggiore per violoncello*, (G. 573), (Italy: G. Zanibon, 1987), p. 1

melodic line in the high register. On the down beat of measure 33, Boccherini presents a rarely used technique in the Eighteenth Century—thumb position triple stops. The application of a dominant chord in thumb position, even if for only one beat not only reveals Boccherini’s desire to explore possibilities of the high register triple stop, but also his ability as a creative cellist-composer. Such a new advanced technique provides new possibilities for the composer to create impressive virtuosic passages. It is in the Concerto No. 11 in D major, Boccherini exhibits more enthusiasm in composing solo cello music with double, triple, and quadruple stops.

Figure 2.5: Boccherini: Cello concerto No. 11 in D major, 2nd movement,

mm. 13-20

Largo cantabile



Aldo Pais believes there are many similarities between the Boccherini’s second movement of Boccherini’s concerto No.11 in D Major (Figure 2.5) and one of the etudes by Jean-Pierre Duport (Figure 2.6). He suggests that these two great cellists may have met in France and exchanged some compositional ideas, thus influencing one another.

Figure 2.6: Duport : Essai. Study #8. mm

Adagio cantabile

The image shows a musical score for Cello, titled "Duport : Essai. Study #8. mm" with the tempo marking "Adagio cantabile". The score is written in bass clef with a key signature of one sharp (F#) and a 4/4 time signature. It consists of two staves of music. The first staff begins with a dynamic marking of *p* (piano) and features a series of notes with slurs and fingerings (4, 2, 4, 1, 2). A *dimin.* (diminuendo) marking is present towards the end of the first staff. The second staff starts with a *cresc.* (crescendo) marking, followed by a *mf* (mezzo-forte) marking, then a *p* marking, a *f* (forte) marking, and finally a *pp* (pianissimo) marking. The music includes various rhythmic patterns, including double, triple, and quadruple stops, and is heavily annotated with slurs and fingerings.

No one is sure how much influence it is possible to postulate, but it seems that starting with this Concerto, Boccherini exhibits more enthusiasm in writing cello music with double, triple and quadruple stops (of course, they did not have to physically meet to be influenced by the others' music.) He even crafts the entire second movement of the Concerto in double, triple, and quadruple stops.

Figure 2.7: Boccherini: Cello concerto No. 11 in D major, 3rd movement, mm.150-171

Allegro comodo

The image shows a musical score for Cello, measures 150-170. The score is written in 3/8 time and features a complex, virtuosic passage. It includes several measures with triplets and double stops, marked with '150', '155', '160', '165', and '170'. The notation is dense and includes various fingering and bowing indications.

Exmpale 2.7 is also a long virtuosic section with a combination of thumb position double, triple stops, and thumb position extension in the high register. Under a temple mark as *Allegro comdo*, here, Boccherini displays an extremely difficulty virtuosic passage both visually and aurally.

In measure 150, by placing cello in an extreme high position reaching g", Boccherini begins the passage with an octave double stop. By holding the thumb on g' through the measure as a drone in the bottom voice, Boccherini creates double stops of a sixth, fifth and fourth within the measure. Notice that starting at measure 153, a minor seventh (which is dissonant) is introduced. Like measure 150, Boccherini asks the cellist to hold the thumb down through the measure as a drone to create sixth, fifth, and fourth double stops. Using it as a model, from measures 158 to 163, Boccherini displays a very impressive moment by bringing the cello down step by step. This descending gesture reaches down to measure 163, where Boccherini reverses the drone from the bottom

voice to the top. This time he asks the cellist to hold down the thumb through the measure as a top voice drone, producing second, third, and fourth double stops. It becomes the second model which is applied through measures 163 to 166. In addition, because of the unison double stop in measure 163 and in 166, a thumb position extension must be applied. Finally, after showing all the possibilities of double stops in thumb position along with rhythmic complexity, Boccherini ends the passage with two rarely used thumb position triple stops in measures 170 and 171. By showing the thumb position double stop in such an exhaustive manner, Boccherini impressively demonstrates all the possibilities in applying the advanced technique—thumb position double stops. Through these quickly moveable thumb position double stops in all degrees, Boccherini exhibits new possibilities and flexibilities in high register double stops' composition.

These quotations from Concerto No. 11 display Boccherini's expansion of the cello interval range, and his extensive use of double stops and triple stops. The examples here demonstrate Boccherini's desire in further exploring these advanced techniques. In the next section, quotations from his later concertos will display how Boccherini utilizes double stops and triple stops even more extensively not only in the low and middle registers of the cello, but in the high register as well.

1768

Cello concerto No. 1 in C major

The next three quotations are from the Concerto No.1 in C major (G. 477) which, according to Gérard, was composed by Boccherini approximately 1768. Although it was not the first concerto to be written, it has been listed as No.1 because it was the first of four concertos published by the Bureau d'abonnement, circa 1770 in Paris.¹⁶

Figure 2.8: Boccherini: Cello concerto No. 1 in C major, 1st movement, mm. 36-50

Allegro

¹⁶ Aldo Pais, Concerto N1 In DO Maggiore per Violoncello archi e 2 corni (g. 477) (Padova, Italy : G.Zanibon, 1987), p. 1

The image shows a musical score for Cello, measures 37 through 50. The score is in 4/4 time and C major. It begins with a thumb position double stop in measure 38, followed by a thumb position extension reaching to d'' in measure 39. The passage includes various advanced techniques such as grace notes, double stops, and blocked hand positions, with fingerings and bowings indicated throughout.

The passage in Figure 2.8 is from Boccherini's Concerto No. 1 C major (G.477) and illustrates increasing technical demands from his previous concertos in the use of the advanced techniques such as thumb position double stops and blocked hand position. The thumb position double stop opening immediately captures the listener's attention. It is followed by a thumb position extension reaching to d'' in the high register on the fourth beat of measure 39. Here, Boccherini employs many grace notes, but the double-stop grace note at the beginning of measure 38 is unique. It presents new possibilities in cello music writing with the thumb position double stop. However, the invention and application of this advanced technique makes this unique double stop grace note available. By employing a combination of the advanced techniques at the beginning of the solo part, Boccherini reveals himself as a progressive and creative cellist-composer in virtuoso.

Figure 2.9: Boccherini: Cello concerto No. 1 in C major, 1st movement, mm.87-120

Allegro

The image shows a musical score for Cello, measures 87-120, from Boccherini's Cello Concerto No. 1. The score is written in 4/4 time and C major. It consists of six staves. The first staff is the Cello part, starting at measure 87. It features a series of chords and a melodic line with triplets and sixteenth-note patterns. A circled section at the end of the first staff is labeled 'extension'. The second staff continues the melodic line with triplets. The third staff shows a bass line with triplets and sixteenth-note patterns. The fourth staff continues the bass line with triplets and sixteenth-note patterns. The fifth staff shows a bass line with triplets and sixteenth-note patterns. The sixth staff continues the bass line with triplets and sixteenth-note patterns. The score includes various musical notations such as dynamics (p), articulation (accents), and fingering (1, 2, 3).

Figure 2.9 Boccherini again displays an extreme length of usage in combination of advanced techniques in the music. Notice that a thumb position extension even is combined with thumb position double stops on the last two beats of measures 90 and 94. This passage suggests the many ways that double stops can be applied in thumb position.

Boccherini employs an excessive number of double stops in thumb position in which one note is held down on one string while a second voice is created on another string. The cellist must place his thumb on d' in measure 87, on b-flat in measure 101 and on g in measure 107 to complete these difficult passages. Figure 2.9 demonstrates Boccherini's consideration of a combination of principles in blocked hand position, thumb position double stops and thumb position extension during his composition. These advanced techniques enable the high register cello music performable as well as the compositional ideas becoming executable. By exploiting the advanced techniques, Boccherini in high register retains enormous variety.

Figure 2.10: Boccherini: Cello concerto No. 1 in C major, 1st movement, mm. 127-142

Allegro

The musical score for measures 127-142 of Boccherini's Cello Concerto No. 1 is presented in four systems. The first system (measures 127-130) begins with a triplet of eighth notes (1, 3, 2) and includes a trill in measure 130. The second system (measures 131-135) contains a complex rhythmic pattern with fingerings 1, 4, 2, 3 and accents. The third system (measures 136-140) features a series of double stops with fingerings 3, 1, 1, 2 and accents. The fourth system (measures 141-142) shows a final double stop with an accent.

The large melodic leaps in Figure 2.10 suggest that Boccherini was not only a great composer, but also a virtuoso cellist. One notices the great leap in measure 127—the shift from e' to g"—a minor tenth shift that demands great skill. Then descending scalar gesture brings the cellist back to the middle register f-sharp in measure 130. Two measures later, Boccherini brings the solo back up to high register thumb position again. In order to execute the running sixteenthths in measure 134 and arpeggio gesture in the following measure, a blocked hand position must be applied here. To avoid shifting on the down beat of measure 135 and 138, a thumb position extension is necessary. The application of the advanced techniques thus provides possibilities for Boccherini to explore new heights and wider melodic leaps in high register solo cello music composition.

The passages quoted from the first movement of Boccherini's Concerto No. 1 in C major demonstrate how he integrated the advanced technique of thumb position double stops into his composition. These passages also reveal his consideration in using a combining of several advanced techniques at the same time. Specifically, these quotations illustrate how Boccherini incorporates thumb position double and triple stops to a greater degree than his previous cello concertos. In addition, it displays Boccherini's higher demand on left hand skills in general. The minor-tenth leap from middle register e' to high register g" in Figure 2.10, and the high degree of intensity regarding the employment of thumb position double stops, demonstrate new possibilities both in performing and composition for virtuosic passages. By extensively employing of these new possibilities, Boccherini exhibits his own progression in both performance and composition as a great cellist-composer.

1770's

E-flat Major Cello Concerto

Boccherini's Cello Concerto in E-flat Major Concerto for Cello and Orchestra is not well known:

[The E-flat concerto] by Luigi Boccherini (1743-1805) was discovered by [Christian Speck] in 1986 in the library of the Conservatorio di Musica *San Pietro a Maiella* in Naples, in the form of a contemporary copy of the parts. With this there are now twelve known cello concertos by Boccherini which all show his extraordinary mastery of the cello.¹⁷

Speck believes that this newly discovered cello concerto was composed by Boccherini about 1772.¹⁸ The E-flat major concerto, being a later composition, displays even more demanding technical difficulties as compared to other concertos that he had composed earlier.

Figure 2.11: Boccherini: E-flat Major Cello Concerto, 1st movement, mm.25-42

¹⁷ Christian Speck, Boccherini Concerto for Violoncello and Orchestra Eb major/Es-Dur, (Mainz: B. Schott's Söhne, 1994), p. 2.

Maestoso

The image shows a musical score for Cello, marked *Maestoso*. The score is written in 4/4 time and consists of four staves. The first staff begins with measure 16 and includes fingerings 1^a, 2, 1, 3, and 3^a, and a dynamic marking of *f*. The second staff starts at measure 30 and includes a dynamic marking of *f*. The third staff starts at measure 30 and includes dynamic markings of *mf* and *f*, and a fingering of 2^a. The fourth staff starts at measure 16 and includes dynamic markings of *f* and *f*, and fingerings 2^a and 3. The score is in a key signature of two flats (B-flat major/E-flat minor).

Unlike what he had composed in the pervious concertos, the passage in Figure 2.11 displays Boccherini's higher technical demands on the cellist regarding normal thumb position, blocked hand position, and thumb position double stops right at the beginning of the solo part in high register thumb position. The double stops on the second beat of measure 27 and 30 indicate that Boccherini has asked a cellist to stay around one position for the main theme. Starting on the third beat of measure 40 and in the following measure, the fast sixteenth notes are also a place where the blocked hand position must be applied. Since the passage is composed around b'-flat, the cellist is able to perform the entire section without shifting very far by setting his thumb on b'-flat in a blocked hand position. Therefore, by exploiting the blocked hand position, Boccherini makes the high register virtuosic solo part becoming playable. Such a virtuoso solo opening in high register thumb position creates an extraordinary solo opening of the concerto. Comparison

¹⁸ Christian Speck, Boccherini Concerto for Violoncello and Orchestra Eb major/Es-Dur, (Mainz: B.

to other concertos' solo opening in the Eighteenth Century and even Boccherini's own (with the low and middle register), this high register solo opening gives the impression that Boccherini was a unique virtuoso cellist.

Figure 2.12: Boccherini: E-flat major cello concerto, 1st movement, mm.54-70

Maestoso

The musical score for the Cello part, measures 54-70, is presented in five systems. The first system (measures 54-58) is in the bass clef and features a high register solo opening with a blocked hand position, indicated by '1a' and '2a' above and below the staff. The second system (measures 59-63) continues the high register passage with similar techniques. The third system (measures 64-68) shows a transition to a lower register with a trill (tr) and a dynamic marking of *f*. The fourth system (measures 69-73) continues the lower register passage with a trill and a dynamic marking of *f*. The fifth system (measures 74-78) concludes the passage with a trill and a dynamic marking of *f*. The score includes various musical notations such as fingerings (1, 2, 3), breath marks (φ), and dynamic markings (*f*).

Figure 2.12 displays Boccherini seeking new possibilities to display his mastery of composition. Here, by employing the advanced technique of blocked hand position, Boccherini creates an extreme impressive passage in the high register. There are two pedal tones that are embellished in this passage, f and b'-flat. From measures 54 to the

Schott's Söhne, 1994), p. 3.

down beat of 58, by using rapid sixteenth note string crossings, Boccherini crafts an impressive sound on the first pedal-tone *f*. It is followed by a gradual ascent, step by step, using the thumb in measures 60 to 64. On the down beat of measure 64, the cellist finally reaches the *b''* with his third finger and sets his thumb on *b'*. Then, he could complete the rest of the highly technically demanding passage by simply staying in that position. However, the high register rapid string crossings are very impressive, display a cellist's highly developed left hand skills. Furthermore, such a high register rapid string crossing reveals new possibilities in high register cello music writing.

Figure 2.13: Boccherini: E-flat major cello concerto, 1st movement, mm.134-153

Maestoso

Cello

The musical score consists of five staves of music. The first staff (measures 134-138) shows rapid sixteenth-note passages with fingering: φ 2 φ and 1 3 φ . Below the notes are fingerings $2a$ and $1a$. The second staff (measures 139-143) continues the rapid sixteenth-note passages, starting at measure 140. The third staff (measures 144-148) features a trill (*tr*) and a fortissimo (*f*) dynamic. The fourth staff (measures 149-152) continues the fortissimo section. The fifth staff (measures 153-156) shows a crescendo (*cresc*) leading to a fortissimo (*f*) section with a trill (*tr*) and fingering φ 1 2 3.

Measures 134 to 153 in Figure 2.13 are a sequential repetition of measures 54-70. Here, the entire previous passage has been transposed to the tonic key which is four scale degrees higher. Obviously, Boccherini composed this passage with the exact same strategy as before; however, the entire passage is presented in an incredible high position making the music even more impressive. By setting his thumb on e"-flat, the cellist can reach the highest note e'"-flat with his third finger. Notice that it is the highest position Boccherini had ever employed up to this point with blocked hand position. The rapid string crossing passage at such heights definitely creates a highly virtuosic passage, and provides a new feature. Nevertheless, the new height on the cello has been exploited here, demonstrating an expansion of interval range to more than four octaves. Such a great dimension of interval range certainly allows the cello to create grand contrasting voices in different registers, which surely create sharp contrasting characters within the instrument. Therefore, the cello become a virtuoso instrument that can provide a wide range in pitch with a quality sound.

Figure 2.14: Boccherini: E-flat major cello concerto, 3rd movement, mm. 246-253

Allegro

The musical score for measures 246-253 of Boccherini's E-flat major cello concerto, 3rd movement, is presented in two staves. The upper staff, labeled 'Cello', shows measures 246-250, marked '8va' with a dashed line above the staff. The lower staff shows measures 250-253, marked '250 (8va)' with a dashed line above the staff. The lower staff includes a trill (tr) in measure 252.

Figure 2.14 displays an interesting problem that occurs when reading Boccherini's cello music. According to Edmund S.J. van Der Straeten,

The simplification in the use of the various clefs was due to Boccherini and Bernhard Romberg, who reduced the C clefs to the use of the tenor clef only, and who introduced a rule that the G clef, when following the bass left, had to be read an octave lower than its actual compass. But when following the tenor clef it resumed its usual position.¹⁹

Therefore, Stracten emphasizes that whenever a G clef appears followed by a bass clef, it has to be read an octave lower than it is actually notated. Therefore, the highest note in the passage of Figure 39 e''' must be read one octave lower because it is followed by a bass clef. Even though the highest note in the passage really has to be read one octave lower as an e'', perhaps this instance demonstrates the fact that Boccherini had exploited one of the highest notes among his own compositions.

Passages from Boccherini's E-flat Major Cello Concerto have proven to be illustrations of his in exploiting the higher ranges of the cello. With this relatively late concerto, the cello now has an interval range of more than four octaves. In addition to this new expansion of the cello register, all the advanced techniques used in this concerto have also been elevated to the upper registers as well, representing Boccherini's higher technical demands of the cellist in terms of utilizing advanced techniques in the upper register. Therefore, this concerto, discovered later than the rest, certainly represents Boccherini's higher demand in utilizing the advanced techniques and maximizing range of cello's fingerboard in his solo cello music composition.

¹⁹ Edmund S.J. van Der Straeten, History of the Violoncello,(London, William Reeves Bookseller Ltd., 1971), pp. 371

The quotations from all four cello concertos exhibit the progressive manner in which Boccherini—the unique cellist-composer in the Eighteenth Century—applies these advanced techniques in the high register. These examples reveal Boccherini’s tendency to place the solo cello higher and higher in register and use the advanced techniques more extensively with successive concerto. It demonstrates new possibilities in solo cello music composition and also serves as a leading in the development of subsequent compositions and performances of cello music, giving rise to a new era in the history of music. Straeten comments,

For the development of the violoncello technique Boccherini did more than any of his predecessors. He developed the passage work with the daring of a great virtuoso, freeing it from all the cramped writing and stiff conventionalities of his predecessors, which arose of course, chiefly from their limited technique.²⁰

²⁰ Edmund S.J. van Der Straeten, History of the Violoncello, (London, William Reeves Bookseller Ltd., 1971), p. 174.

Chapter 3: *The Non-Cellist Composer Franz Joseph Haydn*

Franz Joseph Haydn (1732-1809), a non-cellist composer, is thought to have composed six cello concertos in all. Among these works, two of them are still missing. His D major Concerto Hob. VIIb: 4 and C major Concerto Hob. VIIb: 5 are not often performed, but the Cello Concerto in C major, Hob. VIIb: 1 and Cello Concerto in D major, Hob. VIIb: 2 are regularly found in today's programs.²¹

Of the C major Cello concerto, Karl Geiringer writes:

His Concerto in C (c 1761-5) is the first cello concerto by a major composer of the Classical period, although Haydn's interest in exploring the cello's technical possibilities in a concertante role can be seen already in several of the early symphonies (nos.6, 7, 8, 15, 31 and 45). Written for Joseph Weigl, then principal cellist at Esterháza, the Concerto in C is a musical masterpiece and a virtuoso showpiece for the cellist. It uses techniques similar to those employed by Fils in his concertos: fast passages implying the use of horizontal thumb position fingers across three strings in blocked hand positions, arpeggios, *batteries*, *brisure*, double stops alternating with lower open strings, and lower-register sonorities. The range of the cello part extends to a".²²

Even though this C major Concerto is one of Haydn's earlier works, it nevertheless, clearly reveals the influence of the advanced techniques on this composer's cello music. As Geiringer clearly observes, advanced techniques enable Haydn to compose a challenging cello concerto around the middle of Eighteenth Century, and to enrich his

²¹ Elizabeth Cowling, *The Cello*, p. 112.

²² Wijsman, *18th-century use, Performers and Repertory*, Volume 26. P 755-756

compositional ideas. Regarding to the D major Concerto—a concerto Haydn composed two decades later—Geiringer comments,

The few well-known solo concertos by Haydn were written during the eighties. The authenticity of the Violoncello Concerto in D major (Hob. VIIb: 2) has been doubted; it has been suggested that Anton Kraft, a cellist of the Esterháay orchestra and pupil of Haydn, was its author, though the first edition, published by André (Offenbach) in Haydn's lifetime, bore the inscription "Édition d'après le manuscrit original de l'auteur," and Köchel, the great Mozart scholar, testified to having seen this autograph. Fortunately it was rediscovered in Vienna by the middle of this century, and all doubts of Haydn's authorship were thus removed. In this work, composed in 1783, the part for the solo instrument not only is brilliant, but also has been made the center of the composition: all the other instruments look to it for leadership.²³

Luckily scholars finally have proved the authorship of the D major Concerto to Haydn. It is in this Concerto, that Haydn exhibits an extraordinary manner in application of the advanced techniques. Even though the authorship was clarified, such exhaustive use the advanced techniques in the Concerto make people skeptical. Was there a cooperation between Haydn and Kraft in the compositing of the Concerto?

It is interesting to observe how Haydn, a non-cellist composer, utilizes these advanced cello techniques in his compositions. It is even more fascinating to investigate the difference between these two concertos regarding the application of the advanced techniques, especially considering that Kraft may have participated in its composition. The following quotations from both of Haydn's Cello Concertos, in C major and D major, will serve as examples illustrating how Haydn approached the advanced techniques in his compositions.

²³ Geiringer, Haydn A Creative Live in Music, pp. 294-295.

C major Cello Concerto
Blocked Hand position

Figure 3.1: Haydn: Concerto in C major for Cello and Orchestra. 1st movement, mm. 37-47

Moderato

The musical score for the Cello part, measures 37-47, is presented in five staves. The key signature is C major and the time signature is 4/4. The tempo is *Moderato*. The score includes various performance instructions and fingering indications:

- Measure 37: *p*, fingering 1_a.
- Measure 38: *p*, fingering 2_a.
- Measure 39: *tr*, *f*, fingering 2.
- Measure 40: *p*, *f*, fingering 2.
- Measure 41: *p*, *cresc.*, fingering 1_a, 2_a.
- Measure 42: *p*, *cresc.*, fingering 2_a.
- Measure 43: *p*, *cresc.*, fingering 2_a.
- Measure 44: *p*, *cresc.*, fingering 2_a.
- Measure 45: *p*, *cresc.*, fingering 2_a.
- Measure 46: *p*, *cresc.*, fingering 3, 1_a, 2_a.
- Measure 47: *p*, *cresc.*, fingering 3, 1_a, 2_a.

In measure 37 of the first movement of the C major Concerto, Haydn places the cellist in thumb position in the higher register for the first time. Take notice that he does not keep the cello in the high register for very long but for only two measures. Later, the cello drops down to the middle register, immediately followed by a double-stop figure. An ascending scalar gesture in measure 41 carries the cello back to the high register in thumb

position, reaching d". Again, he only places the cello up in the high register for two measures, 42 and 43, and then brings it down to the middle register in measure 44. Two measures later he once again brings the cello back to thumb position with an ascending scalar motive reaching g". Figure 3.1 displays a typical way in which Haydn employs thumb position to create contrasting voices and timbres by frequently switching registers. The thumb position double stops in measure 40, even though they last only one measure, provides a sharp contrasting texture in the remainder of the thumb position passage. In measures 46 to 47, comprising a two octave ascending scale, Haydn employs a wide interval range to create an exciting passage. These advanced techniques help Haydn to explore virtuosic passage writing in the high register for the cello; these passages can not be performed without a combination of the advanced thumb position techniques.

However, cellists often find that Haydn's technical passages are not easy to play. Haydn often requires of the cellist a difficult shift in a middle of a running passage. As a non-cellist composer, he may have understood the basic principle of the blocked hand position (which can cover an interval range in fourth while playing in one string, or an octave while playing on two strings, etc.) but ignored the timing necessary for the cellist to shift into thumb position. A cellist-composer would either set his thumb on one position at the beginning of the passage then complete it within the position, or require only a shift of a small distance for convenience purposes. In the thirty-second-note passage in measure 46, Haydn asks the cellist to shift on the third beat of measure 46. Therefore, the cellist must shift in the middle of continuing thirty-second notes in order to reach the highest note g". This practice reveals non-cellist composers' lack of full understanding of the advanced techniques in their composition.

Figure 3.2: Haydn: Concerto in C major for Cello and Orchestra. 1st movement, mm. 107-117

Moderato



The virtuoso passage in Figure 3.2 begins with an ascending scalar gesture comprised of thirty-second notes in the low register. The constant skip over two strings back to the lowest string not only provides a bass line, but also reinforces the idea of different voices that can be provided using a wide interval range on cello. The following measures further support this idea by placing the cello up in the high register in thumb position. The staccato sixteenth notes in measure 111, measure 112 and its following measure require an application of blocked hand position covering three strings. Measures 110 to

113 are based on a dominant pedal on the open G string, and Haydn creates a virtuosic passage by having the cello's melodic line leap more than two octaves from the low register to high register. Such rapid string crossing with a high degree of register changing creates a highly impressive passage. However, this virtuosic passage could not have been played nor composed without the knowledge of the blocked hand position due to the wide melodic interval leaps.

The second movement of the Concerto in C major exhibits a beautiful, lyrical slow movement typical to Eighteenth Century cello concertos. This movement shows Haydn's thorough understanding of the different timbres in different ranges on the cello. It is interesting to see how Haydn employs the advanced thumb position techniques to create variety within the slow movement.

Figure 3.3: Haydn: Concerto in C major for Cello and Orchestra. 2nd movement, mm. 42-51

Adagio

The musical score for measures 42-51 of Haydn's Concerto in C major, 2nd movement, is presented in three staves. The first staff is in bass clef and shows measures 42-44. The second staff is also in bass clef and shows measures 45-49. The third staff is in treble clef and shows measures 50-51. The tempo is marked *Adagio*. The key signature is one sharp (F#). The time signature is 3/4. The score includes various musical notations such as slurs, accents, and fingerings (e.g., 0, 1, 2, 3, 3a, 3). Dynamic markings include *p* (piano) and *mf* (mezzo-forte). A *cresc* (crescendo) marking is present in measure 45. A *tr* (trill) marking is present in measure 50.

A cellist can set his thumb on c" to perform Figure 3.3 with a blocked hand position covering two strings. In measure 47, there is a remarkable melodic leap, two-and-a-half

octaves to a higher register. Such a large melodic leap creates an impressive moment in the lyrical passage. The lyrical passage also illustrates a new possibility in higher register cello music. It cannot be successfully played without the blocked hand position, and it is striking that a composer can write such a passage without knowledge of the blocked hand position technique. This beautiful, slow, high register passage certainly creates a different character in virtuosic cello music. By placing the cello in such an extreme high register, Haydn demonstrates a sharp, contrasting voice within the movement in the low and the middle registers.

Figure 3.4: Haydn: Concerto in C major for Cello and Orchestra. 3rd movement, mm. 41-55

Allegro molto

The musical score is written for Cello in 4/4 time. It begins with a piano (*p*) dynamic. The first line shows measures 41-44, featuring a large melodic leap from a low register to a high register. The second line shows measures 45-49, with a complex rhythmic pattern. The third line shows measures 50-54, continuing the virtuosic passage. The fourth line shows measures 55-56, concluding the passage. The score includes various musical notations such as slurs, accents, and dynamic markings.

Figure 3.4 displays the virtuoso opening of the last movement. The advanced techniques of blocked hand position and thumb position double stops must be employed in this

passage in order to complete this highly technical and demanding passage. The repeated running sixteenth notes within an octave and thumb position double stops may show Haydn's consideration of utilizing thumb position blocked hand position covering two strings while composing this difficult passage. In measure 53 and the following measure, a blocked hand position covering three strings should be applied in order to reach the high register note d'' without shifting. It is interesting to observe the sudden change in texture from the single melodic line to thumb position double stops in measure 46. Here, Haydn adds two double stops in thumb position. Even though the double stops only appear twice as eighth notes, this contrasting texture adds charm through a different texture in contrast to the remainder of the single melodic line. Surely, the thumb position double stops help Haydn to create variety within his music. This quotation also demonstrates how the advanced techniques in thumb position enabled Haydn to compose melodic cello music in the high register. However, a cellist may have a problem in determining his fingering on the third beat of measure 53 into 54.

Option one:

Cello

53 55

φ 1 2 3 φ 1 2 φ 1 2 3

3_a 2_a 1_a

Option two:

Cello

53 55

φ 4 0 1 2 1 3 4 1 3 4 1 2 1 2 3 φ 1 2 3

2_a 1_a

Obviously, the fingering of option two, applying the blocked hand position covering three strings, would help the cellist perform this one-and-a half octave passage comfortably and without a shift. Yet, by applying the blocked hand position, a sudden switch to the G string would change the timbre within the phrase. Option one would allow the cellist to play the entire phrase within two strings, retaining the timbre throughout the phrase, but he would have the difficulties of frequent shifts. Therefore, this passage is one of the places where the cellist must choose one of two less than appealing options. A similar dilemma for the cellist is also shown in the next example.

Figure 3.5: Haydn: Concerto in C major for Cello and Orchestra. 3rd movement, mm.228-233

Instead of choosing one of two possible options, here, the cellist has to choose one of three less than appealing options.

The first option, displayed in Figure 3.5, asks the cellist to stay on the A string to complete the entire phrase in order to retain the same timbre.

Option one:

Allegro molto



The second option, exhibited in Figure 3.5, would be to set the thumb on c' or f as the bass note of a blocked hand position to play the passage. Although shifting is avoided,

this creates a string crossing on the last beat of measures 228 and 230, thus damaging the phrase with a sudden jump from a dark to a bright timbre.

Option two:

Allegro molto

Cello

The last option, seen here in Figure 3.5, would be to set the thumb on d'' or g' so that within the blocked hand position the third finger is on g''; however, this creates a similar problem on beat three of measures 228 and 230 and sounds as defective as Option two.

Option three:

Allegro molto

Cello

The performer must thus choose which option is the least difficult or least disrupting within the context of the work. Oddly, passages such as those shown in Figure 3.5 are side by side with examples such as this next one, in which it appears that Haydn not only composed the passage with blocked hand position in mind, but was comfortable with it.

Figure 3.6: Haydn: Concerto in C major for Cello and Orchestra. 3rd movement, mm. 117-146

Allegro molto

The image displays a musical score for the Cello part of the 3rd movement of Haydn's Concerto in C major, measures 117-146. The score is written in 4/4 time and begins with a forte (f) dynamic. The key signature is C major. The notation includes various fingerings (1, 2, 3) and bowing techniques (accents, slurs). Specific fingering notations such as 3a, 2a, and 1a are used to denote alternate fingerings. Measure numbers 120, 125, and 130 are clearly marked. The score concludes with a double bar line and repeat dots.

In measures 118 to 123, the constantly repeating c's prove that Haydn has asked the cellist to set his thumb on d' and use a blocked hand position covering three strings. By shifting one step down, in measure 124, Haydn has the cellist set his thumb on c' to play from measures 124 to the first half of measure 129. Starting at measure 118, a blocked hand position must be applied, covering three strings. At the second half of measure 129, a fresh new sound is created by emphasizing rapid string crossings within a broken chord gesture rather than the scalar motive that is found in previous measures. Four measures later, the open G string brings in by increasing the interval range up to two-and-half octaves within the broken chord figure. Eventually, it leads to the highest note in the entire section, e". Notice that it is only through the development of the advanced technique—blocked hand position—that Haydn could create this exiting virtuosic passage in the high register for cello.

Figure 3.7: Haydn: Concerto in C major for Cello and Orchestra. 3rd movement, mm. 236-251, Coda.

Allegro molto

The image shows a musical score for Cello, measures 235-245. The score is in 4/4 time and features a virtuosic passage of running sixteenth notes. It includes dynamic markings like 'f' and 'f', and technical annotations such as fingerings (1, 2, 3, 4), accents (acc), and trills (tr). The score is written on five staves, with the first staff labeled 'Cello'. The music starts at measure 235 and ends at measure 245. The passage is characterized by rapid sixteenth-note runs, often with slurs and accents. There are several trills in the later measures. The dynamic 'f' is used throughout the passage. The score includes various fingering numbers (1, 2, 3, 4) and accents (acc) above notes. There are also trill markings (tr) above notes in measures 244 and 245. The score is written in a standard musical notation with a treble clef and a key signature of one flat (B-flat).

After a gradual ascending scalar motive in running sixteenths, Haydn finally places the cello in the high register. The repeated g's suggest that Haydn asks the cellist to place his thumb on g' with a blocked hand position. Once again, the cellist will have some difficulty running into this blocked hand position without preparation. The most interesting thing here is that a thumb position extension must be applied because of the repeated g' notes. By setting the thumb on the g', the cellist must apply the thumb position extension in order to reach d" in measure 242 and e" in the following measure, since the interval range from the g' to d" and then e" exceeds a normal thumb position coverage of a fourth. Here, in this virtuosic passage, a thumb position extension enables Haydn to compose using wider interval ranges in the high register. It is the only place in the entire concerto in which Haydn applies this advanced technique. On the second beat of measure 244, Haydn surprisingly places a double stop in the thumb position, which creates a charming moment from sudden changing of texture.

Thumb position double stops:

Figure 3.8: Haydn: Concerto in C major for Cello and Orchestra. 2nd movement, mm. 35-38

Adagio

The image shows a musical score for Cello, measures 35-38, in 2/4 time. The tempo is marked *Adagio*. The score begins with a dynamic marking of *p* (piano). The first measure (35) features a double stop with a fingering of 1^a and 2^a. The second measure (36) has a fingering of 2, 3, 1. The third measure (37) has a fingering of 2. The fourth measure (38) has a fingering of 2^a. The score includes various musical notations such as slurs, accents, and dynamic markings.

Measures 35 to 38 from Figure 3.8 illustrate the first time that Haydn uses thumb position double stops in this movement, and he adds them mainly to create a different texture and a fresh, new timbre. Although this double stop passage lasts only four measures, it effectively carries out a contrasting character to the long slow movement's single melody. Thus, by application of the thumb position double stops in the slow movement, Haydn creates an audible contrast to the texture used in the high register.

Passages from Haydn's C major Concerto exemplify how a non-cello composer applies advanced techniques in his cello music. Even though some of the passages are technically awkward, such as in Figure 3.1, which requires a shift during a running thirty-second passage, and Figure 3.5, which creates the dilemma of finding a good fingering, Haydn undoubtedly achieves his goal by employing these advanced techniques as contrasting devices.

The Cello Concerto in D major

The contrast between the C major Concerto and the popular D major could not be more striking. Here, it is thought that Haydn employs advanced techniques differently because Kraft could have participated in its composition.

Thumb position with shift (shift with assistance by harmonic note)

Figure 3.9: Haydn: Cello concerto in D major. 1st movement, mm. 29-34

Allegro moderato

The musical score for the Cello part, measures 29-34, is presented in three staves. The key signature is D major (two sharps) and the time signature is 4/4. The tempo is *Allegro moderato*. The score includes various advanced techniques: measure 29 features a triplet of eighth notes with fingerings 1, 2, and 3, followed by a sixteenth note with fingering 1 and a grace note; measure 30 shows a triplet of eighth notes with fingering 3 and a sixteenth note with fingering 6; measure 31 contains a triplet of eighth notes with fingering 1 and a sixteenth note with fingering 2; measure 32 features a triplet of eighth notes with fingering 1 and a sixteenth note with fingering 2, followed by a triplet of eighth notes with fingering 3 and a sixteenth note with fingering 4; measure 33 includes a triplet of eighth notes with fingering 1 and a sixteenth note with fingering 2, followed by a triplet of eighth notes with fingering 3 and a sixteenth note with fingering 4; measure 34 shows a triplet of eighth notes with fingering 1 and a sixteenth note with fingering 2, followed by a triplet of eighth notes with fingering 3 and a sixteenth note with fingering 4. The score also includes a trill (tr) in measure 34.

Measure 29 to 34 present the main theme of the D major Concerto's first movement. This quotation is a perfect example to illustrate how the advanced techniques help to make the cello a melodic solo instrument not only in the low register but in the high registers as well. In addition to the lyrical melodic theme displayed in the middle and the

high registers, what strikes listeners the most is the descending scalar gesture at the end of the main theme with its more-than-three-octave interval range. After applying thumb position in order to reach the e" in the high register at the second beat of measure 33, the cello then is carried down gradually. It eventually reaches D in the low register. It is quite fascinating that Haydn displays the unique character of the cello—which has great contrasting voices within the instrument and a wide interval range—right at the beginning of the solo part.

In order to avoid a sudden timbre change from crossing strings, most cellists would prefer not to use blocked hand position to perform this passage. Then, one might notice that the two melodic leaps on the second and fourth beats of measure 33, which could require the cellist to run into thumb position without preparation. However, the harmonic notes e" and a' help the cellist to gain time in order to play his thumb position notes perfectly in tune since the harmonic can be easily located.

Figure 3.10: Haydn: Cello concerto in D major. 1st movement, mm. 60-64

Allegro moderato

Cello

The quotation in Figure 3.10 displays a virtuosic passage which must have been composed and which must be performed with blocked hand position covering four strings. Starting at the last beat of measure 60, the constantly appearing *b'* and *e'* indicate that Haydn suggests that the cellist set his thumb on *b'*. Only by applying the blocked hand position covering four strings could the cellist complete the more-than-two-octaves fast broken-chord figure smoothly and with clarity. Although the continually running sixteenth-notes make one wonder if the cellist would have to shift into thumb position, the cellist could use the harmonic note *a'* on the last beat of measure 60 to make shifting more comfortable. Therefore, Figure 3.9 and 3.10 suggest a cellist's cooperation during the composition. By applying the harmonic note to avoid a rush into thumb position, the cellist can play the virtuosic passage with better clarity and tone.

Extension in thumb position

The frequent use of thumb position extension in the D major Concerto is an obvious contrast to Haydn's C major Concerto, in which the thumb position extension is only used once at the end of the last movement. I believe that perhaps more than anything else, this points to a close cooperation between Haydn and the cellist Kraft in the writing of the D major Cello Concerto. As has been explained earlier, an extension in thumb position permits a wider interval range to be executed without shifting in the high register. It is a later thumb position development of the Eighteenth Century. It provides a new possibility which helps the composer to write high register cello music with more flexibility due to the expanded interval range within a thumb position.

Figure 3.11: Haydn: Cello Concerto in D major. 1st movement, mm. 67-70

Allegro moderato

The image shows a musical score for Cello, measures 67-70, in D major. The score is written in 4/4 time and consists of two staves. The upper staff is in bass clef and the lower staff is in treble clef. The key signature has two sharps (F# and C#). The music is marked 'Allegro moderato'. The passage begins at measure 67 with a triplet of eighth notes. The notation includes various fingering indications: '6' for the sixth finger, '3' for the third finger, and 'φ' for the thumb. Thumb position extensions are indicated by '1a' and '2a' below the notes. The passage ends at measure 70 with a final note and a fermata.

Measures 67 to 69 comprise an extraordinary technical passage which cannot be executed without a thumb position extension. On the third beat of measure 69, the repeated

interval of a tenth within thirty-second notes presents great difficulty for the cellist. However, by employing the advanced technique, this difficult passage becomes playable. The thumb position extension also helps the compositional idea—constant melodic leaps of a tenth to become possible. Notice that the sixteenth notes at the beginning of each running thirty-second scalar motive provide an opportunity for the cellist to set his thumb in thumb position.

Figure 3.12: Haydn: Cello Concerto in D major. 1st movement, mm. 162-163

Allegro moderato

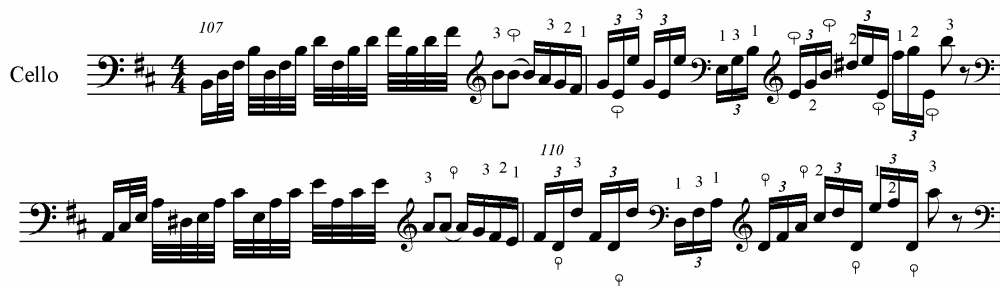


Measures 162 and 163 display a very similar compositional approach to the previous example. On the last beat of measure 162 and second beat of 163, a thumb position extension must be applied. The difference between these two examples is that the three octaves melodic leaps help to create sharp contrasting material in different registers. In addition to the compositional contrasting idea, unlike his C major Concerto, there is no sign of running into the thumb position. Instead, there is well though out shifting plan which permits the cellist to set his thumb on d' for the thirty-second notes with thumb position extension. If the cellist use the advantage of the harmonic note on d' on the D

string, it would be even more comfortable for him to complete the shifts. The next example also reinforces the idea of Kraft's participation.

Figure 3.13: Haydn: Cello Concerto in D major. 1st movement, mm. 107-110

Allegro moderato



In measure 108, where the solo cello reaches the highest note b", a blocked hand position must be applied in order to cover all four strings. It is an extraordinary passage of extreme technical difficulty that demands a skilled left hand. By covering all four strings through blocked hand position, Haydn exhibits his full understanding of this advanced technique (may assisted by Kraft.) From the second-half of measure 107 to measure 110, a combination of blocked hand position and thumb position extension must be applied in order to allow the cellist to reach b" and a" without shifting. The interval of a twelfth leap at the end of both measures 108 and 110 requires a thumb position extension while the blocked hand position covering two strings. Only a virtuoso cellist, knowledgeable in this advanced technique could give a suggestion such as this for a rapid string crossing passage. The shifting has been well thought out by giving an eighth note on the third beat

of both measures 107 and 109. These eighth notes help the cellist to easily place his thumb for the following rapid string crossing in sixteenth notes over four strings. Only by applying the advanced techniques of blocked hand position and thumb position extension could such a compositional idea, covering two-and-half octaves with running sixteenth triplets be executed under a tempo marked *Allegro moderato*.

Figure 3.14: Haydn: Cello Concerto in D major. 1st movement, mm. 173-179

Allegro moderato

The image displays a musical score for measures 173 through 179. It features five staves. The first staff is labeled 'Cello' and begins at measure 173 with a triplet of sixteenth notes. The second staff is labeled 'Flautino' and starts at measure 175 with a melodic line. The third, fourth, and fifth staves contain complex rhythmic patterns, including sixteenth-note triplets and sixteenth-note runs, with some notes marked with a '6' indicating a sixteenth-note triplet. The key signature is D major (two sharps) and the time signature is 4/4.

Figure 3.14 shows the virtuosic ending of the first movement. Here, the development of thumb position helps Haydn to reach g''' , demonstrating a four octave cello range in this

passage. Such an extreme high pitch as seen in measure 175, typifies one of the techniques, only can be discovered and exploiting into composition by a virtuoso cellist himself. Nevertheless, there is no doubt that this interval expansion in Haydn's concerto provides new possibilities in terms of contrast in different registers. Haydn demonstrates this point right after the *fermata* by writing a two-octave arpeggio gesture in measure 178, immediately followed by having the cello back up to a" in the high register. After an abrupt stop in the music, the cello suddenly descends more than three octaves to the short thirty-second notes at the end of measure 178.

Thumb position extension shifting

Figure 3.15: Haydn: Cello Concerto in D major. 3rd movement, mm. 50-55

Allegro

Cello

The quotation in Figure 3.15 containing measures 50 through 57 features a change of texture that requires a difficult combination of thumb position extensions and double stops. In measure 50, an ascending arpeggio gesture takes the cello up to f' and, due to the fast tempo, thumb position extension must be applied in order to complete the passage. This application of thumb position extension permits the cellist to reach the f' in the high register without shifting. Thumb position double stops are employed immediately afterwards. In measures 54-55, the combination of thumb position extension and constant shifting makes the descending arpeggio very difficult, but the eight notes allow the cellist to have enough time to shift to the next thumb position. Assisted with the knowledge of thumb position extension, the composer can write any passage in the high register within an interval range of one-and-a-half octave while applying thumb position on two strings. For instance, Haydn makes the passage in this example very impressive by presenting a descending shift arpeggio gesture with the advanced technique of thumb position extension.

Double stops

Figure 3.16: Haydn: Cello Concerto in D major. 1st movement, mm. 35-39

Allegro moderato

Cello

Measures 36 and 39 contain two advanced techniques, thumb position double stops and thumb position extension. By applying thumb position extension, the cellist can reach the high note f'-sharp without a shift. The combination of thumb position double stops and the thumb position extension is an unusual thumb position technique, and presents technical difficulty in comparison to ordinary thumb position double stops or thumb position extension. Such a combination of advanced techniques permits Haydn to create an aural effect wherein the double stops are paired with large melodic leaps. Therefore, Haydn exhibits a new possibility in composing double stop passages in the high register.

Figure 3.17: Haydn: Cello Concerto in D major. 1st movement, mm. 114-117

Allegro moderato

The image shows a musical score for Cello in D major, measures 114 to 117. The score is written in treble clef with a key signature of two sharps (F# and C#) and a 4/4 time signature. Measure 114 begins with a double stop on the third beat. Measure 115 features a double stop on the down beat, followed by a diminished seventh chord on the third beat. Measure 116 contains a complex passage with double stops and thumb position techniques, indicated by '1a', '2a', and '3' markings. Measure 117 continues the passage with double stops and thumb position techniques, indicated by '1a', '2', and '3' markings.

The excerpt including measures 114 to 117 is another place in the first movement of the D major Cello Concerto in which Haydn uses thumb position double stops. It only lasts for one-and-a-half measure, but the diminished seventh chords introduce an unusual effect with their dissonant harmony. Beginning in measure 114, two double stops are presented in thumb position: one is on the third beat of measure 114 and the other at the down beat of the following measure. Following this, on the third beat of measure 115, a diminished seventh chord looks more difficult than it actually is to play. In order to execute this seemingly complicated passage, the cellist needs only to shift his thumb a half-step down while the other fingers remain in the same position as in the previous measures. Most likely, such a technically impressive passage would only be noticed by cellist themselves. I believe this is another place which suggests Kraft's participation in the composition of this concerto. This new way of writing cello music with double stops in the high register cannot be found in Duport's *Essai*, but it unquestionably provides contrast to a single melodic line. Its dissonant harmony on the third beat of measure 114 and down beat of 115 even creates contrast to the other double stops.

Figure 3.18: Haydn: Cello Concerto in D major. 1st movement, mm. 118-126

Allegro moderato

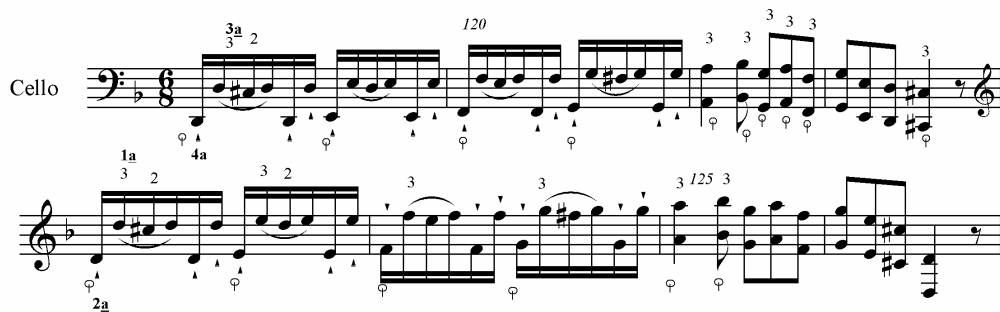
The image shows a musical score for Cello, measures 117-125. The score is written in G major (one sharp) and 4/4 time. It consists of five staves. The first staff (labeled 'Cello') starts at measure 117 with a bass clef and a key signature of one sharp. It features an ascending eighth-note motif starting at measure 117, reaching a high G (g'') on the second beat of measure 120. The second staff continues the piece, showing a descending line from measure 120 to measure 121, followed by an ascending arpeggio in measure 122 that reaches the high G again. The third staff shows a descending line from measure 122 to measure 123. The fourth staff (labeled '125') shows a repetition of the ascending arpeggio from measure 121-122, reaching the high G for the third time. The fifth staff shows a descending line from measure 124-125, reaching the high G for the third time. The score includes various musical notations such as slurs, accents, and fingerings (1, 2, 3, 1a, 2a, 3, tr).

A passage involving frequent switching from the high register to the middle register has been quoted in Figure 3.18. Notice that even though this passage is only eight measures long, the cello is sent up three times to the high register in thumb position reaching g". Starting at measure 117, an ascending motive takes the cello up into the high register, reaching g" on the second beat of 120. Then the cello is descends gradually to the middle register in the following measure. From measure 122, a second ascending arpeggio gesture brings the cello back up to g". Two measures later, in 124 and 125, a repetition of measure 121 and 122, the cello is taken back up to the high register, reaching g" for the third time. It demonstrates Haydn's tendency to create different voices and timbre within a wide interval range by employing the advanced techniques in thumb position.

Haydn ends the section with two unusual double stops with an interval range of a tenth in measure 126. Again, this is a combination of two advanced techniques in thumb position—thumb position double stop and thumb position extension. It is one of the unusual thumb position double stop technique that is not collected in Duport's *Essai*. It surely creates an impressive sound when two notes of such large interval sound simultaneously.

Figure 3.19: Haydn: Cello Concerto in D major. 3rd movement, mm. 119-126

Allegro



Measures 118-126 in Figure 3.19 make up an extraordinarily virtuosic passage. It begins with broken octaves and it is followed by double-stop octaves. Even though the passage is presented in the low register the first time, most cellists would still use the thumb to manage the octave double stops. Under the tempo marking of *Allegro*, such a fast passage also requires rapid string crossings, demanding skillful left and right hands. In addition to the fast tempo and the high technical demand on both hands, the rapid string crossing of octaves in the variation creates a unique aural effect by providing two ascending melodic lines simultaneously. The repetition of the passage two octaves

higher, in contrast to the lower passage, is even more virtuosic. This again may reveal the participation of the cellist, Anton Kraft.

These quotations from Haydn's D major Concerto present a different way of applying advanced techniques from his C major Concerto. All the problems from the C major Concerto do not exist in the D major Concerto such as the running into blocked hand position in thumb position. The extensive use of thumb position extension in Figure 3.11, the special tricks in Figure 3.17, and the rarely used blocked hand position covering four strings in Figure 3.13, all exhibit a thorough understanding of the advanced techniques from a non-cellist composer and thus suggest to me the assistance of the talented cellist, Kraft, in the composition of the D major Concerto. Yet, however this concerto was composed, Haydn indisputably brings virtuosic cello music composition to a new level.

Conclusion

These examples from the most celebrated cellist and teacher J.-L. Duport, cellist composers Cirri and Filtz, the great cellist and composer Boccherini, and great non-cellist composer Haydn, have displayed how through these advanced techniques, the cello was emancipated from its former role in the bass line and became the virtuosic solo instrument. They also illustrate the great expansion and development of thumb position techniques in the Eighteenth Century.

J.-L. Duport, in Part I of Chapter one, his *Essai—Essai sur le doigts du violoncelle et la conduite de l' archet, avec une suite d'exercises* (Essay on the Fingerings and Bowings for the Cello with a Collection of Exercises), presents a collection of these advanced techniques and has transformed them into etudes. These etudes can be used to reflect on the expansion and development of thumb position advanced techniques during the Eighteenth Century. I have used the quotations to simplify and classify these advanced techniques to make later discussions more clear. For instance, in Figure 1.13 from Cirri's concerto, the advanced cello thumb position techniques described in the first part of Chapter One, have been presented in combination demonstrating a different type of cello music composition from the etudes. This example also displays an instance where the cellist must apply a combination of advanced techniques to complete this passage, and these advanced techniques provide new possibilities for a composer to write virtuosic cello music through the expanded range, new voices, and new timbres to contrast with the low and middle registers.

Obviously, the blocked hand position helps the cellist to perform rapid string crossing passages with ease, but Cirri did not use it as often because frequent string

crossing cannot retain the same timbre. In Figures 1.16 and 1.17, passages by the German cellist Filtz, also display his caution while utilizing the blocked hand position. These examples show that Filtz employed the blocked hand position with rhythmic complexity more often than the Italian cellist, Cirri. However, since frequent string crossing cannot retain the same timbre, Filtz also limited the blocked hand position to certain places such as rapid passage in high register with large interval range. These quotations from Filtz's G major Concerto unquestionably exhibit a tendency to the advanced techniques more extensively.

Quotations from Boccherini's concertos in Chapter Two reveal the great cellist and composer's comfort in applying these advanced techniques in his compositions. Even though he had a thorough knowledge of the advanced techniques, it is interesting to observe that he still did not apply the blocked hand position covering more than three strings excessively possibly for same reason that Cirri and Filtz also limited it. It was Boccherini who was the only one in the Eighteenth Century to expand the high register notes on the fingerboard of the cello up to e^{'''}. Figure 2.14 serves as evidence that an expanded interval range of more than four octaves on the cello existed during this time. Also, his generous use of advanced techniques in such an extensive style demonstrates how this extraordinary cellist elevated cello solo music composition to a higher level of complexity.

The quotations from the great composer Haydn's Concertos in C major and D major reveal a non-cellist composer's understanding of the cellos advanced techniques, and the advanced techniques permits Haydn to exploit contrasting characters within an instrument. It is interesting to notice the differences between these two concertos in

regard to the application of the advanced techniques. Although the passage in Figure 3.5 places the cellist in the dilemma when deciding on a fingering, it is fascinating to see a non-cellist utilizing the advanced techniques to create an impressive music by sharply contrasting different registers and textures. The D major Concerto displays charming music that was more than likely composed in collaboration with the talented cellist, Anton Kraft. Figure 3.17 demonstrates a special trick only understood by cellists themselves. It is in Figure 3.13, where the unusual technique, blocked hand position covering four strings which has been mentioned in Duport's *Essai*, has been utilized to create rapid string crossings. Applying such an unusual advanced technique might be the key to revealing Kraft's participation in the D major Concerto. This D major concerto certainly presents a development of the advanced techniques in thumb position as a crucial factor through which the cello become truly a virtuoso solo instrument.

Through these quotations of cello concertos from different composers of the Eighteenth Century, this study has presented an examination of the emancipation of the cello via the advanced cello techniques in thumb position. However, this treatise can only provide a very limited view of a few concertos by a few composers. Of course, there were many cellists and non-cellist composers who composed cello music during this period. What is their contribution to the virtuosic cello music, concerning the application of the advanced techniques in thumb position in their compositions? Also, this treatise has only focused on one of the cello music genres, the concerto. What about virtuosic cello music composition in other genres? How did both cellist and non-cellist composers employ the advanced techniques in thumb position to enrich their musical ideas in different types of cello music? Blocked hand position covering four strings was

extensively employed in Haydn's D major Concerto, likewise thumb position extension, a rarely used advanced technique during the Eighteenth Century. One cannot find such an extensive application of these thumb position techniques even in examples from Boccherini's concertos. However, Haydn's D major Concerto was composed in 1783, which was more than ten years after Boccherini's last concerto in E-flat, the latest to be discovered. What happened in the development of advanced cello techniques during those ten years? Is it important to investigate the continual development of advanced techniques in chronological order according to the known dates of the works? Also, the Italians invented the thumb position, but Italian composer Cirri used the advanced thumb position techniques less than German composer Filtz. Perhaps it is important to examine the development of the advanced thumb position techniques in light of geography or nationality. If these aspects were to be considered and compared, perhaps an even more thorough view of the advanced techniques during the Eighteenth Century would be presented and an even clearer view would be exposed of how composers, via these technical developments, helped the cello to become a virtuoso solo instrument.

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Vita

Feng Zhao was born in Tianjing, China on May 19, 1967, the son of Wang Ling Fang and Zhao Cheng Han. After completing his work at Wu Qi School, Wuhan, Hubei, China, in 1984, he entered the Shanghai Conservatory in Shanghai, China. He received the degree of Bachelor of Music from Shanghai Conservatory in 1988. During the spring of 1992, he attended the Graduate School of Kent State University in Ohio. He received the degrees of Master of Art in Teaching and Master of Music from Kent State University in May and August 1995. In September 1995 he entered the Graduate School of The University of Texas at Austin. During the following years he was employed as an orchestra teacher at Anchorage School District in Alaska. In September 2002 he re-entered the Graduate School of The University of Texas.

Permanent address: 12521 Sir Christophers' Cove, Austin, Texas 78729

This dissertation was typed by the author.