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The Development of the Left Thumb Use in Cello Playing from its beginning until 1900

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Abstract

Ever since the cello emerged as a solo instrument in the first half of the eighteenth century, cellists have sought to develop new playing techniques. Over time, these techniques have exerted a profound influence on the way in which composers have written for the instrument and none more so the use of the left thumb. This technique, which emerged in its first form in the first half of the eighteenth century, not only facilitated the performance of otherwise difficult string crossings in virtuosic works such as concertos but also opened up the extreme upper register of the instrument. This exegesis focuses on the historical development of the thumb technique with reference to various method books published from the mid-eighteenth century and the repertory written from the eighteenth century and encompassing the virtuoso repertoire from the nineteenth and early twentieth centuries. It also considers the impact of the thumb position on the evolution of the cello literature, and practical aspects of the use of the left thumb.
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**Introduction**

The motivation of selecting this topic for my exegesis grew out of my personal experiences. From what I recall of my first lesson on the thumb position many years ago, I found it very difficult to figure out which part of the thumb I had to place on the string, how much pressure I had to exert or how work out how I could keep my thumb on the string for a long time since I had been given no preparation by my teacher before attempting to master this advanced technique. Few of the private teachers I had encountered were able to give clear and detailed instruction on the application of thumb technique or how it had developed historically. Once I had mastered it, I came to realize that thumb position, more than any other technique, had been responsible for the dramatic expansion of playing range that made possible the creation of a virtuoso literature for the instrument.

I find the situation has not changed appreciably in recent years although there are always a few students who have been fortunate in having teachers who have placed a strong emphasis on the development of good technique and set up. In my teaching of intermediate level cello students in Auckland between the levels of Grade 5 and Grade 8 in The Associated Board of the Royal Schools of Music syllabus, I have observed that some individuals get really stressed even before they begin to place the thumb on to the string. In the earliest stage of learning thumb position, the main focus is to build the strength of the thumb muscle (*musculus pollicis brevis*) that is directly responsible for supporting the entire hand. If this muscle is not strong enough, the balance of the hand is disrupted, resulting in an unstable flat hand shape in which the strength of the finger tip is very weak and the knuckled are collapsed. I often see students with collapsed hand shape in the thumb position struggling to make any sound at all. As a result, these students often suffer pain in their left hand or even in
their entire arm because of incorrect hand posture (shape). In extreme cases, the student is afraid to explore the technique further and ends up staying at a basic level of playing, unable to advance. I have also observed cello students at university level who have not reached an advanced level in the use of the thumb position which creates an enormous amount of stress for them when working on technically advanced repertoire. From my personal experience, and witnessing the experiences of others, good instruction through the employment of informed and appropriate teaching methods has not been given to enough students, considering the frequency with which left thumb technique is needed in playing the cello at an advanced level.

“Thumb position” is a term used mostly for the high register of the lower string instruments (cello and double bass) where the thumb is placed as a movable nut on the fingerboard. The thumb is normally placed across two strings, the lower of which forms an octave with the third finger on the higher string and thus enables the cellist to play a scale of one octave on two strings without shifting.¹

Thumb position technique needs to be established properly well before students enter tertiary education. As the repertoire gets harder, the need for advanced technique increases rapidly. By the end of the undergraduate degree, there is an expectation that students will be technically fluent. In other words, in the three or four years of the degree programme students need to develop and expand their playing technique to a very high level: thumb position, which is central to this technical development, needs to be mastered before the student enters

university. The thumb position is a technique that cellists cannot ignore and at the professional level it is essential. Its successful introduction is dependent on a combination of good instruction and the right supporting material. A number of famous cellists have sought to provide both through the example of their own playing and the publication of cello playing methods. One of the earliest of these, Bernhard Romberg,\(^2\) a cellist who worked closely with a number of major composers including Beethoven and Ries, observed in his method that: ‘There is no doubt, however, that a gradual improvement towards perfection, (especially on the Violoncello) chiefly depends on the merits of Elementary Instruction \(^1\).\(^3\)

The question often arises as to when it is most appropriate to introduce students to thumb position technique. Many students fear using this technique and a few of them end up choosing to use big shifts instead of keeping the hand in one position. This could be because they have unpleasant memories of when they started learning thumb technique, or, having been introduced to the technique too late, they are more comfortable returning to first and second position after coming from a higher position or basing the shift to higher positions from that point. This approach, while effective in some contexts, creates a *glissando* effect which may not be desirable in passages which require clean execution.

This exegesis does not advance a method for teaching thumb position to students but instead proposes that the historical survey of the technique through analysis of the most influential

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\(^2\) Bernhard Heinrich Romberg (1767–1841) was a cellist in the orchestra of the Prince Elector Archbishop of Cologne and admired by Beethoven whose offer to write a cello concerto for him was declined by Romberg with the remark that he primarily performed his own music. Romberg not only lengthened the fingerboard of his cello and flattened it on the C-string side, but also initiated the construction of small-size cellos for children.

\(^3\) Romberg, Bernhard. *A Complete Theoretical and Practical School of Violoncello*. Boston: Oliver Ditson and Company, ca. 1880. 3. This edition is a translation of the original: Romberg, Bernhard. *Violoncell-Schule*. Berlin: Eigenverlag, 1840.
method books that forms the core of this study provides a context in which teachers can consider the best means of introducing their students this important technique.

**Current state of the field of study**

Although a large number of method books and collections of etudes were written from the late eighteenth century until the middle of the nineteenth, these methods concentrated mainly on bowing technique and shifting. In spite of the rather advanced thumb position technique that was required for the repertory that already existed by this time, few method books or studies devoted solely to left thumb use were written during the same period. Battanchon’s⁴ collection⁵ is the only exception to my knowledge. Neither are there many resources available today in either printed or electronic media in spite of the explosion of research in the field of string pedagogy.

The only extended study of the use of the left thumb in thumb position is Zhao’s 2006 DMA exegesis.⁶ Zhao’s work, however, limits itself to the eighteenth century and does not consider the rapid expansion of thumb technique that evolved during the course of the nineteenth century.

In this exegesis, the consideration of the historical evolution of thumb technique covers the period from its emergence in the middle decades of the eighteenth century to its fullest development in the last decades of the nineteenth century. It provides insights into the historical aspects of the thumb position function, discusses in detail specific technical aspects

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⁴ Felix Battanchon (1814–1893) was a student of Vaslin and Norblin at the Paris Conservatoire before joining the orchestra of the Grand’ Opéra. Not much is known about his life, except that in 1846 and 1847, he publicly performed on an instrument that he called “Baryton”, which was in fact a small cello tuned an octave lower than the violin.


⁶ Zhao, Feng. *The expansion of cello technique: thumb position in the eighteenth century*. (DMA exegesis, The University of Texas at Austin, 2006)
concerning its use and how this is applied in a representative cross-section of works from the standard repertoire.

**Methodology**

The methodology employed in this exegesis reflects the practical nature of the study. At its heart lies the classification, collection and analysis of data concerning left thumb use from a close study of historical playing methods, études and advanced cello literature. The evaluation of this data is made from the performer’s point of view in order to develop a pedagogical framework for teaching this essential technique. Most of the musical scores and books upon which this study is based are readily available although copies of some of the more obscure material have been acquired from other sources. Alongside the primary sources alluded to above (which includes cello methods), journals and DVDs of master classes have been used as a secondary resource in order to investigate contemporary playing techniques.

**Classification**

The left thumb technique is categorized by four specific types, namely proto-thumb technique, first phase, second phase and third phase. In the proto-thumb technique section, music is analyzed that was written at the time when the left thumb use had started to appear. The first phase includes music written around the time that the earliest experimentation with the technique was taking place and includes works by composers such as Romberg and Popper. The second phase includes music composed at the mid-development stage of the technique (Haydn’s cello concerto stands as a representative example of this phase) and the third phase includes music written in more recent years using extended contemporary techniques such as using the thumb for playing intervals of a tenth.
Data collection

The data underpinning this study includes information that specifically concerns the use of the left thumb, along with primary and secondary literature devoted to the historical background on the physical evolution of the instrument, musical works written before the advent of thumb position that exploit the high range of the instrument, works written after the emergence of thumb position, method books and works written by cellist-composers and non cellist-composers.

Some of the works written by the cellist-composers have not survived and in other cases it is uncertain whether some of the more influential cellists actually composed. Since many players travelled either as itinerant virtuosi or in search of permanent positions, research was also undertaken to establish which composers may have come into contact with these performers and might have been influenced by their command of the instrument. By this means it has been possible to establish for whom certain works may have been composed where other evidence is lacking.

The exclusion of Luigi Boccherini (1743-1805) from this study may come as a surprise but he was neither a pioneer of the thumb position – in spite of his obvious brilliance as a cellist – nor does any one of his works occupy a place in the repertory comparable to that of Haydn’s C major Concerto. Leopold Hofmann’s inclusion might seem equally surprising but it is important in view of the link that exists between his concertos and Haydn’s Concerto in C through the cellist Joseph Weigl.
Analysis and Evaluation

The technical analyses are based largely on method books, the most important of which were written by Michel Corrette (1797–1795), Jean Louis Duport (1749–1819), Bernhard Romberg (1767–1841), Karl Davidov (1838–1889), Justus Johann Friedrich Dotzauer (1783–1860) and Sebastian Lee (1805–1887). These methods not only reflect the style of performance at the time of their composition but also the general technical framework (in the playing sense) in which composers conceived their works. Each of these studies provides a lens through which to examine the music composed in the years prior to its publication and a means of establishing whether it may have had an impact on the music that followed. These methods and études are nowadays mostly used for teaching a limited range of the thumb position technique; many teachers use a combination of excerpts from all these works. The analysis of thumb position technique in the concert repertoire is based on a cross-section of the pieces I have played in my series of DMA recitals.

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7 Michel Corrette (1707–1795): Corrette’s method is discussed in the following chapter. See p.12
Chapter 1. Historical Development of the Use of the Left Thumb and the Emergence of the Cello

1.1. The Decline of the Viola da Gamba and the Emergence of the Cello

After more than two hundred years as the most important low-register stringed instrument, the viola da gamba began to be supplanted by a new instrument, the violoncello, in the late seventeenth century. Despite the fact that the popularity of the viola da gamba was in decline, the instrument still had its champions and a number of virtuosi were active as late as the second half of the eighteenth century. One of the best known of these, and among the most important figures in the history of the instrument, was the German gambist Carl Friedrich Abel (1723–1787). Although Abel travelled frequently throughout Europe giving performances of his own works, he is best remembered as the business partner of Johann Christian Bach (1735–1782) with whom he ran a highly successful series of public concerts in London from 1758 to 1787. Although Abel was principally a gamba virtuoso he also played the cello. Among his extant compositions can be found sonatas for violin or cello with keyboard accompaniment and symphonies but, significantly, not a single work for viola da gamba. Whether this is a reflection of Abel’s disinterest in writing for an instrument which few people now played or an historical accident due to the loss of these works is impossible to know, but the complete lack of works by such a celebrated performer – or even evidence that such works once existed – emphasizes the gamba’s terminal decline.

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The principal physical differences between the viola da gamba and the cello are obvious. First and foremost, the viola da gamba usually has six strings tuned in fourths with a major third in the middle (D-G-C-E-A-D for bass viols and treble viols and G-C-F-A-D-G for tenor viols)\(^{10}\) whereas the cello has four strings which are tuned in fifths.\(^{11}\) The viola da gamba has a flat back, sloping shoulders and a fretted fingerboard. Gambists hold the bow underhand whereas cellists employ overhand bowing. The gamba was held in position by the legs whereas by the early 1800s, the endpin was beginning to be used by orchestral cellists. Major differences also extended to technique: thumb position was not used in gamba playing during the eighteenth century whereas it was becoming increasingly common among cellists. That composers had already started writing music for cello requiring thumb technique, while the viola da gamba was still in regular use, suggests that one of the reasons the gamba fell out of favour may have been that the limited technique employed by most gambists effectively restricted composers from writing more progressive works for the instrument.

The cello offered the player two very important advantages over the gamba. First, finger technique was wholly unlimited because the fingerboard had no frets, which, in regards to runs and cadenzas as well as changes of position, posed a potential hindrance to the gamba player. The cellist could produce a louder, stronger and more focused tone than the gambist by applying more weight onto the bow when playing a single string. The upper edge of the gamba’s bridge (over which the strings pass) was so flatly cut for harmonised or part-playing that it was necessary to avoid a strong tone, lest the neighbouring strings be thereby sounded.\(^{12}\) Another reason why the cello became increasingly popular might have been that new techniques such as the thumb position were being developed whereas gamba technique

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\(^{10}\) The treble, tenor and bass viols were regular members of the consort.

\(^{11}\) The “Violoncello piccolo” for which J S Bach’s Suite in D Major, BWV 1012 was most likely composed, had a fifth string above the A string.

\(^{12}\) Wasielewski, p. 40
remained static. In other words, the viola da gamba ceased to be a living instrument and instead was viewed increasingly as an historical curiosity.

In short, the cello produced a wider dynamic range and a greater variety of tone colours; it proved more versatile than the gamba and could be used as a solo instrument or an orchestral instrument as well as fulfilling the vital continuo function in operas, oratorios and other vocal works.

By the middle of the eighteenth century the cello had effectively replaced the viola da gamba. It was an important member of the orchestra which, due to emergence of the symphony as the most progressive large-scale instrumental genre of the period, now lay at the centre of serious compositional endeavour, and it was also an essential member of virtually every chamber ensemble even if the parts written for it were by convention labelled ‘basso’ in most manuscript and printed sources as well as publishers’ catalogues such as the Breitkopf Catalogue.¹³ From the early 1760s the viola da gamba was considered too archaic to be of interest almost everywhere in central Europe where many of the most progressive musical developments were taking place.

Although the influential German music scholar, organist and composer, Ernst Ludwig Gerber (1746 - 1819) played the cello,¹⁴ he was interested in the gamba and wrote a particularly interesting account of its decline:

“It is remarkable in the history of music that his (Abel’s) instrument was buried with him in the year 1787 in total oblivion: the indispensable gamba, without which for a hundred years neither church nor chamber music could be arranged, which in all public and private concerts had the exclusive right to be heard before

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¹⁴ Gerber, Ernst Ludwig: German music scholar, organist and composer. He was the son of the composer and Bach pupil Heinrich Nikolaus Gerber, who was also his first teacher of the organ and music theory. (Othmar Wessely. “Gerber, Ernst Ludwig” In Grove Music Online. Oxford Music Online, www.oxfordmusiconline.com) (retrieved 21 April, 2013)
all other instruments from the beginning to the end, and which therefore, like
caskets, must not only be exquisitely finished in every size, large and small, but
was also ordered, bought, and paid for adorned with the most costly artistic
carving—ivory, tortoiseshell, gold, and silver—then available. In the course of
time there will be no vestige left in the whole of Europe of this instrument, once
so universal and admired; henceforth it will have to be sought for amongst the old
woodcuts in Prätorius, or specimens of it, stringless and worm-eaten, in a royal
music chamber. Another sad proof how greatly Apollo is overruled by the
goddess Fashion. The taste of our forefathers for these soft, modest, humming
viola tones is also remarkable; they were a quiet, contented, peace-loving people!
In the present time the instruments for our musicians cannot be chosen sufficiently
high and shrill.”

The use of the thumb position was introduced in France in the mid-eighteenth century. The
idea was possibly conceived by the Italian cellist Francesco Alborea (1691–1739), known as
Francischello, who appears to have adapted the technique from the Trompetta Marina, an
instrument that had a single string of great length (about 1.2 to 1.5 metres), which was
sounded by a short bow at the top of the neck (near the peg box), while the notes were
stopped with thumb between the bow and the bridge. Van Der Straeten asserts that it is likely
that the Italian cellist Jean-Baptiste Stuck (1680–1755, pseudonym: Baptistin) introduced the
thumb position technique in France, as it was already known in Italy when he left that
country. From 1705, Baptistin started working in Paris where the Prince of Carignan and the
Duke of Orléans were his patrons. His solo performances inspired many musicians and
helped to popularize the cello in France but whether these include passages in high position

15 Wasielewski, p. 38
utilized the thumb position is uncertain. What is beyond, however, is that although the thumb position seems to have its origins in Italy, a Frenchman, Michel Corrette (1707–1795), was the first person to include it in a method book.

1.2. The Development of the Thumb Position

The understanding of the historical development of the use of the thumb is derived from several sources: the music written for the instrument, anecdotal descriptions of performers and lastly and most importantly, through studying method books written for the instrument. In this chapter, I include concise analyses of the contributions of a number of leading cellists through their published method books.

1.2.1. The first method book: Michel Corrette

Michel Corrette (1707–1795)\textsuperscript{17} was one of the most significant French composers to have been active when the cello first began to emerge as a solo instrument. He wrote method books for keyboard instruments, stringed instruments and woodwind instruments all of which reflect the techniques and musical style of their time.

Corrette’s method book for cello, \textit{Méthode Théorique et Pratique pour apprendre en peu de temps le Violoncelle dans sa perfection}, is the first known example of its kind and was published in Paris in 1741. With no real tradition to draw on, Corrette understandably

\textsuperscript{17} Corrette, Michel: French organist, teacher, composer-arranger and author of methods on performing practice; son of Gaspard Corrette. Though little is known of his life, his works, which span nearly 75 years, provide an extraordinarily rich insight into eighteenth-century French instrumental music. See David Fuller and Bruce Gustafson. "Corrette, Michel," \textit{Grove Music Online. Oxford Music Online.} Oxford University Press, accessed August 27, 2013) (retrieved 27 August, 2013)
illustrates gamba technique in some of the examples provided since many cellists during this relatively early period in the instrument’s history had begun their careers playing the gamba. His approach to fingerings strikes the modern performer as awkward and very uncomfortable. Corrette did not establish any type of consistent spacing of whole and half steps for the left hand and he completely ignored the third (ring) finger in first position\(^{18}\) using 2-2 fingerings instead wherever possible.\(^{19}\) The basic fingering example is shown below.

![Scale on the gamba and Cello](image)

Fig. 1: Example of the fingering for scales on the Gamba and on the Cello\(^{20}\)

The finger position adopted by Corrette for the diatonic scale on all the strings was, in the first two positions, 1, 2, and 4; in the third position, 1, 2, 3, 4; and in the fourth, 1, 2, and 3. After the latter position, the fourth finger was as a rule no longer needed because Corrette believed that it was too short to be made use of in the higher positions on the fingerboard. Corrette states that in the event of it being necessary to use the fourth finger the left arm would be uncomfortable.\(^{21}\) In exceptional cases, however, he concedes that the fourth finger could be used in the fourth position (without changing the thumb position) for the B flat and

\(^{19}\) Wasielewski, op. cit., p. 59
\(^{20}\) Ibid.
\(^{21}\) Wasielewski, op. cit., p. 58
B on the A string, for the E flat on the D string, for the A flat on the G string, and for the D flat on the C string. Thus, until the middle of the eighteenth century, the finger positions employed were somewhat different in the diatonic scale on the cello than they were later. It is especially noteworthy that the pitches E and B were touched with the second finger upon the two lower strings even although the notes marked were far more convenient for the third finger which very shortly took its place. 22

The exclusion of the fourth finger from the thumb position does not require historical explanation since any cellist will confirm the difficulty of using it in that position. An attempt to utilise the fourth finger results in an awkward hand position that is difficult to maintain and from which to obtain strength. In today’s style of playing, as far as the modern technical conventions are concerned, some cellists prefer to use the fourth finger in the higher thumb position while some others do not; it has become more a question of the player’s personal preference and physical capability than a technique that can be regarded as characteristic of the early twenty-first century.

In Corrette’s method, the finger positions for the chromatic scale differ still more widely from the fingering employed later, as the following scale illustrates: 23

22 Ibid.  
23 Ibid.
Fig. 2: Corrette, *Méthode Théorique et Pratique pour apprendre en peu de temps le Violoncelle dans sa perfection* – Comparison between Corrette’s fingering and modern fingering\(^{24}\)

By the time Corette wrote his method, gamba players had largely changed their allegiance to the cello while composers increasingly regarded it as a solo instrument particularly after the introduction of the thumb position which expanded its technical horizons by creating the possibility of playing arpeggios, double stops and scales in the upper register with the thumb securely positioned on the fingerboard. This enabled players to employ extensive use of repetitive chords without being hampered by physical difficulties.

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\(^{24}\) *Ibid.*

Fig. 3: Example of eighteenth-century fingering\(^{25}\)

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1.2.2. Representative Methodical Works by Composers After Corrette

1.2.2.1. The French School

Jean Louis Duport

Like his brother Jean Pierre, Jean Louis Duport (1749–1819) studied cello with Martin Berteau (ca 1700–1771), the founder of the French school of cello playing. Duport’s most influential contribution to cello playing was the establishment of a modern fingering technique. So successful was Duport in this regard that his system is still in use today. His *Essai sur le doigté du violoncelle et sur la conduite de l’archet* (Essay on the art of fingering the violoncello and of the conduct of the bow), published in 1806,\(^{26}\) is divided into two parts, the first devoted to left-hand technique (fingering) and the second to bowing. Duport followed his *Essai* with a set of 21 études. The chapter headings of the *Essai* reflect Duport’s systematic approach to instruction. They are:


In chapter 5 of the first part of the *Essay*, Duport illustrates the scale on one string: as the notes go higher, he introduces the left thumb as a part of the fingering.

\(^{25}\) Shen, Fang-Yi. *A pedagogical and analytic comparison of Auguste Franchomme’s twelve caprices, op.7 and Alfredo Piatti’s twelve caprices, op. 25.* (DMA Exegesis, The University of Cincinnati, 2009)

In this one octave ascending and two octaves descending C major scale, Duport employs the left thumb on G on the A string, on C on the D string and on F on the G string. As is shown on the example, the thumb is not used until the descending part of the scale. He suggests where to put the thumb by giving an indication of the notes under the top C in the third bar so that the player can prepare before executing the actual note that is to be played with the thumb. In this example, $2^0$ indicates the D string, $3^0$ indicates the G string and $4^0$ indicates the C string.

For the D major scale, Duport suggests that the fingering used for the C major scale is retained:

From this regular model of fingering two great advantages derive: the first is that as the degrees of the scale are always the same distance from each other, correctness of intonation is


28 Duport, *op. cit.*, p. 19
greatly facilitated; the second is that as the octaves are always produced by the same finger, the player is always in the correct position. If on descending, for example, one places the thumb behind the first finger, two octaves of the key being played are under the hand. In the example of the C major scale in Figure 4, the “o” marks the thumb, which could nowadays be confused with the indication for harmonics. The two heads of the notes below the upper C are not to be played; they only indicate the place where the thumb comes down simultaneously with the third finger upon C.

The same manner of placing the thumb is always employed in these scales, and if the first finger is not raised, the thumb will of itself take the right place behind the same. If, on the contrary, the first finger is taken up, the thumb will almost always be placed incorrectly on account of the instinct for a point of adjustment.

In the supplement to this chapter, Duport extends his explanation of the use of the thumb to include the technique of placing it on the string in advance of its use. In this instance, the notes where the thumb is placed are a fifth apart from each other, that is F (on the A string) and B flat (on the D string).

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Fig. 6: Duport, Essai sur le doigté du violoncelle et sur la conduite de l'archet: F major ascending scale

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29 Once again it was Bernhard Romberg who left his mark in the history of the cello: he introduced the now common sign for the thumb: 9
30 Duport, p. 18-19
31 Duport, op. cit. p. 24
In the example above, the one octave scale starts with the thumb on F (on the A string) and there are two shifts in the middle of the one octave run. It is important that the player keep the same hand shape while shifting. As a result, at the end of the one octave scale, the thumb is naturally placed on F on the D string – that is an octave below the top note. By employing the thumb on the tonic note Duport facilitates the playing of an octave in one hand position. Duport suggests that the thumb should be prepared in order to avoid placing it abruptly: “I would reject the manner of placing the thumb unpreparedly.”

Considering the physical distance that one has to shift back and forth in the virtuosic repertory or in fast passages, it is much easier to use the thumb and play the scale or the run in one position rather than to move the left hand around. Throughout the book it is clear that Duport, like most cellists of his time, did not use the fourth finger in thumb position.

1.2.2.2. The Dresden School

Bernhard Romberg

Bernhard Romberg (1767–1841) was born in Dinslaken (North Rhine Westfalia) and later was to become the greatest and most influential representative of the famous Dresden school. Romberg’s first method – the *Violoncellschule* – was published in 1839 (seven years later than that of his pupil Justus Johann Friedrich Dotzauer, one of the founders of the Dresden school). His teaching method was clearly influential, however, since its strong imprint can be seen in the works of both Dotzauer and Friedrich August Kummer. In the

32 Duport, op. cit. p. 25
33 The group of cellists, who came to be known as the Dresden School, included Kummer, Lee, Goltermann, Cossmann, Popper, Grützmacher, Davidov, and other cellists who were students and colleagues of this group. The Dresden School, which flourished during the nineteenth century, attempted not only to bring the instrument into prominence, but to revolutionize completely the technique of the instrument. The cello pedagogues of the Dresden School achieved this by publishing their methods and advancements in technique in cello étude and method books. See Venturini, Adriana Marie Luther “The Dresden School of Violoncello in the Nineteenth Century.” Thesis, University of Central Florida, 2007, p.ii
introduction to the Violoncellschule, Bernhard Romberg states that there was no appropriate method book in the market that introduced playing technique step by step for those who did not have a previous knowledge of the instrument: “Though many Instruction Books for the Violoncello have been published, in which players may find much that is useful, not one has yet appeared by which he who is wholly ignorant of Music can be properly taught.”34

Until Romberg’s time, there was no standard indication for the thumb position on the score. This must have caused some confusion among cellists until Romberg’s introduction of a specific sign for the thumb: ⁹. Prior to this, the use of thumb position was signalled in a variety of ways. Some composers (or publishers) used an x, others an o, the latter sign also serving to indicate open strings and harmonics. After Romberg, it was generally altered to the form we know today which is ⁹.35

In his chapter describing the appearance of the hand shape in the thumb position, Romberg suggests that the student place a thick cork between the thumb and the first (index) finger and keep playing with the cork in the hand until the fingers settle in that shape:

![Fig. 7: Romberg, Violoncell-Schule: suggestion for the thumb position hand shape](image)

“Take a thick bottle-cork, and hold it between the thumb and 1st finger, close to the muscle, and so placed that both the fingers may lie asunder, and the other

34 Romberg, Bernhard. A Complete Theoretical and Practical School of Violoncello. Boston: Oliver Ditson and Company, ca. 1900, p. 3
35 Van Der Straeten, p. 359
36 Romberg, op. cit., p. 49
fingers be very little curved, so that they may meet the strings conveniently.
The thumb should be bent neither out, nor in, but should make a straight line
with the hand. Care should be taken that the fingers in playing be not bent too
much inwards, but that they fall on the strings with a slight curvature.
The strings must be pressed down by the fore-joint of the thumb, but only two
strings at a time, so as to make a fifth across the strings. One string must
exactly cross the joint of the thumb, and the other lie under the middle of the
nail.”

From personal teaching experience, people with double joints in their thumb frequently find it
very difficult to keep their hands in the right shape for a long time. Often the entire hand
shape collapses after a few minutes and in extreme cases, after a few seconds. It is possible to
overcome this by strengthening the joint. Romberg’s suggestion of using the cork or any
other similar object while playing would be of benefit for those with double-joints when they
start learning this technique. By leaving it in the hand, it will prevent the hand from
collapsing completely. If the student constantly increases the time he practises with the
supporting cork, the joint will eventually be strengthened.

Romberg’s systematic method of teaching the use of the thumb as a support in the high
registers on neighbouring strings gradually led to the so-called “positional parallelism”
principle in which the left hand stays in one position while moving across the strings. He
treated the thumb as the primary support for the rest of the fingers when playing in the high
positions. It in this sense, the thumb functions in the same way as the Capo for the guitar, the
device that holds all the strings down as shown in Figure 8. Romberg developed this principle

37 Ibid.
and made frequent use of it. This method subsequently spread throughout Europe and became
more and more popular with cellists. The only adverse consequence of utilizing positional
parallelism was that musicians might be thought lacking in artistry, but this was a small price
to pay given the advantages it gave the player in fast and easy execution of difficult passages.

Fig. 8: Capo

The example of positional parallelism is displayed in the Figure 9 below.

Fig. 9 Romberg, Cello Concerto in Bb major, op. 2, first movement, bars 132 – 141

Another of Romberg’s significant achievements was that he introduced the use of the 4th
finger in the thumb position which increased the number of notes that could be played within
one hand position. In Figure 9 where the positional parallelism is used, Romberg’s intention
in bar 138 is to use the 4th finger for the top note E in the thumb position, which enables the player to stay in one position for a longer period of time. By employing the 4th finger in the thumb position, the player is able to execute the passage faster with greater security of intonation.

**Justus Johann Friedrich Dotzauer**

Justus Johann Friedrich Dotzauer (1783–1860) was born in Häselrieth (Germany) and studied with both Jean Louis Duport and Romberg. From his two teachers he absorbed influences from both the French and German schools of cello playing. Dotzauer’s pedagogical works remain a very valuable resource for students and teachers to witness the unique technique influenced by French and German schools.

In his book *Die Violoncellschulen von J.J. Dotzauer, F.A. Kummer und B. Romberg* (1968), Josef Ekhardt compares their three cello methods. He comes to the conclusion that Romberg employed a violinist’s left-hand technique (left-hand fingers pointing downwards towards the bridge) while the Dresden cellists Kummer and Dotzauer used the modern left-hand technique or a more rounded hand away from the neck (placing left-hand fingers more square to the fingerboard). Dotzauer’s first cello method, *Violoncellschule (Violoncello Method)*, op. 165 (1832), was significant in that it combined the methodologies of both Duport and Romberg.  

An example of this can be seen in his treatment of thumb position technique. Dotzauer saw merit in Duport’s thumb position fingerings and Romberg’s use of the fourth finger in thumb position and combined these into another method which included Romberg’s rounded hand and use of fourth finger in thumb position with Duport’s fingerings. One of the reasons that the Dresden School became the leading cello school in the nineteenth century

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was this very combination of the two thumb position methods of Romberg and Duport which represented both the German and French traditions.\(^{39}\)

In his numerous études, exercises and methods Dotzauer sought to reflect his great experience as a teacher and performer. Besides his *Violoncellschule (The Violoncello Method)*, op. 165 (1832), he wrote *Violoncellschule (The Violoncello Method for Elementary Teaching)*, op. 126 (1836), *Flageolet-Schule (The Method of Playing Harmonics)*, op. 147 (1837), and the *Praktische Violoncellschule (The Practical Method of Violoncello Playing)*, op. 155 (n.d.)\(^{40}\) There are more than 180 exercises and caprices contained in his op. 35, 47, 54, 70, 107, 116, 120, 121, 155, 158, 160, 168, 175, 176 and 178. Johannes Klingenberg (1761–1823) arranged 113 of the best of these exercises in progressive order, as well as making a new edition of the violoncello tutors by amalgamating them into a single work and adding some exercises by Duport to increase its general usefulness.\(^{41}\) Even in this new shape, Dotzauer’s pedagogical works remain a very valuable resource for teachers and students.

*Violoncellschule (Violoncello Method)*, op. 165

Dotzauer’s *Violoncellschule*, op. 165 consists of two parts: the first is devoted to the technique of violoncello playing and the second part to the presentation of suitable teaching material. This material is primarily systematic in musical character and is of little interest from the musical point of view; only the use of a second cello to accompany the student makes it slightly more enjoyable for the student and helps to develop a sense for ensemble playing.\(^{42}\)

\(^{39}\) Venturini, *op. cit.*, p. 36
\(^{41}\) Van Der Straeten, p. 242-243
\(^{42}\) *Ibid.*
The *Violoncellschule* consists of short repetitive exercises intended to develop specific left and right-hand techniques. Interestingly, unlike the previously mentioned composers, Dotzauer offers little by way of technical explanation relying instead on the nature of the exercises themselves (and the willingness of the student to practise and experiment) to instruct the student. In other words, Dotzauer prefers the student to *learn* the technique rather than be taught it.

![Diagram of exercises](image)

**Fig. 10:** Dotzauer, *Violoncellschule*, op. 165: example of an exercise for thumb technique

In this exercise, the first two bars indicate that the thumb is placed on two strings. The purpose of this exercise is to achieve a sense of position by practising the alternation of the fingerings while training for good intonation and feeling the distance between the fingers. The horizontal straight lines above the notes in bar 3 mean that the fingers should stay firmly on the string for the entire length of the line, thus establishing the correct hand shape for the whole position.

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As a student of Romberg (who had already introduced the fourth finger use in the thumb position), Dotzauer follows Romberg’s fingering pattern in this exercise. The use of the fourth finger raises the issue of stability. In the last bar of the second line, for instance, the principal technical difficulty is the orientation of the thumb and the placement of the fourth finger while having other fingers placed down on the fingerboard. The player needs to have the arm and elbow turned more outwards in order for the short fourth finger to reach the string easily.

To make it more interesting from a musical point of view, Dotzauer also includes short, melodious passages which are accompanied by a second cello:

![Fig. 11: Dotzauer, Violoncellschule, op. 165: Melodic exercise](image)

He also includes exercises for using the thumb in scale patterns and arpeggio patterns:

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44 Dotzauer, *op. cit.*, p. 25
There is also an exercise for moving the thumb, something not encountered in any of the other earlier methods.

This exercise is very different from other thumb exercises and indeed it appears to be unique in all cello methods. It is important to learn these shifts using the thumb which involve the movement of the left elbow. In order to slide on the string only with the thumb, the player is required to know how much movement is needed from the arm and the elbow as well as what to do with the other fingers of the left hand that are not playing.

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45 Ibid.
46 Dotzauer, op. cit., p. 26
47 Dotzauer, op. cit., p. 35
For double-stops (octaves and thirds), Dotzauer utilizes broken chord patterns to begin with and then introduces single chords.

In order to produce a better sound in this octave passage, it is generally accepted nowadays that it is better to have the thumb on the D and G strings so that the notes pressed with the thumb are played on the flesh side of the finger rather than on the nail of the thumb. It also gives greater pressure to the tip of the third finger which will produce a stronger sound. This technique, however, was only developed in the second half of the twentieth century and has still not been adopted by the majority of performers.49

Dotzauer’s method also includes artificial harmonics where the thumb has the important role of tuning the actual pitch of the harmonic.

Fig. 15: Dotzauer, Violoncellschule, op. 165: thumb use in octaves48

Fig. 16: Dotzauer, Violoncellschule, op. 165: thumb use in artificial harmonics50

48 Dotzauer, op. cit., p. 38
49 Personal communication from Martin Rummel, the leading authority on cello études and himself a performer of international stature.
50 Dotzauer, op. cit., p. 46
In addition, there is an exercise for playing tenths:

![Fig. 17: Dotzauer, Violoncellschule, op. 165: thumb use in tenths](image)

Fig. 17: Dotzauer, *Violoncellschule*, op. 165: thumb use in tenths

Playing a series of tenths in tune is difficult due to changing between two different stretched hand shapes. Scales in tenths require a mixture of two different hand shapes: there are small (minor tenth) and big (major tenth) intervals which create technical complications. The sense of the position for a violinist comes from the first and fourth fingers, whereas the sense of the position for a cellist in the thumb position comes from the thumb and the third finger. The violinist still has the relation between the first finger (on the string) and the thumb (behind the neck) for intonation, whereas the cellist has to rely on his “body memory” for the distance between the thumb and the third finger only, which – in case of scales in tenths – changes significantly from each step of the scale to the next. The thumb needs to lead each shift, which explains why Exercise 255 is the basis not only of playing artificial harmonics, but also scales in tenths.

Dotzauer also adds a double-trill exercise using the thumb:

![Fig. 18: Dotzauer, Violoncellschule, op. 165: thumb use in double-trills](image)

Fig. 18: Dotzauer, *Violoncellschule*, op. 165: thumb use in double-trills

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51 Dotzauer, *op. cit.*, p. 47
The double-trill consists of two adjacent thirds played simultaneously in rapid alteration. To achieve clarity in the sound, the player needs to execute each chord slowly with separate bows to begin with and then gradually increase the practice tempo. It is important to have the fingers lifted in the air just above the original placements on the fingerboard (without moving them around) and placing them back on the string again.

By the time Dotzauer wrote his Violoncellschule, the thumb had clearly been accepted as a normal part of fingering whenever occasion demanded. In his scale method, he is quite specific in his directions to move the thumb and the first finger together while maintaining the same distance between the fingers. Dotzauer analyzes thumb technique in a methodical fashion, providing alternative fingerings with and without open strings for scales. By the time Dotzauer wrote his Violoncellschule, the thumb had clearly been accepted as a normal part of fingering whenever occasion demanded. In his scale method, he is quite specific in his directions to move the thumb and the first finger together while maintaining the same distance between the fingers. Dotzauer analyzes thumb technique in a methodical fashion, providing alternative fingerings with and without open strings for scales. All in all, it can be said that Dotzauer created wider possibilities for alternative fingerings in the thumb position than had previously been common including the use of the fourth finger, which he had learned from his teacher, Romberg.

**Sebastian Lee**

Born in Germany, Sebastian Lee (1805–1887) spent most of his career in Paris where he composed and published numerous works for the cello. The best known of these works today are his cello method, Methode practique pour le violoncelle (Method practice for Violoncello), op. 30 (1842), and his 40 melodische und progressive Etüden (Forty Melodic and Progressive Etudes for Violoncello), op. 31, which are still used to teach melodic phrasing. One of the advances Lee made in his teaching was to warn against the accepted and widely used stationary and blocked hand in thumb position, advocating instead a more

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52 Dotzauer, *op. cit.*, p. 47
53 Ginsburg, *op. cit.*, p. 59
relaxed, mobile approach. Like Duport and Dotzauer, Lee advocated the use of a freer moveable thumb, an idea that we still use today.\textsuperscript{54}

In the early years of the Dresden and French schools, each of them had its own playing traditions. However, when Sebastian Lee, who is considered a member of the second generation of the Dresden school, wrote his method book, it was accepted by the French school as their instruction book, evidence that the two playing traditions had started to blend.

\textit{Methode pratique pour le violoncelle (Method practice for Violoncello), op. 30}

Lee’s \textit{Methode pratique pour le violoncelle} presents detailed basic theories of cello playing including posture and bow holding as well as advice on rhythm, counting, key signatures and time signatures. Lee explains the thumb position posture in the text and gives exercises beginning with diatonic scales before moving on to chromatic scales using the thumb position:

\begin{center}
\includegraphics[width=\textwidth]{fig19.png}
\end{center}

\textbf{Fig. 19:} Lee, \textit{Methode pratique pour le violoncelle}, op. 30: C major scale\textsuperscript{55}

In this example, Lee starts the C major scale with the thumb in one octave ascending and two octave descending scales (incidentally it is exactly the same scale that Duport uses in his \textit{Essai}).

\textsuperscript{54} Stowell, Robin. \textit{The Cambridge Companion to the cello}. Cambridge: Cambridge University Press, 1999, p. 188

Lee also applies the thumb in arpeggio patterns:

![Arpeggio Pattern](image1)

Fig. 20: Lee, *Methode pratique pour le violoncelle*, op. 30: thumb use in arpeggio

He adds artificial harmonics, giving the actual pitch on another stave:

![Artificial Harmonics](image2)

Fig. 21: Lee, *Methode pratique pour le violoncelle*, op. 30: thumb use in artificial harmonics

Like Dotzauer, Lee includes octaves (with use of the thumb) at the end of the book. However, he gives a slightly altered pattern for practising octaves: These exercises let the player focus more on the particular point of movement by alternating the pattern of the different rhythm and slurring.

![Octave Pattern](image3)

Fig. 22: Lee, *Methode pratique pour le violoncelle*, op. 30: thumb use in octaves

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56 Lee, *op. cit.*, p. 55
57 Lee, *op. cit.*, p. 64
1.2.2.3. The Russian School

Karl Davidov

Karl Davidov (also Davidoff, Davydov, 1838–1889) was born in Latvia and educated in St. Petersburg. An important figure in the history of Russian music, Davidov is now considered the founder of the Russian school of cello playing. Having studied with one of Dotzauer’s students (Karl Schuberth, 1811–1873, another member of the second generation of the Dresden school) in St. Petersburg, he may have been influenced by the Dresden style in addition to the musical style of his native Russia.

One of Davidov’s great achievements was the development of the left-thumb technique one step further by utilizing the extension of the finger movement. That is, while playing in thumb position, he made use of the other fingers to move or stretch a bigger distance: in other words, the fingers could be used with great flexibility within a single hand position thus increasing the range of notes that could be played.

This technique is also to be found in David Popper’s “Spinning Song” concert-étude, op 55.

Fig. 23: Popper, Spinning Song, op. 55

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58 Lee, op. cit., p. 66
In Figure 23, from bar 9 to bar 18, the whole passage is played in one position with extension of the 1st (index) finger while the thumb stays in the same place. The player will be able to reach as far as high F₃#.

Although there are a few exercises for higher positions (mostly up to the fifth position) in Davidov’s школа игры на виолончели (School of Cello Playing) (1888), he includes no specific exercises for the thumb position only since his method only covers the very basic techniques of playing. In his other compositions, however, one often encounters extensive use of the thumb position.

![Sheet music](image)

Fig. 24: Davidov, *At the Fountain*, op.20 no.2⁶₀

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⁵⁹ Davidov, Karl. школа игры на виолончели (School of Cello Playing), Leipzig: Peters, 1888
⁶₀ Davidov, Karl. At the Fountain, op. 20 no.2. New York: Wiltshire Music/Cor Publishing Co, 2004
1.2.3. Collections of Study books, Etudes and Exercises

Justus Johann Friedrich Dotzauer

12 Übungen (exercises), op. 54

In his 12 Übungen, op. 54, there are two exercises especially written for the practice of thumb position: Nos. 2 and 11.

Exercise No 2 is an advanced version of a positional parallelism where one passage is to be played restez (the thumb stays in one place throughout):

Fig. 25: Dotzauer, 12 Übungen, op. 54: No. 2

Exercise No. 11 is written especially for the use of the fourth finger in the thumb position. It covers more than one octave within a single position while establishing the position and learning the fingering pattern for it. In the first two bars, the fingerings are: 9, 9, 2, 3, 9, 4, 9, 1, 2, 3, 1, 4 / 9, 1, 2, 3, 1, 4, 9, 9, 2, 3, 9, 4. In one bar, all the fingers in one position are used, which provides a very good way of learning to develop exact intonation with all fingers:

Fig. 26: Dotzauer, 12 Übungen, op. 54: No. 11

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61 Dotzauer, J.J. Friedrich. 12 Übungen, op. 54. Leipzig: Breitkopf und Härtel, 1891, p. 2

62
Dotzauer’s 24 Übungen, op. 35 require the combination of basic thumb positions with other fundamental techniques. However, there is no specific thumb study exercise in this work.

100 Übungen, op. 123

The 100 Übungen, op. 123 cover extensive use of the thumb position. From No 76 until the end of the set there is not a single exercise that omits the thumb position. In general, each exercise includes further exercises for the establishment of thumb position. The following few examples propose slightly different approaches to thumb position:

Exercise No 83: thumb position with the use of the fourth finger:

Fig. 27: Dotzauer, 100 Übungen, op. 123: fourth finger used in the thumb position

Exercise No 94: thumb use in scales:

Fig. 28: Dotzauer, 100 Übungen, op. 123: thumb use in scales

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62 Dotzauer, op. cit., p. 14
64 Dotzauer, op. cit., p. 14
Exercises Nos 95 and 99: thumb use in double-stops

Fig. 29: Dotzauer, *100 Übungen*, op. 123, Exercise No. 95: thumb use in double-stops

Exercise No. 98: thumb use in arpeggios

Fig. 30: Dotzauer, *100 Übungen* op. 123: thumb use in arpeggios

Exercise No. 100: thumb use in octaves

Fig. 31: Dotzauer, *100 Übungen*, op. 123: thumb use in octaves

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65 Dotzauer, *op. cit.*, p. 15
66 Dotzauer, *op. cit.*, p. 16
67 Dotzauer, *op. cit.*, p. 19
12 Übungen, op. 158

In this work, the thumb position is occasionally shown throughout and two exercises are written specifically to facilitate the development of thumb technique.

Exercises Nos 9 and 11: thumb use in double-stops

Fig. 32: Dotzauer, 12 Übungen, op. 158: No. 9 - thumb use in double-stops

Fig. 33: Dotzauer, 12 Übungen, op. 158: No. 11 - thumb use in double-stops

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68 Dotzauer, J.J. Friedrich. 12 Übungen op. 158. Leipzig: Breitkopf & Härtel, 1840, p. 14
69 Dotzauer, op. cit., p. 18
7 Études, op. 175

In the short exercise book entitled 7 Études, thumb position is used occasionally throughout. Interestingly, there are exercises that call for a series of thumb shifts and others that feature tenths played with the thumb and the third finger.

Fig. 34: Dotzauer, 7 Übungen, op. 175: No. 1 - thumb shifting, thumb use in double-stops

Études Nos 4 and 6: thumb use in double-stops

Fig. 35: Dotzauer, 7 Übungen, op. 175: No. 4 - thumb use in double-stops

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70 Dotzauer, J.J. Friedrich. 7 Études, op. 175. Berlin: W. Damköhler, 1850, p. 3
71 Dotzauer, op. cit., p. 6
Étude No. 7: thumb in double-stops, octaves and tenths

Fig. 36: Dotzauer, 7 Übungen, op. 175: No. 7 - thumb use in double-stops, octave and tenth

Sebastian Lee

40 Melodische und progressive Etüden (Melodic and Progressive Etudes), op. 31

Lee’s 40 Melodische und progressive Etüden, op. 31 is divided into two books, the first of which contains twenty-two études that are progressively more demanding as the book unfolds.

The thumb technique appears in the later part of Book 1 where it is employed only on the harmonic notes so that beginners can more easily produce the sound.

Fig. 37: Lee, 40 Melodische und progressive Etüden, op. 31

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72 Dotzauer, op. cit., p. 11
73 Lee, Sebastian. 40 Melodische und progressive Etüden, op. 31, Book 1. New York: Carl Fischer, 1907, p. 21
In Book 2, once the player has begun to master the thumb position and develop the stamina, Lee introduces the blocked thumb position.

Fig. 38: Lee, *Melodische und progressive Etüden* op. 31. No.28 - use of the blocked thumb position

**12 Etüden zur Vervollkommnung (12 Studies for the Perfection of Technique), op. 57**

Lee also wrote *12 Etüden zur Vervollkommnung (12 Studies for Perfection of Technique)*, op.57 for advanced technical practice. Although it contains no study that is specifically written for thumb position, it is used throughout the book.

In Study No.6, for example, there are passages for double-stops with thumb use.

Fig. 39: *12 Etüden zur Vervollkommnung*, op. 57: No. 6 -thumb use in double-stops

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74 Dotzauer, *op. cit.*, p. 10
75 Lee, Sebastian. *12 Studies for Perfection of Technique*, op.57. n.d
1.3. Summary

In this chapter, the proto-thumb technique period and the first phase of the thumb development was looked at. The music written at the time of the proto-thumb technique when the left thumb use had started to appear was analyzed. This period coincides with the publication of the first cello method by Michel Corrette. In the first phase, the thumb technique was added in various study books and études, which reflect the early development of the technique. In this period, composers such as Duport, Dotzauer, Romberg, Lee and Davidov wrote their own method books or study books and started introducing practice methods for developing and perfecting the use of the thumb position. However, there were few study books that fully incorporated the thumb technique. That all of these composers, irrespective of geographical location, were utilizing the thumb position and teaching it to their students indicates its acceptance as a fundamental technique of cello playing. The next generation of composers who will be introduced in Chapter 2 applied the technique more frequently and in a more natural manner in their works.
Chapter 2. Non-Cellist Composers from the Nineteenth and Twentieth centuries; Cellist Composers from the Nineteenth and Twentieth centuries

2.1. Non-Cellist Composers and Cellist Composers

As is the case for any other instrument, there are two types of composers who have written music for the cello. First and foremost, there are the composers who have written for the instrument without being able to play it. These composers, among them Haydn and Beethoven, have created some of the most important works for the cello and any occasional awkwardness in the writing is more than compensated for by the quality of the compositions as a whole. The other group of composers consists of those who were cellists themselves (such as Boccherini and Popper) and who wrote music that was intended in the first instance for their own use. The works of these composers understandably shows a greater insight into the instrument’s special qualities and as a consequence they are often more genuinely virtuosic than works written by non-cellist composers.

The defining characteristic of many of these less well-known works by cellist composers is the natural approach to cello technique that they possess. These composers succeed in creating melody lines in which the cello can produce the best quality sound with the fewest unnecessary shifts and they make the best use of distinctive cello techniques such as the thumb position not only in the high register but also in other registers where the thumb is not
normally used. Many of the cellist composers from the late eighteenth century experimented with technical innovations and achieved some finger arrangements that would have been unthinkable in earlier period.

The purpose of this chapter is to identify what essential differences exist between those two categories of music – works that were written by non-cellist composers and works that were written by cellist composers – especially in relations to the employment of the thumb technique. The composers included in this chapter are those whose works are now considered part of the cello canon. Across the whole period of the active repertory for cello starting with Haydn, this chapter charts a chronological progression from the mid-eighteenth century to the nineteenth century when the thumb position technique reached its fullest development.

Although there were further refinements in the execution of thumb technique in the twentieth century, none opened up new areas of the fingerboard or made possible the performance of difficult shifts and double-stops in the way that the earlier developments had. Several influential twentieth-century cellists wrote method books for left hand technique, among them Paul Tortelier and Janos Starker. Starker introduces a major shift in thinking by proposing that the left thumb is placed under the fingerboard in the higher register. This gives the player a sense of security as the other four fingers are locked in position while the thumb grabs the fingerboard. However, this innovation, and others like, is more an expression of idiosyncratic preference than a genuine extension of the technique. Arguably the most

significant new application of the thumb technique can be found in Prokofiev’s *Sinfonia Concertante*, op. 125 which includes a passage in tenths in the high register [Fig. 40].

Fig. 40: Prokofiev, *Sinfonia Concertante*, op. 125: first movement, bars 91 – 100

2.1.1. Non-Cellist Composers

2.1.1.1. Haydn

In the eighteenth century, it was common that musicians were employed by patrons such as members of royal families or wealthy aristocratic families and it was largely for those patrons that composers created their works. Franz Joseph Haydn (1732 – 1809) was no exception and remained in service, or at least nominally employed by the reigning Esterházy prince, from 1761 until his death in 1809.\(^80\)

2.1.1.2. Composer Haydn and Cellist Weigl

Among Haydn’s vast output of instrumental works are two exceptionally fine cello concertos. One of the earliest major concertos in repertory to exploit thumb techniques, Haydn’s Concerto in C major, Hob VIIb:1, was probably composed during the years 1763 – 1765. Haydn’s exploitation of the high register in this work is all the more remarkable because he had not really done so before this, in spite of writing a number of prominent cello solos in several of his early symphonies. The C major concerto was long believed to be lost, the only

known reference to it being an entry in Haydn’s so-called *Entwurf-Katalog*, but in 1961 a set of unattributed manuscript parts was discovered in the Radenín archive in the Music Collection of the Narodní Muzeum, Prague (now the Czech Music Centre) that were soon identified as the missing concerto. A performance of the work soon followed and from that moment the C major concerto entered the permanent repertory. It is probable that this concerto was composed by Haydn for Joseph Weigl.

According to the English composer and music historian Charles Burney (1726 – 1814), Joseph Franz Weigl (1740 – 1820), “an excellent performer on the violoncello”, joined the Esterházy orchestra in 1761, the same year as Haydn’s appointment as a Vice-Kapellmeister. Weigl’s background and his professional activity remains uncertain prior to his appointment at the Esterházy Kapelle. There is no record of him working in Vienna or its immediate environs which suggest that he may have worked on a freelance basis before Haydn engaged him for the prince’s orchestra.

Shortly after Haydn’s appointment as Vice-Kapellmeister, he composed the three programmatic symphonies (Nos. 6, 7 and 8) for Prince Paul Anton Esterházy in which he introduces extensive concertante passages for the cello which are more demanding than any

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81 *Entwurf-Katalog*: A hand written catalogue of Haydn’s music prepared by the composer *ca* 1765, regularly updated until *ca*1777, and more haphazardly thereafter. Under Haydn’s supervision Johann Elsler drew up a volume of 26 pages divided into nine categories: symphonies, divertimenti, string trios, baryton music, operas, minuets, concertos, sacred works, and keyboard works. (Biba, Otto and Jones, David Wyn *Oxford Composer Companions: Haydn*. Oxford University Press, 2002, p.79


84 Charles Burney (1726 – 1814) was the foremost music historian of his day. He was a music teacher by profession, but it was his writings on music which brought him widespread during his lifetime. The *General History*, his most famous work, was published in four volumes between 1776 and 1789 and is still of great value today.


encountered in his earlier works. Although these works were commissioned and according to Haydn’s early biographer, Dies, their titles were suggested by the Prince, Haydn was free to write them in any style he chose. These ambitious works served three very distinct purposes: they demonstrated Haydn’s brilliant originality as a composer; they showed the orchestra to great advantage (one of Haydn’s first tasks on taking up his appointment was to recruit new players among whom was the cellist Joseph Weigl); and lastly, they provided Haydn with an opportunity to test the abilities of star players, for many of whom he later composed concertos. Weigl, naturally, was given a starring role in these works but it is hard to tell whether he used the thumb technique in these works because the register of the solos frequently lies on the border line of complete independent thumb position. However Weigl played these passages, he clearly did so in a manner that excited Haydn’s professional interest.

88 Badley, op. cit., p. 82
Fig. 41: Haydn, Symphony No. 6 in D major, Hob.I:6: second movement, bars 29 – 48

In the second movement of Symphony No. 6 in D ‘Le Matin’, the Violino concertante and Violoncello concertante sustain much of the important musical action while supported by a delicately-scored accompaniment of strings alone. Although the Violoncello concertante part
is clearly intended to be soloistic, its register stays within the range where the thumb does not necessarily have to be independent.

The C major Cello Concerto not only tells us a good deal about Weigl’s qualities as a player but it also demonstrates Haydn’s grasp of its potential and his own capacity to exploit virtuosic techniques in his works.  

Haydn’s solo writing naturally utilizes figuration patterns and other conventions that are common to the works of other composers of this period but he shows his understanding and sensitivity to the cello’s unique qualities as much in the accompanying orchestral writing which never overwhelms the instrument even when the solo part lies in the middle and lower registers that project less easily than the upper register. The cultivation of the high register allows Haydn to exploit the wide range of the cello more dramatically than had previously been the case.

It is important to note that the expansion of his writing technique for cello concerto is only possible with the facilitation of the thumb position as the following representative examples demonstrate.

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91 Haydn’s predilection for concertante writing in slow movements and in the trio sections of minuets, a practice which is common to many composers of the period, necessarily places restrictions on how he writes for the solo instrument. Extreme virtuosity in the form of rapid passagework, multiple stopping, and the dramatic exploitation of extreme shifts of tessitura does not fit well within the prevailing aesthetic of the mid-century slow movement. It is even less appropriate in trios, which typically introduce a relaxation of mood rather than an intensification of it. (Badley, *op. cit.*)
The beginning of the Figure 42 shows that the thumb is used as a moveable nut in this passage. This is the basic placement of the thumb where it is on the A₃ on the seventh position.⁹² The left hand should be kept in the square shape (meaning the fingers are more close to perpendicular angle with the string). The thumb here is also used to balance the left hand and therefore the player can prevent collapsing of the hand shape.

This passage can be played with or without the use of the thumb depending on whether the player wants the short ascending scale to be in the same tone (in which case it is then to be played on the same string without going across the neighbouring string) or is to be played in one position which facilitates more rapid execution and comfortable movement of the fingers.
As these two passages demonstrate, Haydn’s exploitation of the high register greatly increased the dramatic scope of his solo writing and allowed him to experiment a great deal with different timbres and textures. While this represents a revolutionary leap forward in his writing for the instrument, it does not seem to have exerted much influence on his cello writing per se perhaps because the concerto, as a genre, simply demanded a higher level of virtuosity than other genres he cultivated at this time such as the symphony and the string quartet. In other words, Haydn’s selective exploitation of the thumb position may have been dependent largely on genre.

One of the most advanced examples of Haydn’s solo cello writing that dates from around the same time as the C major concerto can be found in Symphony No.31 in D “Hornsignal” composed for the Esterházy orchestra in 1765. This symphony contains a good deal of obbligato writing, including some fiendishly difficult writing for the four horns, and the cello shares in the musical action both in the second movement Adagio, where it is paired with a solo violin (played by Luigi Tomasini), and in the Variations Finale.

In the second movement, the violoncello solo part is assigned its own staff in the score as if to underline its separation from the generic basso line.  

In the cello solo passage in the figure 44, it is certain that the cellist would have played the passage in the thumb position. The unambiguous use of the thumb position here raises some interesting questions, not the least of them being whether it indicates that Weigl had only recently mastered the technique? The possible fingering is shown as below.

Fig. 44: Haydn, *Symphony No. 31 in D major, Hob.I:31*: second movement, bars 1 – 3

Fig. 45: Haydn, *Symphony No. 31 in D major, Hob.I:31*: second movement, bars 20 – 21
In executing this particular passage, the shape of the left hand should allow the fingers and knuckles to point slightly towards the bridge, as in the picture above. This shape of the hand occurs when the semitone lies between the second and third finger. Without using the thumb position in this passage, there would be many unavoidable shifts that would make difficult to phrase the passage smoothly. The left hand would also be unstable on the fingerboard which would create intonation problems.

Symphonies 6-8, 31 and the C major Concerto were composed at a time when Haydn was not writing string quartets. In his early string quartets and those of contemporaries such as Karl von Ordenz and Johann Baptist Wanhal, the cello retained its customary basso role being restricted both in range and musical function. Rarely if ever did the cello share in the presentation of thematic material and when it did so it was frequently paired with another instrument, typically the viola whose role was even more limited than that of the cello. In the op. 20 quartets, however, Haydn brought the cello to a new level of prominence, entrusting to it at times the presentation of important thematic material and utilizing its upper registers in
ways that forced him to rethink the entire question of string quartet timbres and textures as
the opening of the C major quartet from that set demonstrates.

Fig. 47: Haydn, *Quartet in C*, op. 20: No. 2: first movement, bars 1 – 8

In 1769 Weigl, who was married to the singer Josepha (née Scheffstoß), who had served as a
choral and chamber singer at the Esterházy court since 1760, moved to Vienna where his wife
appeared to great acclaim at the Burgtheater and he took the position of principal cellist at the
Kärntnertortheater. Weigl and Haydn remained friends (Haydn was godfather to one of
Weigl’s children) and he clearly admired his music. Haydn seems to have visited Weigl
whenever the Esterházy court was in Vienna and indeed Burney witnessed Weigl performing
Haydn’s string quartets in 1772, which indicates that he was probably well-informed about
Haydn’s latest developments in writing for the cello. It is ironic nonetheless that Haydn’s
most progressive development in writing for the cello in string quartets should have occurred
after Weigl left the prince’s service.

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94 Badley, *op. cit.*, p. 82
2.1.1.3. Composer Haydn and Cellist Kraft

The Bohemian cellist Antonín Kraft (1752 – 1820) was asked to join the Esterházy orchestra at Haydn’s personal invitation in 1778. That Kraft did not succeed Weigl – nine years had elapsed since Weigl’s move to Vienna – suggests that Haydn did not set a high priority on having a cello virtuoso in his orchestra. However, with no external commissions that we know of from this period and a hiatus from 1772 in the composition of string quartets it may be that Haydn’s priorities lay elsewhere: there are certainly no big cello solos in the symphonies of 1772-1779 to compare with those composed in the 1760s.

Five years after Kraft joined the orchestra Haydn composed a new cello concerto, the Concerto in D major, Hob. VIIb:2) which was premiered at the Esterházy palace in Vienna in 1783. For many years, the work was believed to be by Kraft because the cello techniques used in the work were considered to be too advanced to have been conceived by a non-cellist composer\(^{95}\) but the matter was settled once and for all by the re-discovery of Haydn’s autograph in 1954.\(^{96}\)

In most respects the D major Concerto represents a less decisive change in Haydn’s writing for the cello than the C major did in respect to the works of the early 1760s. Nonetheless, there is more consistent exploitation of the high register and overall, a greater degree of virtuosity not just in terms of rapid passage work but also extending to multiple voicing. Much of the writing is exposed and, as in the earlier concerto, Haydn’s masterful handling of his orchestral forces ensures that the solo line is always audible.

\(^{95}\) Landon, \textit{op. cit.}, p. 133: The German musicologist, Gustav Schilling, stated that in the absence of an original manuscript, it was his opinion that the cello part of the concerto was too well written to be the work of a composer who was not himself a cellist. (Markevitch, Dmitry. \textit{Cello Story}. Alfred Music Publishing, 1984.p. 133)

\(^{96}\) Landon, \textit{op. cit.}, p. 133 - 134
In bar 38, the thumb should be continuously pressed down on the string for the entire duration of the double-stop section as indicated in the box. The left hand should be a squared shape so that the player can have an intervallic sense in one fixed position throughout the section. After this short section, the player can either have a big stretch to the next high note F♯5 or shift the hand and then come back to the lower position. When the player chooses to stretch, assuming that he has a relatively big hand, the shape of the left hand needs to be changed from the squared shape to the side-placing shape while the thumb is still placed on or above the note D₄.

Sometimes, on a rare occasion, the fourth (little) finger can be used in the thumb position. Usually, in the thumb position, it is too physically challenging for the little finger to hold a note for a long time or to vibrate and produce a good sound. However, when it is used in fast passages, it is possible to achieve this.
The note played with the fourth finger as indicated with the arrow in the example above can also be played with the third finger. However, the player then needs to change the position of the hand which may create complications at a fast tempo.

Fig. 50: Haydn, *Cello Concerto in D major, Hob.VIIb:2*: third movement, bars 117 – 122

It is often the case that the thumb is used on isolated notes in lower registers. In the third movement, there are a few octave passages where the thumb requires more weight from the arm in order to place the thumb firmly on a lower and thicker string to produce the better quality sound. When it is followed by consecutive octave passages, the abrupt accents on the next note can be minimized by shifting to the next set of the octaves with a semicircular movement.97

### 2.1.1.4. Hofmann and Pleyel

Even though Haydn’s cello concertos are part of every modern cellist’s repertoire, it is unclear how well known they were in the eighteenth century and what influence if any they might have had on other cellists and composers since they may have been performed largely within the context of the Esterhazy court.98 This is not in itself unusual since in Vienna, at

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97 Moving downwards on the fingerboard while making a semicircle with the hand with flexible fingers.
98 “During the first half of the 1760s Haydn composed chiefly instrumental music, as far as we know exclusively for performance at court” (Webster, James, and Georg Feder, eds. *The New Grove Haydn*. Oxford University Press, 2003, p.14)
least, most music making outside of the church and the theatre was largely a private (or semi-private) affair. The poor survival rate of concertos – of which Haydn’s C major cello concerto is merely a well-known example – raises the question of how widely they circulated and, as a consequence, whether particular works proved to be more influential than others. Haydn’s early works were certainly intended by Prince Esterházy to be his personal property and yet they did circulate and were eagerly sought by publishers as far-a-field as Paris and London. Perhaps the realization that this could not be prevented and in any case increased his own celebrity as well as Haydn’s persuaded Prince Esterházy to relax this rule in the 1780s and allow the composer to accept external commissions. Thus, by 1783 when Haydn composed the D major cello concerto his reputation and position was vastly different to what it had been twenty years earlier, but his works circulated in a musical world that was rich in works written by other composers most of whom enjoyed more regular and direct contact with the public, among them Leopold Hofmann and Ignaz Pleyel, both of whom composed cello concertos.

Although Haydn and Hofmann were close contemporaries in Vienna, one link between them is of particular interest. Joseph Weigl was a colleague of both (Weigl was a member of Hofmann’s orchestras at St Peter’s and at St Stephen’s Cathedral) and the two composers almost certainly wrote works that were conceived with his particular talents in mind. As such, it is unsurprising that they both started employing more advanced cello techniques, including the left thumb use, which led them to start expanding the register of their solo cello

“His duties includes... Whenever His Princely Highness commands, the vice-Kapellmeister is obligated to compose such works of music as His Highness may demand; further not to communicate [such] new compositions to anyone, still less allow them to be copied [for others], but to reserve them entirely and exclusively for His Highness; most of all to compose nothing for any other person without prior knowledge and gracious consent.” Webster, James, Feder, Georg. The New Grove Haydn. London: Macmillan Publishers Limited, 2002, p. 13-14

99 Badley, op. cit.
lines. One such example in Hofmann’s employment of the thumb position can be found in the example below.

Fig. 51: Hofmann, Cello Concerto, Badley D3: first movement bars 48 – 53

Hofmann had written number of works for cello before he started working with Weigl. These works are characterized by the relative simplicity of technique, an indication in all likelihood that Hofmann wanted these works to be performed as widely as possible. After the arrival of Weigl in Vienna in 1769, however, Hofmann started adopting the innovative new technique at the time, the left thumb technique, in solo concertos. It is possible that the fine Concerto for Violin and Violoncello (Badley G1) dates from around the same time but the chronology of Hofmann’s output is very problematic and this work may have been written considerably earlier and for a different cellist.100

Pleyel composed five cello concertos one of which exists in a parallel version for viola (Concerto in D major, Benton 105) and a second for cello, clarinet or flute (Concerto in C major, Benton 106) and with one exception, these works were all published and in multiple editions with rival publishing houses throughout Europe vying to bring out the latest works.101 Although we have no idea for whom these works were written, Pleyel’s popularity

100 Badley, op. cit.
and the ready accessibility of his works means that they are far more likely to have been known to cellists than Haydn’s two concertos.

Fig. 52: Pleyel, *Cello Concerto in C major, Benton 104*: first movement, bars 133 – 141

Although Pleyel is extremely unlikely to have specified any fingerings in his concertos, an edition of the Concerto in C, Benton 104, issued by Maison Pleyel in ca 1799, signals that thumb position is to be used. Irrespective of whoever suggested these fingerings, Pleyel as the editor and publisher, must have approved them. That Pleyel wrote so much of the solo part in the high register is a clear indication that he was familiar with playing of this type.¹⁰²

By looking at works written by Haydn, Hofmann and Pleyel, it is evident that the thumb technique was already in use in concertos composed as early as the 1760s and was in common use across Europe, from Vienna to Strasbourg and Paris. That Pleyel’s works were published in so many editions suggests that a large number of cellists must have mastered the technique by late 1780s.

¹⁰² Thumb sign marked as “o”

Pleyel, *Cello Concerto in C Major, Benton 104*: first movement, bars 148 – 150 (Publisher: Paris: Pleyel, ca 1799. Plate 168)
2.1.1.5. Romberg and Ries

Composer Beethoven and cellist Kraft

One of the most unusual works written in the early nineteenth century is Beethoven’s Triple Concerto composed in 1803. The presence of the cello in multiple-instrument concertos and symphonies concertantes was relatively common in the eighteenth century and the inclusion of difficult cello solos in Pleyel’s Symphonie Concertante in F (Benton 113) and the work it inspired, Haydn’s Sinfonia Concertante in Bb major (Hob.I.106), are obvious ancestors of Beethoven’s work. However, the combination of cello with violin and piano in such a work is unusual and the compositional challenge that creates in an orchestral context makes the Triple Concerto particularly interesting to examine. Just as Weigl provides a common link between Haydn and Hofmann so Kraft does between Haydn and Beethoven since it was Kraft, the violinist Carl August Seidler and his piano and composition pupil Archduke Rudolph that Beethoven had firmly in mind as he composed the work.

The Triple Concerto comes from one of Beethoven’s most productive and highly experimental periods. In 1803, he completed the “Kreutzer” Sonata, op. 47, which in its virtuosity and enlarged scope, forms a bridge between chamber music and the concerto, and no less impressive are works like the ‘Waldstein’ Sonata, op.53 in 1804, and dwarfing them all, the “Eroica” symphony, op.55 completed in 1803.103

By the time Beethoven wrote the Triple Concerto he had written for solo cello not just in chamber works such as the Piano Trios, op.1, the early string trios and the String Quartets, op.18 but he had also composed the two cello sonatas, op.5, a genre that neither Haydn nor

Mozart had cultivated. He was, therefore, an experienced and accomplished composer for the instrument.

The Triple Concerto presented him with an entirely new set of challenges since it was necessary for Beethoven to consider the balance of the cello with respect to its two solo partners as well as ensuring that would project over his customarily elaborate orchestration. Beethoven overcomes the problem of balance by assigning lyrical lines to the cello in its higher registers while accompanying it either with the piano, in the manner of chamber work, or by a heavily reduced orchestra typically consisting of strings only, a technique familiar from the concertos of Haydn, Hofmann and Pleyel.

Fig. 53: Beethoven, *Concerto for Violin, Cello, and Piano in C major*, op. 56: first movement, bars 68 -76

Figures 53-54 show the end of opening ritornello and the opening bars of the first solo section where the theme is presented by the cello with a characteristically light accompaniment.
Fig. 54: Beethoven, *Concerto for Violin, Cello, and Piano in C major*, op. 56: first movement, bars 79 – 84

Fig. 55: Beethoven, *Concerto for Violin, Cello, and Piano in C major*, op. 56: first movement, bars 120 – 124
In Figure 55, the lyrical solo line is again presented by the cello, accompanied this time by the piano as if it were a piece of chamber music. In bar 123, it is easy for the cellist if the C₄ is played with the thumb and therefore the C₅ is played with 3rd finger (middle finger) which gives the player a sense of octave in one hand position. The cello solo part demands a high level of technique and it often stays in the high register where the thumb technique becomes very useful at times indispensable.

![Diagram](image)

Fig. 56: Beethoven, *Concerto for Violin, Cello, and Piano in C major, op. 56*: first movement, bars 155 – 160

In Figure 56 there are a few possible fingerings given in bar 156, but by placing the thumb on A₄ and stretching the first finger (index finger) as much as possible, the cellist is able to play the bar in one hand shape avoiding the shift back and forth.
Fig. 57: Beethoven, *Concerto for Violin, Cello, and Piano in C major*, op. 56: second movement, bars 1 – 43

In Figure 57, the thumb is used both as a guide finger and as an extra finger in the opening bars of the high-register solo.

![Sheet music](image)

Fig. 58: Beethoven, *Concerto for Violin, Cello, and Piano in C major*, op. 56: third movement, bars 1 – 17

In Figure 58, which shows the opening bars of the third movement, there are few possible fingers for the first bar although it is possible to start the first note with the thumb to have less movement while the player shifts to the next position starting from C₃.

Beethoven typically restricts the use of the low register of the cello solo part to the occasional pedal point or when dramatic scales going up and down with other two solo instruments to maximize the effect of the bottom register.

Although we know little about the conception of this work it is possible that Beethoven discussed the solo part with Kraft as Haydn might well have done when working on the D major concerto. However Haydn and Beethoven acquired their knowledge of advanced thumb position technique, they both put it to supremely good use in the two works they composed for Anton Kraft while bringing all their experience to bear on more general compositional problems such as projection and balance.
2.1.1.6. Works by non-cellist composers from the nineteenth and twentieth centuries

One of the characteristics of works written by non-cellist composers is that they frequently display a certain degree of technical awkwardness due to a possible misunderstanding of or lack of knowledge about cellistic possibilities. These are exaggerated in cases where the composer has attempted to introduce elements of extreme virtuosity. As there are fundamental differences between keyboard or wind writing and string writing, some of the non-cellist composers worked with cellists who advised them on certain technical aspects in both left-hand techniques such as the thumb position or double stops and right-hand (bowing) techniques such as sul tasto, sul ponticello or flautando. Works by these composers frequently require big shifts, leaps and arpeggio chords through a large span of the instrumental register. Without a complete understanding of the instrument by the composer, such passages can result in the need for many uncomfortable or technically-difficult fingerings. In most cases, it is those passages in particular that require the thumb position technique on the cello in order to play them more smoothly. The examples discussed below are drawn from my third DMA recital programme and display the use of the thumb both as a playing finger and to stabilize the sense of position when getting to or playing in the higher register of the cello.
Nikolai Myaskovsky (1881–1950)

Sonata for cello and piano No 1 in D major Opus 12 (1911)

Fig. 59: Myaskovsky, Sonata for cello and piano in D major, op. 12: first movement, bars 111 – 116

This passage is ideally played in the thumb position where the top D is played with the third finger and the A is played with the thumb. The left thumb not only gives a sense of position and thus increases the security of intonation, but it also helps to keep the string down which makes string crossings easier for the bow. Playing the A with the thumb means that no shift is required for the next two notes.

However, there are other passages which every cellist will find uncomfortable to play. Figure 60 shows a section where the writing is not very cellist-friendly. Even with a variety of fingering options for this passage, none seems to sit comfortably under the cellist’s hand.

Fig. 60: Myaskovsky, Sonata for cello and piano in D major, op. 12: first movement, bars 117 – 120

With the fingering I have chosen for this passage, the use of the thumb enables the larger intervals to be played by stretching, thus avoiding a large number of audible shifts.
Claude Debussy (1862–1918)

Sonata for cello and piano (1915)

Fig. 61: Debussy, Sonata for cello and piano: first movement, bars 36 and 37

In the short cadenza in the first movement shown in the figure above, Debussy creates the illusion that the cello is a wind instrument (probably flute) but to bring off this effect, the cellist needs to play it relatively fast without any jerky movements which is why there should not be a shift in the middle of it. The player has to use the thumb as a nut in order to have all fingers ready to be played in one position.

Fig. 62: Debussy, Sonata for cello and piano: third movement, bars 81 – 86

In this passage, it is essential to have the thumb on the first set of f sharps in the third bar in order to play these octaves. This is achieved by shifting onto the first finger for the middle f sharp (on the D string), then stretch up to the fourth for the top note (A string) and then down to the bottom f sharp on the G string with the thumb. The use of the thumb is the only way to manage this passage with the necessary precision and velocity.

The difference between this work and the earlier cello writing employing the thumb position is that the thumb is used more often and is taking a connecting role between the positions.
rather than being used as a moveable nut or a guide finger. The thumb also allows the player to stretch the hand easily and reach wider intervals from one hand position.

**Richard Strauss (1864–1949)**

**Sonata for cello and piano in F major, op.6 (1883)**

As a lot of the musical material in Strauss’s early cello sonata makes use of the higher register of the instrument, the use of the thumb position is essential in performance. The thumb technique that gets used most widely in this sonata is the extension of position so that leaps can be played more easily. In other places the thumb is not used as a playing finger but stabilizes the hand so that the cellist does not lose the sense of position:

![Fig. 63: Strauss, Sonata for cello and piano. op. 6: first movement, bars 241 – 251](image)

An alternative fingering would lead to the A in bar 244 played with the thumb but is less effective in a musical sense since it would make a consistent vibrato impossible.

![Fig. 64: Strauss, Sonata for cello and piano, op. 6: second movement, bars 40 – 44](image)

In the passage above, the thumb is placed over two strings, A (I) and D (II), as a guide for the position, thus enabling the cellist to play this passage in one position without shifting. An
alternative fingering without staying in the same position would involve many shifts resulting in less consistent sound quality and some possibly unwanted *glissando* effects.

![Sheet music](image)

Fig. 65: Strauss, *Sonata for cello and piano*, op. 6: third movement, bars 66 – 69

In bars 68 and 69 in Figure 65 above, the use of thumb as a playing finger allows the cellist to execute the arpeggio figure more easily. Having the thumb on the D on the D string (II) gives the advantage of playing this line smoothly in time, as it is a harmonic that will also ring naturally even after the thumb has already left the string in order to jump to the fourth finger to play the B in a neck position.

### 2.1.2. Cellist Composers

#### 2.1.2.1. Works by cellist composers from the nineteenth and twentieth centuries

There are three examples of the works written by cellist-composers included in this chapter that were performed as part of my fourth DMA recital which was devoted to repertory the nineteenth and early twentieth centuries when the blossoming cello repertory began to show a much greater depth and variety than ever before.

Although the cellist-composers make fuller use of cello technique than their non-cello playing counterparts, some of their works are marred by incorporating too many technical difficulties into them. In most cases, these composers use the advanced techniques that frequently involve the left thumb. In the following examples, the thumb is used both as a
playing finger and to stabilize the sense of position when getting to or playing in the higher register of the cello.

**Nikolai Potolovsky (1878 – 1927)**

Sonata for cello and piano in d minor, Op 2 (1905)

![Image](image.png)

Fig. 66: Potolovsky, *Sonata for cello and piano in d minor, op. 2: second movement, bars 57 – 59*

The passage in bar 59 shown above is expected to be played softly with the least interruption. When the left-hand shape is interchanging between the positions, it could result in changes of tone colour. To minimize the activity in the left arm and the hand, the left hand should stay in one position with the help of the left thumb. The thumb acts here as an additional finger instead of being a guide behind the neck, allowing the left arm to stay still.

![Image](image.png)

Fig. 67: Potolovsky, *Sonata for cello and piano in d minor, op 2: third movement, bars 48 – 49*

By having the thumb already on the third note (F₃) in bar 48 in the passage above, the left hand is ready to travel to the higher passage. If this is not done, one further step is needed to prepare for the shift as the player moves the left thumb out from behind the neck.
Ries (1784 – 1838)\textsuperscript{104}

**Sonata for cello and piano in C major, Op 20 (1807)**

Although the C major sonata is dominated by the piano, Ries’s understanding of the cello is evident in the good use he makes of cello specific technique as the following passage demonstrates.

![Fig. 68: Ries, Sonata for cello and piano in C major, op 20: first movement, bars 24 – 30](image)

According to the score the tempo marking for this movement is $\text{\textit{d}\textsuperscript{=152}}$. In bars 24 and 25, at this fast tempo, the use of the left thumb minimizes the movement of the hand moving back and forth around the cello neck area which could result in delay or disruption of the smooth flowing of the phrase.

![Fig. 69: Ries, Sonata for cello and piano in C major, op 20: third movement, bars 206 – 210](image)

The tempo of the third movement ($\text{\textit{d}\textsuperscript{=116}}$) makes it difficult for the player to execute the big leaps in bars 206–207 with string crossings over all four strings. By reducing at least one

\textsuperscript{104} Ferdinand Ries was born in Bonn, Germany. He started learning the piano from his father who was a musician and later studied in Vienna with Beethoven. He also learnt the cello from Bernhard Romberg who introduced modernized cello techniques such as stationary block thumb position and the frequent use of the upper register.

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obstacle such as big shifts at a quick tempo this passage is considerably less difficult. The left thumb use allows the left hand to stay in one position for the entire duration of these two bars and it is possible that this passage reflects the influence of Ries’s cello teacher Romberg who introduced the stationary block thumb position. The thumb here is placed over two strings (A and D) acting as a nut in this register.

Servais (1807 – 1866)

Variations brillantes et concertantes sur l'air “God Save the King” for violin and cello duo, op 38

Fig. 70: Servais, *Variations brillantes et concertantes sur l'air “God Save the King”*, op 38: bars 19 – 26

One of the most common uses of the left thumb technique is the use of the thumb as another finger which makes possible extensions beyond an octave. In bars 21, 23 and 24, the lower D has to be played with the thumb. By placing the third (ring) finger and the thumb, the player can feel a sense of the position and the hand shape becomes very stable whereas without having the thumb placed on the fingerboard, which sometimes occurs when there is only a few notes to play in the high register before returning to the lower register, it is more difficult to maintain the stability in the hand shape and feel the distance between the fingers.
In the arpeggio passage in bar 35, the thumb is used as a passing finger which means that the thumb bridges the positions and allows the next two fingers (fingerings 1 and 2) to stretch easily into the next position.

Because these composers were experienced cellists themselves, figuring out the most musically effective and comfortable fingering is not the most difficult part of learning their works. Their expert knowledge of the instrument enables them to create beautiful melodic lines which wisely avoid uncomfortable shifts that might compromise the integrity of the line.

By using the thumb as a playing finger in the higher register of the cello, we can eliminate these problems in many places. Using the thumb as a stabilizing guide helps the player to have better control over the use of the other fingers. It also allows the player to have fewer shifts and leaps and creates a greater variety of colour and sound quality on different strings without having to move the hand back and forth. This also ensures a more regular and better controlled vibrato in cantabile passages.
2.2. Summary

In this chapter, works written by non-cellist composers and cellist composers were examined which belong to both the second and third phases of development. In the former, thumb technique began to be used more frequently while in the third, the technique is central to the conception of the music and is often used in a more natural manner. While non-cellist composers frequently succeeded in writing music of exquisite beauty for the instrument, cellist composers generally show greater insight into the character of the instrument and its idiomatic potential. Although there is at times evidence of a certain degree of technical awkwardness in the works written by the non-cellist composers, the use of the thumb allows the player greater scope in the choice of fingerings which helps to overcome them.
Chapter 3. Transcriptions

3.1. Transcriptions

There are many nineteenth-century violin pieces that have been transcribed for cello, primarily because the violin was the longest-established member of the string family with the largest significant repertory when the cello began to assert its position as an important solo instrument. Naturally the first virtuoso cellists started “borrowing” violin repertoire not only because some of the most characteristic violin techniques such as double stoppings or string crossings could be used to the same effect, but also because there is a fundamental difference between keyboard or wind writing and string writing that makes these works less effective to adapt. Even today, there are more violin transcriptions available to cellists than transcriptions from any other instrument.

Transcribing music for the cello that was originally written for a smaller instrument such as the violin requires the cellist to do more shifts, leaps and big chords. This, in most cases, adds greater difficulty to the work and due to the lack of a top E string, extensive use of the thumb position is required in order to perform these pieces.

Some transcriptions such as Brahms’s Violin Sonata No. 1 are in a different key to the original, even if in some cases this means a rather drastic change in the expressive colour of the work. These changes of key rarely make things easier for the cellist but the final result
might well sound more convincing to the listener because the music remains the same in every essential detail.

The three examples of transcriptions from violin works that are described below performed in my second DMA recital.

**Robert Schumann**

**Sonata for violin and piano No 1 in a minor Opus 105**

(*arr. for cello and piano by Friedrich Grützmacher*)

Schumann did not write a cello sonata: in fact his only authentic work for cello and piano is the *Fünf Stücke im Volkston*, op. 102; two other duo works (opp. 70 and 73) are alternative versions respectively of horn and clarinet pieces. However, the cellist Friedrich Grützmacher (1832—1903) transcribed Schumann’s first violin sonata for cello and published it with Hofmeister in Leipzig in 1872. This transcription generally follows Schumann’s writing and principally involves transposition of material to the lower octave. However, Grützmacher chooses to alter the violin part in some places where this is by no means necessary from an instrumental point of view. I rejected these changes in favour of Schumann’s original conception of the passages concerned.

This sonata is very suitable for cello, especially as some of the passionately dark passages profit from the darker nature of the cello sound. In bar 6 of the first movement, violinists usually play the F on the G string. Many find it uncomfortable to execute the shift to this note with good sound quality, but for cellists, this register is a “prime location” with good resonance.
As it is shown in Figure 72, the transcribed cello part is an octave lower transposition with no other change involved.

Fig. 72: Schumann, Sonata for violin and piano No 1 in a minor, op. 105: first movement, bars 1-11

The first of many examples of the use of the thumb position in the upper register occurs in bar 23 of the first movement. Playing the D with the thumb means that the three notes preceding it do not need to be stretched (which is of course much easier on the violin, given the smaller distances). There are various fingering options for this bar, but however the D is reached, the use of the thumb results in a good sense of position as well as the stability of the hand throughout the whole bar.

Fig. 73: Schumann, Sonata for violin and piano No 1 in a minor, op. 105: first movement
Having the thumb on the A, G and F in bars 79 and 80 of the first movement allows the cellist to play the remaining notes in one position until the next thumb move, whereas such a passage would naturally be played by a violinist between the fourth (little) finger and the first (index) finger or even (in stretched position) the third (ring) finger and the first finger.

![Figure 74](image1.png)

**Fig. 74:** Schumann, *Sonata for violin and piano No 1 in a minor*, op. 105: first movement

This example demonstrates how necessary the frequent use of the left thumb for the cellist is in order to avoid a large number of audible shifts in this sonata. However, in the second movement especially, the thumb is used rather naturally as a passing fingering or a base for one position:

![Figure 75](image2.png)

**Fig. 75:** Schumann, *Sonata for violin and piano No 1 in a minor*, op. 105: second movement, bars 1 – 8

Many of the places where the cellist uses the thumb can be played with the four other fingers by a violinist. To avoid a non-vibrato harmonic or an audible shift in the very first upbeat, the thumb is a great help, as it makes avoid an audible shift between the penultimate and last notes of bar 2.
In the third movement, the thumb is used as a moveable nut in many places. In bars 6 and 7, the thumb is placed across two strings (A and D) which enables the player to play this passage with no shift. The thumb on the D string of the cello replaces the open E string of the violin.

Fig. 76: Schumann, *Sonata for violin and piano No 1 in a minor*, op. 105: third movement, bars 5 – 9

**Niccolò Paganini *Capriccio* in a minor, op.1: No. 24**

*arr. for cello solo by Luigi Silva*

The problem with playing violin works on the cello is not only that the cello's natural range of sound is about an octave lower than that of the violin but from a merely theoretical perspective, as Martin Rummel asserts, it is actually an octave and a fifth lower since its highest string is an A₃ instead of the violin's E₅. Therefore, having the cello transcription only an octave down from the original violin version is not the most comfortable arrangement for cellists. Additionally, some of the harmonics are more difficult to produce than on the violin in a minor. However, the thumb position allows cellists to be able to play this kind of transcriptions because the player can use the thumb as a moveable nut in order to manage smooth and quicker string crossings.

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105 Personal communication from Martin Rummel, the leading authority on cello études and himself a performer of international reputation.
Due to the above reasons, the easiest arrangement for cellists would be D minor (matching the open string of the beginning being the second lowest on the instrument), but the whole piece would undoubtedly not sound as brilliant as the original key.

Variation 1: As far as the bowing technique is concerned, this variation challenges the player with the continuous use of flying staccato. The average weight of a cello bow is around 80 grams as opposed to a violin bow’s 60 grams which means that this particular articulation is much harder for a cellist to control than for a violinist, as moving the bow in one direction while keeping its bounce means less fight against gravity with a lighter bow (that also has to make thinner strings resonate). Bars 5, 7 and 10 cannot be played without the use of the thumb position on the cello. The left thumb use allows cellists to play two intervals larger than a semitone or tone in a row without shifting (just by stretching from one note to the next, such as in bar 6: thumb 1-2) which is a common pattern on the violin (1-2-3 or 2-3-4) and much easier to execute given the much smaller nature of the violin. Passages as these would otherwise not be possible to play on the cello.

Fig. 77: Paganini, Capriccio in a minor, op. 1: No.24 - Variation 1
Variation 2: Originally intended to be played using string crossings for the first four notes of the beginning of each bar, this entire variation would have to be played in a completely different way if the thumb position were not used. The first four bars in the violin version incorporate the open strings for A (2da corda) and E (1a corda), but given that there is no E string on the cello, the only way to follow the composer’s intention is to use the left thumb on the cello, thus simulating the open string with the thumb. From bar 7 onwards, it is possible to stretch a semitone with 1-4 on the violin, but again due to the larger distances on the cello, the use of the thumb is the only option to play this passage across two strings (as intended by the composer).

Fig. 78: Paganini, *Capriccio in a minor*, op. 1: No.24 - Variation 2

Variation 3: On the cello, octaves cannot be played with any other fingerings than thumb-3, except for very few examples in the very top registers where “fingered octaves” (thumb/3, 1/4) are used.

Fig. 79: Paganini, *Capriccio in a minor*, op. 1: No.24, Variation 3
Variations 4 and 5: Again, octaves require the use of the thumb in the cello version.

Compared to the violin, Variation 5 is a lot more difficult, as jumping into double stops in the high register with only the thumb and the third finger lacks the factor of orientation that violinists have with the thumb around the neck of the violin for finding the first note.

Fig. 80: Paganini, Capriccio in a minor, op.1: No.24, Variation 4

Fig. 81: Paganini, Capriccio in a minor, op.1: No.24, Variation 5

Variation 6: Some intervals are too wide apart on the cello to be played in scales without the use of the left thumb. Thirds in the thumb position can theoretically be fingered, but are mostly played with thumb-2 or thumb-3, especially by cellists with smaller hands. In the neck position the only way of playing thirds without the thumb is 1-4. On the violin, fingered thirds are possible in all positions. Tenths cannot be played on the cello without the use of the
thumb at all. To the author’s knowledge, there is only one other passage of tenths in the cello concert repertoire (Prokofiev, Sinfonia Concertante, second movement).  

Fig. 82: Paganini, *Capriccio in a minor*, op. 1: No. 24, Variation 6

Variation 7: There are big jumps of register in this variation requiring the player to change rapidly from the A string to the C string. The left thumb not only gives a sense of location on the fingerboard, but also helps to keep the string down which makes string crossing easier for the right hand.

Fig. 83: Paganini, *Capriccio in a minor*, op. 1: No. 24, Variation 7

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Variation 8: The challenge of this variation is to bring out the melody that is sometimes hidden in the middle or on the bottom of the chord. In bar 9, the melody is in the top voice, but the third chord would require a barré chord (the first finger having to press down G and A string in the same place). As the strings are much further apart on the cello than on the violin, this is where the thumb comes into use with a slightly unusual way of placing it on the top string while playing the D and G strings to ensure the maximum pressure and thus best possible sound quality on the A string.

Fig. 84: Paganini, *Capriccio in a minor*, op. 1: No.24, Variation 8

Variation 9: The left-hand pizzicato is a common virtuoso violin technique. The violin is smaller than the cello – therefore the fingerboard is shorter – and its strings are a lot thinner which makes it easier to pluck the string with a finger of the left hand. The use of the left thumb for playing some notes enables the cellist to pluck the string further away from the point of applied pressure which allows greater force for the pizzicato. It will be louder and therefore more adequate to match the bowed notes in between.
Variation 10: One of Paganini’s many dazzling virtuoso techniques not included in this Capriccio is that of artificial harmonics. On the cello, it would be much easier to play this variation using artificial harmonics throughout rather than in a very uncomfortable high register, but to reflect the originality of the piece, I decided to go with Silva’s cello version. The thumb again facilitates larger intervals that can easily be stretched on the violin between the fingers 1-2-3-4.

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107 Silva, Luigi. *24 Caprices for Solo Violin*, op.1 (Paganini, Niccolò) transcribed for solo cello, Milan: Ricordi, 1952
Variation 11 and Finale: The final culminating variation includes string-crossings and arpeggio chords consisting of natural notes and harmonics. The use of the thumb again allows the hand to stretch to an extent that more notes can be played without shifting. For the top harmonics, the thumb can be used as an artificial nut that makes the last note the first harmonic (in the distance of an octave) of the chord – see bar 2, note 9 and 12 – which ensures secure intonation and sound quality.

Fig. 87: Paganini, Capriccio in a minor, op. 1: No.24, Variation 11
While the whole piece – and especially the attempt to transfer it to the cello – may sound and look like a series of acrobatics and the type of étude students loathe, but Paganini creates playful melodies in each variation. Some of them are harder to play than they sound – having different voice lines on different instruments can be easily done in an ensemble but is very challenging for one player on a one-voice instrument. Most variations are also exhausting and require extraordinary focus and energy to sustain without error.
Johannes Brahms

Sonata for violin and piano op 78

(arr. for cello and piano by Brahms or Klengel)

The origin of the version for cello and piano is not entirely certain – it may well have been done by Paul Klengel (1854–1935), brother of the cellist Julius Klengel (1859–1933) who was a close friend of Brahms, as suggested on other available editions. However, the cello version was published by Simrock in 1897 with the title page making no reference to the identity of the arranger. At various times during his professional life, Brahms had made arrangements of both his and other composers’ music, but consistently refused to allow his name to appear on the resulting editions as arranger. This transcription is not just a simple version of the violin sonata in D major instead of the original G major; the music has been extensively re-thought. First and foremost, the cello line has been skilfully and sensitively retouched to suit the choice of instrument. But the piano part also has been re-considered, maybe reflecting the composer’s years of experience of performing the piece as a pianist. There are some two hundred changes, the mastery of which point to the hand of Brahms himself.

The choice of key might also have been determined by more than purely instrumental concerns since the obvious relationship is C major to match the G major of the original. However, the violin version is clearly orientated to Beethoven’s last violin sonata Opus 96 both in the choice of keys throughout as well as composition principles.

The main theme of the last movement of Brahms’ Opus 78 comes from two earlier lieder, “Regenlied” (Rain Song) and “Nachklang” (Reminiscence) op. 59, nos 3 and 4. The texts of these songs (by Brahms’ friend Klaus Groth) lend their atmosphere to the whole sonata. The semiquaver passages of the third movement symbolize the text of the poem – “Pour rain, pour
down, and recall to me the dreams I dreamt in childhood ...” (from “Regenlied”). It describes the roots of tragedy where raindrops and tears mingle. Even with the key changed from G major to D major there are fewer awkward passages for the left hand on the cello than there would be in G major. This does not necessarily make it easier to play because it preserves the essential quality of the original in terms of tone colour and resonance.

Brahms writes a series of double stops such as seconds, thirds, fifths, sixths or octaves particularly in the second and third movements, and to ensure a smooth connection between these double stops and also to be able to vibrate them, the cellist is required to use the left thumb, sometimes even in the neck positions. When a violinist plays such double stops, the sense of the position comes from the first and third fingers, whereas thumb and the third finger establish the sense of position for a cellist in the thumb position. Furthermore, violinists have a feeling between their first finger (on the string) and their thumb (behind the neck) for intonation, whereas cellists solely have to rely on their “body memory” for the distance between the thumb and the third finger (or occasionally their second finger) which makes playing in good intonation more difficult.

There are a few quaver passages in the first movement where the left thumb allows fewer shifts and thus smoother connections, in many places by going over harmonics. In bars 9 and 10 of the first movement, the left thumb is placed on A (harmonic) which enables the player to play fifteen quavers in one position – more than the violinist in fact.

Fig. 89: Brahms, *Sonata for violin and piano*, op. 78: first movement, bars 5 – 12
There are other occasions where the thumb is again used as a moveable nut where violinists can play a *barré* (a fifth across the string with one finger) or even use the open strings in the original key. Third movement, bar 47-49:

![Musical notation]

Fig. 90: Brahms, Sonata for violin and piano, op. 78: third movement, bars 44 – 51

### 3.2. Summary

One of the problems of transcriptions can be the balance between the cello and the piano (or orchestra) when the cello line was originally written for a higher instrument. This is especially the case when the solo line is simply transposed an octave down with no changes to the piano accompaniment. It is often the case that lower and middle ranges of the piano overpower the cello if the piano part is not perfectly written. This problem can be (and has frequently been) solved with a revision of the score for the transcription.

Another problem is the difference between the original instrument and the cello. Not only the size of the instrument is different but also the strings on the instruments are in a different position in relation to the fingers of the left hand. Given those two reasons, cellists would have to experience more frequent shifts and leaps than violinists when playing the same piece.
However, by taking advantage of this special technique for the cello, many of these problems of left-hand technique can be solved.

The art of the perfect transcription had been a goal for composers for more than a hundred years before the works referred to above came into existence. One of the most impressive examples of a perfect combination of transcription and key change is Bach’s E/ D major violin/keyboard concerto, a rather less successful attempt is Beethoven’s own piano version of his violin concerto.

The difficulty in transcriptions is to preserve the essential quality of the original while ensuring that the new setting makes equally idiomatic use of the instrument and exploits its full tonal potential. Special techniques of the instrument used in the transcription such as the thumb position on the cello can help to facilitate passages that are awkward in the original and also overcome other instrumental hurdles that may arise from a transcription.
Conclusion

As we have seen, the literature on thumb position is comparatively limited and no articles or books have specifically addressed its historical evolution during the eighteenth and nineteenth centuries. This makes the current study particularly valuable since it can sit alongside the collected studies of such major composers and pedagogues as Dotzauer, Duport and Lee and provide a context in which to view them.

The development of the thumb technique can be categorized into four periods, the first of which might be more accurately described as the proto-thumb technique period. The use of proto-thumb technique began to appear in music composed around the time that Michel Corrette published the first-ever cello method. During the first phase of its early development, the thumb technique was addressed in various study books and etudes written by composers such as Duport, Dotzauer, Romberg, Lee and Davidov who introduced practice methods for developing and perfecting its use. These composers had been utilizing the thumb position and teaching it to their students as a fundamental technique of cello playing in spite of the lack of study books that fully incorporated the technique.

The thumb technique opened up whole new possibilities for composers and performers although it is not immediately clear whether composers responded in a general way to these exciting new developments in playing or whether, in the initial stages, only those composers who had direct contact with exceptional cellists sought to incorporate the high-register in their cello writing. The evidence certainly suggests this was the case and that a cellist of Joseph Weigl’s calibre excited the professional interest of more than one composer with whom he was associated.
The acquisition of a secure thumb technique is greatly facilitated by systematic study of carefully selected exercises and etudes which largely follow its historical development. The table below provides a useful guide to the most appropriate material and can serve as the basis of an extensive framework of study.

<table>
<thead>
<tr>
<th>Composer</th>
<th>Method book</th>
<th>Thumb techniques</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dotzauer</td>
<td>Violoncellschule op. 165</td>
<td>Scales, arpeggios, melodic exercises, thumb shift, octaves, artificial harmonics, tenth, double-trills</td>
</tr>
<tr>
<td>Lee</td>
<td>Methode pratique pour le violoncello op. 30</td>
<td>Scales, arpeggios, artificial harmonics, octaves</td>
</tr>
</tbody>
</table>

**Collections of Method Books**

<table>
<thead>
<tr>
<th>Number</th>
<th>Composer</th>
<th>Method book</th>
<th>Thumb techniques</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Dotzauer</td>
<td>12 Übungen op. 54</td>
<td>Positional parallelism</td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>24 Übungen op. 35</td>
<td>Fourth finger use</td>
</tr>
<tr>
<td>83</td>
<td></td>
<td>100 Übungen op. 123</td>
<td>Combination of basic thumb use</td>
</tr>
<tr>
<td>94</td>
<td></td>
<td>(from No. 76, all numbers are with thumb use)</td>
<td>Fourth finger use</td>
</tr>
<tr>
<td>95, 99</td>
<td></td>
<td></td>
<td>Double stops</td>
</tr>
<tr>
<td>98</td>
<td></td>
<td></td>
<td>Arpeggios</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>Octaves</td>
<td></td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----</td>
<td>----------------------</td>
<td></td>
</tr>
<tr>
<td>12 Übungen op. 158</td>
<td>9, 11</td>
<td>Double stops</td>
<td></td>
</tr>
<tr>
<td>7 Études op. 175</td>
<td>1</td>
<td>Thumb shift, double stops</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4, 6</td>
<td>Double stops</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>Double stops, octave, tenth</td>
<td></td>
</tr>
<tr>
<td>Lee</td>
<td>40 Melodische und progressive Etüden op. 31</td>
<td>28</td>
<td>Blocked thumb</td>
</tr>
<tr>
<td></td>
<td>12 Etüden zur Verollkommnung op. 57</td>
<td>6</td>
<td>Double stops</td>
</tr>
</tbody>
</table>

**Concert Études**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Davidov</td>
<td>At the fountain op. 20 No. 2</td>
<td></td>
</tr>
<tr>
<td>Popper</td>
<td>Spinning Song op. 55 (Thumb stays while other fingers stretch to cover bigger intervals)</td>
<td></td>
</tr>
</tbody>
</table>

There is no single rule or model for introducing the thumb technique to students and the creation of such a model is not the purpose of this exegesis. Nonetheless, it is my firm belief that both teachers and pupils would benefit significantly from having a secure understanding of the way thumb technique developed historically since it helps to provide a context in which to understand the technical demands of the repertoire being played. To comprehend just how difficult some of works were for contemporary performers and why, for example, some of most difficult works from the early period did not circulate very widely, it is essential to understand the technique prevalent at the time.
In spite of the explosion of extended techniques in avant garde music, the thumb technique has remained fundamentally unchanged since its final evolution in the nineteenth century. This raises the very obvious question of how much further the technique can be developed. Although the music being written today would have been inconceivable to the nineteenth-century cellist-composers who wrote their methods and devised new ways of exploiting the high register of the instrument, they created then perfected a technique capable of limitless application irrespective of harmonic language or musical style and that surely ranks as one of the most extraordinary achievements in the long and distinguished history of instrumental music. So have we reached the absolute limit of how far the thumb technique can go or does the nature of music being written today call for a new Duport or Dotzauer to develop an entirely new method that will challenge composers to write pieces that are even more technically challenging? Only time will tell.
## Appendix

List of works performed for DMA recitals

### DMA Recital 1

14 March 2011, 7:30pm

**Piano: Matteo Napoli**

<table>
<thead>
<tr>
<th>Composer</th>
<th>Work Description</th>
<th>Movement 1</th>
<th>Movement 2</th>
<th>Movement 3</th>
<th>Movement 4</th>
<th>Movement 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Francoeur</strong></td>
<td>Cello sonata in E Major</td>
<td>Adagio cantabile</td>
<td>Allegro vivo</td>
<td>Tempo di gavotta</td>
<td>Largo cantabile</td>
<td>Gigue: Allegro vivace</td>
</tr>
<tr>
<td><strong>Poulenc</strong></td>
<td>Sonate pour violoncello et piano, Op.143</td>
<td>Allegro: Tempo di marcia</td>
<td>Cavatine</td>
<td>Ballabile</td>
<td>Finale</td>
<td></td>
</tr>
<tr>
<td><strong>Stravinsky</strong></td>
<td>Suite Italiene for cello and piano</td>
<td>Introduzione</td>
<td>Serenata</td>
<td>Aria: Allegro alla breve. Largo</td>
<td>Tarantella</td>
<td>Minuetto e finale</td>
</tr>
</tbody>
</table>
SCHOOL OF MUSIC PRESENTS

Doctor of Musical Arts Recital: Lisa Chung

Monday 14 March, 7.30pm

Lisa Chung - cello

FRANÇOIS             Cello Sonata in E major
POULENC              Sonata pour Violoncello et Piano, Op. 143
STRAVINSKY           Suite, Italiana for Cello and Piano

MUSIC THEATRE, SCHOOL OF MUSIC
5 SYMONDS STREET, AUCKLAND

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www.creative.auckland.ac.nz
concerts@auckland.ac.nz | 09 323 7707
DAME Recital 2  26 March 2012, 7:30pm

Piano: Richard Liu, Kent Isomura

Brahms Violin Sonata No. 1, op. 78 (transcribed for cello and piano)

1. Vivace ma non troppo
2. Adagio
3. Allegro molto moderato

Schumann Sonate für Violoncello und Klavier No.1, op. 105
(nach der Sonate a-moll für Violine und Klavier)
1. Mit leidenschaftlichem Ausdruck
2. Allegretto
3. Lebhaft

Paganini 24 Capricci per Violino Solo op. 1 (transcribed for cello solo) No. 24
SCHOOL OF MUSIC PRESENTS

DOCTOR OF MUSICAL ARTS RECITAL: Lisa Chung
Monday 26 March, 7.30pm

Lisa Chung - cello
Richard Liu | Kent Isomura - piano

BRAHMS         Violin Sonata No. 1, op. 78 (transcribed for cello and piano)
SCHUMANN       Sonate für Violoncello und Klavier No.1, op. 105
                (nach der Sonate a-moll für Violine und Klavier)
PAGANINI       24 Capricci per Violino Solo op. 1 (transcribed for cello solo) No. 24

PERFORMANCE: Admission is free. Bookings not required.
VENUE: Music Theatre, School of Music
       6 Symonds Street, Auckland

www.creative.auckland.ac.nz | concerts@auckland.ac.nz
DMA Recital 3 11 November 2012, 8:15pm

Piano: Sarah Watkins

Strauss Cello Sonata in F, Op.6
1. Allegro con brio
2. Andante ma non troppo
3. Allegro vivo

Debussy Cello Sonata
1. Prologue: Lent, sostenuto e molto risoluto
2. Sérénade: Modérément animé
3. Final: Animé, léger et nerveux

Myaskovsky Cello Sonata No.1 in D, Op.12
1. Adagio – Andante
2. Allegro passionate – Adagio
SCHOOL OF MUSIC PRESENTS

DOCTOR OF MUSICAL ARTS RECITAL: Lisa Chung

Sunday 11 November, 8.15pm

Lisa Chung - cello
Sarah Watkins - piano

STRAUSS Cello Sonata in F, Op.6
DEBUSSY Cello Sonata
MYASKOVSKY Cello Sonata No.1 in D, Op.12

PERFORMANCE: Admission is free. Bookings not required.
VENUE: Music Theatre, School of Music
6 Symonds Street, Auckland

www.creative.auckland.ac.nz | 09 923 7707
DMA Recital 4  3 November 2013, 4pm

Piano: Rosemary Barnes, Violin: Pam Jiang

Potolovsky  Sonata for Cello and Piano in D minor, Op. 2

1. Allegro impetuoso
2. Largo con grand’ espressione
3. Allegro resolute

Ries  Sonata for Cello and Piano in C Major, Op. 20

1. Allegro con brio
2. Adagio
3. Polonaise Allegretto Moderato

Servais  Variations brillantes et concertantes sur l’air “God Save the King” for Violin and Cello Duo, Op. 38
DOCTOR OF MUSICAL ARTS RECITAL: Lisa Chung

Sunday 3 November, 4pm

Lisa Chung - cello
Rosemary Barnes - piano | Pam Jiang - violin (NZSO)

SERVAIS
Variations Brillantes Sur God Save The King for Violin and Cello Duo, Op. 38

POTOLOVSKY
Cello Sonata in D Minor, Op. 2

RIES
Sonata for cello and piano in C Major, Op. 20

PERFORMANCE: Admission is free. Bookings not required.
VENUE: Music Theatre, School of Music
6 Symonds Street, Auckland

wwwcreative.aucklandac.nz | concerts@aucklandac.nz
DMA Recital 5  15 March 2014, 7:30pm
Piano: Mi Yeon I, Violin: Pam Jiang

Beethoven  Cello Sonata No. 4 in C major, Op. 102, No. 1
1. Andante—Allegro vivace
2. Adagio— Tempo d’andante—Allegro vivace

Brahms  Sonata for Cello and Piano No. 2 in F major, Op. 99
1. Allegro vivace
2. Adagio affettuoso
3. Allegro passionato — Trio
4. Allegro molto

Ravel  Piano Trio in A Minor
1. Modéré
2. Pantoum: Assez vif
3. Passacaille: Très large
4. Final: Animé
DOCTOR OF MUSICAL ARTS RECITAL: Lisa Chung

Saturday 15 March, 7.30pm

Lisa Chung - cello
Mi Yeon I - piano | Pam Jiang - violin (NZSO)

BEETHOVEN  Sonata for cello and piano No. 4 in C major, Op. 102, No. 1
BRAHMS      Cello Sonata No. 2 in F major, Op. 99
RAVEL       Piano Trio in a minor

PERFORMANCE: Admission is free. Bookings not required.
VENUE: Music Theatre, School of Music
       6 Symonds Street, Auckland

www.creative.auckland.ac.nz | concerts@auckland.ac.nz
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