The “New Old” Sound of the Double Bass

Elia Scarponi
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Author: Elia Scarponi
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Supervisor: Maria Bania
Examiner: Ulrika Davidsson

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ABSTRACT

This work is based on research about the different tuning systems adopted by bass string instrumentalists during the eighteenth century. The consultation of period manuals and books related to the development of the double bass highlighted how the first Viennese symphonic tradition was interrelated to the Viennese violone. This bass string instrument was radically different from the modern double bass and was tuned in F A D F# A.

The aim of this study is to suggest a new performing praxis in playing the eighteenth-century Viennese repertoire on the modern double bass, taking advantage of its technology and playing technique, reintroducing the Viennese violone tuning.

In this thesis, a comparison between the modern tuning and the Viennese one in quality of sound, left hand technique and musical direction was made on a selection of Viennese eighteenth century orchestra double bass parts. This was fundamental in understanding the original approach to the instrument and the potential of this period tuning. The recovery of Viennese tuning, underlined how the approach to the instrument was differently and horizontally oriented. Combining the Viennese tuning with the modern double bass technique it is possible to obtain a more ringing sound and to increase the agility of the left hand, reducing the number of shifts. These advantages combined with a different bow technique allow modern double bass players to explore new musical lines and interpretations of the first Viennese symphonic repertoire.
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1. Introduction

The double bass is the last stringed orchestra instrument to develop standardized construction rules and a specific tuning system. The modern doubles bass tuned in E A D G became the standard instrument in all the European orchestras only between the late nineteenth century and the beginning of the twentieth century.\(^1\)

During my previous studies, I started to ask myself how the approach towards the instrument changed during the last three centuries and how the first Viennese symphony repertoire, one of the most challenging for the modern double bass players, was originally performed by bass stringed instrumentalists. In order to find information about this specific topic I started to consult books related to the development of the double bass. A fundamental secondary source in understanding this aspect was *A New History of the Double Bass* by Paul Brun. In his investigation, the author exhaustively underlines how the eighteenth century was crucial for the evolution of the double bass. During this century, bass stringed instruments with different names, sizes, number of strings and tunings coexisted all around Europe generating different national schools that would lay the foundations of the modern double bass technique. According to Brun, the most common instrument performed in the Austro-Germanic area was the Viennese violone with its peculiar tuning system (F A D F# A).\(^2\)

Since this specific repertoire was originally performed on a different instrument, tuned in a dissimilar way if compared to the modern double bass, I decided to explore and investigate the possibility to combine the Viennese Violone tuning with the modern double bass. It is also my intention to study what effect a reintroduction of period tunings would have on the current double bass orchestral performance and what musical and technical consequences the abandonment of the specific Viennese tuning pattern had for the performance of double bass literature.

This project was divided in two different phases. The first one was more theoretical and based on the consultation of primary sources about the eighteenth-century double bass technique and books related to the development of the instrument. During this phase, it was my intention to study how the first Viennese symphonic tradition was interrelated to the Viennese Violone tuning and to find pieces of information about the eighteenth-century most common tunings. The second phase of this work consisted in the application of the Viennese tuning on a modern double bass in orchestra parts. At this point of the thesis it was crucial to make a comparison, in performing this specific repertoire, between the modern tuning (E A D G) and the Viennese one (F A D F# A) focusing on differences in quality of sound, right hand technique and musical direction. In order to do that, I played and recorded some selected orchestra excerpts from the Mozart and Haydn catalogues adopting both the tunings.

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It was also my intention to allow other double bass players to form their own opinions about this “New Old” sound without the necessity of a specific training in Viennese tuning; for this reason I transcribed some selected parts in a special edition with required fingering.

2. The Development of the Bass Stringed Instruments

Paul Brun, in *A New History of the Double Bass*, illustrates how the development of the double bass is strictly connected to the concept of performance and composition and how the spreading of the first Viennese symphonic tradition during the eighteenth century was crucial for this process.  

From the last decades of the seventeenth century we can observe how the idea of music ensemble started to evolve becoming more “orchestral”. The aesthetic ideal was changing in the same way as the social role of the music. From a practical point of view these changes caused an increase of the number of string players, the introduction of a 16’ bowed bass instrument in the orchestral force, and the replacement of the renaissance wind instruments by French-type ‘Baroque’ flutes, oboes, and bassoons. The introduction of these “new” instruments and the increasing number of instrumentalists gradually created a new relation between melody and harmony and a completely new timbral vocabulary.

It is my opinion that the fundamental aspect to consider in the evolution of the double bass is the changing social role of the music. Until the last decade of the seventeenth century, musical performances were usually held in private settings for nobles or aristocrats and opera was practised mainly in Italy; at the court of Louis XIV and at about twenty courts of central Europe. Only sacred music was performed in churches for a more heterogeneous audience. On the contrary, during the eighteenth century the raise of the middle class and the spreading of Enlightenment ideas generated the idea of public concert. The idea of public concert in the modern sense began in London at the beginning of the eighteenth century. Thanks to this revolutionary idea anyone could obtain admission to performances by payment of a subscription. Three of the most important figures in the organization of the London musical scene in the second half of the eighteenth century were Johann Christian Bach, Carl Friedrich Abel and Johann Peter Salomon; thanks to them the idea of public concert born in London started to spread all around Europe. Also, in France we had the Concert Spirituel and in the Germanic area different musical societies that periodically scheduled public performances and the Grosse Konzert in Leipzig. In the same way, while the idea of public performance was becoming more and more common in Europe, the popularity of the opera exponentially increased, becoming the most popular musical genre performed all around Europe.

These changes in the concept of performing created a demand for more powerful instruments and larger orchestras. The number of enrolled players increased, for instance almost sixty musicians were on the payroll in the opera theatre in Milan, Turin and Naples in 1770 and

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4 *The Grove Dictionary of Musical Instruments*, 2nd ed., s.v.”orchestra”.
5 This section is based on *The Grove Dictionary of Musical Instruments*, 2nd ed., s.v.”The Classical orchestra “.
fifty-seven players formed the Concert Spirituel orchestra in Paris in 1778. For what concerns the evolution of the double bass, the necessity of more resonant instruments led to the decline of the softer viol family, which was no longer suitable in orchestral forces.

For this reason the double bass community started to convert now almost obsolete instruments (contrabass viols) to double-bass violins, which were more suitable to eighteenth-century performances.

Paul Brun describes the changes of the instrument which were made. “Most evident among those modifications were the removal of the neck and fingerboard and the replacement by new ones of the violin pattern, the shedding of the frets and of the excess strings, the setting up of heavy, tense, high action strings.” This conversion process created new bass-stringed instruments tuned usually an octave deeper than the cello (C G D A). Thanks to that, musicians were able to switch between these two instruments without difficulties. On the other hand, this tuning generated a common discontent about the quality of the sound and about the left hand technique. For this reason the double bass community started to adopt different tunings and construction methods reducing for example the number of strings or modifying the instrument sizes. Due to this process, there was no common tuning, style of construction or instrument nomenclature, and as a consequence there was a development of different national schools all around Europe.

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3. Some eighteenth century authors on the double bass tuning

A comparison between period manuals from different geographical areas illustrates the most common tuning systems adopted in different national schools during the eighteenth century.

*Méthodes Pour Apprendre à Jouer de la Contrebasse à 3, à 4, et à 5 Cordes* written by Michel Corrette (* Rouen 1707; † Paris 1795) illustrates the main characteristics of the French bass school. The author was an organist, teacher, composer-arranger and author of methods on performance practice. He established his reputation by becoming musical director of the Foire St Germain, where he arranged and composed vaudevilles and divertissements for the opéra comique (1732-1739). From 1737 to 1790 he was the organist at the Ste. Marie within the temple of the grand prieur of France. His methods are acknowledged as rich source of information about performance practice and music in the eighteenth century. In his double bass manual Michel Corrette wrote that French musicians used three, four or five-stringed basses with different tunings (E A D G, G D A, F# B E A D).9

The second period manual taken under consideration is *Elementi Teorico-Pratici di Musica* written by Francesco Galeazzi (* Turin 1758; † Rome 1819). Galeazzi was one of the most eminent theorists, violinists and composers of his period. He was trained in Turin, a leading centre of violin playing in the eighteenth century. After he concluded his formative period he moved to Rome where he was active as violin teacher, composer of instrumental music and musical director of the Teatro Valle for fifteen years. His two-volume treatise on composition and music theory, published in the last decade of the century, is the most comprehensive eighteenth-century Italian treatise, and one of the most important sources for an understanding of the classical style.10 According to Francesco Galeazzi, the four-stringed double bass tuned in C G D A, probably originated in Italy; nevertheless, Italian players preferred to use three-stringed instruments tuned in A D G to achieve a more powerful sound or four-stringed instruments in G D A E tuning.11

The main features of the Viennese violone are illustrated in *A Treatise on the Fundamental Principles of Violin Playing* written by Leopold Mozart (* Augsburg 1719; † Salzburg 1787). The author was a well-known organist and violinist, and his tutor was widely recognized as the most important violin tutor of its time. He published his treatise in 1756, the same year as Wolfgang’s birth. He revised his manual for a second and third edition (1769-1770 and 1787). His manual cannot be considered a universal guide to pan-european eighteenth-century performing practices but represent the source closest to the musical and aesthetic education of Wolfgang Amadeus Mozart.12

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In the third version of his method (1787): Leopold Mozart illustrates the main peculiarity of the Viennese Violone of this period:

The great-Bass or the Violon, from the Italian Violone, is the eighth kind of stringed instrument. This Violon is also made in various sizes, but the tuning remains the same…Because the Violon is bigger than the Violoncello, it is tuned a whole octave lower. Usually it has four strings at times only three, but the larger ones may have five. With these five stringed Violons, or double-Basses, bands of rather thick cord are attached to the neck at all the intervals, in order to prevent the strings from slipping, and to improve the tone. One can also perform difficult passages more easily on such a Bass, and I have heard concertos, trios, solos and so forth performed on one of these with great beauty. But I have observed that in accompanying with any strength for the purpose of expression, two strings are frequently to be heard simultaneously on account of the strings being thinner and lying nearer together than those of a Bass strung with but three or four strings.¹⁴

Since in this description the author is not focusing on the actual tuning of the instrument, it was fundamental to look for pieces of information regarding this topic in one of the most important eighteenth-century composition treatises of the Austro-German lands: Gründliche Anweisung zur Composition by Johann Georg Albrechtsberger (* Vienna 1736; † Vienna 1809). The writer of this manual was an Austrian composer, teacher, theorist and organist, and was considered one of the best pedagogues of its period. He was Beethoven’s teacher and considered by Haydn as “the best teacher of composition among all present day Viennese masters”.¹⁵ In the appendix of his composition manual (1790) he mentions the Viennese violone tuning (F A D F# A) as the more common and testifies the presence at the same time in this specific geographic area of a double bass tuned in FA D G and G A D G.¹⁶

The information about the most common national tunings obtained from the consultation of the selected period manuals is summarized in the table below.

<table>
<thead>
<tr>
<th>Austro-German Lands</th>
<th>France</th>
<th>Italy</th>
</tr>
</thead>
<tbody>
<tr>
<td>F A D F# A</td>
<td>E A D G</td>
<td>C G D A</td>
</tr>
<tr>
<td>F A D G</td>
<td>G D A</td>
<td>A D G</td>
</tr>
<tr>
<td>G A D G</td>
<td>F# B E A D</td>
<td>G D A E</td>
</tr>
</tbody>
</table>

¹⁶Johann Georg Albrechtsberger, Gründliche Anweisung zur Composition, (Leipzig: Johann Gottlob Immanuel Breitkopf, 1790), 421-422.
4. The Viennese Violone

The eighteenth-century Viennese violone is a completely different bass string instrument if compared to the modern double bass. The main constructional characteristics of these instruments had been introduced to Vienna at the end of the seventeenth century by South-German luthiers from Füssen. The instruments were usually pear shaped and famous for their elegant peg-box, equipped with inlaid ivory frets or frets of thick string at regular intervals in the first positions and provided with a flat back. Usually the back, ribs and neck were cut from one single kind of wood; generally maple, while the rest of the instrument was made of other varieties of wood such as spruce or fruitwood. The highly arched top table had no edges and was nailed to the inside blocks by means of wooden pegs built onto the ribs. The ribs were fitted into grooves cut into the back and the neck and their ends were attached together without corner blocks. The upper block, neck and peg box were originally cut into a single slab. The bass bar was carved directly from the belly slab, sometimes in its middle. Crossbars were pressed onto the back by means of blocks, which were glued vertically onto the ribs. Parchment strips were glued above and below the F-or flame-shaped sound holes so as to prevent cracks and fissures while preserving lightness. The tailpiece was scalloped and the lower end rounded into a half circle.

The average measurements were:

- Overall length (without endpin): 196 cm
- Body length: 112 cm
- Width of upper bouts: 48 cm
- Width of lower bouts: 63,5 cm
- Vibrating length of strings: 108 cm

Such instruments were considered to be smaller than the regular double basses used in the Italian orchestras at the time. The strings were made by gut and thicker than the modern ones had to be wound with silver or copper. The most interesting feature of this instrument, for

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17 This section is based on Brun, A History of the Double Bass, 102.
what concern my work, is its peculiar chord-oriented tunings also called triadic or Viennese third-fourth that has its origin in a scordatura of the tuning E A D G C, typical of the bass viols during the seventeenth century. The Viennese tuning is based on the D major chord and was designed to perform pieces in few established keys: A major, F-sharp major, B minor and F-sharp minor. It was also common praxis to tune up the violone a half step, increasing the number of tonal possibilities of the instrument. We can find proof of this habit analysing the original score of the Dittersdorf concerto no.1, in fact the orchestral material is written in Eb major, while the bass part is in the key of D major. The main advantages of the Viennese violone tuning were the possibility to play virtuosic passages and double stops without stress for the left hand, increasing the clarity and the quality of the sound thanks to the sympathetic resonance generated from the open strings, especially if the fingers lay on the fingerboard without shifting too much.

It is my opinion that the possibility to play only in a few keys and the difficulty to modulate on such an instrument was the main reason why the popularity of the Viennese violone tuning started to decrease at the end of the eighteenth century and was gradually replaced by the modern double bass tuning. In the same way Paul Brun believes that this classical tuning was incapable of meeting the changing aesthetics in the Romantic era, with different tonalities and more frequent and distant modulations. In addition, the author of A History of the Double Bass indicates how the Viennese violone was less effective than the bass tuned in forths in the orchestral context because the strings were placed too close to each other, thinner and with less tension than the ones used to tune the double bass in E A D G, generating problems and noises during “forte” accompaniments. According to Alfred Planyavsky, writer of The Baroque Double Bass Violone, the main reason for the abandonment of the Viennese tuning was the demand of a more powerful, deeper sound and a fuller tone that was more suitable to the large symphony orchestra. This specific necessity also caused an increase of the number of double bass players in the musical ensembles generating a loss of prestige of double bassist in the orchestral hierarchy.

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5. Mozart, Haydn and the Viennese Violine

The genesis and the development of the first Viennese symphonic tradition are closely connected to the European geopolitical landscape of the eighteenth century. The Austrian Monarchy and the Holy Roman Empire, usually ruled by a member of the Habsburg-Lorraine family, unified a vast portion of the European soil from a political and cultural point of view. During this century, the territories under the Austrian influence included modern Germany, Austria, Bohemia, modern Belgium and Luxembourg, a part of Poland, Slovenia, a part of Italy and the Greater Hungary. In this political set-up Vienna was the cultural capital both of the Empire and the Austrian Monarchy and as a consequence one of the most important cities for the spreading of new music.

The young talented Haydn (* 1732 Rohrau; † 1809 Wien) moved to Vienna, to be a new recruit of the choir school of St’ Stephen. At the age of seventeen he was dismissed from the choir school and started to freelance for almost eight years as composer, teacher and performer. In 1761, the Esterházy family employed Haydn firstly as vice-Kapellmeister and then as Kapellmeister (1766). The relationship between the composer and one of the richest aristocratic Hungarian families continued for the rest of his life. He also travelled to London on two different occasions thanks to the impresario and violinist Johann Peter Salomon, but after that, in 1795, he spent the rest of his life traveling between Vienna and in Eisenstadt.

Mozart’s life is characterized by several trips around Europe since he was a child, thanks to his prodigious musical ability. From 1770 to 1781, he worked mostly in Salzburg, focusing his career on the court activities. After that, unsatisfied with his employment and about his relationship with the Prince-Archbishop Hieronymus Colloredo, he decided to settle in Vienna as a freelance performer and composer. In 1787, Mozart was employed as chamber composer by the emperor Joseph II. During this period he also met Joseph Haydn in Vienna and the two composers became friends, and the leading figures of the Viennese musical life.

As this information about the two composers biographies testifies, Vienna and the cities influenced by the same musical tradition had a fundamental role in the two composers formation and composing practice. In this specific geographical area, the concertante literature for the Viennese violone grew to an unpredictable level. The most important Viennese violone performers were Joseph Kampfer (1735- after 1796), Friedrich Pischelberger (1741- 1813) and Johannes Sperger (1750- 1812). The last one was also a composer and after completing his studies in Vienna he debuted as composer and performer at the age of 18 in 1778. He was a leading double bass figure, and served in several important courts such as Pressburg, Fidisch and Ludwingslust, where he remained from 1789 until his death in 1812. He wrote eighteen concertos for double bass that were both innovatory and technically demanding and he

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26 Planyavsky, The Baroque Double Bass Violone, 128.
influenced two of the following leading figures of the double bass world: Domenico Dragonetti and Antonio Capuzzi.27

Through the stimulation of these virtuosi almost forty concertante compositions appeared in four decades. Franz Anton Hoffmeister, an important composer and publisher in the late eighteenth century, composed three double bass concertos. Carl Ditters von Dittersdorf, considered one of the leading figures of the Viennese music, wrote duets for violin and double bass, two double bass concertos, six string quintets and a concerto for viola and double bass.28

Haydn wrote a Concerto “per il Violone”, in 1763, that was in the possession of Prince Esterhazy and was presumably lost in a fire of the castle library; we have evidence of its existence thanks to his thematic catalogue.29 He also composed specific solo passages for the Viennese violone in the Symphony no.6 in D major “Le Matin”(1761), no. 7 in C major “Le Midi” (1761), no. 8 in G major “Le Soir”(1761), no. 31 in D major (1765) also called “Mit dem Hornsignal” and symphony no.45 in F# minor “Farewell” (1772). All these virtuosic moments included in his scores are based on chord progressions that can be much easily performed on a period tuned instrument. As a further evidence of how Haydn composed for this specific instrument; there is a bill, dated 1763, preserved in the Esterházy documents for supplying Schwend, the Violonista in the Hoefürstl Kammermusik with strings for his Violone. The supplied strings were A, F#, D and a lower A. The Esterhazy records also list several musicians employed from 1761 until the end of the century, such as Antonin Künnel and Carl Schiringer: as ‘violonista’. Haydn also used almost exclusively this nomenclature (the only exception is in the symphony no. 56 composed in 1774) in his own scores until the composition of his London symphonies.30 This specific nomenclature, official documents preserved in the Esterházy court and the scores composed by Haydn show us how the instrument played at this court was a Viennese violone, supposedly tuned in A D F# A. The absence of the lower F string suggests that probably the solos from the symphonies no. 7 and no. 8 were performed detuning the lowest violone string in G. In fact, in these specific orchestral parts, the bass player should be able to perform a low G that cannot be reached on a four string Viennese Violone tuned in the ordinary way. For this reason during the practical phase of my thesis I decided to perform on a five stringed bass instrument tuned in the standard Viennese tuning (F A D F# A).

Mozart composed, a few months before of his death (1791), an aria “Per questa bella mano”, for bass baritone, Violone and orchestra especially for Friedrich Pischelberger, one of the most respected players of this instrument.31 This specific score, almost impossible to perform on a modern tuned double bass, testifies how the Viennese tuning was still commonly adopted in the Austro-Germanic area until the turn of the century. For the same reason it is important to observe how the last exponent of the Viennese violone school of virtuosity, Johan Hindle (1792-1862), gave double bass recitals in Vienna on a yearly basis from 1810 to 1830. After that he

gradually changed from a five strings bass tuning to a four string bass which was tuned in F A D G.\textsuperscript{32}

6. Modern Tuning and Viennese double Bass Concertos

Compulsory of all the first rounds of the current double bass auditions is to perform one of the most popular Classical double bass concertos: Karl Ditters von Dittersdorf \textit{Double Bass Concerto no. 2 in E major} or the Johann Baptist Vanhal \textit{Double Bass Concerto in D major}. These two concertos are idiomatically written for the Viennese violone. For this reason the publishers had to modify the scores taking under consideration the possibilities of the modern way of tuning the double bass.

In order to understand how the replacement of the Viennese tuning generated a loss in performing music belonging to the eighteenth century we can compare the Urtext score of the Dittersdorf concerto no. 2 and the revised version commonly performed in an audition context.

\begin{quote}
\textit{Music ex. 1. Dittersdorf: Double Bass Concerto no.2 in E major (Urtext) - 1st movement from bar 64 to bar 88 - solo part bass.}\textsuperscript{33}
\end{quote}

\begin{figure}
\centering
\includegraphics[width=\textwidth]{music_ex_1}
\end{figure}

\textsuperscript{32} Planyavsky, \textit{The Baroque Double Bass Violone}, 129.

The comparison between the two scores highlights how the fast string cross figures, from bar 7 to bar 82, are cut in the rearranged score, reducing the musical interest of the concerto. This is only an example of all the modifications made in this concerto in order to allow the modern player to approach this score. The abandonment of the Viennese tuning not only generated the necessity to modify the Viennese classical repertoire for double bass but also create a gradual modification in how these scores should be performed and a loss in the quality of sound. In fact, the use of the original chord oriented tuning generates a more round, deeper and ringing sound and at the same time reduces the number of shifts and allows players to perform with a more relaxed left hand.

At this stage of my thesis, it was essential to make a comparison between the Viennese tuning and the modern one. For this reason, I tuned a five string bass in the Viennese way using orchestral and solo strings. For the lower strings I used a regular orchestral set while for the first string I decide to use an A solo string. In this way I had the chance to combine a period feature (the Viennese tuning) with the modern double bass technology and technique performing on a modern five strings double bass, with a modern bow and steel strings. The best example to understand the main differences between performing on the modern tuning and on the Viennese one is the opening of the Dittersdorf double bass concerto from bar 20 to 26 (see music example no. 3).

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34 Karl Ditters von Dittersdorf, Double Bass Concerto "E major" (Mainz: B. Schott’s Söhne, 1938).
Music ex. 3. Dittersdorf: Double Bass Concerto no.2 in E major (revised) - 1st movement from bar 1 to 28-
solo bass part.  

With the modern tuning (E A D G), it is necessary to play the arpeggio D F# A (bar number 1) in the upper octave in thumb position, in order to obtain a long musical line avoiding shifting a challenging and not comfortable position for the left hand but the only possible way to perform the fast pattern of the bar number three. On the contrary, adopting the idiomatical tuning (A D F# A) the first three notes of the opening theme are performed on open strings, generating a majestic effect, while the arpeggio in the upper octave and the resultant musical figure (bar number 3) is performed taking advantage of the natural harmonics placed on the upper octave generating a ringing, rich sound.

Two clear examples of how the combination between the modern double bass technique and the Viennese tuning can improve the quality of sound and change the approach to the double bass are the recordings of this concerto by Rinat Ibragimov, former principal of the London Symphony Orchestra and Edicion Ruiz, tutti player in Berliner Philharmoniker.

35 Karl Ditters von Dittersdorf, Double Bass Concerto "E major" (Mainz: B. Schott’s Söhne, 1938).
36 Video 1. Elia Scarponi performing Dittersdorf - Double Bass Concerto no.2 in E major (revised) – 1st movement from bar 21 to 28- solo bass part (Modern tuning).
37 Video 2. Elia Scarponi performing Dittersdorf - Double Bass Concerto no.2 in E major (revised) – 1st movement from bar 21 to 28- solo bass part (Viennese tuning).
7. Viennese Tuning in the Orchestral Context

During the last few decades, the Viennese tuning was reintroduced in the orchestral context only on period instruments with gut strings and period bows. For instance Lars Baunkilde performed on a period instrument tuned in Viennese in several recordings with Concerto Copenhagen.40

The analysis of the opening of the Dittersdorf double bass concerto perfectly represents how the Viennese tuning offers very different possibilities if combined to the modern double bass technology. It is less stressful for the left hand in performing that type of musical patterns, and the horizontally oriented playing is advantageous in playing chord patterns common in the Viennese eighteenth-century music. It is my intention to reintroduce these features in the modern orchestral experience.

The selected bars from the first movement of the symphony no. 20, K. 133 in D major (1772), composed by Mozart in Salzburg, are a perfect example of idiomatical writing for the Viennese violone.

Music ex. 4. W.A. Mozart: Symphony no. 20-1st movement from bar 15 to 25- cello/bass part.

In fact, while using the modern tuning, the A major arpeggio in the upper register (second half of the 1st bar) should be performed on the first two strings shifting or pivoting.41 Adopting the Viennese tuning the same arpeggio could be performed using only one finger and pressing

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40 Ronald Brautigam plays Joseph Haydn piano concertos: Concerto Copenhagen conducted by Lars Ulrik Mortensen, 2005, BIS-CD-1318, compact disk.

41 Johann Ernst Hartmann complete symphonies: Concerto Copenhagen conducted by Lars Ulrik Mortensen, 2004, CPO 777 060-2, compact disk. I received this information directly from Lars Baunkilde.

41 Video 3. Elia Scarponi performing W.A. Mozart- Symphony no. 20-1st movement from bar 15 to 25- cello/bass part (Modern tuning).
simultaneously the three first strings creating a ringing effect with less tension in the left hand. The D major pattern (3rd bar) can be played using almost only open strings, showing a completely different articulation and a bigger continuity in sound. It is also interesting to compare the approach in playing the progression that starts in the fifth bar; on the modern tuned bass it is more vertical while in the Viennese tuned bass it is horizontally oriented and almost without any shifting.

In the same way the analysis of the opening of the symphony no. 23 K. 181/162b in D major (1773) shows us how the Viennese tuning allows the bass player to perform arpeggios on the three first strings with a more majestic and ringing sound, generating almost a “bordone” effect, that increases the resonance of the instrument.

Music ex. 5. W.A. Mozart: Symphony no. 23- 1st movement from bar 1 to 21- cello /bass part.

<table>
<thead>
<tr>
<th>Music ex. 5. W.A. Mozart: Symphony no. 23- 1st movement from bar 1 to 21- cello /bass part.</th>
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\[\text{Video 4. Elia Scarponi performing W.A. Mozart- Symphony no. 20- 1st movement from bar 15 to 25- cello/bass part (Viennese tuning).}

\[\text{Video 5. Elia Scarponi performing W.A. Mozart- Symphony no. 23- 1st movement from bar 1 to 21- cello /bass part (Modern tuning).}

\[\text{Video 6. Elia Scarponi performing W.A. Mozart- Symphony no. 23- 1st movement from bar 1 to 21- cello /bass part (Viennese tuning).} \]
Mozart composed the Symphony no. 35, K. 385 in D major in July 1782 when Siegmund Haffner, a friend of his from Salzburg, was ennobled.\textsuperscript{44} He completed this score in two weeks living in Vienna. During the same “Viennese” period he wrote the symphonies no. 36, K. 425 in C (Linz), no. 38 in D, K. 504 (Prague) no.39 in E flat, K.543, no. 40 in G minor, K. 550 and no. 41, K. 551 in C, (Jupiter). After the premiere in Salzburg, Mozart had the chance to perform this symphony in Vienna in the spring of 1783; for this occasion he changed the orchestration and the structure of the score. During the last years of the eighteenth century this symphony became one of the most performed pieces by Mozart and was also published by Artaria in 1785.

I selected two excerpts from this work; the opening of the first movement and the fourth movement from bar 134 to bar 181 (full scores in the appendix). In order to allow other bass players to create their own opinion about this tuning on a modern double bass setup I rewrote the excerpts in a transcribed version with required fingerings. In these scores, which can be considered a kind of tablature, the Roman numerals indicate the string and the note the finger position.

In order to make a clear comparison between the modern tuning and the Viennese one, I decided to analyse and record separately some specific bars from these scores. I choose the bars that are in my opinion more interesting from a technical point of view especially for the left hand. In the next paragraphs, I will describe the main differences that came to light after having performed with the two different tunings.

The opening of the excerpts, adopting the modern tuning (music example 7), results to be more musical and with a stronger direction starting on the third string, after that in order to maintain the right musical line, the D at the end of the second bar should be performed with the second finger shifting the position half a tone back.\textsuperscript{45} This passage is not challenging from a technical point of view but illustrates how on the modern bass the left hand is subjected to additional stress. In the first five bars we are changing position 3 or 4 times.

\begin{figure}
\centering
\includegraphics[width=0.8\textwidth]{music_example_7}
\caption{Music ex. 7. W.A. Mozart: Symphony no. 35- 1\textsuperscript{st} movement from bar 13 to 17- bass/cello part.}
\end{figure}

\textsuperscript{44} This section is based on A. Peter Brown, \textit{The Symphonic Repertoire. The First Golden Age of the Viennese Symphony: Haydn, Mozart, Beethoven, and Schubert} (Bloomington: Indiana University Press, 2002), 397-398.

\textsuperscript{45} Video 7. Elia Scarponi performing W.A. Mozart- symphony no. 35- 1\textsuperscript{st} movement from bar 13 to 17- bass/cello part (Modern tuning).
On the contrary, adopting the Viennese tuning, see music example no. 8, the first D is performed on an open string generating a wider sound and the whole passage can be performed with only one change of position.\(^{46}\)

*Music ex. 8. W.A. Mozart: symphony no. 35 (Transcribed edition)- 1st movement from bar 13 to 17- bass part.*

The scales from bar number 19 to 23, see music example no. 9, are developed in a vertical way on a modern double bass tuning.\(^{47}\) To perform this scale the left hand is supposed to shift at least 3 times and the jump from the lowest F# to his upper octave could be challenging for the intonation.

*Music ex. 9. W.A. Mozart: Symphony no. 35- 1st movement from bar 19 to 23- bass/cello part.*

On the contrary thanks to the period tuning, the scales can be performed without any shift and in a horizontal way taking advantages of the presence of five strings or performing the last note on a open string generating a more ringing sound.\(^{48}\)

*Music ex. 10. W.A. Mozart: Symphony no. 35(Transcribed edition)- 1st movement from bar 19 to 23- bass part.*

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\(^{46}\) Video 8. Elia Scarponi performing *W.A. Mozart- symphony no. 35- 1st movement from bar 13 to 17- bass/cello part* (Viennese tuning).

\(^{47}\) Video 9. Elia Scarponi performing *W.A. Mozart- symphony no. 35- 1st movement from bar 19 to 23- bass/cello part* (Modern tuning).

\(^{48}\) Video 10. Elia Scarponi performing *W.A. Mozart- symphony no. 35- 1st movement from bar 19 to 23- bass/cello part* (Viennese tuning).
The most challenging passage for a modern double bass player is from bar 34 to 41 (see music example 11).

Music ex. 11. W.A. Mozart: Symphony no. 35- 1st movement from bar 34 to 41 - bass/cello part.

![Music example 11](image)

Adopting the modern tuning, in the first bar there is the necessity to shift back from A to E on the same string keeping a fast legato effect and clarity in sound. This problem is not present in a bass tuned in Viennese tuning; the entire bar can then be performed in a low position on the bass without any shift (see music example 12).

Music ex. 12. W.A. Mozart: Symphony no. 35(Transcribed edition)- 1st movement from bar 34 to 41- bass part.

![Music example 12](image)

The second selected excerpt is the fourth movement from bar 134 to 181. I have decided to study this specific part because it is usually required in all the auditions for major orchestras, and present some peculiar difficulties for the left hand and the bow techniques. How is it showed in the video no. 13, on a modern double bass the beginning of this excerpt, see music example

49 Video 11. Elia Scarponi performing W.A. Mozart- symphony no. 35- 1st movement from bar 34 to 41- bass/cello part (Modern tuning).

50 Video 12. Elia Scarponi performing W.A. Mozart- symphony no. 35- 1st movement from bar 34 to 41- bass/cello part (Viennese tuning).
no. 14, is uncomfortable because of the necessity to shift continuously and use extended fingerings in order to keep a long musical line in piano.\textsuperscript{51}


Thanks to the presence of the string tuned in F#, see music example no. 15, the Viennese tuning reduces the number of shifts; all the passage is then less stressful for the left hand.\textsuperscript{52}

*Music ex. 15. W.A. Mozart: Symphony no. 35 (Transcribed edition)- 4th movement from bar 134 to 140-

bass part."

The most tiring part for the left hand is the passage from bar 158 to 168, see music example no. 16. In this excerpt the left and has to shift continuously. For the bow technique the jumps from E (3rd string) to C# (1st string) in bar 159 and 161 and the jump from B (4th string) to G# (2nd string) in bar 165 and 167 are not easy to perform especially because both the notes need to be pressed with the 4th finger on the left hand.\textsuperscript{53}

\textsuperscript{51} Video 13. Elia Scarponi performing W.A. Mozart- symphony no. 35- 4th movement from bar 134 to 140- bass/cello part (Modern tuning).

\textsuperscript{52} Video 14. Elia Scarponi performing W.A. Mozart- symphony no. 35- 4th movement from bar 134 to 140- bass/cello part (Viennese tuning).

\textsuperscript{53} Video 15. Elia Scarponi performing W.A. Mozart- symphony no. 35- 4th movement from bar 158 to 168- bass/cello part (Modern tuning).
Music ex. 16. W.A. Mozart: Symphony no. 35 - 4th movement from bar 158 to 168 - bass/cello part.

With the Viennese tuning, see music example 17, all the passage is almost without any shifting and in the lowest position on the fingerboard. The excerpt is equally challenging for the bow technique with both tunings.\textsuperscript{54}


From the analysis of this excerpts, see the full score in the appendix, emerges that the most uncomfortable part for the Viennese bass player to perform starts at the bar number 173. Because of this tuning is not easy to perform all the octave intervals, it is necessary to use

\textsuperscript{54} Video 16. Elia Scarponi performing W.A. Mozart- Symphony no. 35- 4th movement from bar 158 to 168- bass/cello part (Viennese tuning).
extended fingerings or to cross two strings to reach the lower octave. Bar number 174 results to be the most challenging to perform in a fast tempo and with the right articulation.

9. F.J. Haydn Symphonies No. 6 – 7 – 8

Haydn was formally hired as vice-Kapellmeister by Prince Anton Esterhazy on the first of May of 1761. This date marks the beginning of a collaboration of three decades with this prestigious Hungarian family. During this year Haydn composed the three symphonies selected for my thesis, symphony no. 6 (“le Matin”), symphony no. 7 (“le Midi”), symphony no. 8 (“le Soir”). These three symphonies, that belong to a trilogy that describes the passage of time, are characterized from specific features, the most important for this project is the presence of a bass solo in all the trios in unusual sonorities, an attitude that must have astonished the Esterhazy court. It is interesting to observe how these symphonies seem to be composed to exalt the court musicians abilities, each instrumentalist has a fundamental concertante e solo moment characterized by a virtuous attitude. This solistic attitude is perfectly represented in the solo from the symphony no. 6, see music example 18 and 19.

Music ex. 18. F.J. Haydn: Symphony No.6- 3rd movement –from bar 35 to 64- bass part. 56

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The first main difference, in performing the solo form the Symphony no.6, between the two approaches is the use of the A open string on the Viennese double bass. The presence of this string reduces the shifts, influences the bowings and especially changes the kind of sound produced to be more soloistic, louder and exposed.57 In the bar number 43, performing with the modern tuning it is necessary in order to perform the trill to be in thumb position on the E on the 1st string. For this reason, the interval from the open D string to the F is challenging for the intonation. The progression from bar 46 must be performed only on the 1st string with a vertical approach and some uncomfortable shifts that make it more challenging to follow the musical line. The last disadvantage of performing on a modern double bass is the presence of the octave interval in the bar number 50. This interval must be performed using the open G string and the thumb position on the upper G.58 Adopting the Viennese tuning, the number of shifts and the use of the thumb position decrease. The progression that starts in bar number 46 can be performed on two strings and in a horizontal way. The most challenging aspect of performing with the period tuning, see music example no. 19, is to play the octaves present in the score. For instance, in the bar number 37 the octave interval must be performed on the first and fourth string, this could be challenging for the bow.

Music ex. 19. F.J. Haydn: Symphony No.6- 3rd movement (Transcribed edition)- from bar 35 to 64- bass part.

57 Video 18. Elia Scarponi performing F.J. Haydn – Symphony No.6- 3rd movement –from bar 35 to 64- bass part (Viennese tuning).
58 Video 17. Elia Scarponi performing F.J. Haydn – Symphony No.6- 3rd movement –from bar 35 to 64- bass part (Modern tuning).
There are two main differences in performing the solo from the Symphony no.7 adopting the two different tunings (see music example no. 20 and 21). First of all the different opening position, in fact while on the modern double bass it is necessary to perform the opening in thumb position, on a period tuned bass it is possible to start in a lower position. Second; the chords from bar 41 can be performed thanks to the Viennese tuning without any shift, pressing simultaneously three strings. On the contrary on the modern double bass, these chords have to be performed on two strings using the open G string and shifting, generating a difference in colour between the first note of the triplet and the other two. In performing this solo, the Viennese tuning decreases the number of shifts but is more challenging for the bowing technique.

Music ex. 20. F.J. Haydn: Symphony No.7 - 3rd movement - from bar 31 to 54 - bass part.

60 Video 20. Elia Scarponi performing F.J. Haydn – Symphony No.7 - 3rd movement –from bar 31 to 54- bass part (Viennese tuning).
The solo from the Symphony no. 8, see music example no. 22 and 23, is in my opinion the most idiomatically written for the Viennese tuning. As in the previous excerpt the opening position is drastically different. On the modern bass the first three bars should be played in thumb position in order to maintain a horizontal way of performing. On the Viennese tuned bass, the first nine bars can be performed in a lower position with only one shift in the fourth bar.

63 Video 22. Elia Scarponi performing F.J. Haydn – Symphony No.8- 3rd movement –from bar 37 to 82- bass part (Viennese tuning).
The scale that starts from the lower D (bar no.47) has a vertical approach in both tunings, in the modern one starts from the open D string and reaches the B in thumb position on the first string, while on the Viennese tuning the number of shifts are reduced. On the modern bass the bar number 63 and 64 should be played in thumb position to perform a nice trill and the note progression that precedes these bars is performed shifting on the first string. On the contrary on the Viennese bass all the bars from 60 to 64 can be performed on two strings with only one shift. In all this excerpts the Viennese tunings reduces the number of shifts and allows the player to perform keeping the fingers on the fingerboard increasing the resonance of the instrument. On the modern tuning there are two different possibilities to perform the progression from bar 71 to 73. The first one is vertically oriented while the second one is more horizontal but the octave interval in bars 73 and 74 results to be more challenging.

Music ex. 23. F.J. Haydn: Symphony No.8 (Transcribed edition)- 3rd movement- from bar 37 to 82- bass part.
This symphony in D major, also called “Hornsignal”, was composed in 1765.\textsuperscript{65} The name derives from the preponderant role of the four horns that were not seated as a quartet but probably divided in two different groups in order to obtain a stereophonic effect. There are different theories about the origin of the horn music material; according to some commentators it could be a thematic quotation from hunting calls from an eastern European tradition, according to others from a military fanfare. Listening to the composition, it is immediately clear how crucial the role of the horns is, in fact the symphony opens immediately with a fanfare that will also close the first movement and will return at the end of the finale creating a thematic cycle based on the horn calls. Analysing the score it is clear how this symphony could be easily connected to the Symphonies No. 6 - 7 - 8. All these scores are characterized by a rich concertante style, which has as purpose to exalt the soloistic abilities of the Esterhazy orchestra.

This solo, see music example no. 24, is probably the most challenging to perform and is commonly requested in the audition process. There are different approaches to this passage, it could be performed in a vertical way starting from the second string or with a harmonic on the third string in thumb position in a more horizontally way. I have decided to start on the second string in the first bar and play the second theme from the thumb position in order to have a timbral difference and to emulate the Viennese approach.\textsuperscript{66} In the same way as in the previous excerpts, adopting the period tuning the number of shifts decreases. For this reason the opening becomes more ringing and musical and the sextuplet in bar 118 becomes very comfortable to perform.\textsuperscript{67} The opening after the repeat, see music example no. 25 results to be very peculiar thanks to the two strings tuned in A, in fact it is possible to perform the two A’s as two harmonics in thumb position creating a wider and more ringing sound that is perfectly in line with the musical direction. In this specific excerpt the use of the harmonics create a different and in my opinion more interesting musical experience.

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\textsuperscript{66} Video 23. Elia Scarponi performing F.J. Haydn – Symphony No.31 – 4th movement – from bar 112 to 128- bass part (Modern tuning).

\textsuperscript{67} Video 24. Elia Scarponi performing F.J. Haydn – Symphony No.31 – 4th movement – from bar 112 to 128- bass part (Viennese tuning).
Music ex. 24. F.J. Haydn: Symphony No.31 - 4th movement - from bar 112 to 128 - bass part.\(^{68}\)

Music ex. 25. F.J. Haydn: Symphony no.31 (Transcribed edition) - 4th movement - from bar 112 to 128 - bass part.

11. Conclusions

The standardization of the tuning system of the double bass is a long process which started at the end of the sixteenth century and concluded only in the beginning of the twentieth century.

This essential fact gives us information about how the performing praxis on this instrument changed during the last few centuries. A comparison between period manuals and double bass history books, illustrated how the eighteenth century was decisive for this evolution process, which is strictly connected to the birth of the first Viennese symphonic tradition. The consultation of these primary and secondary sources highlighted that the most common bass string instrument of the Austro-German lands was the Viennese violone, a five strings bass tuned in F A D F# A. This instrument is closely related to the Viennese symphonic tradition and its main representatives. We can find evidence about this relationship in several concertante Viennese scores and from the analysis of the Haydn and Mozart catalogues.

Thanks to the experience gained from performing on Viennese tuning I had the chance to understand how the awareness of the fact that the Viennese classical repertoire was performed on a different instrument could enrich my musical experience as a modern double bass player. I also realized how the Viennese tuning could take advantages from the modern double bass technology creating a new sound of the bass section and forming a new performing praxis in playing this specific repertoire. In fact, the practical phase of my thesis showed me that while the modern tuning is the most effective in playing romantic repertoire, the Viennese one enables a modern double bass player to perform music belonging to the first Viennese symphonic repertoire with more facility and clarity reducing the stress of the left hand, with a completely new approach in sound production and with a more respectful approach to the score.

From a practical point of view the way of performing with the Viennese tuning is more horizontally oriented, based on double stops, chord and natural harmonics reducing generally the number of shifts. As a consequence the bow technique is different from the modern one and could be considered challenging especially in performing arpeggios on three different strings and for the string crossing in playing octave intervals. It is my belief that this approach to the instrument should be part of our formation process in order to have a more deep knowledge of this repertoire and a new both mental and physical attitude in performing.

This thesis illustrated how the recovery of the Viennese tunings combined with the modern double bass technique could create a new sound of the bass section. In order to reach the best result it will be necessary for future research and development to find an appropriate double bass setup that will allow bass players to switch between different tunings without generating structural issues. It will be indispensable to create a specific set using different brands and kinds of strings (both soloist and orchestral, guts and synthetics) as well as specific tools, such as the FreeRange Xtender and the adjustable bridge. This latter allows adapting the action of the instrument, solving the problem of string tension. The FreeRange Xtender (see image below) is a drop tuner machine that must be installed in the tailpiece that enables a quick and less stressful changing of tuning. After have reached a satisfying double bass setup, I would like to perform this specific repertoire firstly with a bass section and after with a whole orchestra in order to understand the effectiveness of the “New Old” sound of the double bass.
The future implications of this work are not only about the double bass technology. In the future it would be interesting to investigate not only the Viennese tuning but also the other tunings systems of the 18th century and analyse repertoires from other geographical areas. After that it will be possible, using critical edition scores, to create a method that will gradually reintroduce the use of different tuning in the modern double bass routine and formation process.

At the end, it is my belief that the ability to perform in different tunings will be an important resource for composer that will have a new instrument to explore.

Illustration no.2. 69

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Appendix

W. A. Mozart: Symphony no. 35 - 1st movement from bar 13 to 48 - bass/cello part. 70

Allegro con spirito

\[\text{[Musical notation image]}\]

W.A Mozart: Symphony no. 35 - 1st movement from bar 13 to 48 - bass/cello part. Transcribed version to be played on a Viennese tuned double bass.

Allegro con spirito
W.A Mozart: Symphony no. 35 - 4th movement from bar 134 to 181 - bass/cello part.  

W. A. Mozart: Symphony no. 35 - 4th movement from bar 134 to 181 - bass/cello part. Transcribed version to be played on a Viennese tuned double bass.
Bibliography


