The Early Violone

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Research question: What were the earliest violones, how can they be defined and how were they used until 1700?

Summary of Results: After looking at evidence of the emergence of the first low bowed string instruments in Europe, this paper follows the types and use of the main instruments which could be termed violones until 1700, mainly centered in Italy. Through the study of treatises referring to the violone, scores using the term, iconography, secondary sources and the reconstruction of a copy of a violone from 1590, it follows the development of the violone until it becomes an octave-doubling instrument.

Biography:

Margaret Urquhart studied double bass and violone with Anthony Woodrow and viola da gamba with Anneke Pols at the Royal Conservatory in The Hague. She then became a member of many notable baroque ensembles including La Petite Bande conducted by Sigiswald Kuijken, the Amsterdam Baroque Orchestra (Ton Koopman), the Leonhardt Consort (Gustav Leonhardt) and Collegium Vocale Gent (Philippe Herreweghe).

In 1986 she joined Frans Bruggen's Orchestra of the Eighteenth Century of which she is the first bassist, and has been active as a chamber music performer taking part in many radio, television and cd recordings. She has taught baroque double bass and violone at The Hague Conservatory since 1989 and at the Amsterdam Conservatory since 1999. In addition to her two teaching posts she also gives master classes internationally and coaches at the European Baroque Orchestra training courses.

She performs and teaches on the 16 foot double bass and violone, the Viennese double bass and also the 8 foot violone in various tunings.

Table of Contents

Introduction: An investigation into the early history of the violone from 1490-1700.

The term 'violone' is used today as a blanket term for an 8' or 16' viol or violin type instrument with the number of strings varying from 3 to 6. It can be strung with many different tunings. The bow can be over or underhand. The sounding string length can vary from 85- 124 cm. Many different names were used in the Renaissance, Baroque and Classical periods to refer to the instrument we now call the violone. The name violone can pertain to the viol family as a generic term, or to early types of cello.

I have been playing the violone professionally for more than 30 years. I have had the good fortune to work with some of the most influential early music specialists: Gustav Leonhardt, Frans Brüggen, Sigiswald Kuijken, Ton Koopman and Philippe Herreweghe. These specialists encouraged an attitude of constantly reexamining the way we perform music, of looking at primary sources and being prepared to take risks with relearning our instruments if necessary. My colleagues were generous in putting up with experiments when I was initially trying out new instruments, tunings, bows and playing techniques. Without that leeway, renewing our performance practices would have been impossible. Balanced with this is the sheer practicality of 'coming up with the goods'. When we are onstage performing a concert or recording, we still need a certain technical level and, to put it simply, to please the audience. There are basic considerations of finding, restoring and maintaining instruments, which in the case of the violone is extremely time-consuming and costly. In order to perform the range of music I do, in a 'historically informed' manner, as I understand it at present, I would need even more instruments and tunings than I already use. The violones, like any instrument, need constant playing and maintenance to keep them working well, and there becomes a limit to how many one can look after.

In addition to the primary sources, there is a substantial amount of secondary source information available. Some of this material has been written by double-bass and violone players. Alfred Planyavsky and Francis Baines, for example, have shared the results of their research. Rereading this information in the light of research by musicologists can be confusing. The way a performer comes to a conclusion is of necessity often different from the way a musicologist would view the same material. This leads to new traditions being set up, which may have little to do with the original material.

Audiences, likewise, have grown to expect certain formats and sounds from early music ensembles. Recordings of Medieval and Renaissance music made in the 1970s and 80s using an array of exotic instruments were impressive and exciting. Listeners eagerly tuned into David Munrow's 'Pied Piper' BBC 3 programs, which helped to generate an enthusiasm for Medieval and Renaissance music performance. This opened up a new sound world, which inspired new audiences to listen to this music in the concert hall. This very enthusiasm, however, has set up expectations in performances of early music. As Taruskin puts it, the early music movement is a modern tradition.

J. S. Bach is considered to be a central figure in classical music. After many years of performing his music, I still have unanswered questions concerning how Bach used his bowed bass instruments. The changing performance practice of his music over the last quarter of a century has brought up various issues concerning the

violone, for instance, how was the 16' and 8' used and when? Conductors are incorporating these issues into their concerts and recordings, while the opinions amongst players and musicologists are divided.

I initially began my research into the use of the 8' and 16' violone in J. S. Bach's music and was advised first to look carefully at the early history of the violone. Looking at the bowed bass instruments from 1490 to 1700, one finds a wealth of variety in instruments, tunings and their use. Having knowledge of the origins of the violone enables one to have a better appreciation of its function in the music of later periods.

Present day authors of the stringed bass history tend to be tempted to look for the 'origins' of low bowed bass instruments and try to connect them to the double basses now used. It's very possible no such link exists, and this method of looking at the history of bowed stringed instruments has lead to the idea that the history of such instruments is complicated. Some authors are keen to show that, for instance, the present day double bass has evolved directly from the violin family of the late 16th century, but we will see that the instruments from that period which are now converted and used as double basses actually originally had viol characteristics. Conversely, many viola da gambas had what we now consider to be violin outlines, but the actual shape of an instrument does not always convey its musical function. Another perceived complication arises when one attempts to divide low stringed instruments into either 8' or 16' categories. These terms as a way of defining bowed basses are relatively recent and not always helpful. Renaissance and Baroque large bowed bass instruments, with more than four strings, could often play in either register, according to the music played. Since the written music did not necessarily notate the octave required, one has to look further than the notated notes to perform the music as it might first have been done. Just as keyboard and theorbo players, for example, could choose to use a doubled octave for effect when desired, the violone players could do the same. Simply looking at the relative size of the low bowed basses can also put us on the wrong track.

I have some years of practical experience as a string maker and realize that we still have much to discover about historical bass strings, despite the many excellent string makers working now and the quality strings they produce. There are differing opinions about what type of bass strings are appropriate. When I first began learning the double bass, the instruments I used were still set up with gut strings, yet these were presented as 'modern' instruments. They had three high twist unwound gut strings and one fourth gut string wound with a thin copper/silver alloy. Through the 1950s many upper string players also still used unwound gut strings on the higher strings. That the basses I first encountered twenty years later still used the all-gut 'Romantic' set-up was a stroke of luck. During the course of the 'Early Music movement' since then, 'historically informed' double-bass and violone players have moved from using two wound lower strings back to the 'Romantic' set-up' I was first confronted with of three unwound strings and the lowest with winding. The type of strings affect playing techniques, but the materials used and consequently their density can also have an effect on the pitch played.

An observation of these instruments combining the academic knowledge we have at present, and practical knowledge, could reveal different conclusions from those arrived at from the vantage point of the present day bowed string bass. A central, practical part of my search for what could be termed a 'historical violone' was

the commission of an instrument built in the style of an original six stringed Italian violone from 1590. This was based on measurements taken from an existing instrument that has been ‘modernized’ over its long history, information from other makers, comparison with similar basses in museums and information from written historical sources. String makers and bass playing colleagues provided feedback during the process of finding the optimal tuning. The result has been a little surprising and I will give more background on this in the second chapter.

Chapter 1 "What say you James Soundpost?" – Early viols, violins and violones 1490-1580.

During the Medieval and early Renaissance periods, music making was mainly vocal. Bowed stringed instruments were used but they cannot necessarily be seen to have any direct links either to early baroque bowed basses or to our modern stringed instruments. Music making changed enormously during this period, and consequently so did the instruments. The Catholic Church was dominant in Europe during the Medieval period, roughly seen to be 500-1400 AD, consequently much of the music was sacred. The early sung sacred music, Gregorian chant, stemmed from Jewish and Byzantine chant and was monophonic. It did not need instruments. Secular music, sung by *troubadours* and *trouveres* was also monophonic. The melodies were often accompanied by improvisation on a single bowed or plucked instrument, which from pictures appear to be treble or tenor sized rebecs or vielles. These matched the voice range of the itinerant musicians and could be carried easily.

Consort principle

Ars Nova, the polyphonic vocal music of the 14th century, not only set the later pathway for the polyphonic choral writing of the Renaissance, but also influenced Medieval secular music. The emergence of polyphonic music marks the beginning of sets of different sized instruments, the 'consort principle'. The new families of instruments covered the same range as the vocal range, the first to be made in a set of different sizes being the shawms in the middle of the 14th century. The flutes followed early in the 15th century and the stringed instruments were probably the last group to shed 'drone' strings and develop as a set of different sizes. The flat bridges of vielles and rebecs could not have allowed individual strings to be played. Although arched bridges are pictured earlier than the 15th century, these were probably simply to allow the musicians to play varied chords.

We do not have evidence to prove that any large bowed bass instruments were used in Medieval and early Renaissance music. Early Renaissance masses, for example, were probably originally performed 'a cappella', in other words without instruments[1]. It is difficult to pinpoint when low bowed bass string instruments began to appear.

The theoretician and composer Johannes Tinctoris (1435-1511) wrote one of the earliest treatises on musical instruments[2], while he was in Naples. He had begun his career in northern Europe, so would have had a perspective on both areas, the Low Countries and the Aragonese royal court tradition in Naples. Even though he was known himself to have had an exceptionally low vocal range, he makes no reference to low bowed string instruments. He does however mention a bowed instrument, the 'viola', playing in the tenor range. We suppose that the bass vocal line did not need to be doubled at the octave, but since the inner and upper voices were sometimes doubled, one would imagine that the bass voice could also have been accompanied at the same pitch.

[1] For further discussion of this topic see: Christopher Page, "The English a capella heresy," in *Companion to Medieval and Renaissance Music,* (University of California Press, 1992).
[2] www.earlymusictheory.org, click on 'The complete Theoretical works of Johannes Tinctoris: A New Digital Edition.'

The first appearance of large stringed bowed instruments

At the end of the 15th century, we at last have the first written evidence of large bowed instruments. In 1493, a pair of Spaniards in Rome playing vihuelas almost as large as people, are noted.[3] These large vihuelas were probably tuned an octave below the normal sized vihuela da arco.[4] The 'vihuela de arco' was a bowed, long necked instrument played in a similar position to the later viola da gamba. It is thought to have derived from the 'vihuela da mano', a plucked guitar-like instrument.[5] To ascertain the sizes of the large vihuela da arcos, one can judge the relative sizes from iconography. Two vihuelas of normal proportions depicted on an altarpiece by Lorenzo Costa, painted in 1497, San Giovanni in Monte, Bologna [6], are estimated to have a string length of 50 and 70 cm respectively. If 50 cm were thought to be the normal length, and 70 cm the intermediate size, this would imply that the large vihuelas had a string length of around 100 cm. [7]

The court of Isabella d'Este

The date 1493 for the first written account of large vihuelas is interesting. Polyphonic improvisation on pairs of lutes or vielles had developed by the mid 15th century,[8] continuing a practice initiated by the *haut* wind bands. This style developed into the fashion in Italy at the end of the 15th century for instrumental music composed in three or four parts, copied from textless Franco-Netherlandish chansons.[9] Peter Holman notes that the chansons would have been performed north of the Alps 'a capella', but that the need in Italy was for music for instrumental ensembles. He also points out that the great patron, Isabella d'Este in Mantua called for stringed, not wind, instruments at her home. Wind instruments were thought to be indecorous for courtly women. Isabella learnt and performed on the viol and ordered a consort of viols in 1495 while visiting Brescia. Meanwhile, in the court of her hometown of Ferrara, the professional musician Agostino della Viola arrived in 1497 to join Andrea and Zampaulo della Viola who were already employed there, and the consort was completed by the arrival of Jacomo della Viola in 1499. In 1499, Alfonso d'Este ordered five 'viole da archo' in Venice and played himself in 'una musica de sei viole' during the celebrations in 1502 of his marriage to Lucrezia Borgia, who became a rival to Isabella. The fact that these instruments were played by the nobility is the turning point when consort instruments were no longer only the realm of professional musicians.

1492 was notably also the year in which Rodrigo Borgia became Pope. He brought many Catalan compatriots to Rome, which could account for the two large vihuelas played by Spaniards in Rome in 1493. Holman suggests that Sephardic Jewish musicians fleeing the Inquisition could also have brought viols to Rome following Ferdinand and Isabella's expulsion of the Jews in 1492.

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[3] Ian Woodfield, *The Early History of the Viol* (Cambridge: Cambridge University Press, 1984), 81.
[4] Ephraim Segerman, *The Development of Western European Stringed Instruments* (Lulu.com, 2006), 73.
[5] Ian Woodfield, *The Early History of the Viol*, (Cambridge: Cambridge University Press,1984), 80-85.
[6] Woodfield, *Early History of the Viol,* 88.
[7] Segerman, *Development of Western Stringed Instruments,* 73.
[8] Peter Holman*, Four and Twenty Fiddlers,* (Oxford, Clarendon Press, 1993), 9.
[9] Jon Banks, *The Instrumental Consort Repertory of the late Fifteenth Century,* (Aldershot,Ashgate Publishing Ltd., 2006), 34.

Twenty years later, the court in Ferrara ordered 'violette' in different sizes to be built. We assume these to be violins. It's possible that they were used as acceptable substitutes for the wind instruments in dance music at court.[10] For many reasons, it is hard to determine how the violin family extended outside the patronage of the Este – Gonzaga court, but by the 1530s it was well known both north and south of the Alps.[11]

Yet another reference to a large bowed bass appears during a banquet given by Ercole d'Este II on 24th January 1529. A composition by `Alfonso della Viola' was performed on 'cinque viuole da arco con uno rubecchino' with 'a viol called The Ogress as a bass' ('una viuola chiamata la orchessa per contrabasso').[12]
To put these events in perspective, we need to acknowledge that music was used as a form of elevating social status, by the church, by princes and by courtiers. Impressive and carefully staged public events had an impact socially and the music had a profound effect. The taste of these patrons influenced wider spheres of music making.

Violin and viol families, tunings, sizes of basses

We have seen that the large bowed bass was appearing in performances with viols and violins by 1530 in Italy, but the gradual emergence of the large basses poses some questions. For instance, which family of instruments did they belong to, what were the tunings, what were the lowest notes played and what were the sizes of the basses? Firstly, we will look at the tunings and lowest notes.

The relative size of the basses compared with their players does not necessarily tell us everything about the pitch of their low strings. We therefore can only surmise what the tunings might have been. The 100 cm string length in the late 15th century, supposing this to be what was observed in the vihuelas almost as large as people in Rome in 1493, need not imply a tuning in what Planyavsky refers to as the 'sub-bass region'. By 'sub-bass region' we refer to the range comparable to today's double bass, that is the pitches below C. Therefore, in order to know what the approximate pitch of the strings would be, we would need to know what type of strings were being used, since a long string length on its own cannot give us all the information about its sounding pitch. Pitch, string length and string type all influence the sounding notes of bowed or plucked stringed instruments. In order to consider what function or what notes were actually played by the instruments we see in iconography, we need information about these factors. Ephraim Segerman gives a very useful table of gut string limits of pitch and string lengths referenced from Praetorius.[13]

It is fairly clear, from what we have reviewed so far, that before the last decades of the 15th century, there is no evidence of low strings below C. During the 16th century in Italy, viols with a string length of about 1 meter were the normal bass viols of the sets of viols. Tunings below C do not appear in Italian treatises till the end of the 16th century. We do however see possible lower tunings in, for example, Munich and Nuremburg.

[10] Holman, *Four and Twenty Fiddlers,* 18.
[11] Holman, *Four and Twenty Fiddlers,* 19.
[12] Woodfield, *Early History of the Viol,* 184.

[13] Segerman, *Development of Western Stringed Instruments*, 30.

Terminology

At this point, we also need to consider the terminology of the low bowed bass instruments. Some present-day indications for determining what a violone is could be are the following:

1. A bowed bass instrument with one or more low strings sounding below C, i.e. in the range CC, DD, EE, FF, GG, AA, BB.
2. Literally " a large viol" from c 1600 onwards.[14]
3. An octave doubling bowed string instrument (after 1660)

The historical terminology of low bowed bass instruments can be misleading. One inventory for example lists a ' violone grande da archo'.[15] During the 15th century, the term 'violone' was used as a generic term for the viola da gamba family (gamba implying the playing position holding the viols on the legs), differentiating them from the viola da braccio family (holding the violin type instruments on the shoulder).

Violone tunings in Germany

There is evidence of the tuning of low bowed bass instruments in Germany from treatises:

1528	GG-C-F-A-d-g	Agricola, Wittenburg
1546	GG-C-F-A-d-g AA-D-G-B-e-a	Gerle, Nurnberg

It is worth noting that the six string G tuning given by Agricola and Gerle appears in treatises 16 times after this first appearance, making it one of the commonest historical tunings given.[16]

In Planyavsky's second book, The Baroque Double Bass Violone, [17] he says that the earliest information about a 'Gross Geigen Bassus' with the tuning GG-C-F-A-d-g in German music can be found with Martin Agricola.[18]

There are some low bowed string instruments mentioned in court inventories. For example, in the inventory of the Stuttgart Hofkapelle in 1589, an entry mentions a 'double-bass made by Hans Vogel of Nuremburg'.[19] The terminology used in translation is sometimes misleading however. Naming this a large bowed bass instrument could be more helpful. The term 'double-bass' becomes applicable after 1660, as we will see in the next chapter.

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[14] Grove Music Online,'violone'.
[15] Woodfield, *Early History of the Viol*, 96.
[16] Peter McCarthy, *Tuning Trends in Large String Bass Instruments,* a talk given at the ISB conference, 2009.
[17] Alfred Planyavsky, *The Baroque Double Bass Violone* (The Scarecrow Press, Inc. 1998), 15.
[18] Martin Agricola, *Musica instrumentalis deudsch*, (Wittenburg, 1528) chapter 8. A translation of Agricola's treatise can be found in English on www.greatbassviol.com, click on 'treatises'.
[19] Woodfield, *Early History of the Viol*, 193, and see plate 87.

Iconography

Iconography can present us with some problems when observing depictions of instruments. An example is a painting by Paulo Veronese (Italy, 1528-1588), the 'Allegory of Music'.[20] It is difficult to see what exactly is depicted here, a violone, bass viol or a lirone, since only the back of the neck and peg box are shown. We cannot assume that pictures are depictions of actual situations. Groups of angels playing a myriad of different instruments together do not necessarily imply that these were actually played together in real life, but can portray the instruments, as in Fig.4.

Soundposts

Early viols were still at an experimental stage. 'What say you James Soundpost?'[21] This use of the word in Shakespeare's play is the first time it is used in print. Until the end of the 16th century, viols did not have sound-posts. Their construction was different from later viols: there was (probably) no bass-bar, or if there was, it was carved from the soundboard wood down the center of the soundboard. If there were added strengthening bars, they were crossways not lengthways inside the front of the soundboard. The soundboards were sometimes constructed using a heat bent middle section, which was then carved. This gives greater strength to the soundboard without having to use a very highly arched front. A characteristic of Italian large string basses is their flatter soundboards. One big advantage of the lack of sound-post is that the bridge can be placed towards the tailpiece or towards the fingerboard as needed for transposing, with a similar effect to the capo used on a guitar. The fact that relative pitch could be changed as desired makes the task of establishing exactly which low notes were played more difficult. Mersenne gives the earliest evidence for the use of sound-posts in viols [22], calling it the 'soul' of the instrument.

Duane Rosengard writes: "Very few bowed instruments, of the type played in the standing position (or da gamba) and datable prior to 1570, now exist, especially those that may have been capable of effective use as a contrabass." He adds: "An identifiable though small number of flat backed Venetian bass viols from the mid 16th century still exist and they were usually made with bent instead of carved fronts, six strings and frets." [23] The bass viols, or earlier large vihuelas, with a string length of up to 100 cm, were still strung with plain gut and high twist strings. These give less projection and clarity in the low pitches and do not have the same flexibility as roped strings. Their pitch with the same given length would have been higher than is possible with the later roped strings, therefore they had to have very long necks.

We can compare the following four pictures from Planyavsky's book, 'Geschichte des Contrabasses', [24] to observe the early German human-sized violone.

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[20] Segerman, *Development of Western Stringed Instruments,* 76.
[21] William Shakespeare, *Romeo and Juliet*, Act IV, scene 5. Shakespeare possibly began writing the play in 1591.
[22] Segerman, *Development of Western Stringed Instruments,* 87.
[23] Duane Rosengard, "The violon contrabasso (Double Bass) in the time of Gasparo da Salo and Gio:Paulo Maggini," in *1520-1724 Luitai in Brescia* (Eric Blot Edizione , 2007) 65.
[24] Alfred Planyavsky, *Geschichte des Kontrabasses,* (Tützing: Hans Schneider, 1984).

Fig. 1.1. 'Kontrabas und Bass aus Wien', Francolini, 1560

Fig. 1.2. Jost Amman, 'Ehebrecherbrucke'

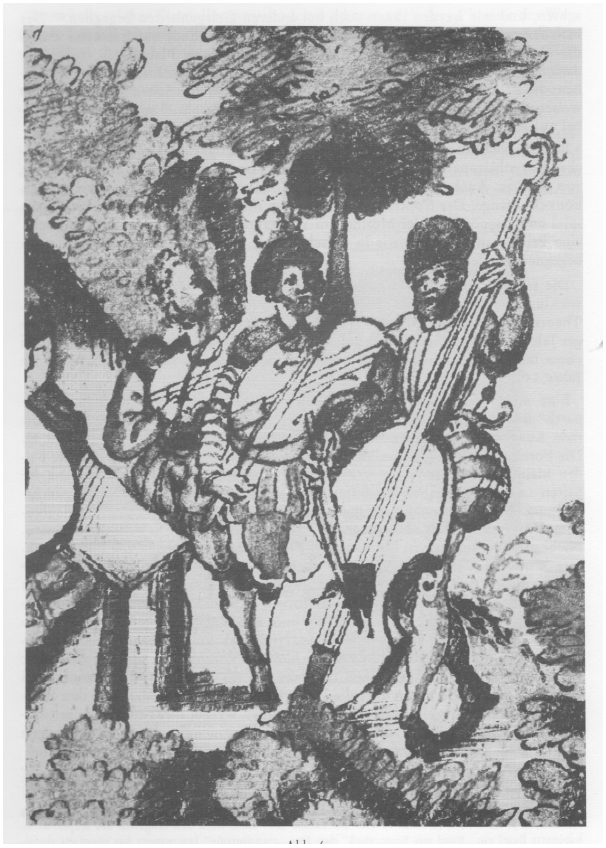

Fig. 1.3. Kontrabass aus einem Schemparth-Buch, 1518

Fig. 1.4. Drey Geigen, Jost Amman, 1568

Some similarities of the four instruments can be summed up as follows:

- Long, thin, tapered body.
- Bridge placed low on the soundboard towards the tailpiece
- Very long thin necks
- Viola da gamba shaped outline
- Bent back curved peg box
- Shallow ribs
- Sound-holes placed towards the bottom of the lower bouts.
- Played with the instrument resting on the ground and the musician standing.
- Some have rosettes in the upper soundboard and some have frets.

These large instruments appear to be a variation of the vihuela de arco. Referring to these large violones, Peter Holman notes: " Such instruments are often thought of as early double basses, but it is unlikely that they were tuned lower than B flat, or that they doubled bass lines at the lower octave". [25]

The large bowed instrument depicted in 'The Wedding Banquet in the Georg-Zaal of the Munich residence', 22 February 1568 [26] is similar to the basses that are illustrated above, from Nuremburg, which Planyavsky's book shows.

The violone outside Italy

The Rozmberk great bass viola da gamba in the Czech Music Museum, Prague, 1329 E, is possibly a late 16th century violone from Nuremberg and is illustrated in *Musikinstrumentenbau-Zentrum im 16.Jahrhundert*, (Michaelsteiner Konferenzberichte Band 72, 2005), 240.

Olga Adelmann, who renovated the 'Alemanische' Berlin instruments, writes that in [27] 1581, instruments were taken from Venice to Brescia to be packed, and then were taken to Stuttgart. 'Geige, Phyola and lyra' were all brought from Italy to Stuttgart. All three terms or types of instrument were in production.
In Germany, the violin family was used in consort alongside the viol family, for example in 1568 at the wedding of Duke William of Bavaria to Renee of Lorraine [28]. This was seen increasingly at the end of the sixteenth century in both Italy and Germany. The equal status of the two types of instrument is interesting; previously the violin family was considered to be inferior and would not have been used in polyphonic music at a prestigious wedding celebration [29].

The instrumentation of the viol consort

During the 16th century, the viol consort was used in the Florentine 'intermedii'.[30] The ensemble, usually comprising four viols, often consisted of the two larger sizes of viols or of four bass viols, and not the treble, two tenors and a bass

[25] Peter Holman, *Four and Twenty Fiddlers* (Clarenden Press, Oxford, 1993) 27.
[26] Holman, *Four and Twenty,* 28.
[27] Olga Adelmann, *Die Alemannische Schule*, Staatliches Institut fur Musikforschung, 1997.
[28] Woodfield, *Early History of the Viol,* 185.
[29] Woodfield, *Early History of the Viol,*191.
[30] Howard Mayer Brown, *Sixteenth-Century Instrumentation: The Music for the Florentine Intermedii.* American Institute of Musicology,1973.

common in the 17th century English tradition. "The mid sixteenth century consort typically consisted of bass viols headed by a single tenor".[31]

"Of all deep bass instruments in the late 16th century " writes Ian Woodfield [32] " the double-bass viol was possibly the most versatile and widely used. In both Germany and Italy the instrument frequently appears in large mixed ensembles, providing a firm and sustained bass line. Hans Mielich's depiction of the Munich court ensemble is a typical example: a completely heterogenous assortment of wind and string instruments are shown grouped round a harpsichord with a large (violin shaped) double bass viol providing a 16' bass line."

In France, looking at the picture of the 'Ecole de Musique', 1584 [33] we see a similar instrument to the 6 stringed 8' G violone played in Italy around the same time. The picture shows four viol players. They are not sitting, but kneeling, and the bass player is stooping which shows that their social status is that of professional musicians. J. Rousseau (Traite de la viole, 1687) states that early viols were larger than the viols of his day. His bass viol would have a stop of about 80cm, and the earlier bass would have been about 20% bigger according to Ephraim Segerman's calculations. The drawing (1611) of the funeral of Charles 3rd of Lorraine in 1608 by Frederic Brentel in the Bibliotheque Nationale, Paris, shows a 5 string bass viol with a string length over 100cm long. This could have been a 'basse contre de viole' or 'double basse contre de viole' that begin to appear from 1556. [34]

To sum up the points in this chapter, we have evidence of low bowed string instruments from 1493. Such instruments appear in iconography, but it is difficult without further research to know the pitches of the strings shown. The earliest tuning given in 1528 is the six stringed G tuning which proves to be one of the most common tunings cited in treatises for the lowest bowed basses during the following two centuries.

[31] Woodfield, *Early History of the Viol,* 185.
[32] Woodfield, *The Early History of the Viol*, 195.
[33] Planyavsky *The Baroque Double Bass*, 66.
[34] Segerman, *Development of Western Stringed Instruments,* 86.

Chapter 2: 1580-1660: The Violone da Gamba. *Monteverdi, Venice and Italy, and violone development in other countries.*

The period from the end of the sixteenth century to the late seventeenth century was rich and diverse for the violone. The instrument emerged in many forms, some of which remained and continue to be used, though in a different function, today. Others appeared briefly as experiments and then disappeared, while others still were gradually adapted over the course of the seventeenth and eighteenth centuries and are no longer in existence today. Today, if we were to document the contemporary playing styles of bassists and the set-ups, tunings, bows and repertoire, acoustic or amplified, improvised or written, to name a very few points, we would come up with a huge diversity of information, much of it possibly seeming unrelated in context. Similarly, I believe that if we attempt to ultimately define even a few bowed bass instruments and playing styles of the 17th centuries as being how music was performed, we are looking at an impossible and unfruitful task. As I have suggested in the introduction, it is not necessary to find a direct link to our contemporary string bass playing or instruments. The spirit of experimentation was just as lively in the 17th century as it is today. We have looked already in the previous chapter at how low bowed instruments emerged during the 16th century to fulfill a need for instrumental consort playing at court. The last twenty or thirty years of the century saw big changes and developments in the bowed bass instruments, and as we will see in this chapter, established a form for the later violone and double bass which would influence luthiers till the present day. One of the biggest musical changes to affect the lowest instruments in general around the beginning of the 17th century was the development of the 'basso continuo'. We will see how the viol tuning of the violones were ideal for supporting the basso continuo line. Another of the main new developments to affect the bass instruments at the end of the 16th century and the beginning of the 17th century was new string technology, which enabled lower pitches to be played on the same string lengths. This had a big impact on the low bowed instruments and could be one of the reasons that the sixteen-foot pitch became so popular early in the 17th century.

Catlin strings

To understand what was happening with string and instrument pitches, one can look at tables of tunings from treatises of the period. Comparing the lowest pitches in the table of tunings of Italian viols played in sets [35] one notices a drop in the lowest open string of the Basso of a fifth by the very end of the sixteenth century in Italy. This corresponds to the use of the catline strings. [36] One of the first string makers to research and produce gut strings on a large scale for Renaissance and Baroque instruments in the early music movement was Ephraim Segerman in Manchester. He explains: "The name 'catlin' first appeared in the middle of the 16th century, probably from 'Catalan', indicating it came from the string making center in Barcelona. By Dowland's time (1563-1626), Spain was no more a significant source of strings, and thicker strings of good quality were made in Nuremburg, Strassburg and Bologna, with those from Bologna being the best. These latter strings were transported from Venice, and so were called 'Venice Catlines'.

"Around 1580, new lutes started to appear with the lowest string a fourth lower than before, and the 'viola bastarda' appeared, which is a viol which used the

[35] Segerman, *Development of Western Stringed Instruments*, 79.
[36] Segerman, *Development of Western Stringed Instruments*, 163.

same range expansion. The expansion appears to be associated with a kind of thick gut string (called 'catlins' or 'catlines' in English sources) that newly became generally available." The word is associated with high quality and is not necessarily [37] a unique type of construction, such as a roped construction for instance. "In the 1570s, roped gut strings became affordable and generally available." [38] Segerman continues: " We have concluded that the thicker gut strings that increased the open-string pitch range by half an octave from the third quarter of the 16th century onwards had rope construction." [39] Gut strings are made by processing the gut of sheep or lambs, then cutting the gut into long strips and twisting it. The dried string is then polished smooth under tension. If, during the twisting process, the string is turned even more, a high-twist string is the result. This has greater density than a plain gut string, so will give a lower note at the same given sounding length. High twist strings were available before roped catlines, and these high twist strings were previously used for the lowest strings.

"Thomas Mace (1676) wrote that Venice catlines were suitable for the mid-range strings and Lyons or Pistoy were best for the bass strings. His criteria for good strings were clearness to the eye, being smooth and well-twisted, and hard and strong. Dowland (1610) mentions that thick strings when fresh and new will be clear against the light, though their colour is blackish." This refutes what some writers have claimed is string 'loading' with a heavy metal.[40] If strings had been loaded with a heavy metal, this would have changed the density of the string, enabling a shorter string length for a given pitch compared with an un-loaded string.

When the roped gut strings became available and began to be used in the 1580s, the bass instruments could play a fourth or fifth lower with the same string length as the bass viols. Hence, the pitches of the viola da gamba family dropped a fifth, or seen another way, the sizes were reduced retaining the same pitch. The old bass gamba became what we now call the 8' violone with GG-g tuning and 6 strings. This is a similar process to that of around 1659-1660 when wound strings became available and the cello in Italy gradually became the main 8' continuo and solo bowed instrument, taking over from the larger 8' G violone. Praetorius gives us tables of tunings and clear illustrations of the violones and gambas to scale in his 'Syntagma Musicum'[41]. Here we can see that the viol he calls the 'bass gamba' is what we now term the 8' G violone.

17th century violone tunings

Italy (including Venice):[42]

1592	GG-C-F-A-d-g	Zacconi, Venice
1609	DD-GG-C-E-A-d	(violone contrabasso) Banchieri, Bologna
	GG-C-F-A-d-g	Banchieri, Bologna
1611	GG-C-F-A-d-g	Banchieri, Bologna
1613	GG-C-F-A-d-g	Cerone, Naples
1635,1640	GG-C-F-A-d-g	Doni, Rome

[37] Segerman, *Development of Western Stringed Instruments,* 28.
[38] Segerman, *Development of Western Stringed Instruments,* 93.
[39] Segerman, *Development of Western Stringed Instruments,* 29.
[40] Mimmo Peruffo, Recercare Vol 15,1993- see painting he shows.
[41] Michael Praetorius, *De Organographia,* (Wittenberg, Wolfenbuttel, 1614-1620).
[42] Segerman, *Development of Western Stringed Instruments,* 79.

Germany, Prussia, Poland:

We have already looked at Agricola, 1528, and Gerle, 1546, both of whom mention the 6 stringed GG-C-F-A-d-g tuning, in the previous chapter.

1619	GG-C-F-A-d-g	Praetorius, Wolfenbuttel
	GG-C-E-A-d-g	Klein bass alternatives, (Praetorius, Wolfenbuttel)
	AA-D-G-B-e-a	
	FF#-BB-E-A-d-g	
	EE-AA-D-G-c	Gross bass
	DD-GG-C-E-A-d	Alternatives
	EE-AA-D-G-c-f	
	DD-EE-AA-D-G	Gar gross Bass
1650	GG-C-F-A-d-g	
	AA-D-G-B-e-a	Instrumentalischer Bettlermantle, A.S. ms. in the Special Collections of Edinburgh University Library [43]
1628	C-E-A-d-g	Hitzler, Tubingen (this is not using the sub-bas range, but could be seen as a variant of the GG-g violone tuning) [44] Ephpraim Segerman believes this could have been the Italian 5-string bass fiddle shown by Praetorius, but restrung like a viol

France:

1636	5th below the Basse de Violon	Mersenne Paris

These tuning tables illustrate the widespread use of lower pitched bowed string instruments by the beginning of the seventeenth century across Europe.

The opera in Italy

The musical changes taking place in Italy early in the 17th century were profound. The intent of the new composers was to give more clarity and more expressive power to the words and emotions conveyed by the musicians, than was possible with polyphony that sometimes obscured the text. A single melodic line with a chordal accompaniment, homophony, was the new vehicle for this expression. The new form of dramatic musical entertainment was opera. At first, this early form of opera was held as private events at court, but in 1637, the first public opera house, Teatro San Cassiano, opened in Venice. The opera began to use the lowest bowed basses to enhance dramatic effects and by the end of the 17th century and in the following century, we see a new use of the basses as octave doubling instruments, which gave even greater emphasis and power.

[43] Segerman, *Development of Western Stringed Instruments,* 84.
[44] Segerman, *Development of Western Stringed Instruments,* 84.

The beginning of the Baroque period marks a taste for antiphony, with the violones being used to support groups of different instruments and later in the century leads to the birth of the orchestra as we would recognize it today, with large forces of string instruments being used, for instance, by Corelli in Rome.

One of the composers at the time who heralded in or developed the new Baroque techniques was Giovanni Gabrielli, He was one of a long line of distinguished musicians, including Willaert, Andrea Gabrielli and later Monteverdi, to work at St Marks, Venice. The layout of the building and its many choir lofts in part lead to the development of the Venetian polychoral and antiphonal style. Giovanni Gabrielli became famous throughout Europe by bringing devices already present in music, such as the use of various spatially separated groups playing together, to splendid effect. He specified the singers and instrumentation to be used in the groups, which gives us some information about how the bass instruments were incorporated and what their function was. On Christmas day in 1602 in St Mark's, Venice, for instance, we know that Signore Venture, player of the violone, was one of a large group of singers, brass and cornetto players and violinists performing. [45]

Monterverdi's use of the violone

It could be helpful to center on one particular composer and composition in the early seventeenth century in order to begin understanding the use of the various violones in use in Italy during this period. One of the most well known composers of early seventeenth Italy, Claudio Monteverdi, is specific in his instrumentation. However, taking Monteverdi's 'Orfeo', 1607, as an illustration of the use of the violin and viol family in early 17th century Italy is more complicated than it first appears. Although Monteverdi gives clear instructions as to which instruments he wants, present day interpretations of what those instruments actually refer to can differ. The lowest bowed bass instruments he lists are 'Duoi contrabassi de Viola'. There are different opinions among musicologists about the instrumentation of 'Orfeo' in general, concerning what the stringed instruments actually were and how they were tuned and pitched. In this investigation, we will be concerned only with the lowest bowed bass stringed instruments. For examples of differing proposals concerning the stringed instruments, see Peter Holman 'Col nobilissimo esercitio della vivuola' [46], David D, Boyden ' Monteverdi's Violini piccolo alla Francese and Viole da Brazzo'[47] and Ephraim Segerman.[48] Monteverdi's ' Viola Contrabasso' in the 'Combattimento' is an alto range part.[49] In the 'Vespers of 1610' he requires only one viola da gamba instrument, the contrabasso da gamba, which plays only in 'Domine ad adjuvandum', and where it is assumed that Monteverdi wanted the part transposed down an octave. Lodovico Viadana: Musicista fra due secoli, 1612, [50] gives detailed instructions for the doubling of his psalms for four choirs. He says the bass is always low, so should

[45] John Spitzer and Neal Zaslaw, *The Birth of the Orchestra,* (Oxford, OUP, 2004), 56.
[46] Peter Holman, *"Col nobilissimo esercitio della vivuola*": Monteverdi's string writing, *Early Music*, 577-590 (1993)
[47] David D.Boyden, *Monteverdi's Violini piccolo alla Francese and Viole da Brazzo,* 385-401.
[48] Segerman, *Development of Western Stringed Instruments,*
100-105.
[49] Holman, *Con nobilissimo*, 578.
[50] Florence: Leo S.Olshki. 1966, English translation from Jerome Roche, *North Italian Church Music in the Age of Monteverdi*, (Oxford, Clarendon Press, 1984) 425, Jeffrey Kurtzman, 'The Monteverdi Vespers of 1610'.

be sung by deep voices with trombones, double-bass viols -'violone doppi' and bassoons, with the organ an octave lower than normal. Monteverdi uses the terms for violins and viols in their old and new meaning in the same pieces. Which type of violone and which tunings, of the possibilities known, could have been used for Monteverdi's performance of 'Orfeo'? Peter Holman writes: " The exact identity and role of Monteverdi's 'contrabasso' is a problem."[51] Referring to treatises for an answer, we have Banchieri' (1568-1634) [52], who states that the 'violone da gamba' is tuned GG-C-F-A-d-g and the 'violone del contrabasso' is tuned DD-GG-C-E-A-d. The DD instrument is not mentioned in the second of Banchieri's editions. Doni [53] correlates similar measurements and gives a similar description. [54] Agazzari (1578-1640) [55] calls this violone ideal for providing a deep bass line.

Surviving instruments of the time could possibly give us additional information in determining the possible violone used by Monteverdi. Surviving violones of the late sixteenth and of the seventeenth century in Italy have been studied by Duane Rosengard. Rosengard uses the term 'double bass' instead of violone or low bowed bass instrument, which is a little confusing as he is one of the writers on the bass instruments to give a clear picture of when the real double bass emerged as an instrument at the end of the 17th century, doubling entirely at the low octave. However, Rosengard, a specialist in the Brescian and Cremonese bass makers, says: " There are still many gaps in our knowledge of what actually took place in the most crucial period of double bass development, between the years 1600 and 1720." [56] So having landed on firmer ground at the beginning of the 17th century, we are again in trouble! Admittedly, he is looking at the development of the bass in Cremona, while the double bass as we know it today originated in Brescia. Andrea Amati (1505-1577, Cremona) is known as the first great violinmaker, establishing its form. Rosengard says: " There is no firm evidence that Andrea Amati made either a double bass (or large violone) or that one survives to the present day." [57] The earliest document we have mentioning the 'contrabasso' in Cremona is in one of two notarial documents drawn up in 1661. Alessandro Lodi's huge collection of bowed and wind instruments included a 'contrabasso'. The second notarial document was signed by Nicolo Amati, who sold the 'contrabasso'.[58]

Both Rosengard [59] and Bonta refer to the fact that Nicolo Amati made 'over-sized' cellos by modern standards. Bonta refers to these as a type of violone.[60] "Amati's disciples, F. Ruggeri, G.B. Rogeri, A. Guarneri and A. Stradivari, initiated and perfected the development of the instruments we today consider the true violoncello, or 'small violone'." [61]

Monteverdi's 'contrabasso' is a problem',[62] we can also consider how the violone could have been played in order to search for more specific answers.

I-2

[51] Holman,*Col nobilissimo*, 585.
[52] *Conclusioninel suono dell'organo*, 1609, 2/1626
[53] *Annotazioni sopra il Compendio de'generi*, 1640
[54] *New Grove Dictionary of Music and Musicians*, 1980, 'Violone', 814.
[55] *Del sonare sopra'l basso*, Sienna, 1607.
[56] Duane Rosengard, *Contrabassi Cremonesi*, (edition Turris, Cremona, 1992).
[57] Rosengard, *Contrabassi Cremonesi,* 67.
[58] Rosengard, *Contrabassi Cremonesi,* 62.
[59] Rosengard, *Contrabassi Cremonesi,* 68.
[60] Rosengard, *Contrabassi Cremonesi,* 68.
[61] Rosengard, *Contrabassi Cremonesi,* 69.
[62] Holman, *Con nobilissimo*, 585.

The violone, or contrabasso, da gamba has a two and a half octave range, which can be played in the first position, i.e. by placing the first finger of the left hand a tone above the open string. It is an ideal tuning for playing broken chords, in comparison with the bass violin 5ths tuning, which requires more shifting. The notes above the top fret were probably not used in ensemble playing.The viol playing in a consort does not usually play above the highest frets. The violone or contrabasso da gamba has a similar function to the theorbo or keyboard continuo parts. It can be seen as a continuo instrument rather than as simply a 'normal' member of either the viol, or the violin or viola da braccio families. The violone plays at the written sounding note or transposes down an octave for greater effect in certain passages just as the theorbo or keyboard player does. This is not written in the part. In this sense, the 6 stringed violone da gamba can be seen as having a different role from the 5 stringed DD-G larger violone, which Praetorius also catalogues. The 6 stringed violone can be tuned in GG, AA or DD. The smaller GG instrument is suitable for the continuo line of smaller ensembles either da camera or da chiesa. The bigger DD instrument could have been used in larger ensembles, playing in churches, cathedrals or theatres. The AA tuning is a variant of the GG violone tuning and was probably used in Northern Germany in the 17th and early 18th centuries. Buxtehude's Duo for viola da gamba and violone fits well with this tuning for example.

The significant features of the 6 stringed violones in Italy from 1580 onwards are:

1. Deep ribs. These create a large 'soundbox' and which enables the violone to project wonderfully, even to the back of a large church such as St Mark's Venice. The cellos and gambas in contrast had shallower ribs, thus less projection.
2. Long string length. This helps projection when using high twist or roped unwound strings. Cellos had shorter sounding string lengths (wound strings were not in use till after 1659).
3. Frets. Frets give greater clarity particularly of articulation and partly of intonation in contrast with the unfretted cello.
4. Underhand or 'German' bow grip. This projects a clearer fundament in comparison with the violin family overhand bow hold, which produces more overtones at the cost of less fundament on the violone.
5. The use of the viola da gamba method of tuning: 4ths and a 3rd.

These features would all be ideal for continuo work, in supporting and sustaining the keyboard and plucked continuo instruments. It is probably significant that Praetorius groups the violones with other continuo instruments on his prints. [63]

I believe it is no coincidence that the violone tunings are almost the same as the chitarrone and theorbo G tunings. The tuning makes chordal playing of the continuo line relatively easy in comparison to the 5ths tuning of the emerging violin family, which is more suited to melodic line. We could draw some comparisons here to the use of the fourth tuned double bass as the fundament of jazz ensembles. If agility and speed of playing notes were the primary concern, one would expect a cello or a bass with a shorter string length tuned in 5ths to take over the function. Metal strings certainly make this a possibility.

[63] Praetorius, *Syntagma Musicum* , Organographia, Theatrum Instrumentorum seu Sciagraphia, 1620

We can now look at actual instruments which could have been used in Monteverdi's works. Unlike the situation in the early 16th century, from around 1580 until the middle of the seventeenth century, it is possible to put together quite a clear picture of some of the violones that were probably used in Venice. There are two main types of surviving violones, both types being excellent examples. Firstly the viola da gamba type, for example, the Ventura Linarol of 1585 [64] and secondly the surviving evidence from instruments made by Gasparo Bertolotti da Salo (1540-1609) and his pupil Giovanni Paolo Maggini (1580-c,1630-1631) in Brescia. Da Salo and Linarol were also themselves both violone players. The da Salo and Maggini instruments have a 'violin' shaped outline, but originally had 5 or 6 strings and wooden pegs and were fretted. They were built in two sizes, but otherwise look very similar to each other. Admittedly, these basses have been altered significantly over the last 400 years and are now all in a 'modern' playing state. In many cases, much has fortunately been retained. The curvature and carving of the soundboard, the outline of the body, to some extent the shape of the peg-box and the depth of the ribs have usually stayed intact. The necks have all been replaced, and slanted at a greater angle. This creates more pressure on the soundboard, so consequently the bass bar has been made bigger to give greater strength. The bridge is made higher and thicker since the neck angle is greater. The number of strings has been reduced from the original 6 or 5, to 4, so consequently the bridge is now also narrower. We can see from the wide spacing of the sound holes that the bridge would have accommodated more strings, even though the neck and peg boxes are now replaced or totally altered. The original wooden pegs have been removed and replaced with metal shafts and gears, which adds to the peg-box weight and damp the reverberation of the bass to some extent. The varnish has been altered and layers have been added. Deducing how the instruments would have originally been built is a kind of archeological work. We need to look at how the viol family instruments were constructed in general, to imagine which building methods are appropriate. Late renaissance viola da gambas could have had heat bent soundboards; the middle sections of the soundboards sometimes show charring inside.[65] Martin Edmunds describes the heat bending of soundboards in viols. [66] The internal construction of early viols was quite different from that of the later violin family.

Reconstruction of a violone of 1590

The following pictures show what is, to the best of my knowledge, a unique experiment to build a replica of an existing low bass instrument by da Salo, set up completely in its original state. This presented many challenges, one of the main ones being that the present day basses have been so much altered that many choices as to how the original would have been built had to be made purely by speculation. What is valuable in this reconstruction is that the soundboard, for instance, has the same thicknessing as the double bass that was copied. By comparing various other existing da Salo double basses, it was possible to put together enough criteria to build this copy.

[64] Kunsthistorisches Museum,Vienna
[65] Woodfield, *The Early History of the Viol,* chapter 7.
[66] Martin Edmunds, *'Venetian viols of the 16th Century*, Vol 33 Galpin Society Journal, 1980, 74-91

Fig. 2. The photos above are of an instrument made by Christiane Mitschke, Potsdam, completed February 2015. The violone is an exact replica of an existing Da Salo, but constructed with a heat bent front and set-up as it probably would have been when it was first built. This is the result of a six-year project by Christiane, Robert Franenberg and myself to produce an original copy of a large violone from the end of the 16th century. Happily, the instrument has a clear, well-projected sound in all registers, from the low EE to the top fret of the first f string. It is strung with all gut catline strings and presently tuned EE-AA-D-G-c-f, which is one of Praetorius's tuning options.

Fortunately there are paintings by Evaristo Baschenis (1617-1677, Bergamo) who lived near Brescia, from the period when Da Salo was building violones there, which provide us with additional information. Baschenis was also a musician and owned a violone similar to Maggini's violones. His works are of contemporary musical instruments, painted in an almost 'photographic' (realist) style, as still-lives. The sizes, proportions and colors of the instruments are seemingly very accurately portrayed. Several of his paintings show large string basses, which probably look very similar to the original appearance of Da Salo's violones.

Da Salo, Maggini, Linarol

Duane Rosengard [67] has written a very helpful survey and comparison of the work of Da Salo, Maggini and Linarol. These were all makers of violones and produced some of the most beautiful looking and sounding violones, which were ever made. Their work in many ways laid the foundation for double bass making for the

[67] Duane Rosengard, *The Violon Contrabasso (Double bass) in the time of Gasparo da Salo and Giovanni Paolo Maggini from 1520-1724, Luitai in Brescia*, (Eric Blot Edizione ISBN 978-88-88360-07-2).

following 250 years. The instruments are still very highly valued for their wonderful craftsmanship, unique sound color and strong projection.

Fig. 3. Evaristo Baschenis,(1617-1677,Bergamo), Still Life, Musees Royeaux des Beaux Arts, Bruselles

"Gasparo seems to have produced more tenor violas than all other instruments played on the arm combined; very few of his violins now exist." [68] John Dilworth suggests that his larger da gamba instruments, of which 4 or 5 still exist, were originally arched back violones. These had a body length of around 80 cm but in the course of time have been cut down and are in use now as violoncellos. There are at least 6 of the large flat back contrabasses still in existence. I suggest that we can partly define the 8' G violone by its sounding string length. Less than around an 84cm sounding string length with the lowest one or two strings being roped or wire wound means that the instrument loses sonority. Around 80-84 cm sounding string length can work for the AA tuning which was probably utilized for the violone playing the Gibbons Fantasias or for much north German violone continuo lines by Buxtehude for example.

Maggini has more surviving instruments than Da Salo. Earlier in his career he produced more medium sized flat back violones and made smaller alto violas as well as tenor models. Later, he made more of the larger models of violone. An example of his medium sized violone (which is wrongly referred to today as the 'bassetto') is the 'Dumas', mentioned by M.L. Huggins. [69] She writes: " Maggini is reputed to have made a considerable number of double basses, and may have done so, but the Dumas bass is the only original one known to Messrs. Hill. It is of very small size, and is what would be called a 'basso di camera'. Its workmanship is poor, the head is not

[68] Rosengard, *The Violon Contrabasso,* 69.
[69] *Gio: Poalo Maggini :His Life and Work*, (W .E. Hills & Sons, London,1892)

original, and the mitres are not distinctly bevelled; but on the whole it shows many of the characteristics of Maggini." [70]

Repertoire of the 17th century violone

Having looked specifically at the music of Monteverdi and the possible use of the violone in his music, it is interesting to turn to music from other contemporary Italian composers. These offer a broader picture of how the violone could have been utilized. Stephen Bonta, who has researched and written comprehensively about the terminology of the violone and violoncello in Italy in the seventeenth century [71] writes "by the early 1560s, there was a spate of Venetian prints of sacred music that mention the use of instruments…" He gives an appendix of the instruments used that include the basso viola or violone and the contrabasso, among others.[72]
Other researchers covering the violone in 17th century Italian sources include Eleanor Selfridge-Field,[73] who compiled a list of publications (canzonas and sonatas) with designated violin parts from 1600-1670. Of these, the following have designated violone parts:

- Grandi Ferrara 1613, Venice 1617
- Cazzati Bergamo 1656/59, Bologna 1670
- Legrenzi Bergamo 1648,1655, Ferrara 1663
- Cima Milan 1610
- Pietragrua Pallanza 1629
- Uccelini Modena 1668

Sandra Mangsen is another researcher who gives instrumentation indications in selected sources of 17th century Italian duos and trios: [74]

- Cazzati, 1660 Trattenimenti per Camera a due Violini e Violone, se piace (page heading 'violone o tiorba')
- Cazzati 1670 Sonate a due Istromenti, cioe Violino e Violone(part book labels, Violone, Organo o Tiorba)
- Vitali Correnti, e Capricci per camera a due Violini e Violone (partbook labels,Violone o Spinetta)

From 916 duos and trios with a melodic bowed string bass, which Mangsen includes, 441 specify a bowed string such as a violone, basso di viola, violoncino, viola da brazzo, or viola da gamba.[75] Mangsen raises the question, " does a figured part for violone or theorbo imply that even the violone player would have produced chords? " [76] This is another area for further investigation, since the fretted violone, with the gamba tuning, is suitable for playing chords. The limitation would be the string

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[70] *Gio;Paolo Maggini,* 68.
[71] Stephen Bonta, *' The use of instruments in sacred music in Italy 1560-1700'*, (Early Music, November 1990).
[72] Stephen Bonta, *Studies in Italian Sacred and Instrumental Music in the 17th Century,* (Aldershot, Ashgate Pulishing Limited, 2003), 527.
[73] Eleanor Selfridge-Field, *'Instrumentation and Genre in Italian Music 1600-1670',* (Early Music, Volume 19, 1991), 61-67.
[74] Sandra Mangsen, *" 'Ad libitum' procedures in instrumental duos and trios",* (Early Music February 1991),70.
[75] Mangsen, *Instrumental duos and trios,* 31.
[76] Mangsen, *Instrumental duos and trios,* 32.

length, which can be varied. Manfred Hermann Schmid looks at the range of the bass notes given in Italian works calling for the violone to determine what the instrument was.[77] This is a useful approach, but does not include the possibility of the continuo instruments doubling at times at the lower octave.

In England, Orlando Gibbons (1583-1625) writes for the 'great dooble base' in his fantasias for 3 and 4 parts, which is probably a 6 stringed violone tuned one tone higher than the Italian 6 stringed 8'G violone, so AA-D-G-B-e-a.
The music of Giuseppe Colombi (1635-1694), though titled 'violone', was probably intended for a bass violin with BB flat as its lowest open string, and tuned in 5ths. Some of the chordal passages are not playable with the usual 8' G violone tuning yet fit well on the 5ths BBflat tuning. The lowest note given in passagework for a particular solo instrument can be an indication of the instrument's possible lowest open string. To illustrate this point, looking at the lowest notes of the solo bastarda pieces collected by Jason Paras[78], we can observe certain possible viol tuning patterns, given the knowledge we have from available treatises. Most of pieces included for the lowest tuned viols would be in AA, while the piece by F. Rognoni 'Susana D'Orlando' is specified by him for violone or trombone and could have implied the G violone.

Fig. 4. Domenicos Theotocopoulos, El Greco (1540-1614). Oballe Conception, c. 1608-1613. Church of San Nicolás de Bari, Toledo. Placed at the Museo de Santa Cruz, Toledo (detail)

[77] Manfred Hermann Schmid, *Der Violone in der Italienischen Instrumentalmusik des 17. Jahrhunderts,* Germanisches National Museum, Studia Organologica, 413.
[78] Jason Paras, *The Music for Viola Bastarda* , (Bloomington, Indiana University Press), 1985.

Chapter 3: From Violone to Double bass: 1660-1700 – The development of wound strings and the continued use of the Violone da Gamba.

The last forty years of the 17th century saw a continued growth and experimentation in the use of instrumental forces in Italy, which would influence the rest of Europe. Technical developments changed the role of the violone decisively after the second half of the seventeenth century. This was one of the biggest changes in the use of the basses: the gradual division in Italy into 8' basses, normally cellos, with octave doubling bowed basses. Metal wound gut strings came into use around 1660. This discovery gave strings a greater density which meant that string lengths could be shorter, while retaining the same pitch. From around 1680-1730, the violones shed the number of strings and began to double the new cello, which now used wire wound 4th strings, at the lower octave. The usual cellos became smaller. The function of the violone of either playing at the written octave or transposing down an octave, was no longer necessary when playing exactly the same line as the cello an octave lower. This period saw the development of a new bass making tradition and the structural adaptation of the old violones for their new role.

Corelli's orchestra

Musical taste for bigger orchestras also altered the role of the bass instruments. When Arcangelo Corelli arrived in Rome from Bologna around 1675, he quickly became one of the most important violinist-composers of the century. Archives in Rome in the churches and of the important Roman families preserve information about the players, instruments and wages for many orchestras led by Corelli in the period 1680-1713. [79] This gives us information about the changing size of the groups, which had a central core of key string players and which were added to for important occasions. Cardinal Ottoboni sponsored an orchestra of 69 players in 1694, while at other events the group could be only 20 or so musicians. One factor was consistent: the violins were around half the total number and the string basses (cellos, violone and double basses) were proportionally a third to a fourth. Much has been written about the exact meaning of the 'violoni' used by Corelli, for example by Stephen Bonta, [80] and Tharald Borgir. Tharald Borgir proposes that the term violone could have been used to mean the cello in Rome from the1660s onwards, stating "Outside of Rome, however, it is doubtful that the term violone referred to the bass violin until sometime after 1700. Before that time only three instances are known; a single piece by Ghizzo in a collection of sacred music (Calvi 1624), and Vitali's opus 2 (1667). In each case the word violone is followed by the qualifier "da brazzo". Without the qualifier the word violone during the seventeenth century referred to the Italian bass gamba tuned to G."[81] Since musicians of the time were proficient in more than one instrument, and the development of the low bowed basses was still changing, I think it probable that various stringed bass instruments could have been used in Corelli's groups. Zaslow notes that many of the freelance musicians who joined Corelli's orchestras for bigger performances seem to have been foreigners, which

[79] John Spitzer and Neal Zaslaw, *The Birth of the Orchestra, History of an Institution, 1650-1815,* Oxford, Oxford University Press, 2004), 124.
[80] Stephen Bonta, *Studies in Italian Sacred and Instrumental Music in the 17th Century,* (Aldershot, Ashgate Publishing Limited. 2003, 217-231.
[81] Tharald Borgir, *The Performance of the Basso Continuo in Italian Baroque Music,* (Anne Arbour, UMI Research Press, 1987), 81.

suggests to me that different types of basses could have been in use alongside each other. [82]

Germany and Austria

Looking at Germany in the last quarter of the 17th century, we see the 8' G violone continuing to be used. Daniel Speer [83] gives the same 6 string GG-g' tuning for the 'Bass-violon'. The fact that in Italy the tuning is becoming outdated is not applicable north of the Alps.

Unlike the treatises for the bass, tenor and treble viola da gamba instruments, the violone has no treatise with playing instructions until 1677 when Johann Jacob Prinner, 1624-1694, in Vienna [84] gave the tuning FF-AA-D-F#-B. This tuning anticipates the so-called Viennese tuning which was used, though with a top A instead of B, for much of the solo and divertimento music for violone /contra- bass from c1730-c1790. [85] It is worth noting that Prinner also still provides the 8' G violone tuning, which he terms the ' Basso di Viola mit 6 Seiten': GG-CC-F-A-d-g. [86]. Planyavsky points out that there are various works specifying the violone in 17th century Austria:
Lowe van Eisenach- sonatas for quartets, quintets and a sextet with violone 1668 (UB Uppsala. Loan material from the Wiener Kontrabass archive)

- J.M.Zacher
- H.G. von Kielmannsegg
- A.Poglietti
- E.T.Richter
- Jakob Kremberger

One of the instruments I own is a Krouchdaler built in 1692. It is in itself a valuable document in that the neck is original. This is the only violone which I have come across which has the original neck. The body and pegbox are also in original state. When I bought the violone, it had a cello fingerboard and pegs, so was then restored by Willem Bouman in The Hague. Faced with finding a suitable tuning, I tried many historical variations including 4ths, 5ths and 3rds over a period of a year. Finally the tuning which brought the instrument back to life was the G violone tuning without the lowest GG string. This was originally probably one of a set of different sized bowed instruments. Graded sizes of violin family instruments were probably used in Poland and Germany. [87] The 'Alemannische' school of stringed instruments imitated Italian instruments made a hundred years earlier, and different sized violas and small and larger bass instruments were built. These instruments can be seen in the Berlin Instrument Museum, restored by Olga Adelman The Alemannische instruments are therefore built in an archaic style.

[82] Zaslaw, *Birth of the Orchestra,* 130.
[83] Grundrichtiger Unterricht der musikalisches Kleeblatt, Ulm, 1687/97; reprint Leipzig, Peters, 1974. pp 199-207
[84] Musicalischer Schlissel, 1677, MS in Us-Wc
[85] Adolf Meier, *Der Wiener Kontrabass und Bassfunktion,* (Innsbruck,Helbling,1984).
[86] Planyavsky, *The Baroque,Double Bass*, 59.
[87] Holman, *Con nobilissimo*, 580.

Fig. 5. Die Alemannische Schule: left to right: klein bassgeige,H.Krouchdaler, 1685, tenor geige J.Meyer ca.1675, tenor geige J.Meyer, ca. 1675, tenor geige Fr.Straub,1690, discant geige J.Meyer, ca 1675, Gross Bassgeige H Krouchdaler,1689. Right hand photo: Gross Bassgeige Hans Krouchdaler,1689. These instruments are in the collection of the Musikinstrumenten-Museum, Berlin

Kremsier (Kromeriz) was the birthplace of Heinrich Ignaz Biber von Bibern (1644-1704). He was sent to Absam near Innsbruck to buy instruments from Jacob Steiner, but went on to Salzburg instead. Biber used the violone in his music, specifying it instead of the violoncello. Biber knew Prinner and they both served together at the court of Prince Johann Seyfried Eggenberg in Graz in the early 1660s. One of Biber's better known works specifies two violones: the 'Battaglia a 10' - 3 violins, 4 violas, 2 violones and continuo. (1673). His 'Mystery Sonatas' are written for violin and violone.

Violone tunings at the end of the 17th century

To sum up the late seventeenth century use of the violone, we can see the following tunings in use:

Italy:

1677	EE/GG A D G	Bismantova, Ferrara

Germany, Prussia, Poland:

1687	GG C F A d g EE AA D G	Speer, Ulm
1688	GG C F A d g	Falck, Nurnberg (he also includes an E variant for the 4th string)
1695	AA D G B e a GG C F A d g AA D G A d g	Merck, Augsburg (Merck also lists the BBflat F c g tuning)

Habsburg Empire:

1677	GG C F A d g FF AA D F# B	Prinner, Vienna
1701	GG AA D G	Janowka, Prague
1701	no tuning or number of strings listed by Brossard, Paris ('Violone, c'est un double basse')	

England:

1694	GG C F A d g (violone)	Talbot Oxford
	FF/GG AA D F# A	(gross contra bass geig) He refers to both violones as German

The tuning which Bismantova gives is notable in that he lists a bass with four strings all in the octave below the notation. In his second edition, published in 1694, he adds two more instruments: the *violoncello da spalla* and the *contrabasso o violone grande.* [88]

The low GG string is the same pitch as the lowest sting of the GG six-stringed violone. The explanation for using the same lowest note but with a different tuning could be that we are looking here at the adaptation of the lowest bass instruments for use in the large orchestras that are emerging at the end of the 17th century. The 8' violone range was gradually not needed in the orchestra, so many bowed basses probably would have been converted to four stringed instruments playing in the low octave in Italy.

In England the same trend can be seen: violoncellos with octave doubling double basses begin to be used in the new Italian opera orchestra London in 1705-6. [89] The composer and double bass player Saggione is recorded as playing alongside four cellists, and is credited with introducing, together with Michel Pignolet de Monteclair, the 'contre basse' into the Paris opera around 1700. [90] Paul Brun informs us that Monteclair brought ' a very good double bass from Naples' to Paris in 1695 and preceded Saggione as the bassist with the Small Choir of the Opera Orchestra.[91] This information was seen for a long time as implying that no 16' range on a stringed bass instrument was used in France till the beginning of the 18th century. As we have seen though, six stringed bowed basses were already played in France in the 16th century and had 'contra bass' notes on the bottom strings. It is simply that the musical function of the bass instruments changed following the trend in Italy and consequently the lowest bowed basses then began to be used as octave doubling instruments. It is possible that the octave tuning in 5ths was more usual in France, but

[88] Tharald Borgir, *The Performance of the Basso Continuo in Italian Baroque Music,* (Ann Arbor, UMI Research Press, 1987), 79.
[89] Peter Holman, *Life After Death: The Viola da Gamba in Britain from Purcell to Dolmetsch,* (Woodbridge, The Boydell Press, 2010), 45.
[90] Holman, *Life After Death,* 46.
[91] Paul Brun, *A New History of the Double Bass,* (Villeneuve d'Ascq, Paul Brun Productions, 2000), 47.

this is an area for further research. Michael D. Greenberg has documented the use of low bowed basses in France in his excellent article ‘ Perfecting the Storm’.[92]

[92] Michael D. Greenberg, *Perfecting the Storm; The Rise of the Double Bass in France,1701-1815,* (The Online Journal of Bass Research, Volume 1, July 2003, http://www.ojbr.com/vol1o1.html.)

Conclusion

There is little information available specifically relating to the early history of the violone. Apart from Planyavsky's work [93], most of the information on low bowed string instruments which could be termed violones is spread around papers, sections of books and on internet sites and is not always easily accessible. Opinions today among musicians and musicologists as to the use, nomenclature and tuning of the violone vary considerably. One can sympathize with performers of the violone being uncertain about which choices could be considered 'historically informed'.

Despite this, I was surprised to find quite a consistent picture gradually emerge while piecing together the information which is available. A type of large bowed stringed instrument, which could be called a violone, appears to have first been mentioned at the end of the 15th century in Rome, played by Spanish musicians. A similar type of human sized viol was already pictured at the beginning of the sixteenth century in southern Germany. By 1570 in Italy, two types of violone are identifiable which were being built: the viola da gamba shaped model and the violin shaped type that still had viol characteristics. Around this time, the roped catline string appeared. The violones were used in sacred music in Italy, as part of the continuo group and were probably also used in solo bastarda music. They also functioned as the lowest member of the viola da gamba consort in secular music making. During this period, there were two main sizes with corresponding tunings being used, the very large violone tuned in DD or with Praetorius's other large bass tunings, and the slightly smaller GG violone. We see few references to the DD violone and it is unlikely that it was widely used. The GG violone on the other hand, is referred to in many treatises and seems to have been in use from the early 16th to the middle of the 18th century. Both types had five or six strings and were tuned like the viol family in thirds and fourths. They played either at pitch or doubled at the octave below when necessary, as the theorbo and keyboard instruments did. The violones could play the lowest part in music performed by both the viol and violin or da braccio families.

Around 1660 in Italy, when wound strings began to be used, the violone began to be played more as a 16' instrument doubling the 8' octave. This gradual process was much slower in the surrounding countries than in Italy. In Germany and Austria, the six-stringed GG or AA violone continued to be used well into the 18th century, alongside violones with fewer strings playing solely at the 16' octave.
It is very possible that the string length of the six-stringed GG violone was normally greater than we consider usual today. This violone tuning is mentioned the most in treatises.

The large octave doubling violone with four strings, sometimes tuned an octave below the violoncello, but probably more often retaining the fourths tuning, began to be used at the end of the 17th century.

[93] Planyavsky, *The Baroque Double Bass Violone.*

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