

## **Bach's Violone: a 16' double bass of sorts or a 8' C-G-d-a bass fiddle?**

On Bach's instrument indications (instrument terminology) neither the sources of his works nor the musicological interpretation of these sources offers sufficient clarity: frequently one finds in Bach literature anachronistic, contradictory explanations and dubious, apodictic statements.

Yet after two centuries of Bach performances people might think it unnecessary to offer a convincing argumentation in order to establish the time-honored truism that Bach's *Violone* was a double bass.

Zelter, Mendelssohn's teacher, was perhaps the first to utter this opinion: in the venerable 1714 autograph Bach score of cantata 182 he noted in the basso continuo staff: '*Contrab. pizz.*'.

Instrumentation and voices are indicated by Bach's autograph words in the heading of the score: *Concerto...a 1 Flaut. 1 Violin 2 Viole | Violon S.A.T.B. è Cont.*

The two lowest staves in movement 1 contain nearly identical notes: the heading makes clear that the fifth staff is for the '*Violon*' and the sixth staff for the figured bass (=Basso *Continuo*).

In the fifth staff, containing the *Violone* notes, Zelter scribbled:

*'Violoncello pizz.'*

Bach's indications '*senza l'arco*' (in the parts) and in m. 17 '*coll'arco*', however, mark the beginning and the end of the pizzicato of the *Violas* and the *Violon*, not of Zelter's 'Contrabaß' introduced in the bottom staff.

No Weimar part for *Violone* has been preserved. Stimme nr 7 [St.47/13] is a partly autograph *Violoncello* part for cantata 182 that contains the same notes as the fifth staff of Bach's score, the *Violon* staff. This terminological incongruity within the original performance material of one work might be significant: in 1714 Bach used the term *Violon* for the instrument that others called *Violoncello*; scribe 'Anonymus 1 Weimar' labeled Stimme nr 7 [St.47/13], in which he copied Bach's *Violon* notes from the fifth staff in the score, '*Violoncello*'. Bach did not 'correct' this.

Stimme Nr 23 [St 47/14] *Violono* [korr. aus *Violino*] was written out for a 1728 performance of cantata 182. Prof. Dr. Christoph Wolff, now the director of the Leipzig Bach-Archiv, stated in 1994/95 about this part: '*Hinzufügung des 16'-Violone*' (Ton Koopman's Vol. 2. CD-booklet, p. 34). However, when he edited this cantata for the 'Neue Bach Ausgabe' in 1998, he wrote in the Kritischer Bericht (critical commentary), p. 111: '*Nahe liegt, daß bereits 1724 ein Violone mitwirkte und eine entsprechende Stimme 1728 aus irgendeinem Grunde ersetzt werden mußte.*' In the NBA score of the 'first Weimar version' Wolff had '**Violoncello**' notated for the fifth staff: in doing so, he preferred the terminology of scribe 'Anonymus 1 Weimar' to the terminology of the composer himself who in the heading of the Weimar score had fixed a *Violon* as the bass string instrument.

A comparable discrepancy within the sources of a single cantata can be seen in a performance part for cantata 132: 'Fragment einer Originalstimme mit autograph. Titel auf Blatt 1 recto:

*Concerto â / 1 Hautbois / 2 Violini / 1 Viola / Fagotto / **Violoncello** / S.A.T. è Basso / con / Continuo / di / G.S. Bach;*

Blatt 1 verso: Überschrift ***Violone***, anschliessend die *Violone*-stimme der Kantate bis nr 3 , Takt 44.'

A bass fiddle tuned C-G-d-a might in Bach's day have been called *Violone*. in 1729 the *Vocabulario degli Accademici della Crusca* stated: *Violone*: viola with low sound that is also called *Basso di Viola*, and *Violoncello*, if it is of smaller size. (*Violone: Viola di tuono grave, che si dice anche Basso di Viola , e Violoncello, quando e di minor grandezza.*).

'The' *Violoncello* in Bach's environment – German documents from 1708 to 1758 usually speak about *Viola da spalla / Schulter-viole* in their *Violoncello* entries - might have been relatively small (*di minor grandezza*).<sup>1</sup>

Comprehensive and intensive research of the bass lines of Bach's concerted music have not brought to light any evidence that contradicts

my idea that **Bach's *Violoncello* and *Violone* might have differed in size only, not in tuning.**<sup>2</sup>

### **I. A seemingly subversive, but plausible hypothesis:**

This theory (as worded at the end of the preceding section) removes from (the harmonic etc. "substance" of) Bach's music something extrinsic, viz. the addition of 16' string sound, but alters nothing in the written octave positions notated by Bach in preserved sources.

For a clear, efficient sight-reading of the sometimes complicated continuo lines of Bach's works, the tuning C-G-d-a is much better than any of the countless tunings (in fourths + third or second) that are mentioned for *Violone*, *Contra-violon* or *Kontrabass* in treatises from 1650 to 1881.

The idea that the *Violone* in Bach's oeuvre was a big 16' instrument tuned in fourths (+ third) was the inevitable consequence of that other paradigm that dominated early and later Bach research: the idea that Bach's *Violoncello* was nearly identical to the 'vertical' 'cello of a later time. For this new instrument Boccherini and the two Duports had meanwhile developed a virtuoso technique that brought the instrument a degree of esteem enabling it to thoroughly eclipse its predecessor.<sup>3</sup>

### **II. The many, speculative elaborations of the accepted *Violone* theory.**

Since Zelter's time there has been extensive speculation and hot debate about all thinkable *Violone* tunings that could be used in Bach's works. The most recent argumentation was published by contrabassist David Chapman.<sup>4</sup> He writes (p.227) concerning the *viola da gamba* in the Renaissance and the 17th century: '*it seems clear that matching the tuning to the central tonality of a piece was an important consideration to the Renaissance musician.*' Because Chapman regards double basses and *Violoni* as members of the '*viola da gamba family*', he applies this idea of tonality-oriented tunings to Bach's *Violone*.

Chapman states: *'The low C's in Concertos 1 and 2 could be construed as indicating a violone tuned C1-F1-Bb1-D-G-c, which would provide maximum resonance to the F major tonality of both pieces. [...]*

*However, in Concertos 4 and 5, the lowest note to be found is D1.*

*[...] the low C1 is avoided. The keys of these pieces, G major and D major respectively, seem to indicate a violone tuning of D1-G1-C-E-A-d, thereby precluding the use of the low C1.'* [...]

*'This concept could also go a long way towards explaining the baffling low Bb2 in Concerto 6; scordatura being common practice, we could postulate a tuning of Bb2-F1-Bb1-D-G-c.'*

The fact, however, that this tuning is not mentioned in a single source from the period, weakens the validity of Chapman's solution.

The very last note in the last movement of Brandenburg Concert 6 - at least in Bach's score, our only source! - indeed is a low Bb2 in mm 45/110 written in the staff for *Violone è Cembalo*: this unique 'baffling low Bb2' for *Violone* can be seen as one of many deficiencies in Bach's score (see Festschrift Max Schneider, p 132 ff.). Did Bach notate this note in a separate *Violone* performance part as a  ${}_1B_b$  or, one octave higher, as a Bb? Let us look closely at m 45 in Bach's autograph: in Movement 3, mm 45/110 he had already put the fermata in all staves (twice in staves 1, 2, 4, 5: both below and above the notes); then he proceeded to write the fermata in the middle of the bottom stave, so that there was hardly enough space left to notate a Bb.

There is only one partbook that contains a *Violone* note below C: a  ${}_1B_b$  in the *Violone et Organo* partbook of cantata 63. This 'Chorton'  ${}_1B_b$  which is not present on the organ keyboard, sounded as high as the 'Kammerton' C of the remaining string instruments. In this cantata the *Violone* could play a note that exceeded the range of the keyboard instrument (*Organo*) and in Brandenburg Concerto 6 the keyboard instrument (*Cembalo*) played a note that was too low for the *Violone*. In both cases there is only an apparent discrepancy between notation and obvious realization.

Another low 'continuo' note is found in the Fagotto part in BWV 150: the lowest note for the *Fagotto ex D* was a Choir pitch (*Chorton*) AA which is as low/high as a *Kammerton C*.

It is remarkable that Chapman suggests no violone tuning for Concerto. 3: the notes of the 12 / 8 Allegro last movement are extremely difficult in any imaginable 16' tuning.

Laurence Dreyfus<sup>5</sup> postulated - at least in his 1987 book - Eisel's *Violone Grosso* (1738) for the Concertos 1 and 3. This four stringed instrument - according to Eisel and the Stößel brothers (1737) - was tuned by most players in fourths: C1-F1- Bb1- Eb, a tuning that doesn't work well for the G major key of the third Concerto.

A statement by Jon W. Finson reads: *'If we tune the whole four-stringed bass down a major third (to CC FF BBb Eb, an odd tuning at any rate), passages like that in Ex. 3 (=Brand. Concerto III, 3, mm 1-3) must be played at the end of the finger-board where speed and accuracy are notoriously difficult and rarely achieved.'*<sup>6</sup>

### **III. Significant emergency solutions in modern Bach practice.**

Among the sources of Bach's church music there are no more than 17/18 partbooks originally indicated for *Violone*; seven are pre-Leipzig, while ten are from the period after May 1723, falling thus in his Leipzig period. They contain 92-96 cantata movements with *Violone*-music.

Many of these cantata movements are recorded on Cd by famous ensembles, but in many cases the *Violone* notes are performed on 'baroque violoncello'. My questions addressed by email to the conductors about their motives for deviating from Bach's prescribed instrumentation have remained unanswered...

After a performance of the Matthäus-Passion I asked one of the two double bass players about the tuning of his lowest string; he said: *'D1, but C1 for the last movement.'* The double bass player of a famous HIP group told me that he usually tunes his instrument to C1-A1-D-G.<sup>7</sup>

### **IV. Inconsequences and discrepancies.**

a) One of the parts in Cantata 78 is *Corno* Stimme No. 5, which contains on the recto side the *Corno* part for movements 1 & 7: for a later performance (*in den 1740er?* Kobayashi, BJ 1988) Bach composed a *Violone* part that he himself notated on the verso side of the *Corno* part. It is a pizzicato part in quarter notes for movement 2. In the sources of this cantata there is no indication of further *Violone*-parts besides this simple minipart: we may assume that the **more challenging** Bc-music of the first movement of BWV 78 was performed by player(s) of a different instrument (e.g. *Violoncello*) and not by a second (player of a) *Violone*. If there was an able Violonist available, capable of performing the Bc in the first movement, there would have been no reason to give the simple special *Violone* (Grosso) part to another ad-hoc Violonist. It seems improbable that in this performance another *Violone* player than the '*Cornist-Violonist*' was present. The 8th-notes in movement 2 of cantata 78 are given usually to (baroque) cellists. Most conductors leave out or include their '*Violone*' rather arbitrarily in various cantata movements. This does not reflect the organization of Bach's continuo parts that normally contain the Bc notes of **all** movements. Moreover, it turns out that all original partbooks for Bach's performances offer precise information about change of instrument, '*tacet*' for the next movement(s) etc.

b) As stated, Bc music that according to original parts was played on *Violone*, now often is performed on 'baroque violoncello'.

c) sometimes on HIP-CD's a later version of a cantata movement is added as an 'Appendix': movements like BWV 18/3, 42/6, 132/2, 182/6, which are difficult for the modern violone are avoided. Other difficult parts like movements 1 & 9 of BWV 117 are played in a simplified '*Violone*' version.

### **V. The octave positions chosen by Bach.**

Bach's bassoon parts are/go sometimes one octave higher, and occasionally one octave lower than other '*continuo*' parts (see cantatas No. 21, 31, 132, 150 and some bars in the first Brandenburg Concerto).

Again and again Bach is very fastidious concerning the octave position of bass notes: he often fixes high and low position exactly; there are many / numerous cases of diverging, converging, crossing octave jumps, cases of a **written** two-octave distance between two continuo instruments, of octave doubling in a harpsichord bass etc.

Weihnachtsoratorium No. 39 is a 'Parody' of BWV 213, 5.

In mm 104-106 Bach changed the octave position: the literal transposition would give the Bc pitch series g-g'-c'-b-a | g-a-b-g | c' etc., but Bach -----notated/wrote g-G-c-B-A | G-A-B-G | c etc.

In mm 108-109 Bach did not transpose literally (d-g-d'-e'- f#' | g' ), but -----notated d-G-d- e - f# | g etc.

Octave treatment of the Bc in Bach's scores of his harpsichord concertos sometimes is striking: BWV 1052 / 1, mm 28-33, 44, 93, 113-118, **134-140**, 181-184, in movement **2**, **mm 50-53**; the crossing octaves in the first bars of BWV 1053 / 1, the octave positions mm 76, 87-92, 179-182, in movement 3, mm 313-318.

## **VI. C as lowest pitch in Bach's continuo parts.**

Bach seems to maintain always C, which is the bottom note of 'the' cello, as bottom limit of the 'continuo space'.

Only in very exceptional cases there is a note below C in Bc parts, e.g. in wrongly transposed organ parts.

For the rest Bach's Bc parts never go below C. In so-called 'parodies' in a tonality that differs from that of the original version and in sequences, C as a border line is always respected. The GG-g Violone, if playing at written pitch, could/can produce notes below C easily, down to GG. Why did Bach not use this possibility for consequent transpositions and sequential progressions?

Because he had no GG-g Violone available? Why did he never write a note for its GG string, whereas he always wrote notes for all strings of the other string instruments?

a) In sequences like those in Matthäus-Passion / 1 in which the vocal bass is doubled by the continuo one octave lower, these 'admissible' octave parallels are not continued/pursued consistently below C: see/compare mm 19, 24, 26, 34, 61, 86, 89.

b) Movement 4 in Missa BWV 233, the '*Qui tollis*' in g minor, is a parody of movement 3 of cantata 102 in f minor. The f minor Bc in 102 / 3 descends to C (m 20); the g minor Bc in 233 which, if transposed note for note, would be higher everywhere, also goes down to C (mm 33, 48).

c) In the Weimar Choir Pitch version of cantata 199 C is the lowest note. In the later Chamber pitch version (which sounded about as high, but according to the nominal written pitch seems to be one whole step higher) one would expect D (as exact transposition of the Choir Pitch C) to be the lowest written note: in movement 8, m 18, however, Bach wrote a fermata on C.

d) Movement 2 of cantata 12 is the f minor model of the e minor *Crucifixus* in the B Minor Mass: an **exact** transposition of the downward octave jump c-C which occurs 12 times, would in the e minor *Crucifixus* have given an octave jump  $B^b - {}_1B^b$ .

e) In the g minor harpsichord concerto BWV 1058 Bach used the a minor music of the violin concerto BWV 1041. The downward transposition stops at C as bottom limit of the continuo instruments.

If Bach had had available the GG-g Violone mentioned in the Lexica of his period which could play/sound all pitches between GG and C, it is strange that Bach did not use the (restricted) 16' possibilities of this instrument, while/whereas he in 233/4 and the Leipzig Chamber Pitch version of 199 aimed at the C? Why did he stop at C as a magical limit?

## **VI. Practical aspects.**

Week after week Bach's freshly written Bc lines of his cantatas were played without much rehearsal time, virtually by sight reading. In contrast to the modern highly specialized players of baroque cello and baroque violone the musicians in Bach's premières probably were not specializing players of one instrument, trained during many many years (compare the

Cornist-Violonist in BWV 78 /2 and the violinists-recorder players in BWV 244/ 19.

In some 'choir' passages Bach wrote a Bc that goes parallel with the bass voice one octave lower. Sometimes these passages, if sounding in three bass octaves, tend - especially in a fast tempo - to become unclear, to say the least: low notes suffer (profit?) from a longer reverberation/echo, so that one 16' note drowns the next 16' note.

Where - in cases of crossing voices - a 16' Violone doubles the Bc notes, a notated root position is changed.

Increasing the resonance of subbass instruments as advocated by Chapman, means that instrumentalists of other groups might feel inclined to increase their sound volume/level or that they have to live up to (to accept the risk) the danger of being overpowered by 16' sounds.

In some performances the now usual extra 16' octave in the continuo group results at the entry of the bass in a bass sound which is disproportionately heavy. Is there any compositional motive to have the bass part as only part of the ensemble played in more than one storey/floor/level?

The bassoon has bass function to the three higher reed instruments in mm 48-67 in movement 1 of the fourth Overture BWV 1069: it would be an odd idea to add a contra bassoon here; but why do conductors cherish the time-honoured idea that in mm 128- 147 the violins and the viola need the double bottom of an extra 16' line that Bach did **not** notate?

In passages where the viola has bass function, doubling the bass notes **an octave lower** with Vc or bassoon would be strange and superfluous. In violin and harpsichord concertos the viola notes are sometimes doubled **in the same octave** by the continuo instrument or by the left hand part of cembalo solo: in the second movement of the g-minor cembalo concerto BWV 1058 which is a parody of the a minor violin concerto BWV1041 and BWV 1049 and its rearrangement, BWV 1057.

Bach clearly chose octave positions deliberately.

## VIII. Deceptive links between handbook statements and music.

From the primary sources of Bach's oeuvre no convincing philological or musical proof can be extracted for the hypothesis that Bach's Vne was a 16' instrument that should double continuo notes one octave below written pitch. This 16' theory is based exclusively on a one-sided interpretation of the term *Violone* and on the ever increasing preferences of the post-Bach era.

In fact Fuhrmann (1706), Johann Christian & Johann David Stöbel (1737) and Eisel (1738) mention *das 16füßige Contra C* in connection with the term *Violone (Grosso)*; Fuhrmann even states (p 93) '*soll der Violone oder Violone Grosso [...]beym Musiciren [...] immer mitgestrichen werden.*'

These texts seem to produce ample evidence for the idea that Bach used such a *Violone Grosso*. No wonder that renowned Bach researchers and Bach interpreters assume unanimously that the Bc line of Bach's works nearly always should be doubled at the lower octave by a 16-foot *Violone*. Although for Cantata 184 no *Violone* part survived, the editors Dürr and Mendel wrote (p. 176 of the *Kritischer Bericht NBA I/ 14a*): '*Trotzdem hat die Besetzung mit Violone, .....für uns den Charakter unzweifelbarer Gewissheit.*'

In the preface to *NBA I / 9* Dürr wrote about Cantata 31: "*Eine Stimme für Violone ist nicht erhalten; doch kann nach unserer Kenntnis (= Vermutung?) der Bachschen Kantaten-praxis kein Zweifel darüber herrschen, daß dieses Instrument mitgewirkt hat.*"

Alfred Dürr (*Die Kantaten*) p. 77-78 stated: '*Auch der Kontrabaß (Bach: "Violone") sollte offenbar nach Bachs Leipziger Praxis in allen Sätzen mitwirken.*'

and p 74: '*der Violone (ein im Ton schwächeres Instrument als unser Kontrabaß, vermutlich eine Oktave tiefer gestimmt als das Violoncello)...*'

In spite of all these unanimous opinions there is a base for some doubt.

a) The suffix *grosso* does not necessarily indicate a different instrument; it can define the role ('in ripieno' / optional?) played by the instrument in the ensemble. Just as parts labeled *Violino primo* and *Violino secundo* call for the same treble violins with the same tuning and number of strings, exactly so parts labeled *Violone* and *Violone Grosso* can indicate the same instruments. For both Brandenburg Concerto 1 and 3 Dreyfus assumes that Bach wanted Eisel's '*Violone grosso*' in CC, but for Concerto 1 Bach's score notes *Violone Grosso*, whereas the score of Concerto 3 simply calls for a *Violone*.

For Concerto 4 (where Bach indicated: '*Violone in Ripieno*') and for Concerto. 5 (indication '*Violone*') Dreyfus assumes the six-string DD-d *Violone*.

For Concerto 2 (indication '*Violone in ripieno*'), for Concerto. 6 (indication *Violone*) and for Farlau's *Violone*-part in the early version of Concerto 5 (BWV 1052a)<sup>8</sup> Dreyfus assumes that Bach wanted a six-string GG-g *Violone*.

The word '*Grosso*' in "Concerto *Grosso*" and in Telemann's designation "Violino *Grosso*" in his 'Konzert für Flauto dolce, Viola da Gamba und Streicher' (Darmstadt, Mus. 1033/59) and in the *Concert a 7* in *Musique de Table, deuxième production* is *grosso modo* a synonym for '*in ripieno*' (A. Dürr, Die Johannes-Passion, p 22-23, footnote, concerning the *Bassono **Grosso*** in Bach's Johannes-Passion).

In BWV 241, Bach's arrangement of a Kerll-Sanctus there are two autograph Bc string-parts: one labeled *Violoncello senza Violone*, the other *Violone Grosso*. The heading of the Vc part seems to warn the cellist: 'your part deviates from the *Violone* part'. Although the suffix *Grosso* is absent from the heading of the *Violoncello* part, yet it clearly refers to the other string bass part labeled '*Violone Grosso*'. And of course " *Violoncello*

*senza Violone*' is not a name for a special cello type, just as in BWV 213 / 11 a *viola certata* certainly indicated a 'normal' viola.

The title page of Bach's score of BWV 241 (Dreyfus, p. 47) notes: '*Violoncello*' | '*Violono*'. On that title page in spite of want of space Bach scribbled '*d'Amore*' after '*2 Hautb.*' to specify the 2 oboes. After '*Violono*' Bach had enough space to add: '*Grosso*'...He didn't: so the same instrument must be meant, whenever the sources of BWV 241 note: '*Violone Grosso*' or '*Violone*'. Information about the word pair '*Violone Grosso*' in lexica is clearly incomplete and confusing.

After 12 bars playing unisono with the *Violone* in bar 13 the *Violoncello* jumps up to an e' and the *Violone* descends to an E: if the *Violone's* real sound should be an EE, we again would hear an *unlikely three-octave gap*, just as in bar 56 of the first movement and in bar 33 of the second movement of the sixth Brandenburg Concerto, in Concerto 4, movement 1, m 31, Concerto 5, movement 1, m 134 and in many, many other places in Bach's oeuvre.

Whereas in Concerto 6 / 1, 56 the cembalo plays its D in a theoretically very broad ravine between the supposed DD of the *Violone* and the d' of the *Violoncello*, the cembalo in V,1, m 134 has to play a d': should the cembalist bridge the gap between the cembalo d' and a hypothetical DD of the *Violone* by playing some chord underneath the d' ?

**IX.** Summary: there is no historical base for adding a *double* bottom to Bach's oeuvre by the now usual *double* bass-like instruments ( $\neq$  Bach's *Violone*).

This bold statement may send shock waves through the guild of professional contrabassists, the 'grex tremendae gravitatis'. They, because of their vested interests in the problem, may feel inclined to ignore my arguments or dismiss them as self-evidently nonsensical. In my above text I tried to beat a new path through the thicket of (seemingly) familiar data.

Unbiased readers, however, are invited to trace weak points in the above argumentations and to signalize evidence that points towards a 16' Violone to be used in Bach's works and that might have escaped my attention.

## **Appendix I: Facts and questionable theses.**

First two unquestionable facts:

- 1) the vast majority of Bach's continuo parts descends to C or C#.
- 2) because the lowest notes of the contra octave not always can be played by the differently tuned double basses and violoni, double bass players already during two centuries make their own ad hoc decisions. Such arbitrary adaptation of bass notes to the limitations of the double bass is assumed by Carl Bär also for Bach's performances: without producing any evidence he stated:

*'Dieses gebrochene Spiel war von Bach bis Beethoven selbstverständlich, und es gehörte zur Routine jedes Kontrabassisten, derartige Stimmunterschreitungen [...] seinem Instrument an zu passen.'* <sup>9</sup>

For many people, especially double bass players, the desirability or indispensability of 16' doubling of the baroque Bc, preferably down to contra C, is an axioma that needs no proof.

So David Chapman (note 4) about the Baroque period: *'the growing need in orchestral situations for an extremely agile and flexible contrabass instrument. [...]*

*the low registral needs of many of the orchestral works of Bach and his contemporaries. [...]*

*It appears that the six-string violone, the contrabass member of the viol family, was Bach's instrument of choice for his continuo bass. [...]*

*However, the pre-existing preference for sixteen-foot transposing instruments throughout most of Europe quickly relegated this instrument (= the six-string GG-g Violone) to a role of reinforcing the violoncello in the continuo group, especially when the cello assumed a quasi-concertato role [...]*

*certain practices by viol players in the Renaissance and, presumably carried over into the orchestral practices of the Baroque period by the players who were sought out to provide this sixteen-foot sonority. [...] Utilizing a viol to fulfill such an important and versatile function as that of the sixteen-foot member of this new style of orchestral continuo group would have seemed natural for Bach and his contemporaries. [...] It would appear that, while the sixteen-foot register was a very important consideration for these composers, resonance within the key of the piece was also an important concern, [...]*

*Too often in the discussion of register in the bass parts of the eighteenth and nineteenth centuries, it is suggested that composers who are otherwise renowned for their attention to detail in matters of instrumentation, range, and timbre would somehow, when it came to writing the often all-important double bass parts, suddenly decided to write notes which they knew the instruments of their day could not perform, **leaving it to future generations to solve these problems**'*

My comment: did the future generations themselves create these problems?

Jon W. Finson (note 7) states about the Violone in the Brandenburg concertos:

*'The violone, where it plays, essentially doubles the violoncello note for note. It **seems improbable** that Bach would have written an extra part for an instrument which doubled the 'cello line in the same octave, and it appears more logical that the violone line is notated with the assumption that it will automatically be transposed down an octave, as still with contra parts in the orchestra today. [...] the solid foundation of tone which Bach evidently intended to rest an octave below the 'cello.'*

Comment on Finson's statements: appearances are deceptive, because scores served as source for copying the separate performance parts.

Although often the vocal bass part and the Bc were identical, yet they were written in full in the score to prevent mistakes in the copies. Exactly so Bach wrote in the third Brandenburg Concerto the identical notes of *Violoncello* I, II, III and *Violone* completely in four staves: out of these four staves the four parts could be copied in a more or less mechanical way. Therefore it seems to be more logical to expect that the deviating octave position which now is postulated for *Violone* would have been fixed with a clear indication by the composer Bach who always fixed the octave position in the bass realm.

### **Appendix II: remarkable statements.**

On p. 82 in Nr XXIII (1970) of *The Galpin Society Journal*, Francis Baines states: '*The violone of Corelli's sonatas is unquestionably a 'cello, and so is Handel's violone, as a glimpse of the score of Il Pastor Fido (first version= Oct 1712) will show.*'

[...](p 84)There is mention of a *viola da contrabasso* in Italy as early as 1529, and a little later Ganassi gives the instrument of exactly that name a G-tuning; only a fifth below the bass viol. Gerle, Zacconi, Cerone and Praetorius all agree that the lowest consort bass is in G, and Banchieri goes further by saying that the *violone da gamba* in G is the true bass of the consort. Nearly a hundred years later Talbot is still asserting that the double-bass viol has a G-tuning. And so it is not surprising that when Ortiz and Gibbons compose a part labelled 'contrabasso', it should fit such an instrument perfectly and never descend too low or ascend too high. 'Contrabasso' could not have had the same meaning then as it does now. Bass singers in Spanish churches were called 'contrabaxos'; the ordinary bass of the French consort was known as the 'basse-contre'.<sup>10</sup>

The last section of Baines's article (1970) reads:

*'What instrument lurked in the corner of the organ gallery at the Thomas-Kirche?*

*A 'brummende' violone or a contrabasso da gamba? The latter could have sounded superb beneath the other viole da gamba in the Actus Tragicus, but the former would have given better support to the chorus, trumpets and drums. The bass line, largely founded on dance rhythms was as suited to the cello as it was unsuited to the viol.*

Already in 1971 Henry Burnet in his article 'The bowed instruments of the Baroque Basso Continuo in Italy and France.' in *Journal of the Viola da Gamba society of America*, VII (1971), stated p. 31:

*'Naturally, an instrument playing at 16 foot pitch [...] - whether a double bass gamba or a double bass violin - would totally upset the delicate balance of a small ensemble, creating too wide a distance between the bass and the upper parts. Then again, to play these often complicated bass parts at pitch, on an instrument of 16 foot pitch, would be absolutely ludicrous not to say extremely difficult to execute.'*

Forkel discussed unacceptable big distances in the harmonic texture in a 1782 text.<sup>11</sup>

In 1789 Quantz still warns against an extra octave gap between high and low.<sup>12</sup>

In France also objections were voiced against a too big distance between bass and higher instruments: Rousseau (*Dictionnaire de Musique* 1768/R 1969) s.v. Virole (= viola) wrote: *'La Virole sert à lier les Dessus aux Basses, & à remplir, d'une manière harmonieuse, le trop grande vide qui resteroit entre deux. C'est pourquoi la Virole est toujours nécessaire pour l'Accord du tout, même quand elle ne fait que jouer la Basse à l'Octave, comme il arrive souvent dans la Musique Italienne.'*

If Rousseau's statement is correct, then in Italian music the bass lines sounded in three layers/storeys, provided that the now usual 16' doubling was common practice in those days: quod non liquet et adhuc est demonstrandum.

In 1727 Johan Helmich Roman published in Stockholm his 12 'Sonate a

*flavto traverso, **violone** e cembalo'*. Can this **Stockholman** 1727 terminology be construed to prove the possibility that at least there and then the term *Violone* indicated a C-G-d-a cello? Roman's *Violone*-part goes from C to a', again exactly Walther's *Violoncello* range etc.

About *Violone* Jacob Wilhelm Lustig who had studied with Mattheson, stated:

*De Violone, of CONTRABAS, van 16 voet, tot meerder statigheid. Die grootpa vergenoegt zich, deftigheids halve, met louter hoofdnoten, latende optooiselen, der jonge wereld over. De gryzaards onder haar, hebben zes snaaren, gesteld in contra G, groot C. F. A. d. g. Het zal misschien naar men zegt (5) paarde-werk weezen, als iemand, drie, vier uuren achtereen, tegen dit schrikdier moet kampen*

My English translation:

*The violone or contrabass, of 16 foot, to more stateliness/solemnity. This granddad contents it/himself, for the sake of dignity, with only main notes (hoofd=head), leaving the ornamental ones to 'the young world', The grey-haired men amongst them have six strings, tuned to contra G, great C. F. A. d. g. It might be horse labour, as is said, if one has to fight for three, four hours on end with this terror beast.*

### Appendix III:

Brandenburg Concerto 4, BWV 1049 and BWV 1057: a case study.

Brandenburg Concerto No. 4, BWV 1049: Bach's *Violone* ***in Ripieno*** & *Violoncello*.

Bass notes are played in combinations of various weight: from the lightest (*Continuo* + *Viola*) to the heaviest (*Continuo* + *Violoncello* + *Violone*). The step from the lightest combination (*Continuo* + *Viola*) to the heavier one (*Continuo* + *Violoncello*) is not a big step; of course the next step involves the addition of a bigger instrument: but why should this instrument sound in the 16' region? The contrast between steps 2 and 3 would be less big, if Bach's *Violone* was a C-G-d-a 'grosse Baßgeige' and his *Violoncello* a C-G-d-a 'kleine Baßgeige'.

Some observations:

- 1) The notes that Bach wrote for *Violone* in this work are - apart from the numerous rests - nearly always identical with the *Violoncello/Continuo* notes, but are partly written in deviating / divergent octaves.
- 2) The *Violone* plays only where Bach wrote notes for the 'Concertino' (= *Violino Principale, due Flauti d'Echo*) and the other '*in Ripieno*' instruments: the *due Violini* + *Viola*. The NBA wrongly suppresses Bach's modifier '*in Ripieno*' at the *Violone* staff. Because of the range (C-b') and the presence of written double octaves (Mvt1, 311, 315, 319) we may assume that the *Continuo* notes were to be played with a *Cembalo*.
- 3) In various sections the *Cembalo* notes are variously identical with the *Viola*, *Violoncello* or *Violone* notes.

4) in Mvt 1, m. 10 - m. 13, m. 66 - m. 69, m. 140 - m. 143, m. 188 - m. 190 Vne & Vc are silent and *Viola* + Cembalo play the bass.

5) *Violoncello* and *Continuo* Cembalo share the same notes in Mvt 1, 1-9, second 8th-note in 13-29, 35-first note in 39, second note in 41-65, third 8th-note in 69- second 8th-note in 80, 81-124, 137-139, from third 8th-note in 143 - first note in 161; cembalo plays sixteenth notes in 161, 163, 165-173, 179 & 182-183; for the remaining bars between 161-187 cembalo and *Violoncello* play the same 8th-notes. Mm 191-194 and 251: different octave positions, 195-250 and 253-292 again *Violoncello* = Cembalo. In 293-312 Cembalo plays 16th-notes (partly with the *Violoncello*).

In these measures, as already mentioned, the *Violone* joins in only where soloists + orchestra are active, but the *Violone* notes are written variously one (or two) octave **higher or lower** than the notes for the other bass instruments.

Further evaluation:

The first 3 bars start with three unisono **descending** notes *g-d-G* for the three bass instruments, followed in m 4 by a *g* for Cembalo & ***Violoncello***: in m 4 where the other *Ripieno* instruments and the *Violono Principale* is silent, the *Violone* has to be silent as well.

At the second entry (mm 7-10) the two *Fiauti d'Echo* swap parts and the three continuo instruments play an **ascending** line *G-d-g*, concluded in m 10 by a *g* 8th-note for *Continuo* + ***Viola***. These differentiations suggest that Bach wanted special effects of sound combinations and timbre.

Already in mm 15-17 we see Bach's striking, playful octave differentiation in the bass parts. The mm 351-353 preceding the *Da Capo* of m 10 differ a little from mm 7-9: the ascending and the descending lines of mm 1-3 and 7-9 are now combined: Vc +Cembalo play *G-d-g*, while the *Violone* plays *g-d-G*. Wouldn't the contrast with the modest Cembalo + *Viola* in m 10 be a little too big, if Bach's *Violone* was a big 16' double bass-like instrument?

Bach applies different octave movements in the bass region: contrary/crossing, dissilient-converging. This play gets lost or at least is changed, if one of the instruments, the 'Violone', is interpreted as a transposing 16' instrument.

In Movement 1 Bach notated for *Violone* on only **one** 8th-note a note that is **two** octaves higher and on **42** 8th-notes notes that are **one** octave **higher** than the *Violoncello* notes. The use of a 16' *Violone* results for these 42 8th-notes in a unison that obscures/annihilates Bach's written octave positions.

On one 8th-note in Movement 1 Bach notated for *Violone* a note that is **two** octaves higher and on 50 8th-notes a note that is **one** octave **higher** than the *Continuo* notes. The use of a 16' *Violone* results for these 50 8th-notes in a unison that destroys Bach's written split octave positions.

On 41 8th-notes in Movement 1 Bach notated for *Violone* a note that is **one** octave **lower** than the *Violoncello* notes. For these 41 8th-notes the use of a 16' 'Violone' causes a distance of two octaves, which obscures/changes/spoils Bach's written octave positions.

On 41 8th-notes in Movement 1 Bach notated for *Violone* a note that is **one** octave **lower** than the *Continuo* notes. For these 41 8th-notes the use of a 16' 'Violone' causes a distance of two octaves, which changes the **one** octave distance that Bach seems to have meant. On the first 8th-note of m 31 Bach's *Violone* note is even **two octaves lower** than the *Continuo* note. Does a 16' *Violone* introduce here Dreyfus's '*unlikely three-octave gap*', which can be construed to indicate inevitably the use of an **eight foot Violone** (with bottom string tuned to C)?

For answering this suggestive rhetorical question, please check the correctness of the following observations:

(Legenda for Movement 1: Vne=*Violone*; Vc= *Violoncello*)

15a= first 8th-note in bar 15.

155abc= all three 8th-notes in bar 155).

In Movement 1 Bach wrote *Violone* notes one octave **higher** than **Violoncello** notes on: 15a, 17a, 25a, 80 c, 202 c, 203a, 215a, 216a, 217a, 218a, 219a, 221 c, 222a c, 223a c, 224a c, 225ab, 226a, 235a, 237a, 239a, 242a, **two octaves higher on** 243a, 244 bc, 245a, 246 bc, 247a, 248 bc, 249a, 250a, 341abc, 342ab, 351a.

Vne once two octaves higher and 42 x one octave higher than Vc. Do these facts suggest a 16' 'Violone'?

In Movement 1 Bach wrote *Violone* notes one octave **higher** than **Continuo/Cembalo** notes on: 15a, 17a, 25a, 162 b, 164 b, 165a, 193a, 202 c, 203a, 215a, 216a, 217a, 218a, 219a, 221 c, 222a c, 223a c, 224a c, 225ab, 226a, 233abc, 234ab, 235a, 237a, 239a, 242a, 244 bc, 245a, 246 bc, 247a, 248 bc, 249a, 341abc, 342ab, 351a, 361a; **two octaves higher than Cemb. bass** on 243a.

Vne once two octaves higher and 49 x one octave higher than **Continuo/Cembalo**. Do these facts prove that Bach wanted a 16' 'Violone'?

In Movement 1 Bach wrote *Violone* notes one octave **lower** than the *Violoncello* notes on: 20 bc, 21abc, 22abc, 23a, 31a, 125a, 129a, 133a, 154 b, 155abc, 156ab, 158 bc, 165a, 202 b, 220a, 233abc, 234ab, 289a, 293a, 301a, 302a, 311a, 315a, 319a, 323a, 324a, 342 c, 343a, 353a. Vne 41 x one octave lower than Vc. The use of a 16' *Violone* causes for these 41 8th-notes a distance of two octaves: is this implication plausible or unlikely?

In Movement 1 Bach wrote *Violone* notes one octave **lower** than **Continuo/Cembalo** notes on: 20 bc, 21abc, 22abc, 23a, 31a **two octaves lower than Cemb. bass**, 154 b, 155abc, 156ab, 158 bc, 161a, 162 c, 163a, 164 c, 165a, 194a, 202 b, 220a, 233abc, 234ab, 251a, 289a, 293a, 301a, 302a, 323a, 324a, 342 c, 343a, 353a

Vne 41 x one octave lower than *Continuo/Cembalo*. The use of a 16' Violone implies for these 41 8th-notes a distance of two octaves. Did Bach really mean these two-octave gaps?

**Second Movement:** m 18 Vne **E**, Cont & Vc **e**; m 31 Vne **c**, Cont & Vc **C**.

**Third Movement:** more empty bars for the *Violone*; m 87: *Continuo/Cembalo* & Vc play **e**, Bach corrected an original *Violone* **e** to an **E**.

In m 98 Cb +Vc play **g-G**: the *Violone* **G#** in m 99 after a measure rest accentuates the harmonic change.

mm 172-175 Vc plays quarternotes *FGAF | G g a e | f d g G | c*

-----Continuo plays quarternotes *f g a f | g G A E | F D G g | c*

m 183 Vne **c**, Cont & Vc **C**.

m 232-233 *Continuo/Cembalo* & Vc : - GFG | C b.

- - - - - *Violone*: - g f g | c B.

In Movement 1 the short *Violone* 8th-notes in mm 125, 129, 133 and in mm. 311, 315, 319 simply mark the harmonic changes: for this purpose a stronger/ relatively bigger instrument is needed, not necessarily a sixteen foot instrument.

This observation about mm 125, 129, 133 and 311, 315, 319 is valid also for BWV 1057 which is Bach's arrangement of BWV 1049: he replaced the *Violino Principale* by the *Cembalo certato*, the *Fiauti d'Echo* by *Fiauti a bec*. In some places in the score of BWV 1057 Bach differentiated between sections with and sections without *Violone*; he mainly repeated the *Violone-Vc* distribution of Brandenburg 4, but not always the octave differentiation.

A general observation about notes written for the different instruments Bach wanted to use and the ambitus of these instruments:

Bach wrote for all instruments parts that could be played without ad hoc adaptations or ad hoc octave transpositions: only in very exceptional cases a note had to be changed e.g. a BB or BB flat in wrongly/hastily transposed organ parts. (NB ad hoc octave transposition on a keyboard instrument like the organ is not especially difficult) Bach's music itself proves that f' was the bottom limit of his *Fiauti d'Echo* in BWV 1049 and of his *Fiauti a bec* in BWV 1057, d' of his *Traverso* and c' of his *Hautbois*. One need not to read instrument manuals of Bach's time for confirmation about/of these bottom limits.

We might safely conclude that the bottom note of Bach's *Violone* was the C.

<sup>1</sup> Compare Hawkins, 'A General history of the Science and Practice of Music' (1776), p 630: '*the instrument now used in concerts, called by the Italians and French **Violone**, and by us in England the double bass; it seems that this appellation was formerly given to that instrument which we now call the **Violoncello**...*'

<sup>2</sup> Compare Mersenne's three c-g-d'-a'- viola types differing in function and possibly in size.

<sup>3</sup> Lambert Smit, *Naar een coherente, historische visie op Bachs Violoncello* in 'Huismuziek', Jaargang 51, januari 2002, 4-10.... A version in English (*Toward a*

more consistent and more historical view of Bach's Violoncello) will be published in 2004 in *Chelys*, the journal of the Viola da gamba Society.

<sup>4</sup> David Chapman in *The Galpin Society Journal*, June 2003, 224-231: 'Historical and Practical Considerations for the Tuning of Double Bass Instruments in Fourths'

<sup>5</sup> Laurence Dreyfus, *Bach's Continuo Group*. Cambridge, Massachusetts / London 1987, 151. This influential author doesn't believe anymore his theory of three Violone types in the Brandenburg Concertos (if I interpret some of his private communication correctly). This tripartite/trifarious/triple distribution, however, has been canonized meanwhile by Johannes Loescher in MGG, s.v. column 1709, 3th paragraph.

<sup>6</sup> JON W. FINSON, in 'The Violone in Bach's Brandenburg Concerti' (*The Galpin Society Journal* 29 (1976) p. 105

<sup>7</sup> *ibidem*, p 105-106 'A tuning of CC AA D G (in other words, lowering the EE string a major third) to accommodate the low range of Bach's writing seems impractical for rapid passage work like that in Ex. I (=Brand. Concerto III, 3, m 71-72). With such a tuning, all pitches below AA must be played on one string, leading to a violent series of leaps up and down the fingerboard to accomplish scales and string crossings.'

<sup>8</sup> Cf Peter Wollny, "Tennstädt, Leipzig, Naumburg, Halle -- Neuerkenntnisse zur Bach-Überlieferung in Mitteldeutschland" in *Bach-Jahrbuch* 2002 (p. 29-60)

<sup>9</sup> Carl Bär, 'Zum Begriff des 'Basso' in Mozarts Serenaden' *Mozart Jahrbuch* 1960/61, p 151.

<sup>10</sup> cf. Brossard, *Dictionnaire* (1703): BASSISTA. Celuy qui chante la plus basse des Parties de la Musique, vulgairement BASSE-CONTRE.

Cf. Walther, *Lexicon* 1732, p 79: 'Bassista (*ital.*) derjenige welcher bey einer Music die tieffste Stimme singet, insgemein von den Franzosen Basse-Contre genannt. In Plurali: Bassisti.'

cf. Paneraj, *Principj di Musica* (c.1780): on p 2 as '*Scala per il Contrabasso*' the whole pitch series from C to a' (=exactly the range of Walther's *Violoncello*) is shown. Here Paneraj's term *Contrabasso* seems to indicate a cello; on p 9, however, Paneraj wrote as '*Scala per imperare à suonare il Contrabasso*' the pitch series E to d' with the following fingering: *à voto. 1.4. à voto. 1.4. à voto. 1.4. à voto. 1.4. 1.4.* (*à voto*=open string).

<sup>11</sup> *Bach Dokumente III*, nr 856 op p. 348.

<sup>12</sup> Quantz, *Versuch...*Berlin 1752, 3/1789/R1952, XVII. Hauptstück, V. Abschnitt.