

**Teaching Cello at the College Level:
Using Baroque Music to Teach Fundamentals of the Cello
Bow Arm
Daniel Saenz, DMA**

Key Words: Cello, string pedagogy, bow arm, Baroque.

Abstract

Many structural features of the cello, such as neck angle, fingerboard length and width, string spacing, and bass-bar placement have remained the same since the 1800s. The endpin was a significant modification to the cello in the mid-1800s, but it was not widely adopted until after 1900. By the end of the 19th century, most cello teachers still required their students to play without an endpin during the first year of instruction (Kummer & Schulz, 1928). Several other improvements in the mechanical structure of stringed instruments emerged during the 20th century, including the use of carbon fiber materials for bows and tailpieces. The lighter, more durable materials, along with new styles of bridges, have helped improve sound projection and general ease of playing. However, in spite of these advances in cello mechanics, proper development of bow arm technique continues to be a challenge for many young cellists. The author will explore the benefits of encouraging cello students to study music of the Baroque during their freshman year at music school in order to build a foundation for technical skill that will help them achieve musical expression through the bow arm and learn explore the many resources on classical music available to them.

Introduction

My position as a university cello teacher allows me to interact with many young cellists, and there seems to be no shortage of virtuoso cello playing. Many young students are capable of performing works such as Kodaly's *Solo Sonata* or Prokofiev's *Sinfonia Concertante*. However,

as eager as they may be to learn and play in an atmosphere that is conducive to mastering their craft, there is one overriding problem that many young cellists share upon entering music school: a deficient bow arm that is incapable of expressive playing. When I began teaching at the university level, I thought I was alone in my diagnosis of widespread bow arm technique deficiencies; however, I realized from my colleagues that bow arm technique deficiency was commonplace. I recognized the need for an effective way to teach the bow arm technique along with some kind of rubric for evaluating progress in expressive playing as the bow arm technique improves.

To address the need for effective bow arm pedagogy and to provide a rubric for evaluating expressive cello playing as bow arm technique improves, I propose studying music of the Baroque era composers Domenico Gabrielli, Antonio Vivaldi, and J.S. Bach, and by teaching the basic tenets espoused by Johann Joachim Quantz (Quantz & Reilly, 1966) and Leopold Mozart (1985) in their treatises on flute and violin playing. Gabrielli's *Ricercare No. 2 in A Minor*, Vivaldi's *Sonata No. 6 in B-flat Major*, and J.S. Bach's *Suite No. 1 in G Major* provide ideal material for combining the proper execution of legato, staccato, and cantilena with proper bow arm movements. This study helps build fundamental technique and musicianship, and it also allows students to explore vocal techniques like *messa di voce* and its application to string technique.

Ricercare No. 2 in A Minor

Domenico Gabrielli lived his short life in Bologna from 1651 to 1690. He was a member of the elite Accademia Filarmonica and the orchestra at Basilica San Petronio. Gabrielli, along with his teachers Giovanni Battista Vitali and Petronio Francheschini, was an innovator in the development of cello pedagogy and repertoire (Cowling, 1975). The rapid development of wire-

wound gut strings in late 17th-century Bologna enabled instrument makers to develop smaller bass instruments that would match the timbre and projection of the violin. During this time, the cello began to emerge as an important new instrument, spurred along by the publication of Gabrielli's *Seven Ricercare for Solo Cello*.

Gabrielli's *Ricercare No. 2 in A Minor* is a precursor to the Baroque sonata form that would later reach sophistication in the compositions of Arcangelo Corelli and J.S. Bach. *Ricercare No. 2* is composed in four sections, with each new section marked by a strong cadence followed by a meter change. *Ricercare* was originally scored in *scordatura* with the A-string tuned down a whole step to G. Although playing with this tuning is not overly difficult, beginning undergraduate cellists in music school may find the altered fingering patterns for string crossings to be confusing. Modern day student cellists will find it useful to play this work using normal tuning due to the prevalence of lower position passage work, absence of double-stops, and string crossings that fit under the hand.

In his article on articulation, Nikolaus Harnoncourt states the common tenet concerning the performance of Baroque and Classical music is that "...music prior to 1800 *speaks* while subsequent music *paints*" (Harnoncourt & Pauly, 1988, p. 39). Closely tied to the study of spoken rhetoric, composers sought to present and expand their musical ideas in the same manner that great orators would present and expand their arguments. A Baroque era performer conveyed these musical ideas through masterful articulation of the bow, which included producing a beautiful tone with a variety of dynamics. To reach that level mastery, the left hand must be capable of not only creating excellent intonation, but also adding subtle shades of color through vibrato and articulation. Baroque music provides the appropriate repertoire for training a first year undergraduate cellist to learn how to *speak* effectively with the bow. Due to the absence of

double stops, thumb position passages, and changes in clef, the Baroque era's technically friendly repertoire allows less advanced students enough time to address any other deficiencies they might have upon entering music school. On the other hand, more advanced players will find it challenging to perform the music without the help of slurs and consistent vibrato that they have been trained to use. From a pedagogical perspective, teachers can use music like Gabrielli's *Ricercare* as a launching point for conversations about proper bow arm technique.

In his *Treatise on the Fundamental Principles of Violin Playing*, Leopold Mozart (1985, p. 204) states, "Notes must be strongly attacked; be sustained without emphasis and gradually die away, as the ringing of a bell...gradually dies away." He also points out:

Each tone, even the most strongly attacked tone, has a small, if barely perceptible weak point before it. Otherwise it would not be a tone, but merely an unpleasant, incomprehensible sound. This weakness can also be heard at the end of every tone.

The following acceleration exercise [Fig. 1] is one way to learn and execute these bell sounds.

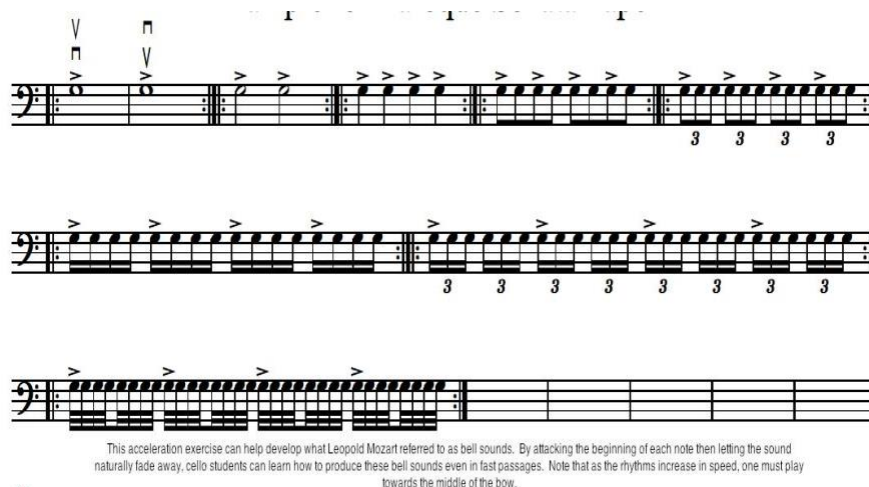


Figure. 1. Acceleration exercise for developing bell sounds, by Daniel Saenz.

By attacking the beginning of each note then letting the sound naturally fade away, students can learn to produce a ringing yet articulate sound even in fast passages. Another way to label this technique is articulate and release because the bow is allowed to breathe without much pressure after the initial attack. As the rhythms increase in speed, students must play towards the middle of the bow. The articulate and release technique helps develop a fundamental skill that will benefit the cello student in their entire repertoire. The same technique can also be used to teach bow techniques such as staccato, spiccato, and martelé.

Most cellists prefer to avoid the open A string of the cello at the beginning of the *Ricercare No. 2* [Fig. 2], due to the harsh and metallic tone the open A string sometimes produces; however, cellists of the late-17th century frequently used lower positions and open strings, and their preference for fingerings in lower positions provides insight to their approach to technique and tone color. Open strings should be the preferred choice when playing Baroque music today, and students benefit from learning to how to play a beautiful open A-string sound in the interests of both authenticity and overall musicianship.



Figure 2. Beginning of Gabrielli's *Ricercare No. 2*. (Gabrielli & Vanscheeuwijck, 1998).

By requiring a student to begin the *Ricercare* on an open A-string, the cello teacher can initiate the discussion about how to produce a beautiful open string sound. Cello teachers normally suggest playing open string exercises in long tones at a very slow pace and very close to the bridge. Through long tones, students can learn to manipulate the four basic functions of the right arm: holding the bow, applying pressure and weight, pulling or pushing the bow at a slow

or fast speed, and appropriately placing the bow near or far from the bridge. In addition, the study of bell sounds and long tones is very useful in executing passages where there is an absence of slurs.

One of the difficulties the student will encounter when first studying the *Ricercare* is learning how to achieve musical expression. To help a student address musical expression, the teacher must call attention to some key passages in order to equip the student with tools for expressive playing. For example, take the octave leap (A2-A3) in the first measure of Fig. 2. Careful preparation of the bow arm level from the G to the A string is essential for executing this leap. Next, elongating the two A notes and shortening the G after the leap will help highlight the gesture. Lastly, when encountering the syncopation in measure two, students can prepare for it with a gentle lift followed by a slight accent produced primarily through bow speed. Tasteful use of vibrato is also welcomed, but students must be careful not to shake too wildly as if infected with what Leopold Mozart (1985) called a “chronic fever” (p. 204).

In an example by Gabrielli [Fig. 3], we see a semblance of a contrasting lyrical theme. Gabrielli introduces a second, somewhat chromatic theme, foreshadowing the sonata form of the Baroque and Classical Eras. Longer bow strokes in this passage help delineate the sections and break up the monotony the performer may experience playing so many separate bow strokes.



Figure 3. An example of Gabrielli's lyrical writing (Gabrielli & Vanscheeuwijck, 1998).

The end of the first section [Fig. 4] gives us four half notes leading back into the tonic key. Using full bows with thoughtful swells, while limiting the vibrato, will help students focus

on creating expression through the right arm instead of using excessive vibrato for an expressive effect.



Figure 4. An example of half notes leading to a cadence point . (Gabrielli & Vanscheeuwijck, 1998).

The second section of the *Ricercare* shifts to 3/2. [Fig. 5] Although the meter seems to slow the pace with the longer values, it is actually much faster than the previous section. Judicious use of bow speed and arm weight can help accentuate the lilt produced by the three half notes per measure. Additionally, due to the absence of slurs proper, left-right hand coordination is a must.



Figure 5. Gabrielli's (1998) *Ricercare*, second section (Gabrielli & Vanscheeuwijck, 1998).

The third section of the *Ricercare* begins at measure 154. Returning to common time, this section is characterized by large leaps crossing over three and sometimes four strings. This technique of composition creates a multi-voice texture that J.S. Bach developed and incorporated into his *Suites for Solo Cello*. In addition to learning the contrapuntal texture created by these leaps, students can focus on reaching the correct arm level for each string. Students must remember that the arm takes the hand where it wants to go rather than the hand leading the arm. A simple exercise based upon the bell sounds exercise will aid in mastering the third section of

the *Ricercare*.

The fourth and final section, beginning at measure 206 [Fig. 6], contains the first slurs of the entire work. The slurs appear as disjunct figures that leap in a dance-like movement by 3rds and 4ths. By using the bell sound technique of articulate and release at the beginning of each slur, a bounce will naturally occur in the bow arm. These buoyant gestures are needed to create the feeling of a dance.

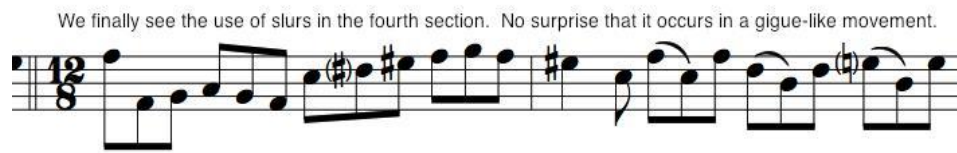


Figure 6. Excerpt from the fourth section of Gabrielli's (1998) *Ricercare*. (Gabrielli & Vanscheeuwijck, 1998).

Sonata No. 6 in B flat Major, RV 46

Antonio Vivaldi wrote most of his cello sonatas while he was living in Venice during the mid-1720s. We know he wrote nine cello sonatas and all except one (RV 42) are *sonatas da chiesa*.

In his cello sonatas, Vivaldi's writing exploits the melancholy nature of the instrument. Through lyrical passages such as the opening of the first movement [Fig. 7] from his *Sonata No. 6 in B flat major*, R 46, Vivaldi demonstrates how a beautifully crafted melody that is suited for voice can be transformed into a rapturous cello line. Although students may be inclined to add more slurs, particularly on the separate quarter notes in measures 2 and 4, teachers must encourage students to use the bow ergonomically in order to achieve the melancholic affect.



Figure 7. Excerpt of Vivaldi's *Sonata No. 6*, first movement (Vivaldi & Hoffmann, 2003).

For example, the opening measures provide opportunities for students to develop a clear beginning bow (down or up), followed by a gentle crescendo that extends over the bar line through to the third measure ending with an equally gentle decrescendo. After first studying Gabrielli's music to learn the fundamental techniques of articulation and speaking with the bow, cello students would then be ready to emulate the vocal technique of *messa di voce* in Vivaldi sonatas. Assuming that the student has been practicing long tones and bells sounds on a daily basis, learning to achieve a tasteful *messa di voce* will be an attainable goal. In addition to practicing the aforementioned fundamental techniques, students can also vocalize the opening measures by singing or speaking. Either method of vocalization can help student learn the contour of the melody in a natural way. When first learning a piece of music, students often use the default, uniformed technique of sight reading on their instruments before singing or speaking their parts. Teachers can help young students avoid many problems during the initial stages of learning a new work by simply encouraging them to study the score, learn the form and structure of the music, and sing or speak the music all *before* taking the instrument in hand.

The second movement of the *Sonata No. 6* [Fig. 8] begins with a swift upbeat followed by a syncopated rhythm. This figure is promptly repeated in subsequent measures, but with the

additional detail of a slur over the bar line. The missing slur in the first measure may have been a forgetful omission, or an editing error. In either case, having students ponder such details provides excellent training for in depth study of repertoire. Although this illustration deals specifically with a Baroque work, teachers should encourage their students to study the original manuscript in whatever works they decide to perform in order to achieve the most authentic realization of the score.

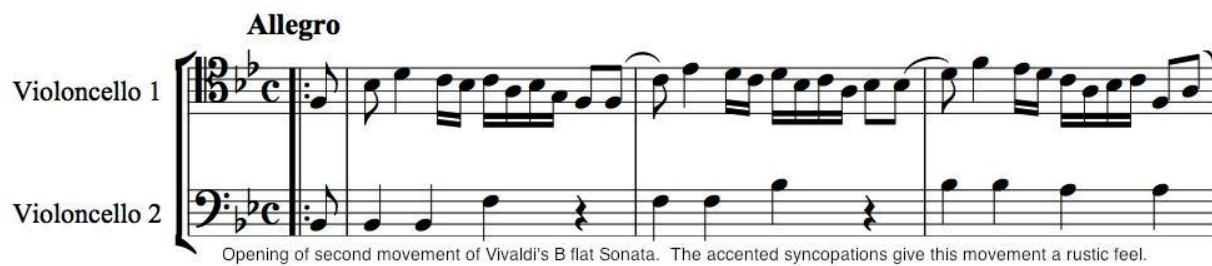


Figure 8. Excerpt of Vivaldi's *Sonata No. 6, second movement* (Vivaldi & Hoffmann, 2003).

The 3rd movement is the most solemn of the whole sonata. Here the student can learn how to express the feeling of harmonic tension present between the solo and the continuo. Students will find the passage in Fig. 9 to be endlessly satisfying as they experiment and search for ways to move their bows in opposition to the continuo line.



Fig. 9 . Excerpt of Vivaldi's *Sonata No. 6, third movement* (Vivaldi & Hoffmann, 2003).

For example, students must decide whether their stressed bow comes on the upbeat resolving to the downbeat, e.g. G-F#, F-E, or if the stress should begin on the downbeat and resolve on the

upbeat, F#-F, E-E flat. Due to the relative simplicity of the notes on the page, students mistakenly believe that the phrasing is also simple; however, careful analysis of the harmonic movement will reveal a descending chromatic sequence wrought with throbbing dissonances. The interest and intensity of this passage can only be produced with careful allotments of pressure and speed of the bow along with the sensible addition of vibrato on the dissonant notes.

Learning how to vibrate in Baroque works is a natural part of music making in both instrumental and vocal music. As Frederick Neumann (1989) states in his essay *Authenticity and the Vocal Vibrato*:

String vibrato was not as all-pervasive as it is today, but was used selectively and with discrimination. In particular the over-rich, voluptuous variety practiced by many of today's virtuosi is inappropriate for eighteenth-century music. But to ban the vibrato altogether or reduce it to an almost imperceptible minimum is due to a historical misunderstanding and a musical aberration (p. 173).

Neumann argues that vibrato is a natural occurrence in singing, and emulating the human voice is used as the model for string playing; therefore the use of vibrato should not be missing from string performances of Baroque music. Teachers should provide students with exercises to help them gain control of their vibrato and enable them to use it at will rather than having it run on automatic pilot. Control of vibrato will be especially useful when students encounter moments of harmonic tension as in the third movement of Vivaldi's *Sonata No. 6*.

The closing movement of *Sonata No. 6* is in $\frac{3}{8}$ time and features virtuosic string crossings and challenging rapid scales. Students should learn the passage as written without slurs, experimenting with typical slurring combinations only after mastering the passage without

slurs. For example, the second measure in Fig. 10 has a C-minor arpeggio that requires crossing over three strings. Slurring all of the notes on a down-bow can help make this measure stand out more lyrically than the surrounding measures. The B flat arpeggio in the fourth measure can be articulated with the same technique. Another option would be to slur the 2nd, 3rd, and 4th notes of those arpeggios. Whatever option is chosen, the melodic gesture should not be interrupted.

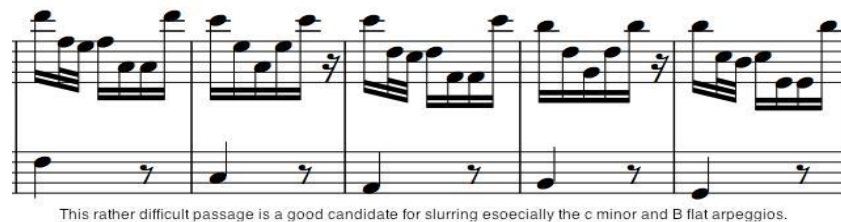


Figure 10. Excerpt from Vivaldi's *Sonata No. 6* (Vivaldi & Hoffmann, 2003).

Suite No. 1 in G Major

The *Suites for Solo Cello* by J.S. Bach, written circa 1720, are generally believed to have been written when Bach was in Koethen. The exact date of composition cannot be verified with due to an absence of an original manuscript, however, four manuscript copies exist, including the most important one by Anna Magdalena Bach [Fig. 11].



Figure 11. Original manuscript of Bach's (2006) *Suite for Solo Cello* from Anna

Comparing these manuscripts to the title pages of Anna Magdalena's copy of the *Sonatas and Partitas for Solo Violin* reveals two notable phrases: "*Senza Basso*" and "*Pars 2*". Both of these works accomplish a bass line through their many double stops and wide-ranging chords, but the cello suites feature more simplified writing to accommodate the larger intervals and string lengths of the cello as compared to the violin. The phrase, "*Pars 2*" is only found on the manuscript for the solo violin sonatas. This phrase is interesting in that it suggests both the solo cello and violin works were meant to be paired as a set (Bylsma, Bach, & Bartman, 1998). When using these works as pedagogical tools, teacher must again encourage students to consult the original source material for the suites, seeking out the most accurate representation of the works to be studied. To this end, *Suite No. 1* draws attention to the discrepancies found in later editions of the *Suites for Solo Cello*, as the four sources are often inconsistent with one another.

Most editors of the late 20th century espoused a Romantic approach to the slurs in the opening bars, aligning with the notion of painting a scene rather than speaking the notes. For the interpretive aim to be true to Bach's intention, students must search the score of the *Sonatas and Partitas for Solo Violin* to find similar figures that can be used to inform their choices for articulations in the *Suites for Solo Cello*.

On a technical level, the Bach's first suite poses different challenges than those found in Gabrielli's *Ricercare* and Vivaldi's *Sonata No. 6*. First, Bach writes in many more ornaments than what was typically included in the scores of Gabrielli or Vivaldi. Students often have difficulty maneuvering their way through these ornaments without disturbing the pulse and tempo of the work. Figure 12 below, from the second movement *Allemande*, illustrates ornamentation that could cause a student to interrupt the tempo and disrupt the melodic line:



Figure 12. Bach's Allemande, second movement.

Both measures have trills on G#, but the oncoming string crossing often causes students to rush through the trill and distort the rhythm instead of letting the trill naturally run its course. By practicing the passage without the trill and establishing phrase direction, students can begin to understand how to execute this passage. Once the trills are added, the phrase will begin to feel more organic, and the bow arm can flow without interruption.

Bach's music is often associated with his Lutheranism. Accordingly, his Suites are often considered to be devotional music (Bartman, 2001, p.1). Dietrich Bartel (1997) explains, "It was considered possible to undertake a rational analysis of music and to objectively identify its God-given power" during the Baroque era in Germany, but "the German Baroque composer still viewed the act of composition as a craft rather than an aesthetic undertaking" (p. 34) Bartel also writes that as the Baroque era progressed, "Human experience rather than dogmatic divine truth gradually became the foundation of a new music aesthetic" (p. 36). In order for college freshman cellists to incorporate these historical perspectives into their performance, they must be encouraged to research and study various other writings on Baroque era music to help them learn that every decision about bowing technique and finger placement upon the fingerboard must be made with purpose and integrity. All the exercises created for agility are not enough to capture true human emotion and the translation of that emotion into tones. By introducing the young cellist to the writings of noted musicologists, teachers can help shape the views and tastes of a generation of cellists that will be more informed about performance practice, giving the young student knowledge beyond technique they can apply to their performances.

Conclusion

Teachers bear a great responsibility to imbue their students with correct technique and introduce them to reliable sources that will influence their musical tastes, interests and aspirations. Unfortunately, many young cellists avoid studying original sources and try to perform their assigned repertoire without proper research and inquiry. By studying music of the Baroque during their freshman year at music school, cello students can not only build a foundation for technical skill that will help them achieve musical expression through the bow arm, they can also learn the craft of research and explore more deeply the many resources on classical music available to them.

References

- Bach, J. S. (2006). 6 suites a violoncello solo senza basso, BWV 1007-1012. Kassel: Bärenreiter.
- Bartel, D., & Bartel, D. (1997). *Musica poetica: Musical-rhetorical figures in German Baroque music*. Lincoln: University of Nebraska Press.
- Bartman, G.. (2001). *Christian symbolism in the first three preludes of Johann Sebastian Bach's Six Suites for Cello Solo*. Basel (Switzerland): Bylsma's Fencing Mail.
- Butt, J. (1990). *Bach interpretation: Articulation marks in primary sources of J.S. Bach*. Cambridge [England]: Cambridge University Press.
- Bylsma, A., Bach, J.S., & Bartman, G. (1998). *Bach, the fencing master: Reading aloud from the first three cello suites*. Amsterdam: A. Bylsma.
- Corrette, M. (1972). *Méthode Théorique et Pratique pour apprendre en peu de temps le Violoncelle dans sa perfection*. (Original work published 1741). Geneva: Minkoff Reprints.
- Cowling, E. (1975). *The cello*. New York: Charles Scribner's Sons.
- Donington, R. (1982). *Baroque music: Style and performance: A handbook*. New York: Norton.
- Gabrielli, D., & Vanscheeuwijck, M. (1998). *Ricercari per violoncello solo*. Bologna: Forni,
- Harnoncourt, N., & Pauly, R. (1988). *Baroque music today: Music as speech: ways to a new understanding of music*. Portland, Or: Amadeus Press.
- Kummer, F., & Schulz, L. (1928). *Violoncello method with an appendix containing one hundred and eleven practice pieces*. New York: G. Schirmer.
- Leppard, R. (1988). *Authenticity in music*. Portland (Oregon): Amadeus.
- MacDonald, M. (2007). Atrium Musicologicum: Antonio Vivaldi's Cello Sonatas RV. 39-47. musicologicus.blogspot.com..
- Mertin, J., & Levarie, S. (1986). *Early music: Approaches to performance practice*. New York: Da Capo Press.
- Mozart, L. (1951). *A treatise on the fundamental principles of violin playing*. London: Oxford University Press.

Neumann, F. (1989). *New essays on performance practice*. Ann Arbor: UMI Research Press.

Newman, W. (1969). "Is there a rationale for the articulation of J.S. Bach's string and wind music?" *Studies in musicology; Essays in the history, style, and bibliography of music in memory of Glen Haydon*. Chapel Hill: University of North Carolina Press.

Quantz, J., & Reilly, E.. (1966). *On Playing the Flute*.

Vivaldi, A., & Hoffmann, B. (2003). *Sämtliche Sonaten für Violoncello und Basso continuo: RV 39 - 47 = Complete sonatas for violoncello and basso continuo*. Kassel [u.a.: Bärenreiter-Verlag].