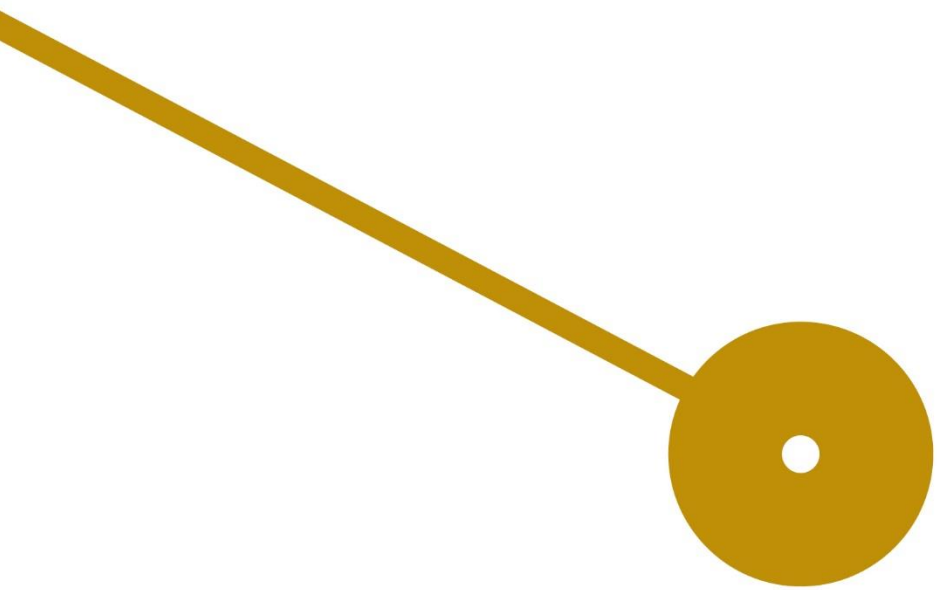
ESCOLA
SUPERIOR
DE MÚSICA
E ARTES
DO ESPETÁCULO
POLITÉCNICO
DO PORTO

MESTRADO
MÚSICA - INTERPRETAÇÃO ARTÍSTICA
SOPROS - SAXOFONE

Between Saxophone Worlds: Interpreting the / Improvising on the Bach Cello Suites

Hristo Kamenov Goleminov

09/2018



M

MESTRADO
MÚSICA - INTERPRETAÇÃO ARTÍSTICA
SOPROS - SAXOFONE

Between Saxophone Worlds: Interpreting the / Improvising on the Bach Cello Suites

Hristo Kamenov Goleminov

Dissertação apresentada à Escola Superior de Música e Artes do Espetáculo como requisito parcial para obtenção do grau de Mestre em Música – Interpretação Artística, especialização Sopros, *saxofone*

Professor(es) Orientador(es)
Gilberto Bernardes de Almeida

09/2018

Acknowledgements

Foremost, I would like to express my gratitude to my advisor, Gilberto Bernardes, for his never-ending guidance, patience and support. His insightful remarks throughout the past few weeks proved indispensable for the artistic conception and academic coherence of this monograph. I am also incredibly grateful for the incalculable thought-provoking artistic insight he has provided me as a teacher over the past 9 years.

I would like to thank Henk van Twillert, head of the ESMAE saxophone class and my mentor for the past few years, for his relentless dedication to my growth as an artist and as a human being. From touring all over the world to discussing the finest musical details, his influence is paramount to the musician I am today.

I am immensely grateful to Manuel Marques, for introducing me to jazz music and inspiring me from a very young age. His serious yet warm dedication as a pedagogue cannot be overstated.

I thank all my previous saxophone teachers – namely Fernando Ramos, Francisco Ferreira, Hugo Marinheiro, Isabel Anjo and Ricardo Pires – for their passion for teaching, which contributed immensely to my education.

My colleagues and friends in the saxophone class of ESMAE, with whom I spent hundreds of hours rehearsing, performing and discussing music, have contributed to my passion for sharing music with other people. I thank them for their support through the ups and downs of being a musician.

This project would not have been possible without the love and support of my family. I cannot thank my parents Roumiana and Kamen enough for the sacrifices they made for my growth as a human being, and Bogdan for his brotherly love and guidance.

Resumo

Esta monografia constitui o suporte teórico para uma *performance* de duas Suítes para Violoncelo de Johann Sebastian Bach através da interpretação e improvisação. Com base no estudo da literatura existente sobre a interpretação de música do período barroco, e através do estudo aprofundado das suítes nº 1 e nº 4, várias decisões acerca da sua performance no saxofone barítono são propostas. O processo de improvisação dentro das suítes é fundamentado através do estudo da improvisação no contexto histórico em que as obras se inserem, e através da análise dos parâmetros das obras originais que servem como base para a improvisação. As diversas conclusões expostas servem como contributo para a literatura existente sobre a interpretação das suítes, assim como sobre a prática de improvisação.

.

Palavras-chave

Bach; Violoncelo; Improvisação; Interpretação; Performance; Saxofone;

Abstract

This monograph presents the theoretical groundwork for a performance of two Suites for Unaccompanied Cello by Johann Sebastian Bach on the baritone saxophone, through a mixture of interpretation and improvisation. By reviewing the existing literature on the interpretation of baroque music and through a careful study of both suites, choices as to how to interpret the suites as written on the saxophone were explained. The process of improvising within the suites is documented through the combination of a historic overview of improvisation in the baroque era and the analysis of the challenges presented by original compositions. Several key conclusions are presented which contribute to the existing literature in both the domains of interpretation and improvisation.

Keywords

Bach; Cello; Improvisation; Interpretation; Performance; Saxophone

Table of Contents

List of Figures

Introduction

Goals and Motivations

The goal of this monograph is to present a new and personal approach the performance of two (out of the six) Unaccompanied Cello Suites by Johann Sebastian Bach - Suite no.1 in G major and Suite no. 4 in Eb Major, on the baritone saxophone. I propose a blend of my interpretation of the suites and a modern take on improvisation over the structure of each movement.

My motivations for this endeavor are multiple. First, I would like to stress my passion for the music of J. S. Bach, which has grown tremendously over the past years - especially during my studies at ESMAE. Second, the concert I had the opportunity to attend years ago by the baritone saxophonists Henk van Twillert and Gary Smulyan was particularly inspiring for my work. To the interpretation of the Bach Cello Suites by Van Twillert, Smulyan has created an improvised dialogue in a unique blend of musical styles. Third, my musical studies have long been a share between the classical and jazz traditions, both being the pillars of my current artistic vision. Lastly, upon hearing pianist Dan Tepfer's approach to J. S. Bach's Goldberg Variations (on Tepfer's album "The Goldberg Variations Variations" (2011), I was immediately struck by the fabulously balanced musical approach: the interpretation of the variations as written, each followed by an improvisation over the original harmony. My longstanding aim to blend classical and jazz musical languages has been materialized masterfully by Tepfer, which became a fundamental reference and inspiration to my work.

Methodology

My goal is to approach the suites holistically, dividing my study into two areas: on one hand, a theoretical research into the music from historical, stylistic and analytical standpoints; on another, a practical study of the two suites through the baritone saxophone.

Each of the two areas is divided into the study of the interpretation of the suites and the process of improvising within them. The expectation is that each area of focus will contribute to the other, and that the final result will be a coherent, historically informed, yet fresh take on the cello suites of J.S. Bach.

Outline of the monograph

This monograph is divided into two chapters, each describing a different viewpoint of the suites.

Chapter I explores the interpretation of the Bach cello Suites on the baritone saxophone, starting from an overview of the historical context of the work and the problematic issue of its sources. Then, the relationship between the Suites and the original dances that they stem from is described. Finally, the polyphonic aspects of the suites –implied polyphony and chordal structures – and their performance on the saxophone are explored, followed by an overview of ornamentation, vibrato, dynamics and articulation from a historical perspective.

Chapter II describes the process of improvising on the Suites, starting from a brief explanation of the topic of improvisation in the 17th and 18th century and its relationship with the cello suites of J.S. Bach. Then, I review projects exploring baroque music and improvisation, followed by a proposed model for improvisation, in order to clarify the methodology used to improvise in the suites. Finally, practical aspects of the improvised sections are explored, starting with the structure, onto the topics of rhythm, harmony, and melodic development.

The content of both chapters is then shortly summarized, followed by a few important conclusions regarding the contribution of the monograph to the existing academic literature, as well as to my personal vision as an interpreter and improviser of music. Finally, the relevance of this project for future similar works is explained, as well as new artistic possibilities which stem from the view of the music of J.S. Bach as is here presented.

1. Chapter I – Interpretation

1.1. Foreword on the Cello Suites by J.S. Bach

From 1717 to 1723, Bach held the position of *capellmeister* and chamber music director in Köthen, appointed by Prince Leopold, who had a great appreciation for music and provided Bach with great financial support (Williams, 2004). Under Prince Leopold's patronage, Bach composed a huge amount of instrumental music, including violin sonatas and partitas, flute partitas, and clavier partitas. It also during this period that Bach wrote the six cello suites. It is unknown whether he wrote them with any specific performer in mind. However, he most likely had access to cellists with considerable technical skills (Lim, 2004).

The six cello suites follow a structural model which was common practice since the early 17th century – i.e. a set of common European dances which composers assembled and reworked into suites (Qureshi, 1994). By the early 18th century, these suites had become more independent and complex musical compositions, still bound by the traditional dances, yet with a higher degree of sophistication (Qureshi, 1994).

Despite its affiliation in the historical development of the dance suite, the Bach cello Suites are historically unique as they combine the common suite form with the solo violoncello in a explorational and technically demanding approach which had never been seen before (Lim, 2004). The use of an alternate string tuning in the fifth suite and a five-string cello in the sixth reveal that Bach was firmly acquainted with the technical capabilities of the cello and was at the forefront of the historical development of the instrument (Davis, 2004).

1.2. Sources

The source of the Unaccompanied Suites for Cello is a highly controversial topic in the musical community, which stems from the fact that no original autograph has been found as of yet. The only existing autograph is a transcription of the fifth suite for the lute. As such, most editions of the six suites for cello stems from one or more of the following five sources (Szabó, 2016):

A. *6 Suites a Violoncello Solo. Senza Basso. Composée par Sr. J. S. Bach. Maitre de la Chapelle* - Anna Magdalena Bach manuscript;

B. *Sechs Suonaten Pour le Viola de Bass. Par Jean Sebastian Bach: pos. Johann Peter Kellner* – Johann Peter Kellner manuscript;

C. *Suiten und Preluden für das Violoncello von Joh. Seb. Bach* – Anonymous manuscript, identified in recent research as Schober;

D. *6. Suite a Violoncello Solo Del Sigl: Joh: Bach* – Anonymous manuscript, referred to as "Kopist Traeg-Bach 34" by researchers;

E. Six SONATES ou Etudes Pour le Violoncelle Solo Composées par J. SEBASTIEN BACH – First printed edition, published by "Janet et Cotelle";

These sources differ in notes, rhythms, articulations, dynamics and ornaments. According to Szabó (2016) every one of these sources has many errors, and therefore any edition which is solely based on a single source is bound to be incorrect in one way or another. It is therefore necessary for the performer to make choices, based on the current research on the topic and the strengths and weaknesses of each source. It is not my goal to reach a definite conclusion regarding the quality and accuracy of each source, but rather to approach each of the two suites with an informed view.

Source A is by Anna Magdalena Bach, the second wife of J.S. Bach, who is widely praised for her accurate copies and beautiful calligraphy. Yet, Tomita (2007) notes that Anna Magdalena Bach's version of the cello suites contains a large number of errors. The author suggests that besides having to deal with many children as a busy housewife, Anna Magdalena Bach might have had little time to make her copies, and that she might have based her copy on an unclear, perhaps much revised score.

Szabó (2016) makes the point that although Anna Magdalena Bach's proximity to Johann Sebastian Bach has been claimed as an argument for the quality and authenticity of her copies, her work can only be judged by its merit. By comparing her copy of the Violin Partitas and Sonatas to the original autograph by Johann Sebastian, the author points to her seeming lack of understanding of the importance of articulation in string playing. This claim is supported by the fact that Anna Magdalena was diligent enough to copy stave and page changes faithfully, yet repeatedly overlooked bowing marks, so much as to contradict basic bowing conventions of that time.

The fact that Anna Magdalena Bach is known to have been a useful and often faithful copyist of her husband's work does not take away her frequent mistakes, and J.S. Bach likely did not think of her as a professional grade copyist (Tomita, 2007). Her many incorrect note, rhythms and articulations in the cello suites make for a doubtful case for her copy as the sole basis for any edition (Szabó, 2016).

Source B is a copy by Johann Peter Kellner (1705-1772), a young organist who is known to have copied many works of J.S. Bach. He was likely acquainted with Bach, and there is evidence to suggest that the two met on several occasions (Szabó, 2016). Regardless, his copy is the earliest surviving manuscript of the cello suites.

Szabó (2016) makes a strong case – and likely the first published one - for the Kellner manuscript as the most trustworthy source for the cello suites. The author makes the following points regarding the Kellner version:

- Kellner is known to have been a diligent copyist, and refrained from deliberately changing musical parameters
- Kellner most likely based his copy on the same original autograph which Bach himself used for the suite for lute. This is evidenced by the striking similarities between Kellner's copy of the fifth suite and Bach's lute transcription, and the fact that these similarities are not shared by any of the other sources;
- In cases where sources vary from one another, yet multiple options are musically valid, Kellner's version is the most consistently convincing one;

Sources C and D were both written after the death of J.S. Bach and provide no information as the name of their copyists. Source C was written by two different copyists, one having copied until bar 12 of the *Bourrée I* of the Suite in C Major, and the other having finished the work. The first copyist has recently been identified as Johann Nicolaus Schober, and the

second remains anonymous. Source D is also the work of an anonymous copyist, and its history has not yet been made clear by researchers.

Both sources C and D are often dismissed as faithful copies, due to three major factors. First, the big temporal gap between the original autograph and the respective copies. Secondly, the lack of information regarding their authors. Finally, the vastly richer ornamentation compared to the earlier manuscripts, suggestive of additional ornamental involvement from the editors.

Finally, the first published edition, source E, was released in 1824 in Paris by "Janet et Cotell". Its editor is likely a cellist by the name of Louis-Pierre Norblin (1781-1854), who taught at the Conservatory in Paris and is claimed to have obtained a copy of the suites somewhere in Germany. Based on the fact that this edition shares many similarities with sources C and D yet lacks some traits which are shared by the latter pair, Szabó (2016) suggests that the three sources might be based on the same manuscript. Source E is a rather unreliable edition, with original tempo markings, unusual bowing markings, reduced chords and missing bars.

Based on the research outlined above, I decided on the use of both the Anna Magdalena and Kellner manuscripts as main sources. However, whenever faced with disagreements between versions, I have generally followed Kellner's manuscript, as I believe it is the most consistent one. These cases will be briefly described in the next section.

1.3. Note differences

In this section I will briefly go over the main divergent notes between the Anna Magdalena Bach and Kellner manuscripts of suites no.1 and no.4, focusing on the few notes that remain sources of scholarly discussion and are not agreed upon by performers.

1.3.1. Suite no.1.

In the second *minuet*, the first repetition is made up of two almost identical four bar phrases, each with a bass sequence known as the *chaconne* bass – which I will discussed in greater detail in Chapter II. However, in bar 7, Anna Magdalena Bach (AMB) writes an E natural, whereas all other sources write an E flat – the same bass note as in bar 3. Although the E-natural can be considered a part of the G minor melodic scale, its usage in the context of the *chaconne* bass is highly unusual and results in a very doubtful harmonic sequence. I retain the original E-flat as suggested by both the bass sequence and most of the sources.

Figure 1: Suite no.1 Minuet II, bars 7-8, AMB manuscript

1.3.2. Suite no.4.

In bar 31 of the *prelude*, AMB writes the fourth note as a B flat, while all the other sources write an A flat (see Figure 2). Although the B flat could be interpreted as an approach note for the following C, this view is not coherent with the rest of the prelude, since every bar except bar 35 contains almost exclusively notes of the arpeggiated chords. The exceptions are the fourth note of bar 32 – an approach to the first degree -, and the second and fourth notes of bar 35 – approaching notes to the third and first degrees.

Figure 2: Suite no.4 Prelude, bar 31, AMB manuscript

In bar 59 of the *prelude*, Kellner writes the second lowest voice of the first beat as an A, although every other source writes a C (see Figure 3). Though both options are harmonically sound, I believe Kellner to have notated the note incorrectly, as it is unlikely that all the remaining sources contain the same error.

Figure 3: Suite no.4 Prelude, bar 59, Kellner manuscript

Bar 80 of the *prelude* contains a Neapolitan sixth chord, which is a common harmony in the music of J.S. Bach and other baroque composers[1]. The second and fourth notes of the third beat are written unanimously as B flat (see Figure 4), which is the fifth degree in the tonic key of Eb major. However, since the Neapolitan sixth chord is a major chord – in this case, in the lowered second degree (F-flat) of E-flat minor, it sounds similar to a modulation to F-flat major. Perhaps for this reason, the vast majority of recordings by prominent cellists - such as Mischa Maisky (1994) and Yo-Yo Ma (2018) – switch these notes for B-double-flat, as if a modulation did indeed occur. The same error is present in many published editions of the suite. I retain the original B flat as it is written in every source, without exception.

[1] This chord will be discussed in greater detail in Chapter II.

Figure 4: Suite no.4 Prelude, bar 80, AMB manuscript

In the Anna Magdalena Bach manuscript, the last note of bar 30 in the *allemande* is written as a G (see figure 5), while every other source writes an F. The long note value – eighth-note – implies that the note should be a chord-tone – in this case belonging to B-flat major -, which the G is not. The F is the expected fifth degree of the chord, and the last five notes of bar 30 are followed their retrograde conversion.

Figure 5: Suite no.4 Allemande, bar 30-31, AMB manuscript

In bar 28 of the *sarabande*, Anna Magdalena Bach writes the last note of the second beat as an A flat (see Figure 6), though the remaining sources write a G. The implied chord is a minor seventh chord built on the relative minor – C minor -, where the A-flat doesn't fit, nor does it resolve into the expected G. I thus choose to keep the note a G as written in most sources.

Figure 6: Suite no.4 Sarabande, bar 28, AMB manuscript

In bar 42 of the *gigue*, the second note of the second beat is written as an A flat in the Anna Magdalena Bach manuscript (see Figure 7), and as a G in the remaining sources. The A flat could be interpreted as an implied tonic of the fourth degree – A flat -, but this would make this passage the only one in the entire suites to feature such a rapid harmonic motion from subdominant, dominant to tonic. It could also be interpreted as the seventh of the dominant chord – Bb major -, but that suggests that the note should resolve to the third of the tonic – G - , which does not occur. For these reasons, I consider the note to be an error of the AMG manuscript and play it as a G.

Figure 7: Suite no.4 Gigue, bar 42, AMB manuscript

1.4. Dances

According to Hebson (2010), dance had a very important social function during the baroque period, and even though the cello suites were never intended to accompany dance, Bach took advantage of the rhythmic features of each dance. Hebson fails to mention that dance suites would have been commonly known to the audience at the time, and different composers of various nationalities had unique approaches to their composition. Mickelson (n.d.) acknowledges this and points to the fact that Bach is commonly considered to have perfected the dance suite.

An understanding of each dance and its character is therefore pivotal for their informed interpretation, as it lays the rhythmic foundation for all these movements. Qureshi (1994) explores the topic of baroque dances in the music of J.S. Bach thoroughly, both in its original historic context and in the cello suites. His dissertation will be the primary source for the following discussion on the topic.

The typical structure of a 17th century dance suite consisted of a *prelude, allemande, courante, sarabande,* and a *gigue*. Bach used three other dances in his cello suites, namely *minuets, bourrées* and *gavottes.* These are sophisticated, yet simple dances of the French court, and are inserted in between the *sarabandes* and the *gigues.* I will briefly describe the *minuet* and the *bourrée,* as they appear in cello suites number one and four, respectively.

In both the Anna Magdalena and Kellner manuscripts, the movements following the *allemande* are always named *courantes*. However, five of these are written in the Italian *corrente* style, and the only French *courante* is that of the fifth suite. Due to the lack of an autograph, it is unknown if the current title was originally assigned by Bach or added in later copies by editors Qureshi (1994). Nevertheless, I shall focus on the two *correnti* at hand and refer to them by their proper name.

The *allemande* is originally a german dance, typically calm and of moderate tempo, with broad harmonic structures and a lack of syncopation (Mickelson, n.d.) Originally, it was the first dance with which formal dancing began in court, and it features a mixture of quarter-note and eighth-note pulses, with the strong beats being beats one and three (Qureshi, 1994).

In both suite no.1 and no.4, the *allemandes* are characterized by sixteenth-note phrases with long and smooth melodies, as well as arpeggios, as illustrated in Figure 8**.**

Figure 8: Suite no.1 Allemande, bars 1-3, AMB manuscript

The Italian *corrente* is typically lively and light, often in compound meter, such as 12/8 or 6/8. Dancers combined fixed steps with improvised patterns, stepping on the beat and hopping on the preceding eighth-note. The *corrente* features fast, virtuosic sixteenth-note lines, wide melodic leaps and broken chords, in a rapid display of movement (Qureshi, 1994). In the cello suites, Bach wrote each *corrente* in 3/4, with a quarter-note pulse, expanding the hop-step pattern from the beat to the entire bar. Qureshi instructs the interpreter to aim to outline this metric quality by not over-emphasizing the second beat, and to mind the tempo as to both preserve the four-bar phrases and the virtuoso aspect of the music.

The two *correnti* under study are quite different from one another. In suite no.1, the *corrente* consists of almost exclusively sixteenth-notes and eighth-notes, as illustrated by the main motif.

Figure 9: Suite no.1 Courante, bars 1-4, AMB manuscript

Suite no.4, however, features a huge variety of figures, from half-notes to sixteenth-notes and even triplets (see Figure 10). Bach goes beyond the usual metric molds of the *corrente* and showcases his mastery of rhythmic variation – in line with the conception of the *corrente* as a virtuosic dance.

Figure 10: Suite no.4 Courante, bars 7-9, AMB manuscript

The Spanish *sarabande,* originally considered an exotic dance of the West Indies 16th century folklore, was adapted for the French courts into a calm, ordered and balanced dance. In the French style, the dance was composed in 3/4 meter, and the second beat was the strongest one, so much so that it was originally danced with a bend in the first beat and a step on the second. Bach embellishes the essential pulses with shorter rhythms of eight-notes and sixteenth-notes, and the phrases are built in groups of four or eight bars. (Qureshi, 1994)

Both *sarabandes* under study adhere to common conventions, but they differ in choices of rhythmic figures. The *sarabande* of the first suite is mainly based on lines of sixteenth-notes.

Figure 11: Suite no.1 Sarabande, bars 5-8, AMB manuscript

The fourth suite *sarabande* is based on a single motif of two gallops followed by a quarter-note.

Figure 12: Suite no.4 Sarabande, bars 6-7, AMB manuscript

The French *minuet* is an elegant and delicate couple dance. It is typically written in 3/4 meter, with a strong pulse on the first beat of every two bars, and four bar phrases. It is a simple dance with metric subdivision limited to eighth-notes. In the first suite, the *minuets* come in contrasting pairs. *Minuet I* is standard, with a simple eighth-note melody and rhythmic accents in every two bars (Qureshi, 1994). *Minuet II* is more complex, with a 3-voiced polyphonic texture, and it is the only movement in the first suite in a minor tonality. It begins with a typical baroque *chaconne* bass – a descending bass pattern from the tonic to the dominant (Winold, 2007). Below is the passage in question, with the bass notes below.

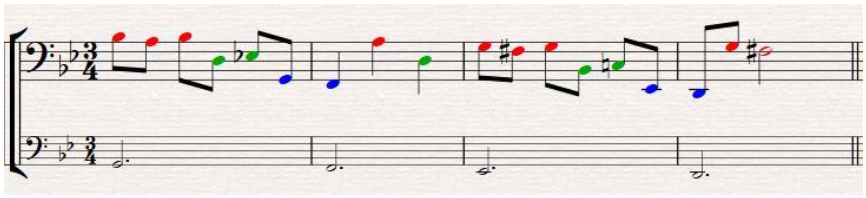


Figure 13: Suite no.1 Minuet II, bars 5-8

The *bourrée* is an easy, serene, and pleasant dance. It features a quarter note upbeat, and a strong rhythmic accent in the middle of the bar, as well as simple, regular phrases. The essential pulse is the quarter-note, and Bach limited subdivision to the regular eighth-notes and sixteenth-notes. Similarly to the *minuets*, Bach wrote *bourrées* in pairs, and kept the essential rhythmic aspects of the original dances intact, without much ornamentation (Qureshi, 1994).

The two *bourrées* of the fourth suite differ from one another. *Bourrée I* is based on a single motif of four sixteenth-notes and a quarter-note (see figure 14), while *Bourrée II* features longer figures, the shortest rhythm being the eighth-note (see figure 15). Both *bourrées* share the essential rhythmic features of the original dances, but differ in metric subdivisions.

Figure 14: Suite no.4 Bourrée I, bars 1-2, AMB manuscript

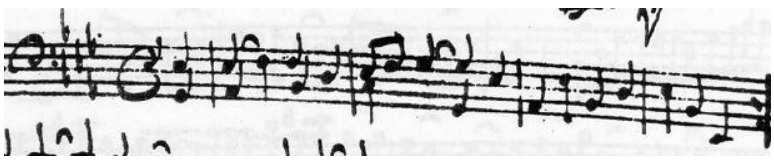


Figure 15: Suite no.4 Bourrée II, bars 1-4, AMB manuscript

The *gigue* was originally a fast and virtuosic British dance. It was adopted by central Europe with relative freedom. Similarly to the *courante*, there was both the French *gigue* and

the Italian *giga,* with Bach using the latter in every cello suite except the fifth. The Italian *giga* is typically written in compound meter, with homophonic, motive-based lines and irregular phrases (Qureshi, 1994).

The *gigues* in the two suites are in line with their dance roots yet differ quite a lot from one another. The *gigue* of the first suite suggests a moderate tempo, and each beat contains a complex melodic line which does demands great attention to details – such as articulation and dynamics (see figure 16). The *gigue* of the fourth suite has a more fluid motion and suggests more sparse rhythmic accents compared to the first suite. Even though the rhythmic figures are similar to those of the first suite – eighth-notes -, groups of two bars are the essential rhythmic structures, suggesting a faster and lighter tempo (see figure 17).

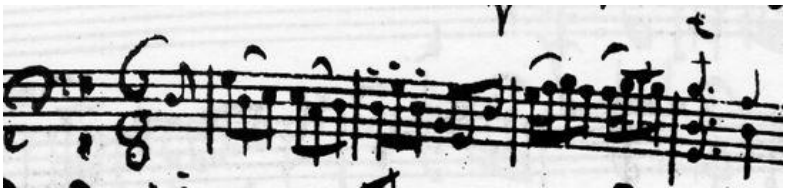


Figure 16: Suite no.1 Gigue, bars 1-4, AMB manuscript

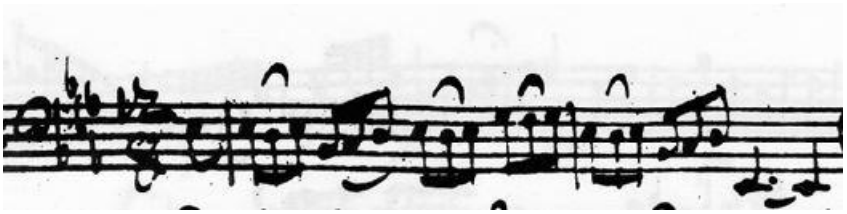


Figure 17: Suite no.4 Gigue, bars 1-2, AMB manuscript

1.5. Polyphony on the Saxophone

1.5.1. Implied polyphony.

Implied polyphony, as described by Davis (2011), is the phenomenon of multiple melodic voices being perceived within a monophonic texture. This compositional technique is particularly central to much of J.S. Bach's unaccompanied repertoire. Davis argues that besides the use of implied polyphony as a way to develop and lead several voices at once, Bach used this technique to create rhythmic variety by the use of irregular accent patterns.

Davis (2009) explores the use of rubato in the context of implied polyphony in the solo violin music of J.S. Bach. The author performed an analysis of various recordings of the same Bach works, focusing on passages which contained implied polyphony, and studied how each violinist approached rubato in said passages. The resulting data indicates that in passages where the implied polyphony makes significant alterations to the metric structure, violinists tended to avoid extensive use of rubato, and during less structurally complex passages they used rubato more extensively, in order to "bring out" the counterpoint which would otherwise not be as perceptible.

The use of implied polyphony is also a staple in the Bach Cello Suites (Twillert, 2013). The figures below show two examples from Suite no.1, first from the *allemande,* then from the *minuet*. The different voices are labeled by color.

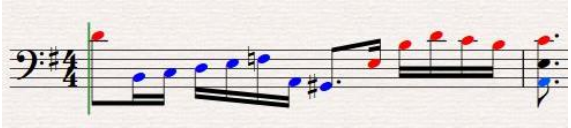


Figure 16: Suite no.1 Allemande, bar 21

Figure 17: Suite no.1 Minuet II, bars 1-2

The role of the interpreter in highlighting certain notes within passage is of great importance in general, and in the case of the Cello Suites this becomes a key subject when dealing with implied polyphony. There are arguably two ends of the spectrum regarding any particular passage. On one end, greatly emphasizing particular notes to enhance their perception or its grouping with a particular layer of the polyphonic texture. On the other end, keeping the passage homogenous, without bringing any particular notes to attention. It is then the goal of the interpreter to determine which notes should be produced most emphatically, as well as whether the composition achieves this effect naturally or if extra effort is needed during performance. In cases of implied polyphony this method must be applied in light of the position of each voice within the metric structure of the music.

I have chosen to follow the apparent trend among violinists as demonstrated by Davis (2011), as to apply significant emphasis mostly on the voice leading which does not make itself inherently apparent. In cases where Bach uses different voices in significantly complex metric locations, I aim to make the sets of notes homogenous, in order that the rhythmic oddities do their job with the least possible effort. Figure 18 shows a passage where the counterpoint is made obvious through composition. Figure 19 illustrates a passage where a stepwise rising voice – in blue - is hidden in the linear melody.

Figure 18: Suite no.4 Courante, bars 49-52

Figure 19: Suite no.4 Allemande, bars 7-9

One peculiar feature can be observed in Figure 18, which is prevalent all throughout the suites: the blending of one melodic voice into another. In other words, it is often hard to determine where, for example, the top voice ends and the middle voice begins, since Bach often leads one voice to another in a stepwise manner. The end result is a fluid melodic motion which has its roots in two different voices.

1.5.2. Chords.

Various chords appear in the two Cello Suites under study. Their component notes are carefully chosen so that the cello is capable playing them using double stops, i.e. producing two tones simultaneously (Potter, 1996). By playing two notes of the chord at time, typically starting from the bottom two and going through the 3 or 4 strings in a quick enough fashion, the natural acoustic of the instrument allows for the notes to be heard long enough to produce the effect of a chord.

Chords of three and four notes are found in the suites, and therefore choices need to be made on the treatment of each note within a chord. Three techniques are commonly applied: i) rubato, ii) grace notes and iii) arpeggiation.

Rubato is commonly used in the performance of the Cello Suites to allow enough time for all the voices to the played – for example, the first two bars of the *sarabande* of Suite no.1 as recorded by Yo-Yo Ma (2018). This approach has the disadvantage of slowing down the flow of time within the piece, and its overuse may jeopardize the rhythmic stability of the music.

Another approach is to emphasize the importance of the top note, and to treat the remaining note(s) as grace notes – such as in Yo-Yo Ma's (2018) recording of the *gigue* from Suite no.1 , bar 4. This preserves the rhythmic structure of the top melody (Twillert, 2013) but has the disadvantage of undermining the full sound of the harmonic structure. The grace notes may either be performed within the meter of the piece (as notes of short value, such as 8th notes, 16th notes or 32th notes), or as rhythmically independent notes.

A third technique is also possible, by arpeggiating the three voices in time and extending the top note in the remaining duration of the note, as will be exemplified shortly. The disadvantage of this approach is that it cuts off the start of the top note, and there is thus a risk of hindering the rhythmic clarity of the melody.

Beyond the use of extended techniques, the saxophone is only capable of producing one tone at a time. Although this is a technical limitation for performing the suites, I believe that the common techniques used for cello can be equally applied on the saxophone, albeit with greater difficulty.

The choice between these techniques should be done according to the role of each chord within the rhythmic and melodic structure of the passage. The interpreter must decide which aspect of the passage must be emphasized most clearly and choose accordingly. Figure 20 shows a possible approach to the beginning of the *sarabande* of the Suite no.1. The bottom

voices of the last chord are converted into grace notes as to preserve the rhythmic flow of the melody.

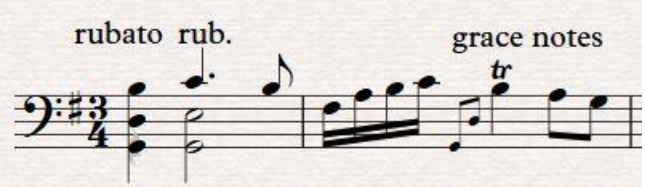


Figure 20: Suite no.1 Sarabande, bars 1-2, suggested performance of chords on the saxophone

1.6. Ornamentation

The use of ornamentation was an idiosyncrasy of seventeenth century art, and therefore of great importance in baroque music. Neumann (1983) describes ornaments as elegant, florid additions to the structural musical elements, at times complementing the structure but often difficult to distinguish. J.S. Bach assimilated different ornamentation styles, namely the French and Italian, into his own style, with no intention of preserving stylistic purity and rigidity. Instead, Bach freely used whatever techniques he deemed most suitable to each musical situation (ibid.).

Since the thorough discussion of baroque ornamentation is not within the scope of this dissertation, next, I will focus on the ornamentation relevant to the two Bach Cello Suites in study, which virtually only consists of trills.

Trills are by far the most common ornaments in the two suites. It is therefore essential for the interpreter to understand their usage in accordance to the music conventions at the time.

Neumann (1964) claims that besides the typical 17th and 18th centuries interpretation of the trill as starting on an auxiliary note and on the beat there are many other appropriate interpretations in Bach. These include the anticipation of the trill, partly or in whole, and the anticipation of the upper note. Collins (1973) argues against this notion and sets forth a few rules for the performance of French trills, with the main point being that they should overwhelmingly begin with the upper auxiliary. Collins (1973) further stresses that the trills should be expressive, whenever possible, with a slight accent on the upper auxiliary note which smoothly merge into the beats.

The usage of trills must not hinder the original flow of the melody and can be a way to emphasize its direction (Twillert, 2013). I believe that the interpretation of trills as suggested by Collins is the most fitting approach to this device within the suites. This belief is the result of both the theoretical research I have presented here and my own experience after testing different methods within the suites.

With this in mind, there is still much room for flexibility regarding the speed of the trill, as well as the overall timing of each part of the ornament. Combined with the proper

approach to chords, when necessary, the goal is to properly balance the often-opposing forces of rhythmic structure, linear flow and florid expression.

1.7. Vibrato

The use of vibrato in Baroque music is a highly debated topic. It stems from authenticity issues to discussions surrounding the appropriate use of vibrato as well as its speed and amplitude in different musical contexts. Vibrato can be defined as any combination of rapid and regular oscillation of pitch, dynamics or timbre, with the goal of enhancing a musical tone (Neumann, 1991). However, I will refer to vibrato solely as the oscillation of pitch, as this is the main point of scholarly discussion, and is an expressive tool which fits the saxophone on a technical level.

Neumann (1991) provides in a lucid and referential historical overview of the vibrato literature prior to 1800. A minor limitation is the little distinction between vocal vibrato practice and instrumental vibrato, and between ornamental and continuous vibrato, resulting in Neumann pointing to all sources as support for the use of continuous vibrato as an essential component of tone. Gable (1992) makes this last point clear, critiquing Neumann by arguing that string and vocal vibrato during the baroque period was much narrower than its use in modern times, and calls for the distinction between slight, natural dynamic and pitch fluctuations and ornamental vibrato.

Thierbach (1999) argues that both continuous, slight vibrato and expressive, ornamental vibrato are suitable and authentic for the interpreter of baroque music. The author refers to Greta Moens-Haenen's (1988) book "Das Vibrato in der Musik der Barock", an extensive look at baroque vibrato, but does not quote or paraphrase it. Instead, the author mentions several conflicting reviews of the book, namely by Donington, Stowell and Gable (1992). According to Thierbach (1999), the three authors have opposing views of Moens-Haenen's own conclusions in the book. However, both Gable (1992) and Neumann (1991) refer to Moens-Haenen's book, the former critiquing her for her dismissal of natural, wider vibrato, and the latter having the opposing view. This clears some doubts on Moens-Haenen's book while I am unable to review the publication myself.

For my performance on the saxophone, I have opted for a generally stable tone with little dynamic or pitch oscillation, reserving the use of vibrato for notes which I deem to warrant additional expressive effort from the performer. This approach seems the most suitable for the cello suites, considering the documentation I have been able to consult.

1.8. Dynamics

During the 17th and 18th centuries, composers did not commonly notate dynamic markings, leaving these decisions to the performer (Lim, 2004). Bach is not an exception as he also rarely wrote dynamics. A good example is the complete absence of dynamic markings in the cello suites.

A few conventions regarding the use of dynamics were in use in the baroque period, which the modern interpreter can make use of according to the instrument at hand. Most keyboard instruments of the era were unable to linearly and gradually change dynamics, and were thus limited to what is now referred to as "terrace dynamics", where only sudden changes from soft to loud or vice-versa were possible (Reeves, 2001). This practice led to the trend of composers writing music with these dynamics in mind, the most common convention being the use of the echo effect, where repeating passages would be played loud during the first time, and soft during the second (Lim, 2004). Figure 21 illustrates this principle in the opening bars of the fourth cello suite.

Figure 21: Suite no.4 Prelude, bars 1-4, AMB manuscript

Although this technique was at the core of dynamic embellishment in keyboard instruments, the convention would not have been strictly applied to instruments which did not share similar technical limitations – such as strings, woodwinds, brass and the voice. For example, *bel canto* singers in the early 17th century employed a technique called *messa di voce*, where a long note would begin in *piano*, followed by a *crescendo/diminuendo* back to *piano*. This technique was also in common use among baroque string and wind players. (Reeves, 2001).

As described in the section regarding implied polyphony, dynamics can be used to emphasize voice leading. The complex structure of voices in the cello suites allows for many possibilities which are beyond the scopes of systematization. These slight dynamic variations can be decided upon by the interpreter and constitute the major differences between interpretations.

Considering the degree of freedom commonly conceded to the baroque performer, the lack of dynamic markings in the cello suites – and most of Bach's music -, and the technical capabilities of the cello, it would follow that the question of dynamic choices in the cello suites should follow the emotional and structural conception of the interpreter, with a basis on the few known baroque conventions.

1.9 Articulation

Peter Martens' (2007) dissertation serves as a starting point for this section, as it covers the topic of articulation in the cello suites quite extensively. Martens compares the baroque cello and its capabilities to the modern cello and establishes some guidelines for interpreting the Bach suites.

In cello playing, the topics of articulation and bowing are inseparable. According to 17th and 18th century tradition, string bowing was conformed to the down-bow rule, according to which strong beats should be played with the naturally strong down-bow, and weak beats with an up-bow. This is the most fundamental aspect of baroque bowing (Martens, 2007).

A few other historical slurring rules are mentioned by Martens (2007). Namely, that consecutive adjacent notes can be slurred, while big leaps should be detached, and that the first note in each slur should often be more emphasized.

Until the 18th century, slur markings were rarely seen in scores, since performers were trusted to decide matters of articulation themselves (Donington, 1973). Bach was more explicit in his slurring decisions in the violin partitas, and the same can be said of the cello suites, where articulation marks are frequent.

As described in Chapter I, slur markings are very inconsistent throughout the different sources of the cello suites. Not only are they often irreconcilable, but they are often not consistent within each source, such as the Anna Magdalena manuscript (Szabó, 2016).

A comparison of Bach's autograph of the Suite in G Minor for lute – transcribed from the fifth suite in C minor for cello – and the Kellner manuscript of the fifth suite can be made to analyze the question of slurs. From the figure below, we can observe that slur markings are different, with the Bach autograph providing very few markings at all.

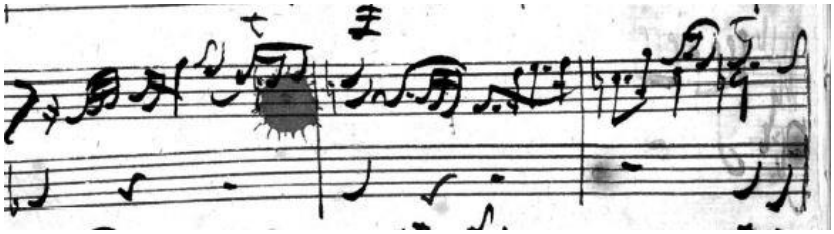


Figure 22: Lute suite in G minor, bars 26-28, autograph

Figure 23: Suite no.5 Allemande, bars 26-28, AMB manuscript

This example is prototypical of the entire suite – the Bach autograph simply does not include many slurs. The same comparison can be made with the Anna Magdalena version – it contains many more slurs than the lute autograph. Articulation works differently in the cello than it does in lute, since the bow allows for a longer sustained musical line, and therefore it is expected that Bach should notate slurs differently. It is telling, however, that slur markings are so rare in the lute version. The impact of this fact on the authenticity of any of the sources' slur markings is beyond the scope of this monograph. It could be suggested, however, that Bach intended the performer to approach articulation from the perspective of their own instrument, and not as an objective, preconceived plan which is inseparable from the composition.

Considering the fact that no source can safely be trusted on slur markings, together with the notion that Bach varied slur markings depending on the instrument, I am basing my approach through the saxophone on the demands of each particular passage, through the technical viewpoint of the baritone saxophone, with a strong basis on the various markings found throughout the sources. This is further supported by the well-established idea that performers could historically make their own slurring choices.

The saxophone provides one major technique which is not available on the cello: it can produce a sustained, slurred line as long as the saxophonist has enough air, regardless of note choice. In this sense, slurring possibilities are not restricted by string changes or bow length, but rather mostly by breath limitations. It follows that since many of the slur markings in the Cello Suites are specific to the instrument's limitations, the interpretation on the saxophone must distinguish them from slur markings which are essential to proper musical phrasing, regardless of instrument.

2. Chapter II - Improvisation

2.1. Foreword on Bach and Improvisation

2.1.1. Improvisation in the baroque period.

In 17th and 18th century music, the performer had a great deal of responsibility and autonomy regarding musical choices, including ornaments, cadenzas and dynamics (Rubinoff, 2009). They were required to have an understanding of stylistic conventions, and thus many details were omitted by composers, since their works would have either been performed by close friends and students, or by the composers themselves (Oakley, 2013). The musical language was consistently shared by composers and performers alike, and its conventions were much stronger in comparison with contemporary music practice.

The performance of any particular work was therefore understood as a blend of the composer's ideas and the interpreter's personal vision, the latter playing a much bigger role than it does in most contemporary performances (Donington, 1973). This responsibility required an understanding of the core patterns behind composition, which were often gradually taught on a practical level– essentially, through the study of improvisation ().

Fidom (2008) provides a historical overview of organ improvisation, and describes how the art of improvisation, once an indispensable skill, gradually faded away through the 19th and 20th centuries. It is known that historically, *preludes* were often improvised by musicians in the 17th and 18th century, as a way of getting comfortable with the instrument and introducing the key (Rubinoff, 2009). Indeed, improvisation and composition have historically been very closely related.

The practice of figured bass was an essential part of most 17th and 18th century music (Arnold, 1934). It was also key to Bach's way of composing and teaching (Rothgeb, 1981). To quote Bach himself in his "General Bass Rules" (1738):

> Figured bass is the most perfect foundation of music. It is played on the keyboard in such a way that the left hand plays the written notes, while the right hand strikes consonances and dissonances, so that this results in full-sounding harmony to the Glory of God and the delight of the soul. (Bach, 1738)

Johann Sebastian Bach was recognized quite early in his life as an avid improviser, and several accounts of his improvisational feats are historically documented (Fidom, 2008). Rink (1993), in an article regarding Heinrich Schenker's views on improvisation, quotes Schenker in a 1923 essay as writing:

> Can it not be said that virtually all of Bach's music relies on improvisatory creation? Obviously the current inability to improvise handicaps the modern musician in his attempt even to approach the unprecedented improvisatory art of a Bach… (Rink, 1993, p.6)

Another perspective on the music of Bach was elegantly put by the late pianist Glenn Gould in his 1962 documentary "Glenn Gould on Bach" (Lyalone, 2014):

> The fact remains that Bach, for all the passion of his own belief, for all the conviction of his own theological position was, in as far as his musical achievement be concerned, first and last an architect, a constructor of sound. And what makes him so inestimably valuable to us is that he was, beyond a doubt, the greatest architect of sound that ever lived.
>
> (…)
>
> And one of the qualities which gives Bach's work its extraordinary poignancy is the fact that we can practically see him struggling to restrain the limits of his incredible linear imagination, in order to fit, and even to save the disciplining harmonic progressions of tonality. (Lyalone, 2014)

It is in Gould's view of the music of J.S. Bach as sonic architecture that I approach the Bach suites. The construction of harmony is at the core of the music of Bach, and the cello suites, for all their melodic qualities, are no exception. The harmonic progressions are the

driving force behind Bach's linear development, as an emotional, architectural plan over which Bach could use his skills as a composer (and improviser) of great melodies.

2.1.2. Improvising on the cello suites.

Dobbins (1980) relates the baroque practice of improvisation on a *passacaglia* or *chaconne* bass to the way jazz musicians often follow chord schemes. The same comparison can be made between the more complex figured bass and jazz practice. This is not to say that the music of Bach can be reduced to improvisations over figured bass lines, but rather to suggest that there is a major improvisatory quality to his compositional process, a relationship between figured bass and melodic development which is akin to standard jazz practice.

This relationship can be observed in the Cello Suites through the analysis of the implied harmony within their melodic material. By simplifying a melodic passage into its most harmonically essential notes – generally found in strong beats, such as the first beat of a bar in an *allemande*, or their strongest metric subdivisions -, the overarching harmonic sequence can be determined.

I have applied this process to the entirety of the dance movements within the two suites and have converted the harmonic sequences into chord symbols, as commonly used in jazz practice. The resulting chord schemes serve as a groundwork for the improvised sections which is coherent with the original architectural plan of J.S. Bach. The chord schemes, as well as their simplified functional analysis, will be available in appendix 1.

In this chapter I shall describe the theoretical and practical framework on which I will base the improvisation in the two suites. In the process, relevant details of the original composition will be briefly analyzed as foundations for the process of improvisation.

2.2. Bridging XVII Century Music and Jazz: a Review

The idea of combining the music of the 17th and 18th century, and especially that of J.S. Bach with the jazz idiom has been explored in the past, and numerous such projects have been sprung in the last decade. I shall briefly go over a few notable cases which can be related to the present work.

French pianist Jacques Loussier has released tens of albums along his piano trio– piano, bass, and drums – exploring the music of J.S. Bach. They recorded a huge variety of Bach's music, from his Preludes, to the Suites, and even the Brandenburg Concertos. The approach is often to play the original work in the piano, while accompanied by the bass and drums. The original melodies are often played loosely, with improvised ornaments, and there are sections of improvisation over the original harmonic structure of the piece.

Christina Pluhar is a theorbist and harpist based in The Hague who, together with her early music ensemble L'Arpeggiata, performs music from the 17th century and regularly improvises. Her 2014 album "Music for a While – Improvisations on Purcell" combines their existing group with jazz musicians, in an exploration into the music of Henry Purcell.

In 2011, Canadian pianist Dan Tepfer released his solo album "Goldberg Variations / Variations", a revolutionary new take on J.S. Bach's original Goldberg Variations, BWV 988. Tepfer starts with the original *Aria*, and then alternates each variation as written – without repeats - with a respective improvisation, through all 30 variations, ending with the *Aria da Capo* as written. He goes to great lengths to alter the original harmonic sequences and rhythmic structures, so far as to sometimes change the time signatures.

More recently, in March of 2018, American pianist Brad Mehldau – most famous for his "Art of the Trio" albums – released the solo album "After Bach". Mehldau plays four preludes and one fugue from the Well-Tempered Clavier by J.S. Bach, following each of these works by his own pieces, which stem from the original works but showcase his own compositional and improvisational vision.

The first and only exploration of the Bach cello suites in this context seems to be the project of baritone saxophonists Henk van Twillert and Gary Smulyan, who frequently perform the suites through simultaneous interpretation by the former, and improvisation by

the latter. I had the opportunity to hear this project in concert several times throughout my studies in Portugal, which now serves as inspiration for my own work.

2.3. Boundaries: a Model for Improvisation

It is not within the scope of this dissertation to thoroughly discuss the topic of improvisation, through its history, varietyof possible definitions and the many different models proposed by other authors. Rather, I propose a pragmatic model which, although not comprehensive, I believe to suit the purpose of this project, i.e. to discuss a practical approach to improvisation within the two Cello Suites by J. S. Bach.

One characteristic that many models for improvisations have in common is the description of the dichotomy between real-time, creatively generated material and the pre-existing groundwork which the improviser prepares for. The latter includes aspects of harmony, rhythm, and the knowledge gained from previous improvising experiences. This dichotomy by no means describes the entire process of musical improvisation, nor does it relate to all types of improvisation, but it is nevertheless an essential part of the improvising process in a variety of musical cultures (Menezes, 2010)

Regarding the improviser's approach to this dichotomy, I propose a model which uses the idea of boundaries as a means of describing the stylistic, harmonic and rhythmic context which constrains the act of improvisation.

If we were to imagine, for the sake of argument, an unconstrained, limitless source for musical material, the amount of musical directions would be theoretically infinite. In this situation, no musical parameters have been defined yet, and the concept is still very abstract, so much as to be almost inconceivable. A hypothetical listener who is as open-minded as the musical creator would have no framework to base his perception on. This is obviously not the way music is created and shared in our culture. It is rather in the context of a mutually understood system of musical conventions that ideas can be conveyed from the creator to the listener. For example, the concept of tonality itself is a set of boundaries which western society has accepted for hundreds of years. An example from the cello suites is the concept of a dance, which in the act of composition implies a set of musical boundaries that are relatable

from the composer to the listener. These conventions allow the composer to clearly convey ideas to the listener - whether it is through an interpreter or not.

Musical conventions alone do not, however, account for the artistic significance of a work. It is rather in the study of the deviations of a particular piece from the conventions which govern it that an understanding of its substance can be achieved (McLary, 2000). In the case of the Cello Suites, for example, the identity of each dance movement can be found in its similarities and differences with the dances which gave its origin.[2]

The dichotomy is at play during the act of improvisation. When a jazz musician is improvising over a jazz standard from the Great American Songbook, the loosely defined canon of American popular songs and jazz standards from the 20th century, multiple boundaries are in place, some more covertly than others. The improviser is limited by the form of the song and its harmonic, melodic and rhythmic features. Of course, these limits are flexible and open to interpretation, but they exist nonetheless as an underlying coherent starting point. It is in the improviser's ability to create within these boundaries, or find creative ways to surpass them, that resides the difficulty of improvisation. Even in improvisation practices which are based on none of these fixed parameters – an example being what is loosely named "free jazz" -, the improviser can set these parameters as the music is being created (Menezes, 2010).

This understanding of boundaries allows for a practical approach to improvisation in the Cello Suites. As a starting point, the improviser must define how the source material will shape the boundaries for creative output, by analyzing the boundaries used for composition and applying them to improvisation. Although the musical styles are clearly vastly different, the process of handling this dichotomy is no different in relation to baroque music than it is to jazz.

[2] See p. 11-15.

2.4. Structure

All the dance movements in the suites share the same structure: A-B, each section repeated twice. In most movements, the B section is significantly longer than the A section.

Three ways of organizing the alternating sections of interpretation and improvisation on the suites were considered:

1. Alternating in each repeat, i.e. playing the first repeat of each section as written, and improvising the second repeats;
2. Playing the two sections as written but without repeats, followed by improvisation on the same structure – the approach chosen by Dan Tepfer;
3. Playing the first A of each dance as written, followed by its repeat and the first B improvised, ending with the last B section as written – a symmetrical structure which I believe is unique to this project;

By experimenting with the first approach, I found it to have great disadvantages in the cello suites. First, it's quite repetitive, in that there is a change of style and musical approach in every repeat of every dance. Secondly, and more importantly, it can simultaneously risk being too incoherent and chaotic, since it allows for neither a proper development of the suite as written, nor the time to develop ideas in the long term as an improviser.

The second approach is quite suitable for the Goldberg Variations as played by Tepfer, since each movement is short, and the harmonic sequence is essentially always the same – the work following the structure of a theme and variations. When applied to the Cello Suites, however, this approach becomes tedious, since the entire harmonic sequence – which is much longer and more complex than that of the Goldberg Variations – must be repeated in each movement, and the improvised sections occur after each movement has concluded its complete form.

The third structure, which I have decided on, solves these issues quite easily. Each dance begins and ends as written, providing a sense of stable opening and closure. At the same time, it allows for two consequent sections of improvisation, with greater freedom and the comfort of knowing that the suite will naturally end as Bach intended. This way, I believe that the logic

of the suites remains intact, and the original composition encloses the improvised sections in the exact same manner that jazz standards are traditionally played.

The *preludes* in the Bach suites for cello are – naturally, as discussed in the foreword - of improvisatory nature, even though they are completely notated (Szabó, 2016). The question arises as whether to introduce improvisation in the performance of the *preludes*, considering their historical context.

I consider the *preludes* to be integral parts of the identity of the Bach suites: they introduce the character of each suite very uniquely, and I believe that their alteration could jeopardize the integrity of the works. For this reason, I have chosen to play the *preludes* as written and improvise solely over each of the dances.

2.5. Rhythm

The rhythmic and metric basis for improvisation will be the characteristics of the original dance movements as written by Bach. That is to say, besides the essential aspects of each dance as baroque conventions dictate, the specific details of each suite – as described in chapter I - will be considered.

A few hemiolas are used by Bach in the first suite, namely in the *courante* and *sarabande*. They are an interesting addition to the rhythmic repertoire, as Bach manages to suggest large groups of three "beats" – two real beats each – while also preserving the original 3/4 structure. Below is an example from the final two bars of the first suite *sarabande*, with the imaginary 2/4 bars highlighted.

Figure 24: Suite no.1 Sarabande, bars 15-16, AMB manuscript

The use of hemiolas, not restricted to the specific type used by Bach, is a technique which will be employed during improvisation. Possibilities vary from shorter groups of smaller metric divisions to bigger, overarching hemiolas which can span several bars. The figure below shows a hypothetical hemiola figure – groups of three eighth-notes over three bars of 4/4.

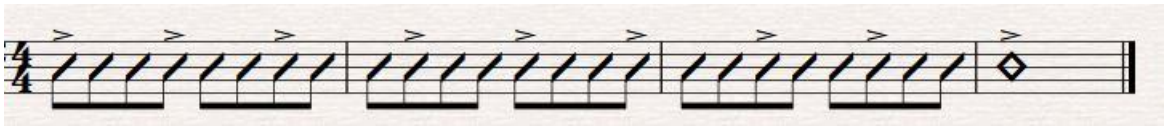


Figure 25 Hemiola figure, groups of three eighth-notes over bars of 4/4:

Additional subdivisions, not present in the original suites, will also be used. The most obvious option is to subdivide existing figures by two, such as the *minuet* eighth-notes into sixteenth-notes. Alternating triplets with eighth and sixteenth-notes, as found in the fourth suite *corrente* is a logical next step. The *sarabandes*, being slow movements, allow for much greater diversity of metric divisions, such as quintuplets or sextuplets, or even 32nd-notes. These complex subdivisions can be used as embellishments over the original rhythmic structure, as to avoid losing coherence with the original music.

2.6. Harmony

Each of the dance movements features the same essential harmonic structure: the first section begins in the root key and ends in a cadence to the dominant; the second section begins in the dominant and ends in a cadential sequence back to the root.

Within this basic harmonic structure, the suites contain many harmonic variations revolving around the various degrees of the major tonality, with the relative minor, the third degree, and the fourth degree and the dominant being the most common ones. The harmonic pathways are punctuated by cadences, which serve as stable harmonic references to guide the listener through the complex melodic development.

Many alterations to the original chord scheme can be added during the process of improvisation. These generally either embellish the existing chord progressions or serve the goal of providing an alternative harmonic route to the same targets. Note that the existing cadences which give structure to each dance will be kept intact – it is only the trajectory from one to the other that will be altered.

Besides the usage of chord symbols as a reference to the original work, it is necessary to approach the topic of harmonic rhythm, as a way to understand how the original harmony interacts with the rhythmic framework of each dance.

Harmonic rhythm refers to the speed at which chords progress, as well as where the most important chord changes occur in the metric structure. Based on the chord scheme provided in Appendix 1, a few key aspects can be observed. First, the most essential chord changes and cadences happen exactly as expected by the conventions of each dance. A clear example is the first four bars of the *sarabande* of the first suite, where the chord changes fall on the second beat of each bar.

Secondly, Bach fills the spaces between the essential chords with a huge diversity secondary chords which are often in various inversions. These secondary chords are of less structural importance yet serve the very important purpose of continuing harmonic motion, as well as developing the bass voice an interesting and dynamic melodic agent.

J.S. Bach's use of the Neapolitan sixth chord is worth a short description, as it is occasionally found in the two cello suites. The Neapolitan sixth chord consists of a major triad starting from the lowered second-degree of the minor scale – hence the common and more

descriptive term "major flat two". Its most common use is as a subdominant function, in preparation for the cadential chords (Lewis, 1939). This chord is most commonly used in its first inversion, and in the suites it is used to anticipate the main cadences with great dramatic harmonic tension.

Bach's use of the Neapolitan sixth chord as a dramatic harmonic device suggests its use in cadences which do not originally contain it. Even though the chord is generally used in minor tonalities, its usage in the context of major tonalities – such as the *prelude* of Suite no.4[3] - can justify its use in practically any cadential sequence.

[3] See p. 8.

2.7. Melodic Development

An overview of the most important melodic techniques used in the suites is important, as it leads naturally into devices that can be used in improvisation.

2.7.1. Implied polyphony.

By far the most notable melodic device used by Bach in the two suites is implied polyphony, as described in chapter I. The ability to develop up to three voices at a time in a monophonic line is a great achievement in the Bach Suites, and will therefore be a major focus in the improvisation sections.

The process of developing this skill as an improviser will first consist of analyzing its usage in the original composition. From there, I shall practice developing two or three voices as a time, with a gradually increasing tempo, over short sections of chord progressions from the suites. As my proficiency with this technique increases, I shall slowly add it to my improvisational process. I intend to develop this skill over the next few years, as I believe there is, as with most skills, an indefinite range of mastery.

2.7.2. Octave displacement.

The technique of octave displacement is a simple yet very effective melodic tool which Bach employed very frequently in the suites. Octave displacement consists of shifting a melodic line up or down an octave.

Although the technique itself is very simple, Bach uses it in many different ways, often with more than one intention. I shall briefly explain the myriad of ways in which octave displacement is used in the two cello suites. Example from the suites will be sometimes accompanied by an alternative which shows the melody as if this technique had not been employed.

The most common goal is simply to have the melody leap while preserving stepwise direction, as in the *allemande* of suite no.1.

Figure 27: Suite no.1 Allemande, bars 15-16

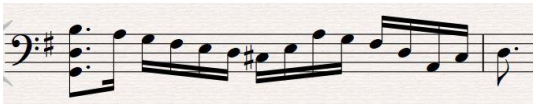


Figure 26: Suite no.1 Allemande, bars 15-16, simplified octaves

Sometimes, octave displacement is used when the range of the intended melody is simply too high. This is the solution to a very common problem in transcriptions, when the range limitations of the intended instrument are reached.

Figure 28: Suite no.4 Sarabande, bars 7-8

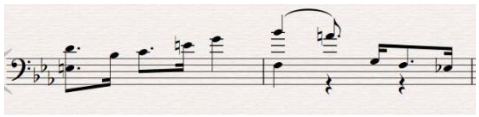


Figure 29: Suite no.4 Sarabande, bars 7-8, simplified octaves

A very peculiar use of octave displacement appears in the *Prelude* of the first suite**.** The primary effect is the perception of a perpetually descending line, while confining each section to the range of an octave. Simultaneously, each two-beat section is a step lower than the previous one, resulting in a downward harmonic motion. Bach also achieves functional bass notes – highlighted in red - in every two beats, even though they are blended into the melody itself. The harmonically structural notes are highlighted in blue.

Figure 30: Suite no.1 Prelude, bars 29-31

Another goal of octave displacement is be the division of an otherwise smooth linear melody into two different voices.

Figure 31: Suite no.1 Courante, bars 33-35

Figure 32: Suite no.1 Courante, bars 33-35, simplified octaves

This technique is not exclusive to the top voices. Bach also uses it in the bass voice, for two different reasons. The first is simply when the upper or lower limits of the cello are reached.

Figure 33: Suite no.4 Sarabande, bars 23-24, AMB manuscript

The second case is when Bach intends to write a double-stop for the cello, but the two voices are too far apart to allow their execution in two adjacent strings, such as in the *Courante* of suite no. 4.

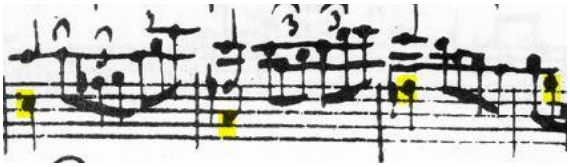


Figure 34: Suite no.4 Courante, bars 19-22, AMB manuscript

Octave displacement is therefore not just used in the suites as an escape from range limitations, but also as an effective melodic technique. It is also a common tool in jazz

improvisation, as described by Jacobs (1996), and I will work to incorporate it into the improvised sections.

2.7.3. Motivic development.

The technique of motivic development, as described by Berliner (1994), consists of taking one motivic idea, and developing it over a long stretch of time while still maintaining its identity. As Berliner explains, this technique is common to jazz music and other musical traditions. Motivic development is essential to the identity of each movement, as can be seen in the *courante* of the first suite, where one rhythmic motif is the basis for the entire movement (see Figure 35).

Figure 35: Suite no.1 Courante, bars 19-22, AMB manuscript

This technique is already a part of my usual improvisation practice, although it is much more difficult in the case of the cello suites. The main challenge is the lack of accompaniment, and therefore of harmonic support. Bach solves this problem by developing motives within the implied polyphonic voices, therefore preserving a clear harmonic structure. During improvisation, however, there is little time to work through these issues, and therefore compromises often have to be made. The improviser must often choose between melodic development and harmonic clarity – a coherent logic to the improvisation is more important than perfect balance, since there is an inescapable imbalance from the start.

A good balance between these two forces can be achieved by a variety of techniques. The improviser can emphasize the main cadential sequences[4], as to balance the complex melodic lines. Melodic lines which highlight important harmonic notes can be chosen. Chords can also be used in important rhythmic locations[5] to remind the listener of the harmony.

[4] See p. 36.
[5] See p. 33.

3. Summary and Conclusions

3.1. Overview

I began this monograph by exploring the different topics regarding the interpretation of Suite no.1 and Suite no.4 on the baritone saxophone. After researching the interpretation of 17th and 18th century music in general and the cello suites in particular, personal decisions concerning the performance of the suites were described. Then, the process of improvising on the suites was described, the starting point being the indispensable character of improvisation in baroque music, and in the musical conception of J.S. Bach.

In the first chapter, a few note discrepancies between the various sources were explored, as well as what I believe to be a common error in most recordings of Suite no. 1, in the hope that the resulting conclusions are also a relevant contribution to the research into this contentious topic. The challenges in performing the suites on the saxophone were approached from the perspective of the instrument's ability to conform as close as possible to the musical intentions of Bach, as well as through personal decisions regarding the interpretation of his music on the saxophone.

In the process of developing an approach to improvisation on the suites, several features of the original compositions were analyzed. Their theoretical study and practical usage in improvisation further aided my understanding of the Cello Suites from the viewpoint of an interpreter. Bach's approach to French court dances and their rhythmic and metric conventions, as well as his usage of harmonic sequences – firmly rooted in figured bass -, were made clearer by my own process of developing improvisation within the same boundaries.

Two new melodic techniques were studied which had not previously been a personal focus as a student of improvisation: implied polyphony and octave displacement. The analysis of these devices in the two suites revealed their great potential as melodic tools, suggesting that a a deeper study of these – and other – melodic devices in the compositions of J.S. Bach can be of great help in the study of jazz improvisation.

I developed a new appreciation for harmonic rhythm and its variety within the Cello Suites by studying its interaction with the melodic material and the rhythmic foundations of each dance. In my personal experience studying jazz, I have observed that harmony is often conceived in regular chord changes in the beginning of each bar. However, the diversity of the

harmonic rhythm in the Cello Suites revealed many possibilities which I had not previously studied, such as fundamental chord changes in odd parts of the bar – like in the *sarabande* -, or secondary emphasis in the middle of the bar – such as in the *bourrée*.

Although this project resembles some recent approaches to blending the music of J.S. Bach and jazz improvisation – such as that of Mehldau and Tepfer – it is unique in a few ways. It is the first solo approach to the Cello Suites featuring both their interpretation as written and improvisation, and the structure I have decided on is novel in that it preserves the original structure of each movement as conceived by J.S. Bach. The appendix is likely the first complete chord scheme of the dance movements from suites no.1 and no.4.

3.2. Future Work

The (re)introduction of improvisation in the performance of 17th and 18th century music and the theoretical research into its historical relevance are subjects of increasing exploration by both performing musicians and researchers. This monograph – as well its respective recital -, appears as a continuation of this long tradition. It appears to be the first academic document to describe and support a performance of the music of Bach through both interpretation and improvisation by drawing parallels between the improvising practices of the 17th and 18th centuries and traditional jazz practice. My hope is that the improvising strategies described here and my personal conclusions can serve as a reference for future work on the subject.

The conclusions of this monograph pave the way for many new artistic possibilities, the most straightforward being the performance of other – if not all – cello suites of J.S. Bach through the same approach. Other works by Bach for different instruments are a next possible step, such as many of his piano works, or even large orchestral music.

Even though the improvisation of the preludes was not decided upon for this project, their history as completely improvised introductory material suggests the possibility of future improvised preludes. The question of their – arguably incontestable – importance in the identity of the Bach suites is unavoidable, but artistic possibilities exist which can include improvised preludes. The most ambitious musical idea comes to mind after my work on the cello suites: the performance of an improvised suite with no existing material, either through predefined harmonic and rhythmic structures, or completely improvised in the moment.

Bibliography

Bach, J. (2011). Goldberg Variations / Variations [Recorded by D. Tepfer]. Sunnyside.

Bach, J. S. (1738). *General Bass Rules.* Leipzig: N. Schmidt, 2003.

Bach, J. S. (1994). Bach: 6 Cello Suites [Recorded by M. Maisky]. [CD]. Deutsche Grammophon.

Bach, J. S. (2018). Six Evolutions - Bach Cello Suites [Recorded by Y.-Y. Ma]. [CD]. Sony.

Bach, J., & Mehldau, B. (2018). After Bach [Recorded by B. Mehldau]. Europe: Nonesuch.

Davis, N. (2004, February). Historical Background: J.S. Bach's Suites for Unaccompanied Cello B.W.V. 1007-1012. *American String Teacher*, 104-111.

Dobbins, B. (1980). Improvisation: an Essential Element of Musical Proficiency. *Music Educators Journal, 66*(5), 36-41.

Donington, R. (1973). *A Performer's Guide to Baroque Music.* London: Faber and Faber.

Fidom, H. (2008). Organ Improvisation - An Introduction. *New Sound, 32*.

Jenne, N. (1973, Octover). Bach's Use of Dance Rhythms in Fugues. *Bach, 4*(4), 18-26.

Lewis, E. (1939). *The Neapolitan Sixth Chord: Its Origin and Development through J.S. Bach.* Master Thesis.

Lim, J. (2004). *A Performance Guide to J.S. Bach's Suite No.5 for Violoncello Solo: The Interpretation of the ornaments, rhythm, bowing and phrasing, and polyphonic texture.* Doctoral Thesis, University of Cincinnati, The College Conservatory of Music, Indiana.

Lyalone, F. (2014, December 17). CBC Presents: "Glenn Gould On Bach".

Martens, P. (2007). *Inspired by the past: A practical guide for cellists and other string players to the execution of Baroque music on modern instruments with special reference to the Six Suites for Solo Cello by J.S. Bach.* Master Thesis, University of Cape Town, South African College of Music.

McLary, S. (2000). *Conventional Wisdom: The Content of Musical Form.* London, England: University of California Press.

Menezes, J. M. (2010). *Creative Process in Free Improvisation.* Master Thesis, University of Sheffield, Department of Music.

Mickelson, B. (n.d.). *J.S. Bach's Six Unaccompanied Cello Suites: What did Bach Want?*

Neumann, F. (1991, Spring). The Vibrato Controversy. *Performance Practice Review, 4*(1, Article 3).

Oakley, A. (2013). *The Sarabandes of J.S. Bach: Freedom of Ornamentation and Melodic Manipulation.* Arizona State University.

Potter, L. (1996). *The Art of Cello Playing: A Complete Textbook Method for Private or Class Instruction* (2 ed.). Van Nuys, California: Alfred Music.

Qureshi, R. J. (1994). *The Influence of Baroque Dance in the Performance of Johann Sebastian Bach's "Six Suites a Violoncello Senza Basso".* Doctoral Thesis, Rice University, Houston, TX.

Reeves, A. R. (2001). *Understanding French Baroque Practice Performance Via a Modern Edition of Jean-Philippe Rameau's "In Convertendo".* Doctoral Thesis, The University of Arizona, School of Music and Dance.

Rink, J. (1993, Spring). Schenker and Improvisation. *Journal of Music Theory, 37*(1), 1-54.

Rothgeb, J. (1981). Schenkerian Theory: Its Implications for the Undergraduate Curriculum. *Music Theory Spectrum, 3*, 142-149.

Rubinoff, K. R. (2009). (Re)Creating the Past: Baroque Improvisation in the Early Music Revival. *New Sound, 32*.

Szabó, Z. (2016). *Problematic Sources, Problematic Transmission: An Outline of the Edition History of the Solo Cello Suites by J. S. Bach.* Sydney: Sydney Conservatorium of Music, The University of Sydney.

Tomita, Y. (2007). Anna Magdalena as Bach's Copyist. *Understanding Bach, 2*, 59-76.

Twillert, H. v. (2013). *Bach's Cello Suites Transcription and Interpretation for Baritone Saxophone.* University of Aveiro.

Williams, P. F. (2004). *The life of Bach.* Cambridge, United Kingdom: Cambridge University Press.

Winold, A. (2007). *Bach's Cello Suites, Volumes 1 and 2: Analyses and Explorations.* Indiana: Indiana University Press.

Appendix I

Chord schemes of the dance movements from

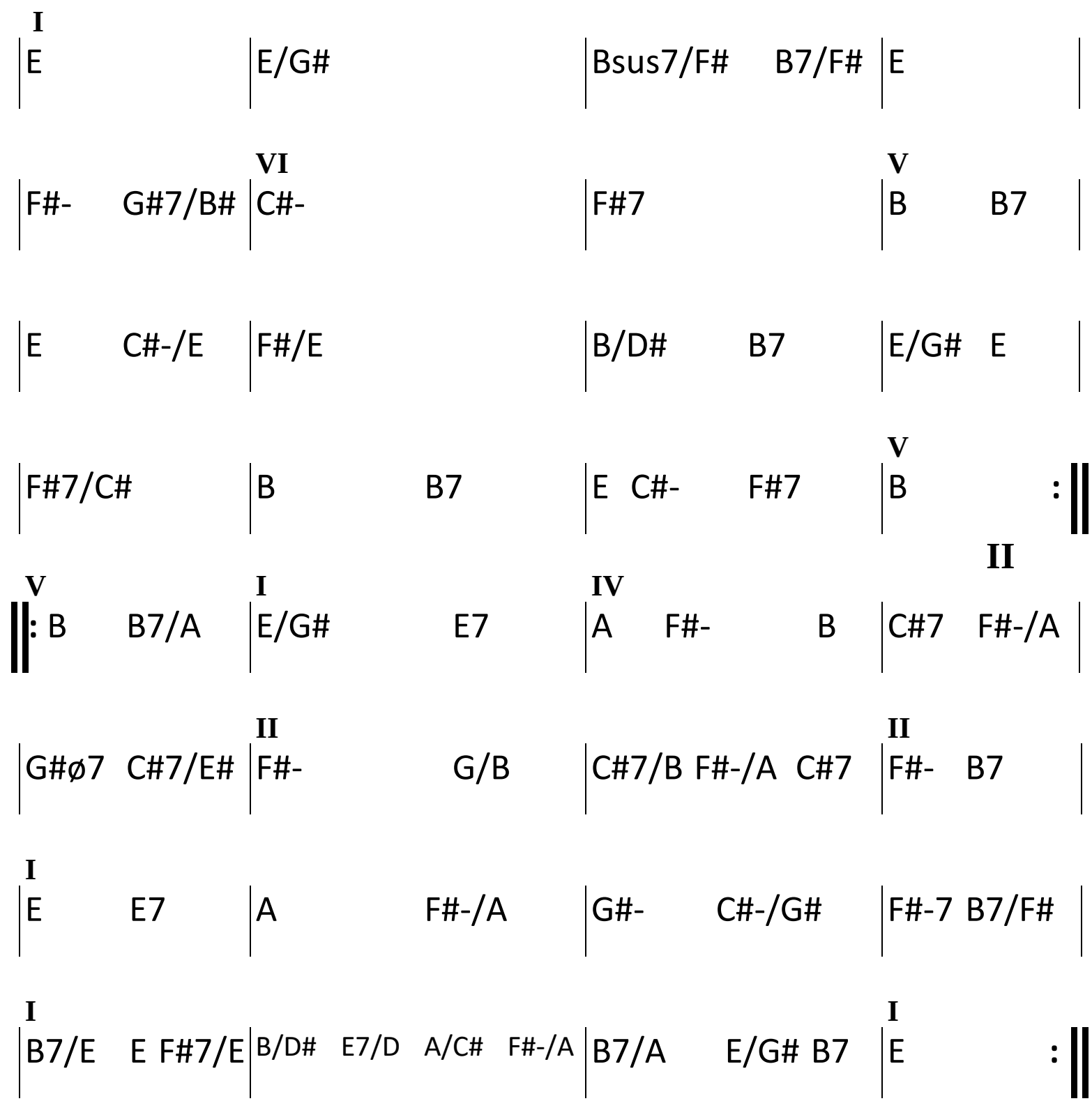
Cello Suites no.1 and no.4

by Johann Sebastian Bach

Transposed for baritone saxophone (Eb)

Essential chord functions are notated in roman numerals and in bold above the respective chords.

Suite no.1 in G major - Allemande



Courante

I			
E	%	A	B7
B7	E Amaj7	B E/B B7	E
V/V			
F#7 B	F# B	F#7	B Emaj7
	V		
B/D#	B	%	F#7/E B/D#
	V	V	
B/D# E F#7	B	:‖: B	B7/A
	I		
E/G# A B7	E	G#/B#	C#-
			VI
D/F#	G#7/F#	C#-/E F#- G#7	C#-

E7/G#	A	F#7/A#	B7/A

E7	A	B7	E	A	B7	I E

%	B7	E	E/G#	A	B7/D#	B7

E/G# A	B7	I E	:‖

Sarabande

I				IV				V	
E	A/E	B7/E	E	E7	A			Bsus	B7

	I		V/V		V			(V)	
B/A	E/G#	C#-/B	F#/A#	F#7/E	B/D#	C#-/E		F#7	B

V		I					VI	
B	B7	E	G#7/F#	G#7/B#	C#-	F#-/A	G#7	C#-

	IV		II					I	
E7/G#	A	C#/E#	F#-	B7/A	E/G#		F#-/A	B7	E

Menuet I

I

E	%	A/C# B/D#	E B7

V

B7/F#	B7	B/D# E F#7	B :‖

V **II**

‖: B	%	E#^{0}	F#-

VI

G#7/F#	C#-/E	G#sus7 G#7	C#-

IV **V**

E7/G#	A	F#7/A#	B

I

B/A E/G#	A F#-	B7/A E/G# B7	E :‖

Menuet II

I			
E-	B-/D	A-/C	B7
E-	B-/D	A-/C	B7 :‖
‖: B7	I E-	A7	V/III D D7/C
G/B	C	A-/C Dsus7 D7	III G
E7/G#	IV A-	D7/F#	III G
B7/D#	I E-	A- Bsus7 B7	I E- :‖

Gigue

I								
E	A/E	E		E	A/E	E/B	B	
C#-	F#7/E	B/D#		C#-/E		F#7		
V						**V**		
B-	F#7/E	B-/D	E-	B-/F#	F#7	B		:‖
V				**I**				
‖: B	E/B	B7		E	G#7/F#	C#-/E	C#-	
B7		E	F#-/A	G#sus7	G#7	**VI** C#-		
C#-/E	F#7/E	B-/D	E7/D	A/C#	F#-/C#	**V** B		
I						**I**		
E-	B7/F#	E-/G	A-	Bsus7	B7	E		
A		B		C#-	A/C#	B	A	

I

| E/G# B7 | E :‖

Suite no.4 in Eb Major

Allemande

I

C	F/A G7/F	C7/E F	G7/D C/E

I

F/C G7/D	Gsus7 G7 C	G7 C	A- D7

V

G A-/E	D7/F# G	D7/A G7/B	C A- D7/F#

G	G7/B C	A- D	Dsus7 D7 G :‖

V

‖: G7	C/E G7 C	G#o E7	A-

VI

E7	A-/C E7 A-	A- F/A	F/A B7/A

III **II**

E-/G B7/F#	Bsus7 B7 E-	G- A7/G	D-/F A7/E D-

G7	C G7	G F/A G7/B	C Bb/D C7/E

IV F G7/F	C	**V** G7	**I** C7/E F

G7/D C/E	F/A G7	C F#o G7	Gsus7 G7	**I** C : ‖

Courante

C F G	C	G C D	G G7/F C/E
D-/F	C/E	D-/F G7	I C
A-/C	D7/C	%	V G/B
C	D7	E-	D7
C	V/V D	D7/C	D7/A
D7/F#	G A-/C D7	V G	%
Dsus7 D7	G	V : G C D/F#	G
A- D- E/G#	VI A-	A-	D-

G7	C	F	D-
G7	G#o	D-	E7
A- D- E7	VI A-	A7	II D-
G7	I C	F	G7
I C	C7/E	F D-/F	A7/E
D- G7/B	C A-	F#o	V G7
G7/F	G7/D	G7/B	C D-/F G7
I C	%	C/E G7	(I) C :‖

Sarabande

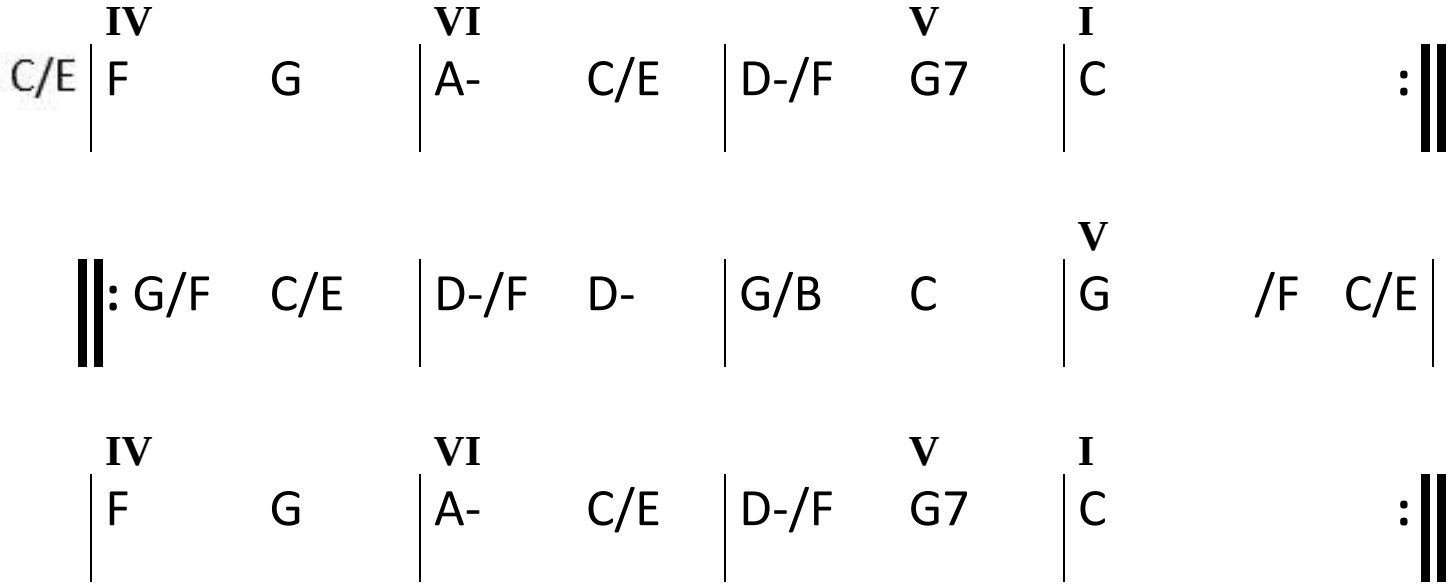
I C C7	F	G	C
V G7	C7	A7/C#	D7
V G/B	Cmaj7	Dsus7 D7	**(V)** G :‖
‖: **V** G7	E7/G#	**VI** A- D-/F F#o	E7
A7/G D-/F A/E	D- E7/D A-/C	D- E7	**VI** A-
D7/F#	G7	**I** C F#o	G7
(I) C/E	Fmaj7	G7	A-7
D7/F#	G7/F	C/E D-/F G7	**I** C :‖

Bourrée I

I			
C	G7/D	%	C
V			
G7	%	%	%
V/V			**V**
D7	%	G A-/C D7	G7 :‖
V	**I**		
‖: G	C	G#o	E7
VI			
A-	E7	A-	D-/F E7
	(VI)		
D- E7	A- A7	%	D- G7
I			
C	G	G7	%
C7	%	F A7/E	% D- G7

		I	
C	G7	C/E	D-
D-	G7	C	G7
			I
C	F /E	D- Gsus7 G7	C
V			I
G7	%	C/E F G7	C :‖

Bourrée II



Gigue

I				**V**			
C		%		G7/D	C/E	G7/D	C/E
V/V				**V**			
D7/C		%		G/B	C	G/D	C/E
		(V)		**V**			
A-	D7	G		:‖: G		%	
				VI			
G#o		%		A	F	G7/F	C/E
				VI			
F	Bo	E/G#	Esus7 E7	A-		%	Ao
		III				**V/III**	
%	Bsus7 B7	E-	A-	E-/B	C	B	
			III	**I**			
%		Bsus7 B7	E-	C		%	
V				**I**	**IV**	**I**	**IV**
G/D	C/E	%		C7	F	C7	F

F#o			%			V G7	/F	C7/E	F	/E	G7/D
C/E		A7/C#	D-		G7/B	I C/E		F	C/G		A-
D-		G7	I C		:‖						