

2012

Bach on marimba : a case study using the violin sonata in A minor (BWV 1003)

James Chong
Edith Cowan University

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Bach on Marimba: A Case Study Using the Violin Sonata in A minor (BWV 1003)

James Chong

Western Australian Academy of Performing Arts

This dissertation is submitted as partial fulfillment of the requirements of the
degree of Bachelor of Music Honours 2012

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Acknowledgements

I wish to thank my primary supervisor, Dr. Jonathan Paget at the Western Australian Academy of Performing Arts (WAAPA) for all his knowledge, expertise and insight into helping me with this project. His guidance has proved invaluable in accomplishing this dissertation. I also would like to thank others who have helped me through this journey: Troy Greatz, my percussion teacher, whose skill set and knowledge has helped me critically discuss the techniques within the dissertation, and Stewart Smith whose vast knowledge of baroque performance practice has granted me tremendous insight into understanding my topic further.

Above all, I wish to thank my family, and in particular, my parents – Elaine and Ken Chong – for all their time, money, support, effort and patience with both me and my studies. Their generosity and charity has made my studies and training significantly smoother and easier.

Abstract

Transcribing works from the violin repertoire for marimba presents a series of technical issues, which must be addressed before the work can be successfully performed on marimba. This dissertation focuses on addressing the main issues that arise in this transcription process, using Bach's A minor violin sonata (BWV 1003) as a case study. The main areas of investigation are (i) articulation, (ii) arpeggiation, (iii) possibilities for harmonic expansion, and (iv) sustain. Within each of these four topics, discussion is made into a selection of techniques available to the marimbist in the search for a performance style that is both historically informed and idiomatic to the instrument.

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I. Introduction

The music of Johann Sebastian Bach (1600-1750) is transcribed for and performed on various instruments in multiple concert settings all over the world. The marimba is no exception, with many of Bach's chorales and works for strings and harpsichord being transposed onto marimba. As the marimba developed into a serious concert instrument, around the 1950s, Bach's music, as well as that of other compositional masters, found their way into the marimba repertoire, being transcribed and performed by the leading percussionists of the time. Bach's music has been frequently recorded and performed by marimbists such as Peter Sadlo, Evelyn Glennie, Gwen Thrasher, and Leigh Howard Stevens just to name a few.¹ His music continues to be used today, both as an important component to the concert repertoire, and as a pedagogical tool as Bach's string works are a favourite for percussionists to utilise in both a teaching and concert setting.

Bach wrote many works for the instruments of his time. Some of Bach's most famous works for solo repertoire are found in the Six Sonatas and Partitas for Solo Violin (BWV 1001-1006).² These works are regularly performed today in concert halls all over the world, and were pivotal in the development of the violin as a solo instrument, due to the technical and musical demands it placed on the performer. As musicians today place Bach on a pedestal as one of the most influential composers, performers tend to gravitate towards his music, recognising it as harmonically and musically sublime. Bach's music is highly intellectual and musically tasteful, and for this reason, performers observe his music as an important resource for the development of technique and musicianship. Thus a broad historical tradition of Bach transcription has existed throughout the twentieth-century.³ For the marimba,

¹ William Leslie Sallak, "The Cello Suites of J. S. Bach: A Critical Edition for Marimba" (Arizona State University, 2010), 34-36.

² Johann Sebastian Bach, *Three Sonatas and three Partitas for Solo Violin*, ed. Peter Wollny (Kassel: Barenreiter, 1720), iii-vii.

³ Richard D. P. Jones, "Transcribed Bach," *Oxford Journals* XXVI, no. 2 (1998), 1.

the performance of Bach also aids in its development as a serious concert instrument.

As Bach's music is increasingly performed on the modern marimba, it was felt that a study that focussed on performance issues in Bach marimba performance was warranted. This study will utilize the violin sonata in A minor (BWV 1003) as a case study to explore a way of performance that is both historically-informed and idiomatic to the instrument.

Recent decades have seen a great deal of attention paid to historically-informed performance practice (or HIP), particularly with regard to the music of the Baroque. This is essentially a quest for authenticity, and typically includes a revival of authentic Baroque instruments, Baroque techniques, and Baroque ideas of musicianship—often with extensive reference to treatises of the period. As purists have upheld the idea of playing on original instruments as pivotal to this endeavour, the idea of performing Bach on the marimba might seem to be antithetical. The obvious counterpart to such an overly pedantic way of thinking is that transcription was widely practiced during the Baroque—and as will be seen, Bach himself transcribed his own works for other instruments, significantly altering them in the process. Therefore, transcription itself must be viewed as something that is very much authentic to the period. The key question becomes how should this process of transcription be approached?

An investigation of the Baroque transcription process demonstrates that the primary motivation is one of being idiomatic to the new instrument. Transcription then, is a process of translation. Elements that are idiomatic to one instrument must often be transformed on the new instrument, in order to preserve the musical spirit. If we speak of authenticity, it must be to the musical essence and not a dogmatic devotion to every note. The same process is observed in Bach's own transcription of the A minor violin sonata for harpsichord (BWV 964),⁴ where significant alterations

⁴ Darren Bruce Bastian, "Bach transcription for marimba: Creating an authentic performance edition of Johann Sebastian Bach's Sonata No. 1 for Violin Solo, BWV 1001, and Sonata No. 2: Grave, BWV 1003, using guitar and lute transcriptions as models" (The University of Arizona, 2009), 24.

are made in order to make the work idiomatic for the new instrument. This provides a strong premise for the transcription of this sonata onto marimba, an instrument that carries many similarities to the harpsichord.⁵

However, this quest to be idiomatic must be careful not to engender anachronistic performance practices. Elements of style (as commonly known in the new arena of research into HIP) must be preserved and translated into the new instrumental idiom. In short, an ideal transcription should be (i) idiomatic, and (ii) stylistically appropriate.

In order to understand what is idiomatic to the marimba, it is useful to understand a little of the instruments origins and design. The modern marimba is a wooden keyboard percussion instrument whose appearance is likened unto the keys of a piano. It features two rows of wooden bars like the natural and accidental keys of the western keyboard.⁶ Below these wooden keys are resonator tubes, which act as natural amplifiers for the marimba, allowing for a deep and resonant timbre. The marimba finds its origins in Central America; where around 1870 it was developed into a chromatic instrument from its ancestor, the diatonic marimba. The diatonic marimbas are a common instrument throughout Central America, where marimba ensembles are extremely common. In the early twentieth century, the chromatic marimba was brought to North America, where it has since flourished into a popular compositional medium for 20th Century Classical composers around the world.⁷ Being a relatively young instrument within the classical family, the marimba lacks the depth of repertoire that exists on other western instruments such as the piano and indeed the violin. As the marimba began its push to be recognised as a serious solo concert instrument, it was only a matter of time before the music of periods past by would find its way onto this percussive keyboard. The

⁵ Brian Cole, "Baroque Performance Practice and the Marimba Transcription," *Percussive Notes* 29, no. 5 (1991), 3.

⁶ James Blades. *Percussion Instruments and Their History*. London: Faber & Faber Ltd, 1970, 412-415.

⁷ Ibid.

modern marimba commonly has a range of between four and five octaves, and is played with anywhere between one and six mallets.

Although the marimba's note range allows for all of Bach's solo string work to be played in their correct register, transcribing music from strings for marimba presents a variety of technical and musical challenges. It is important to keep in mind that these challenges are essentially a process of translation. Essentially, how can the stylistic principles of HIP be adapted to marimba technique?

This dissertation highlights four key issues, where it is felt that the adaption of HIP to marimba technique is most fruitful. In each case, analysis will be made of the HIP issues involved, with reference to primary sources, and then discussion will be made as to the advantages and disadvantages of various marimba techniques in achieving these musical goals. The four key areas of discussion will be (i) articulation, (ii) arpeggiation, (iii) possibilities for harmonic expansion, and (iv) sustain. As previously stated, this dissertation addresses these issues through the use of Bach's violin sonata in A minor (BWV 1003) as a case study.

The first two chapters consider how articulation and arpeggiation, respectively, are approached on the violin (according to HIP), and then discuss ways that these practices could be transferred to the modern marimba. Chapter three explores the possibilities of the marimba in affording harmonic expansion. The original violin music is very much limited in its range and contrapuntal complexity in terms of the physical limitations of the instrument. When Bach himself transcribed this work for harpsichord, he likewise realised many of the harmonies to capitalize on the polyphonic capabilities of the instrument. To a limited extent, this can be done on the marimba also. In the final chapter, consideration is made of the problem of sustain—one that is idiosyncratic to the modern marimba as a percussion instrument. This chapter lists and discusses a series of approaches that the marimbist can utilise in order to sustain notes or musical lines deemed musically appropriate. In all cases, these discussions and examples are not designed to be definitive, but rather simply to enable the performer to create musically successful and historically informed choices for themselves.

II. Articulation

Articulation in music is the treatment of any given note in terms of its connection to its adjacent notes, as well as the general treatment of the length of the note. Articulation appears within a score in a variety of methods including staccato, legato, and slurs, but are not limited to these few terms. With regards to the violin, the concept of articulation has a lot to do with the use of the bow, and its accompanying technique. Whilst the bowing technique of the violin has undergone a series of developments, like all other instruments, there are certain features that remain a constant for the violin.⁸ For example, the contrasting effects of the down bow and up bow strokes of the violin served as a means in which to produce heavier and lighter weighted strokes respectively.⁹ This was a feature for the violin through the baroque period, and is still a technique utilised today, generally with respect to the French style of articulation. During the baroque period, these bowing patterns originated in the dance styles that much of the repertoire was composed in. Within these dance styles, the rule of bowing required the performer to emphasise each down beat or strong beat with a downwards stroke.¹⁰ The contrast between these two styles of strokes, downwards and upwards, resulted in the terminology of 'good' and 'bad' strokes, a terminology used early on by Francesco Geminiani, an Italian violinist and composer of the Baroque period.¹¹ This use of 'good' and 'bad' strokes, and their naturally contrasting weightings were utilised by composers and performers to enhance the metrical structure of the work. This bowing style allowed the audience and listeners to grasp a stronger understanding of the pulse, as the

⁸ Bachmann Werner, "Bow. 1. Origins" *Grove Music Online*, accessed June 14, 2012, *Oxford Music Online*.

⁹ Scott Laurie, "Violin Bow Technique." *American String Teacher* 61, no. 1 (2011): 72.

¹⁰ Robin Stowell, and Colin Lawson, *Historical Performance of Music: An Introduction*. Cambridge: Cambridge University Press, 1999, 56-57.

¹¹ Andrew Manze, "Strings." In *A Performer's Guide to Music of the Baroque Period*, London: The Associated Board of the Royal Schools of Music Publishing, 2007, 78-79.

down bows would emphasise the stronger beats within a bar.¹² The understanding of good and bad strokes or notes found its way into the other families of instruments; its reference in baroque woodwind performance will be discussed later in this chapter.

As we transfer the works of the violin onto the marimba, we must consider the performance practices of the violin, and consider the suitable and appropriate translations of these practices onto the marimba.¹³ Types of articulation, such as slurs, legato and staccato, which appear within the violin sonata, create a series of issues for the marimba. Whilst they may not always be appropriate to emulate, these styles of articulation should all still be investigated, if for no other reason than to create a firmer understanding of the available options when translating the sonata onto marimba.

The marimba, as with most of the percussion instruments within the western world, features a very distinct and strong attack on each of its notes, and a quick decay. The effect that this strong attack and rapid decay has on sound production is one of a seemingly staccato or 'percussive' nature. This chapter investigates how to create a pallet of sounds that will allow the listener, and indeed the performer, to identify each of these various articulations on the marimba beyond its inherently staccato sound. The discussion explores the various approaches to articulation through phrasing, sticking combinations and timbral control.

Slurs (which are one of the more common articulation devices present within the sonata) usually imply notes to be played by a single bow stroke, creating both a sense of phrase and a legato sound—both of which are integral components to the music.¹⁴ However, slurs cannot be easily emulated on the marimba, which is essentially a percussive instrument. However, a variety of different strategies can

¹² Robin Stowell, and Colin Lawson, *Historical Performance of Music: An Introduction*. Cambridge: Cambridge University Press, 1999, 56-57.

¹³ Darren Bruce Bastian, "Bach Transcription for Marimba: Creating an Authentic Performance Edition of Johann Sebastian Bach's Sonata No. 1 for Violin Solo, BWV 1001, and Sonata No. 2: Grave, BWV 1003, Using Guitar and Lute Transcriptions as Models." The University of Arizona, 2009, 10-11.

¹⁴ Geoffrey, Chew. "Slur." *Grove Music Online*, accessed June 14, 2012, *Oxford Music Online*.

be employed by the marimbist in order to attempt to simulate a similar musical effect to a slur. The principal strategy to create the illusion of legato and lightness is through dynamic shaping. Additionally, the strengths and weaknesses of three different sticking combinations will be discussed, in terms of their ability to produce the musical effect required for slurred notes. Similarly, the effect of staccato can be simulated via judicious mallet placement. These strategies are discussed, in turn, below.

A. Simulating Legato through Dynamic Shaping

The simulation of legato through dynamic shaping can be made by placing a slight emphasis upon the first note of the passage, while the subsequent notes are played at a slightly lower dynamic, allowing the passage to have both momentum and shape, which creates a sense of a flowing line and legato sound. Using this technique allows the marimbist to emulate a line and shape that on a violin would be achieved through the motion of a single bow stroke. This creates a true legato line by having a clear beginning, a joined passage, and a slightly tapered ending.¹⁵ This technique is particularly useful in passages that feature a consistent rhythm such as **figure 1**.



Figure 1: mm21-22 of Allegro from BWV 1003¹⁶

In this example, the marimbist would endeavour to place slightly more impetus on start of beat 2 in bar 21, lightly tapering towards the D. This phrasing style should be copied in the subsequent slur markings of the figure. These slur

¹⁵Geoffrey, Chew. "Articulation and Phrasing." *Grove Music Online* accessed June 14, 2012, *Oxford Music Online*.

¹⁶ Peter Wollny, *Johann Sebastian Bach, Three Sonatas and Three Partitas for Solo Violin*. Kassel: Barenreiter, 1720, 25.

markings would naturally be played by one bow stroke on the violin, thus the tapering of the notes covered by the slur on the marimba present both a musical and stylistic approach to the phrase.

B. Sticking Combinations

With four mallets at the performer's disposal, the choice of various sticking options becomes important, especially for phrasing and articulation purposes. Sticking is notated through the use of numbers 1-4. This notation system is similar to that of the keyboard, where the left most mallet is number 1, and the right most mallet is 4. However, this numbering system is frequently used in conjunction with a standard L and R for left and right hand.¹⁷ For a passage such as in **figure 2**, taken from the Grave of Sonata II, a player may choose to stick the notes in a number of ways. The following discussion observes three different approaches: (i) hand-to-hand sticking, (ii) single-mallet sticking, and (iii) one-hand mallet alternation.



Figure 2: mm7 of Grave from BWV 1003¹⁸

1. Hand-to-Hand Sticking

This technique features a sticking which alternates between hands, which allows for the player to very easily shape the passage. It also allows for a very large dynamic range as there is ample time between repeated hand movements to generate enough velocity for a note of high dynamic, or to be in position for a gentle soft

¹⁷ L.H. Stevens, *Method of Movement: For Marimba, with 590 Exercises*: Marimba Productions, 1979, 5-6.

¹⁸ Peter Wollny, *Johann Sebastian Bach, Three Sonatas and Three Partitas for Solo Violin*. Kassel: Barenreiter, 1720, 18.

dynamic. With this approach, the marimbist has more time between individual strokes in each hand, allowing for a greater control over individual note weightings and accuracy. This sticking approach is very effective when used in conjunction with the phrasing concept previously mentioned.



Figure 3: illustration of hand to hand sticking combination¹⁹

2. Single Mallet Sticking

This method incorporates only one mallet, and whilst seemingly more technically and physically demanding, playing a single line with a single mallet has multiple effects both visually and musically. As the performer has four mallets at their disposal, they may utilise this by using a mixture of mallets (as opposed to four of the exact same mallet), with each mallet being tailored to the common playing range of that mallet on the marimba. For instance, the mallet held on the outer left of the player may be of a softer variety to harness the large resonance of the lower register, whilst the mallet on the outer right may be of a much harder quality, to allow for higher clarity within the upper register of the marimba.

Performing with a set of different mallets is common within marimba performance, as it not only seeks to produce the best sound from every part of the instrument, but also allows visually for both the player and audience to observe the position of each harmonic line within the four part harmonies that are so common within Bach's music. If this were indeed the case, then it would very quickly cause

¹⁹ Peter Wollny, *Johann Sebastian Bach, Three Sonatas and Three Partitas for Solo Violin*. Kassel: Barenreiter, 1720, 18.

problems for any hand-to-hand sticking, as the result would never be even with two different mallets. Thus the easiest and most obvious solution would be to retain all notes pertaining to a particular voice, within the mallet that is assigned to that harmonic voice (i.e. four voices, with each voice covered by a single mallet). The limitation of this technique lies with both note accuracy and tempo. Forcing only one mallet to play a large passage of notes on its own places an immense technical challenge before the player to make sure that the mallet is always striking the correct pitch, in the optimum playing position. The example in **figure 4** is one of Italian diminution, which, as a stylistic function needs to be kept light. This technique runs a risk of creating very heavy tones and losing its legato effect through the naturally demanding physical nature of this approach. Furthermore, there is clearly a speed limit to which this technique can operate, just as there is a max speed that the performer's hand will allow them to play at. Thus an appropriate tempo must be selected which allows for the performer to work within these limitations and execute this technique.

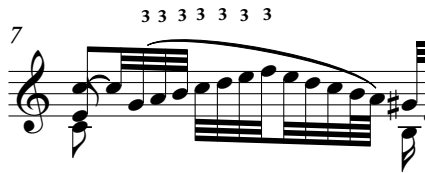


Figure 4: illustration of single mallet sticking²⁰

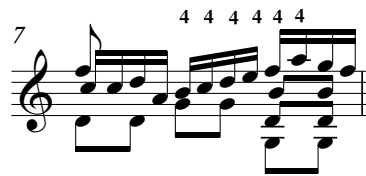


Figure 5: mm7 of Andante from BWV 1003 with single mallet sticking²¹

In **figure 5**, the example depicts an instance in which the single mallet sticking approach would be both appropriate and helpful to the performer. Dedicating the semiquaver run from B to F allows the performer to free up the other

²⁰ Peter Wollny, *Johann Sebastian Bach, Three Sonatas and Three Partitas for Solo Violin*. Kassel: Barenreiter, 1720, 18.

²¹ Peter Wollny, *Johann Sebastian Bach, Three Sonatas and Three Partitas for Solo Violin*. Kassel: Barenreiter, 1720, 24.

mallets for the two chords at the end of the figure. Furthermore, the movement of mallet 4 positions it in an optimal placement for the same two chords. The use of a single mallet, when not pushing the physical capabilities of the marimbist, can allow for a very rhythmically stable and even playing style, which often eliminates any tendency for rushing through passages.

3. One-Hand Mallet Alternation

This technique refers to a sticking combination that is discussed within a thesis written by Thomas Allen Zirkle. Zirkle's thesis discusses the use of a technique involving the alternation of the two mallets within the one hand to perform linear passages within Bach's keyboard works.²²

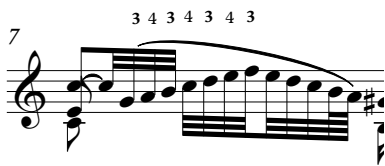


Figure 6: illustration of one hand alternation sticking²³

This same technique can be incorporated beyond the keyboard works of Bach, into his work for strings. Zirkle highlights the increased note accuracy that is present through this technique, knowing that the alternating note will always be in the appropriate position to play the correct note, and that the player need only aim for the initial note, effectively halving the efforts of the performer. This technique relates very strongly to the previously mentioned 'good' and 'bad' notes that existed as a stylistic feature within violin performance practice. The naturally weightings of down and up strokes on the violin were referred to by Geminiani as 'good' and 'bad'

²² Thomas Allen Zirkle, "Developing a Four-Mallet Marimba Technique Featuring the Alternation of Mallets in Each Hand for Linear Passages and the Application of This Technique to Transcriptions of Selected Keyboard Works by J. S. Bach." 2003, 1-2.

²³ Peter Wollny, *Johann Sebastian Bach, Three Sonatas and Three Partitas for Solo Violin*. Kassel: Barenreiter, 1720, 18.

tones respectively. These contrasting note weightings strengthened the rhythmic elements of the works performed, which was particularly relevant to the works composed in dance styles. This same technique is imitated through the performance practice of period woodwind players, who utilise ‘good’ and ‘bad’ notes through soft and hard syllables when tonguing²⁴. These hard syllables create a slightly more weighted note, whilst the softer syllables create notes with less attack. The result is this alternating effect of strong and weak notes within a passage.

The practice of the technique suggested by Zirkle has this effect as the initial note will naturally have more strength than its subsequent note²⁵. The tonguing utilised by baroque players for this effect is shown below in **figure 7**.



Figure 7: Example of baroque tonguing approach²⁶

The approach utilises the ‘t’ in ‘tu’ sound as a harsh consonant, which brings about the strong or ‘good’ sound. The subsequent ‘ru’ articulation uses the softer ‘r’ consonant, which results in the weaker or ‘bad’ note.

This one-hand mallet alternation technique is useful for diatonic passages, such as in **figure 6**. It can also be adapted for use in passages that incorporate accidentals, but this can become cumbersome and awkward for the player.

²⁴ Robin Stowell, and Colin Lawson, *Historical Performance of Music: An Introduction*. Cambridge: Cambridge University Press, 1999, 48-49.

²⁵ Thomas Allen Zirkle. "Developing a Four-Mallet Marimba Technique Featuring the Alternation of Mallets in Each Hand for Linear Passages and the Application of This Technique to Transcriptions of Selected Keyboard Works by J. S. Bach." 2003, 11-12.

²⁶ Robin Stowell, and Colin Lawson, *Historical Performance of Music: An Introduction*. Cambridge: Cambridge University Press, 1999, 49.

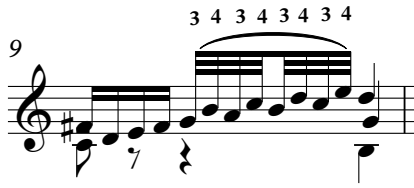


Figure 8: mm9 of Andante from BWV 1003 with single mallet alternation sticking

Figure 8 illustrates a circumstance in which the one-hand mallet alternation is extremely useful and appropriate to the marimbist. In this figure, the marimbist only need keep the interval of a third in his or her right hand, and diatonically move upwards toward the E. This movement also allows for the right hand to be in an optimal position for the G major triad at the end of the figure. Using this method also translates the fore mentioned practice of ‘good’ and ‘bad’ notes onto the marimba, in an instance where that exact articulation would apply.

C. Simulating Staccato through Mallet Placement

The bars of the marimba, which are the playing surface or keys of the instrument, present a variety of colours and tone qualities purely based on where on the bar you strike with you mallet. Like most percussion instruments, the bars on a marimba feature a very clear node and antinode.²⁷ The nodes of a marimba bar, of which there are two, lie directly above where the cord, which aligns the bars, runs through the bar itself. When struck on the node, the sound of the bar is choked and significantly less resonant. The antinode is therefore located in the absolute centre of the bar, between the two nodes. A second antinode exists at the very edge of the bars, beyond the nodal points. The sound produced after striking the antinode is distinctly warmer and more resonant. The tone quality changes in accordance to where the bar is struck in relation to the nodes and antinodes; the closer to the

²⁷ Nicholas Parnell. "Technique as a Solution to Artistic Problems in Solo Classical Vibraphone Performance." The University of Adelaide, 2009, 26-27.

antinode, the warmer the tone, and the further away from the antinode, the more dull the tone.

With this in mind, the performer can change the character and indeed articulation of a passage purely based on where you strike the bar. To create a more staccato or detached sound, the player could decidedly strike closer to the nodes, creating a duller and more percussive tone with less resonance. In the opposite direction, striking closer to the antinode creates a fuller and more resonant sound, which more closely translates into a legato sound.



Figure 9: mm38 of Fugue from BWV 1003²⁸



Figure 10: mm1-2 of Andante from BWV 1003²⁹

The two figures above show instances in which the marimbist would utilise a striking position closer to the nodes of the bars to create a slightly more staccato tone production. Although staccato markings are not present within Bach's sonata, the use of a detached and more staccato sound is implemented by many period performers, especially in phrases that repeat a single pitch, the classic example being the opening bar of the G minor fugue from BWV 1001. This is stylistically important to repeated pitches, where the detached sound allows the performer to emphasise the rhythm and repetition of the voices within the music.

In **figure 9**, this staccato approach would be utilised on the first double-stop quaver of the A and C (beat 3). This double-stopped quaver, when performed as a shorter, more detached note, allows for the rearticulation of the following chord, clarifying the harmonies within the passage. In **figure 10**, the contrasting

²⁸ Peter Wollny, *Johann Sebastian Bach, Three Sonatas and Three Partitas for Solo Violin*. Kassel: Barenreiter, 1720, 20.

²⁹ Peter Wollny, *Johann Sebastian Bach, Three Sonatas and Three Partitas for Solo Violin*. Kassel: Barenreiter, 1720, 24.

articulation is demonstrated, where the marimbist should aim for a warmer, more resonant sound from the bars. In this example, the passage requires a maximum amount of resonance to be drawn from the marimba, thus the marimbist should aim for the absolute centre of the bars, striking the antinodes of each bar, to allow for the most full and resonant sound production. This attention to mallet placement allows the marimbist to access a broader sound variety and selection of timbral colours to draw from when performing both period and modern repertoire on the marimba.

D. A Word on Mallet Choice

Simulating Baroque gestures of articulation is an inexact science on the marimba, as these can only be approximated by the variety of different dynamics, sticking, and timbres possible. It is therefore worth considering the role played by mallet choice, as the choice of mallets will determine the sound pallet from which the performer may draw upon. Careful mallet choice is essential for creating the correct sound world for a work.³⁰ Factors that can affect the choice of mallets include:

- Range of the work on the marimba
- Tempo of the work
- Acoustic setting for the performance

The lower end of the marimba responds better to heavier, softer mallets, whilst the upper octaves of the marimba react better to harder mallets. Thus the performer should make a selection of mallets that allow for a good sound production and attack quality. It is important for the performer to discern where on the marimba he or she will be playing, and subsequently, make an appropriate selection of mallets. In each of the movements within the sonata, the choice of mallets naturally differs with the musical context, but its pitch range is based around the centre of the marimba.

³⁰ Mark Ford. "Marimba: An Interpretation." Innovative Percussion Inc, <http://www.innovativepercussion.com/pages/files/MarimbaAnInterpretation.pdf>.

The tempo of the work plays a large role in the mallet selection process. Should the work be slower in tempo, an enhanced resonance may be desired, for example, in the *Andante*, where the tempo is slower, and the harmonic progression more poised, the presence of a more resonant sound is appropriate. This would be achieved through a softer and more weighted mallet, which activates more of the potential resonance of the marimba. In contrast, the *allegro* moves significantly faster, thus having a strong resonant quality and soft attack would only serve to blur the pitches of the individual notes. In this case, the performer should opt for a harder mallet that provides a cleaner and clearer attack, allowing for each note to clearly sound its pitch.

Finally, the acoustic setting for the performance of the work must be taken into account. For instance, if the work was performed in a cathedral, where there is a lot of natural reverb, echo and resonance, then it may be suitable to select a harder mallet than normal, as the resonance of the room will already amplify the resonance of the marimba, and clarity is the essential component to be enhanced.³¹ The most important thing is for the choice of mallets to be carefully considered, and for the performer to listen to the sound that he or she is creating, and act accordingly.

The marimbist can make use of all of the various techniques mentioned and discussed above. Each technique serves a different purpose, which, at various points within the sonata, becomes appropriate to the musical context. Along with the various technique discussed, the most important feature is an awareness of the production of sound and tone. Whilst each of these techniques serve to enhance the marimbist's ability to stylistically perform the work, the technique should never inhibit the marimbist's ability to produce a good sound.

³¹ Ronald, Lewcock, and Pirn Rijn, "Acoustics, 1: Room Acoustics" *Grove Music Online* accessed July 9, 2012, *Oxford Music Online*.

III. Arpeggiation

Arpeggiation refers to a style or technique in which a chord is broken into its individual pitches. This is a technique often employed for the purposes of expression and expansion of a single chord.³² With regards to string instruments, arpeggiation is an essential tool to allow for the performer to exceed the polyphonic limitations that are idiosyncratic of the instrument.³³

This discussion explores the use of arpeggiation within the A minor sonata for violin by Bach (BWV 1003). As part of this discussion, the use of multiple stopping as an approach to arpeggiation will be discussed. Multiple stopping is a term that describes when the performer plays two or more strings simultaneously. The use of multiple stopping dates back to the early viol players (an instrument that pre-dates the violin).³⁴ In the early 17th century, the scores of the violin repertoire began to feature double stops and chords. By the end of the 17th century, multiple stops became a common feature within violin repertoire, through the works of Corelli, and Bach, amongst many others.

Within works such as the Bach sonata, we encounter several instances in which the score calls for the performer to simultaneously sound four notes on the violin (see fig 11).



Figure 11: mm25 of Andante from BWV 1003³⁵

³² Franklin, Taylor, "Arpeggiation (I)." *Grove Music Online*, accessed June 14, 2012, *Oxford Music Online*.

³³ Robert E. Seletsky, "Bow. 3. C1625-1800" *Grove Music Online*, accessed June 14, 2012, *Oxford Music Online*.

³⁴ Peter Walls, "Multiple Stopping." *Grove Music Online*, accessed June 14, 2012, *Oxford Music Online*.

³⁵ Peter Wollny, *Johann Sebastian Bach, Three Sonatas and Three Partitas for Solo Violin*. Kassel: Barenreiter, 1720, 24.

As previously mentioned, this is an impossible feat for the violin, and thus the common practice for many performers is to incorporate a combination of multiple stopping and arpeggiation. For example, the first note of the *Grave* (see fig. 15) movement of the sonata features a root position a minor chord, across four voices. A recording of Jascha Heifetz performing the work shows a common employment of two double stops.³⁶ In this scenario, the performer sounds the lowest two notes briefly before shifting to the upper two voices, sustaining the latter double stop for the intended duration. Although multiple stopping appears in the 17th Century³⁷, the utilisation of multiple stopping to approach chords is a stylistic approach that originated in the 19th century, first described by Louis Spohr (1784-1859). Spohr is quoted in Peter Walls' article on multiple stopping (in regards to **figure 12**):

In executing four-part chords, the bow, close at the nut, is placed firmly to the two lower strings and brought, with a strong impetus, over to the two higher; the stroke being steadily continued upon the upper notes for their full duration ... The two lower notes, although frequently written in crotchets or minims, can be, at most, of only a semiquaver's length.³⁸



Figure 12: Spohr's reference to multiple stopping of chords³⁹

In a contrasting recording of Richard Tognetti, we observe an alternative approach to the arpeggiation of the chord, still with impetus on the root, and the majority of the beat's value placed on the highest voice.⁴⁰ Through these two

³⁶ Johann Sebastian Bach, *Sonata in A Minor*, Jascha Heifetz (violin), BMG Classics (RCA) 09026 51748-2, 1952, compact disc.

³⁷ Peter Walls. "Multiple Stopping." *Grove Music Online*, accessed June 14, 2012, *Oxford Music Online*.

³⁸ Ibid.

³⁹ "Spohr: Violin-Schule (1832)." *Grove Music Online*, accessed June 14, 2012, *Oxford Music Online*.

⁴⁰ Johann Sebastian Bach, *Sonata in A Minor*, Richard Tognetti (violin), ABC Classics 476 8051, 2005, compact disc.

examples, we observe the two most common practices in approaching chords of this nature. Tognetti's approach is more in line with period performance practice of baroque works whilst Heifetz demonstrates a more contemporary approach. Andrew Manze depicts a selection of these arpeggiation styles in the figure below.



Figure 13: Example of Baroque style arpeggiation⁴¹

Geminiani formulated an instruction that depicted 19 ways to arpeggiate a chord progression in his publication, *The Art of Playing on the Violin* (1751)⁴². The first section of this instruction is shown in **figure 14** and further demonstrates the importance of arpeggiation in the baroque period.



Figure 14: Excerpt of Geminiani's approach to arpeggiation⁴³

⁴¹ Andrew Manze, "Strings." In *A Performer's Guide to Music of the Baroque Period*, London: The Associated Board of the Royal Schools of Music Publishing, 2007, 78-79.

⁴² Peter Walls. "Multiple Stopping." *Grove Music Online*, accessed June 14, 2012, *Oxford Music Online*.

⁴³ Francesco Geminiani, "The Art of Playing on the Violin." (1751): 33.

Arpeggiation and chordal treatment are an important aspect to stylistic performances of baroque music. The inherent improvisatory style of baroque performance lends itself to a large variety of approaches to chordal treatment. The various methods of arpeggiation that are discussed within this chapter provide the reader with the main examples and approaches for use on the marimba. The number of approaches available to violinists with regards to arpeggiation are plentiful, thus this discussion is restricted to a select few, more common approaches.

When translating this situation to the marimba, the performer has the opportunity of utilising each of the four mallets to perform each note of the chord simultaneously (as a block chord, which is beyond the idiosyncratic limitations of the violin), or in any permutation of the chord; any arpeggiation style.⁴⁴ Such flexibility provides the marimbist with an opportunity to replicate the approach demonstrated by either Heifetz or Tognetti, or explore a different arpeggiation method altogether. Below is a discussion into some of the main approaches available to the marimbist regarding arpeggiation. These approaches exude many similarities to the approaches of both Heifetz and Tognetti. The arpeggiation styles discussed within this chapter are Double Stoppings (Heifetz) and Placed Arpeggios (Tognetti). The effect of arpeggiation and its use on marimba in relation to the harpsichord is also examined within this chapter. In particular, the discussion explores the translation of arpeggiation concepts and methodologies from the violin onto the marimba, in reference to the opening of the *Grave*.

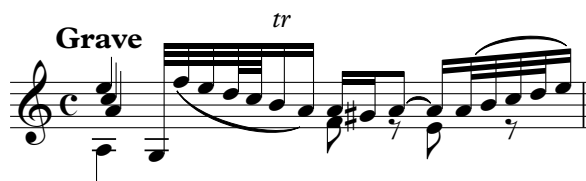


Figure 15: mm1 of Grave from BWV 1003⁴⁵

⁴⁴ L.H Stevens, *Method of Movement: For Marimba, with 590 Exercises*: Marimba Productions, 1979, 6.

⁴⁵ Peter Wollny, *Johann Sebastian Bach, Three Sonatas and Three Partitas for Solo Violin*. Kassel: Barenreiter, 1720, 18.

A. The Double-Double-Stop

This technique is demonstrated by Jascha Heifetz and incorporates the use of multiple stopping.⁴⁶ The chord is divided into two halves, which are split across the marimbist's two hands. Each hand independently performs a double stop, separated into the two lowest and two highest notes within the chord, covered by the left and right hand respectively. In the example of the first chord of the *Grave*, this would divide the A octave into a double stop performed by the left hand, and the C and E as a second double stop (as depicted in fig. 13). This course of action, whilst effective on the violin, can produce a very harsh and disjointed result, ultimately removing the connected nature that the chord requires.

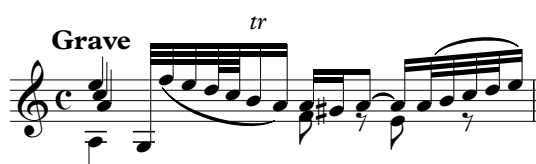


Figure 16: mm1 of Grave in BWV1003⁴⁷

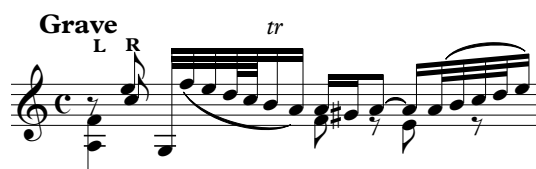


Figure 17: mm1 of Grave in BWV 1003 as performed by Heifetz⁴⁸

The disjointed nature of this technique stems from an inherent lack of sustain on the marimba. The natural percussive sound of the instrument prevents the continuity capable on the violin. This approach ultimately leaves the perception of a completely different rhythm, and a sense of precisely two double stops, as opposed to the single chord that this technique should represent. However, with a practiced method, and an execution of conviction, this approach can provide a strong approach to chordal treatment and arpeggiation on the marimba.

⁴⁶ Peter Walls. "Multiple Stopping." *Grove Music Online*, accessed June 14, 2012, *Oxford Music Online*.

⁴⁷ Peter Wollny, *Johann Sebastian Bach, Three Sonatas and Three Partitas for Solo Violin*. Kassel: Barenreiter, 1720, 18.

⁴⁸ Ibid.

B. Placed Arpeggiation

This technique employs the same strategies as that of Richard Tognetti in the opening of his recording of BWV 1003. Tognetti very clearly arpeggiates the chord, sounding each voice from low to high, with a strong sense of rubato, still placing the most emphasis on the higher voices. The sticking options that are made available to the performer through this approach are large in number, however, can be effectively separated into 3 categories; hand-to-hand, singular mallet and rippled⁴⁹.

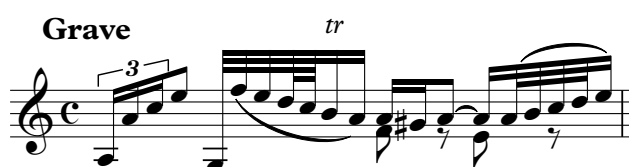


Figure 18: mm1 of Grave from BWV 1003 as performed by Heifetz⁵⁰

1. Hand-to-Hand

Hand-to-hand sticking, as with slurs, allows for a very free and flowing technique but has the potential to appear more as a written out passage, and less like a chord. With this technique, note accuracy also becomes an issue when pursuing an effect closer to a flourish. The hand-to-hand combination becomes awkward logistically for the performer in passages that need to move rhythmically, as the positioning of the individual mallets can be thrown off course. **Figure 19** depicts an instance where if the performer were to attempt to perform the first two chords with a hand-to-hand movement, by the end of the chord, all four mallets would be in a compromised position to accurately execute the ensuing passage.

⁴⁹ L.H Stevens, *Method of Movement: For Marimba, with 590 Exercises*: Marimba Productions, 1979, 30-37.

⁵⁰ Peter Wollny, *Johann Sebastian Bach, Three Sonatas and Three Partitas for Solo Violin*. Kassel: Barenreiter, 1720, 18.

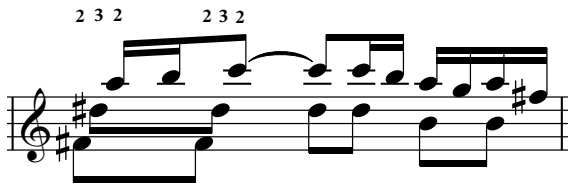


Figure 19: mm18 of Andante from BWV 1003⁵¹

2. Single Mallet

Using a single mallet to perform the entire chord, whilst emitting a strong phrasing and tone consistency, provides obvious logistical and technical problems. For example, the speed at which this ‘flourish’ can occur is limited by the physical capabilities of the performer’s hand. Furthermore, the note accuracy of this approach creates another problem, as the single mallet must not only move at considerable pace, but with pinpoint accuracy. The first and most deciding factor for the execution of this technique would be the speed or tempo of the arpeggiation, as this factor determines the physical possibility (or impossibility) of the approach. Provided that the tempo allows for the execution of this technique, this technique would be preferred if the mallets being utilised by the marimbist differed in each position (i.e. four different gradations of marimba mallets 1-4). In this case, the preservation of tone quality would be important, thus using a single mallet of the same density and weight would allow for the chord to sound with a similar tone quality on each voice.

3. Rippled Arpeggiation

A rippled approach makes use of all four mallets, covering each of the pitches within the chord with a mallet, sounding each note with an individual mallet.⁵² This

⁵¹ Peter Wollny, *Johann Sebastian Bach, Three Sonatas and Three Partitas for Solo Violin*. Kassel: Barenreiter, 1720, 24.

⁵² L.H. Stevens, *Method of Movement: For Marimba, with 590 Exercises*: Marimba Productions, 1979, 35-37.

approach allows for optimum accuracy from the performer as the entire chord can be covered, as well as placed in relation to the adjacent notes, to create the desired rhythmic effect without compromise of either accuracy or strength. This technique works well for all arpeggios, but is perhaps the most effective approach to arpeggios that feature large intervals between adjacent pitches, due to the accuracy that is inherent to this approach.

In addition to the use of arpeggiation to realise written chords, the marimbist can utilise arpeggiation as an approach to sustained rhythms within the work. As previously mentioned, one of the most inherent problems that the marimba faces within transcribed works, is its lack of sustain within the notes.⁵³ The method of arpeggiation as a means of sustain is often employed on the harpsichord, guitar, and lute.⁵⁴ This approach to sustain will be discussed further in the chapter pertaining to sustain.

C. Arpeggio Placement

One of the key factors in terms of arpeggios is the actual placement of the arpeggio in terms of its individual notes. This notion is concerned with where the arpeggio begins and ends in relation to the beat to which it belongs. In the example below, taken from the opening of the *Grave*, the arpeggio is performed commencing on beat one (i.e. the bass note is 'on the beat') by both Heifetz and Tognetti, as well as by Hill on the harpsichord.

⁵³ Brian Cole, "Baroque Performance Practice and the Marimba Transcription." *Percussive Notes* 29, no. 5 (1991): 7-9.

⁵⁴ Darren Bruce Bastian, "Bach Transcription for Marimba: Creating an Authentic Performance Edition of Johann Sebastian Bach's Sonata No. 1 for Violin Solo, BWV 1001, and Sonata No. 2: Grave, BWV 1003, Using Guitar and Lute Transcriptions as Models." The University of Arizona, 2009, 22-23.



Figure 20: mm1 of Grave from BWV 1003⁵⁵



Figure 21: mm69-71 of Fugue from BWV 1003⁵⁶

In contrast, the last two chords seen in **figure 21**, taken from the *Fugue* of BWV 1003, lead into the beat when performed as arpeggios by the fore mentioned violinists. This would result in the B and A of the top voice landing exactly on the third and fourth quavers respectively (i.e. the top note is 'on the beat').

The placement of an arpeggio affects how the individual voices are perceived as well as the perception of where the beat is. The performer has complete control over numerous factors, including beat placement (on time or late), accentuation (bass or melody), speed of arpeggios (slow or fast), and can create a variety of musical effects. By arpeggiating more slowly, for instance, the audience is clearly provided with an individual sounding of every voice contained within the chord or arpeggio.⁵⁷ This clarity within the harmony only serves to strengthen the music and melody that exists in the main voice of the passage. Further discussion of the musical effects of arpeggiation is made in the subsequent section as well as in section four (concerning sustain).

D. Translating Harpsichord Arpeggiation onto Marimba

Arpeggiation or chordal treatment serves multiple purposes in the hands of the performer. This use of arpeggiation can emphasise and strengthen musical lines, highlighting cadence points within the music (an important feature within the

⁵⁵Peter Wollny, *Johann Sebastian Bach, Three Sonatas and Three Partitas for Solo Violin*. Kassel: Barenreiter, 1720, 18.

⁵⁶Peter Wollny, *Johann Sebastian Bach, Three Sonatas and Three Partitas for Solo Violin*. Kassel: Barenreiter, 1720, 20.

⁵⁷ Cole, Brian. "Baroque Performance Practice and the Marimba Transcription." *Percussive Notes* 29, no. 5 (1991): 7-9.

works of Bach, as the harmonies within the music drive the works). Arpeggiation also serves to clarify harmonic movement, removing any doubt of the existing voices within a chord.

The A minor sonata was transcribed by Bach from the violin onto the harpsichord. The harpsichord, being a keyboard instrument similar to the piano, features, like the marimba, a greater polyphonic capability than the violin⁵⁸. Its timbral profile is very similar to that of the marimba with a strong percussive attack, and sharp decay. For this reason, it is appropriate to consider its approach to arpeggiation when performing period works on the marimba. Any arpeggiation utilised on the harpsichord can serve one of several different musical purposes. It can (i) elongate a beat (creating an agogic accent), (ii) soften the percussive nature of an individual chord, (iii) clarify the voicing and/or harmony (particularly with a slower arpeggiation), or (iv) draw attention to (and hence place emphasis on) a particular chord or cadential passage. The following figures demonstrate the latter, with regards to a recording of the sonata on harpsichord by Robert Hill⁵⁹.



Figure 22: mm44-45 of Fuga from BWV 964⁶⁰



Figure 23: mm111-112 of Fuga from BWV 964⁶¹

⁵⁸ Bastian, Darren Bruce. "Bach Transcription for Marimba: Creating an Authentic Performance Edition of Johann Sebastian Bach's Sonata No. 1 for Violin Solo, BWV 1001, and Sonata No. 2: Grave, BWV 1003, Using Guitar and Lute Transcriptions as Models." The University of Arizona, 2009, 12-13.

⁵⁹ Hill, Robert. *Bach: Original and Transcription*. Holzgerlingen: hänssler Classic SCM, 1999.

⁶⁰ Johann Sebastian Bach, "Sonata BWV 964." IMSLP, http://erato.uvt.nl/files/imglnks/usimg/b/b7/IMSLP05830-Bach_-_BGA_-_BWV_964.pdf.

⁶¹ Ibid.

The two examples show Hill emphasising two cadential moments in the *Fugue* by arpeggiating in a manner similar to the ripple effect mentioned earlier on the marimba. Hill arpeggiates the D minor chord in bar 45 of **figure 22**, and the D minor triad of bar 112 in **figure 23** in an ascending manner that places the top voice on the beat. This style of arpeggiation rhythmically places the preceding voices in a flourished or embellished position, where they serve almost as ornamentations to the leading voice, which in this case is the top D and F respectively. This example reveals that the use of arpeggiation is not always a stylistic emulation of the violin, but rather used as a means of bringing attention to a harmonic figure, or to overcome the lack of sustain on the harpsichord (or marimba).

Arpeggiation provides the unique ability of strengthening and drawing attention to a harmonic figure within a work. The act of arpeggiating a chord allows the listener to experience every note within that chord, strengthening each voice, and removing any ambient distraction from the voices present within the chord.

The use of arpeggiation in the harpsichord edition is again important at the second time bar of the *Andante* movement (**fig. 24**). Here, the arpeggiation is used to extend and elongate the note value of the C Major chord. This underscores the role of arpeggiation as a means of creating sustain on the harpsichord, and indeed, by extension, the marimba.



Figure 24: mm11-12 of *Andante* from BWV 964⁶²

⁶²Johann Sebastian Bach, "Sonata BWV 964." IMSLP, http://erato.uvt.nl/files/imglnks/usimg/b/b7/IMSLP05830-Bach_-_BGA_-_BWV_964.pdf.

Comprehending the ways that arpeggiation is used on the harpsichord enables the marimbist to create an effective translation of the arpeggiation practices of the baroque period onto the marimba. Arpeggiation is a vital musical component to the performance of Bach on the marimba, bridging the gap between modern and established instruments.⁶³ It also grants the performer a considerable degree of interpretative freedom. In the next section, we shall see that Bach's harpsichord transcription also provides a model for the freedoms performers can have with regard to harmonic expansion when transcribing Baroque works onto an instrument with greater contrapuntal potential.

⁶³Darren Bruce Bastian, "Bach Transcription for Marimba: Creating an Authentic Performance Edition of Johann Sebastian Bach's Sonata No. 1 for Violin Solo, BWV 1001, and Sonata No. 2: Grave, BWV 1003, Using Guitar and Lute Transcriptions as Models." The University of Arizona, 2009, 25-28.

IV. Possibility of Harmonic Expansion

As mentioned in the previous chapters, the violin is limited to a maximum of two simultaneous notes. Bach accounts for this limitation, by writing a series of harmonic progressions that imply the chordal progressions, as opposed to completely realizing them.⁶⁴ Typically, the act of transcribing Bach's solo works for violin onto other instruments leads to an expansion of these harmonies by the arranger.

Bach's harpsichord edition of the A minor sonata, as previously mentioned, utilises the extensive polyphonic capabilities of the harpsichord, realizing a number of chords and expanding the number of voices present in many of the movements. The harpsichord edition realises a number of implied pitches and thickens the overall harmony of the sonata, whilst maintaining the same overall structure and content of the original violin edition.⁶⁵ The conclusion we draw from these examples is that an exact transferral of the work from one instrument to another does not take into account the physical differences and changing limitations of each instrument. Instead, the direct transferral carries with it the limitations of the original instrument without considering the idiomatic strengths and weaknesses of the receiving instrument.⁶⁶ Thus in order to translate the work from the violin to the marimba, the performer must consider the idiosyncratic properties of the marimba in relation to the violin.

As another example, in Stanley Yates' guitar transcriptions of Bach's Six Cello Suites (BWV 1007-1012), the addition of a number of bass notes and added voices within the existing texture can be observed. In **figure 25**, Yate's arrangement of the *Sarabande* from Suite I shows his arrangement compared with the original. It is

⁶⁴Peter Walls, "Multiple Stopping." *Grove Music Online*, accessed June 14, 2012, *Oxford Music Online*.

⁶⁵Johann Sebastian Bach, "Sonata BWV 964." IMSLP, http://erato.uvt.nl/files/imglnks/usimg/b/b7/IMSLP05830-Bach_-_BGA_-_BWV_964.pdf.

⁶⁶Stanley Yates, *J.S. Bach: Six Unaccompanied Cello Suites Arranged for Guitar*, Stanley Yates Series. Pacific, Missouri: Mel Bay Publications, Inc., 1998, 154.

clear that Yates has included a series of bass notes and other voices that were not present in the original as part of his translation of the sarabande onto guitar.



Figure 25: mm1-4 of Yates' Transcription of Sarabande from BWV 1007⁶⁷

This example can serve to illustrate the merits and potential pitfalls of such harmonic expansion. Firstly, the editor is operating perfectly within the realms of authenticity in terms of adding such harmonic realisations. The resultant texture is fuller, and seems more idiomatic to the guitar. However, there also lies the danger of disrupting the balance, simplicity, and elegance of the original counterpoint. One should ask, does the addition enhance the musical structure, or detract from it? While the added voices do fill out the harmonies, the added bass voice is not intrinsically interesting as an independent voice. So, in some sense, the resultant musical texture is weaker than Bach's original. Clearly, this is a subjective matter. The aesthetic beauty of the original is something that can be elusive, difficult to define. While enriching the texture can make the music more idiomatic to a new instrument, it may do so at the risk of disrupting the intangible elegance of the original counterpoint.

⁶⁷Stanley Yates, *J.S. Bach: Six Unaccompanied Cello Suites Arranged for Guitar*, Stanley Yates Series. Pacific, Missouri: Mel Bay Publications, Inc., 1998, 24.

Let us now return to considering further examples from Bach's violin sonata in A minor. In **figures 26** and **27** the harmonies are not fully realised, but suggested through a series of double stops.



Figure 26: mm1 of Andante from BWV 1003⁶⁸



Figure 27: mm11-12 of Andante of BWV 1003⁶⁹

Using only double stops to imply fuller chords frees up the violinist to allow the passage to move in a more expressive and rhythmic way.⁷⁰ If the full chords were to be realised, the result would be a number of consecutive arpeggios that distort the rhythmic drive and pulsing of the harmonies in the movement. In the *andante and fugue*, Bach makes use of these implied chords through double stops to allow the performer to continue this rhythmic drive through the movement. As displayed in the two examples above, as well as the many others that exist throughout the sonata, we observe that Bach has carefully selected pitches from the implied chords that would still allow the audience to perceive the chords, despite the 'missing notes'.⁷¹ The intended chord is made clear in its musical context.

The first example (**fig 26**) implies a C Major chord, through both the present Major 3rd over the C, as well as the shape of the line in the remainder of the bar.⁷²

⁶⁸ Peter Wollny, *Johann Sebastian Bach, Three Sonatas and Three Partitas for Solo Violin*. Kassel: Barenreiter, 1720, 24.

⁶⁹ Ibid.

⁷⁰ Peter Walls. "Multiple Stopping." *Grove Music Online*, accessed June 14, 2012, *Oxford Music Online*.

⁷¹ Darren Bruce Bastian, "Bach Transcription for Marimba: Creating an Authentic Performance Edition of Johann Sebastian Bach's Sonata No. 1 for Violin Solo, BWV 1001, and Sonata No. 2: Grave, BWV 1003, Using Guitar and Lute Transcriptions as Models." *The University of Arizona*, 2009, 25-27.

⁷² Peter Wollny, *Johann Sebastian Bach, Three Sonatas and Three Partitas for Solo Violin*. Kassel: Barenreiter, 1720, 24.

The second example (Fig 27) presents 2 Gs, an octave apart. On their own, the octave Gs could imply a number of chords, however, if we observe the context and form of the movement, its apparent that this octave is indicative of a major triad, and shift of tonality from the tonic to the dominant, leaving us with the conclusion that the G octaves imply a G Major Chord.⁷³

The analysis of the A minor sonata, with regards to the specifics of implied harmonies, can be further clarified through the use of Bach's reworking of the sonata for harpsichord (BWV 964). The reworking of the sonata capitalises on the increased polyphonic capabilities of the harpsichord.⁷⁴ By comparing the two editions, we can observe in various passages, the realisation of the violin's implied chords within the harpsichord's edition.

For example, in **figures 28 and 29**, we can see the way that the harpsichord edition simply fills out the cadential triad.

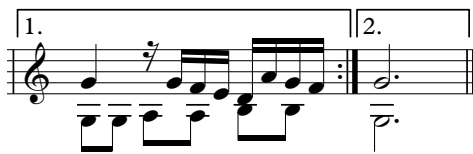


Figure 28: mm11-12 of Andante from BWV 1003⁷⁵ (violin)



Figure 29: mm11-12 of Andante from BWV 964⁷⁶ (harpsichord)

⁷³ Ibid.

⁷⁴ Darren Bruce Bastian, "Bach Transcription for Marimba: Creating an Authentic Performance Edition of Johann Sebastian Bach's Sonata No. 1 for Violin Solo, BWV 1001, and Sonata No. 2: Grave, BWV 1003, Using Guitar and Lute Transcriptions as Models." The University of Arizona, 2009, 26-27.

⁷⁵ Peter Wollny, *Johann Sebastian Bach, Three Sonatas and Three Partitas for Solo Violin*. Kassel: Barenreiter, 1720, 24.

⁷⁶ Johann Sebastian Bach, "Sonata BWV 964." IMSLP, http://erato.uvt.nl/files/imglnks/usimg/b/b7/IMSLP05830-Bach_-_BGA_-_BWV_964.pdf.

Similarly, **figures 30** and **31** draw attention to Bach's use of the polyphonic capabilities of the harpsichord, to strengthen and thicken the existing harmony. In this passage, Bach introduces a middle voice that expands the harmony into realised chords.



Figure 30: mm14-15 of Andante from BWV 1003⁷⁷ Figure 31: mm14-15 of Andante from BWV 964⁷⁸

Often, these added middle voices sit either in thirds or sixths above the pre-existing bass line. As well as these additional voices, through this example, it is clear that Bach included more ornamented lines in the harpsichord edition, again utilising the harpsichordists ability to freely play multiple notes at the same time, and more importantly, independently play multiple voices simultaneously.⁷⁹

On the other hand, sometimes Bach chooses *not* to fill out the harmonies—as seen in **Figures 32** and **33**. In the opening of the andante, there is no doubt that the possibility of expanding these harmonies was available on the harpsichord, however, Bach clearly made a decision to not over complicate this passage. We could conclude that harmonic expansion is not always musically appropriate or fulfilling. Conceivably, Bach's choice to keep the texture light and transparent here serves to preserve the musical structure of this movement, which begins gently, and builds to a more substantial cadence point (where the texture is thickened).

⁷⁷ Peter Wollny, *Johann Sebastian Bach, Three Sonatas and Three Partitas for Solo Violin*. Kassel: Barenreiter, 1720, 24.

⁷⁸Johann Sebastian Bach, "Sonata BWV 964." IMSLP, http://erato.uvt.nl/files/imglnks/usimg/b/b7/IMSLP05830-Bach_-_BGA_-_BWV_964.pdf.

⁷⁹ Edwin, M. Ripin. "Harpsichord." *Grove Music Online*, accessed October 4, 2012, *Oxford Music Online*.



Figure 32: mm1 of Andante from BWV 1003⁸⁰
(violin)



Figure 33: mm1 of Andante from BWV 964⁸¹
(harpsichord)

As the focus returns now to the marimba, it is apparent that the marimba holds a polyphonic range somewhere in-between that of the violin and harpsichord.⁸² The marimba exceeds the violin in terms of its polyphonic capability whilst also having the ability to perform at multiple dynamic ranges, an asset not possessed by the harpsichord.⁸³

In the transcription process, it is important to utilise the strengths and advantages of the new instrument.⁸⁴ For the marimba, this provides the possibility of performing the sonata with more realised and thickened harmonies than the violin, with a more sensitive touch and dynamic shape than that of the harpsichord. It is important to note that the process of expanding harmonies for the marimba must be completed in a tasteful and stylistic way, in which the expansion does not detract from the existing music, but only serves to strengthen and warm the sound, through more present voices and the resulting sympathetic harmonics.⁸⁵

⁸⁰Peter Wollny, *Johann Sebastian Bach, Three Sonatas and Three Partitas for Solo Violin*. Kassel: Barenreiter, 1720, 24.

⁸¹Johann Sebastian Bach, "Sonata BWV 964." IMSLP, http://erato.uvt.nl/files/imglnks/usimg/b/b7/IMSLP05830-Bach_-_BGA_-_BWV_964.pdf.

⁸² Kubik Gerhard, James Blades, and James Holland, "Marimba." *Grove Music Online*, accessed July 9, 2012, *Oxford Music Online*.

⁸³ Edwin M. Ripin, and Howard Schott, "Harpsichord. 1: Structure" *Grove Music Online*, accessed October 4, 2012, *Oxford Music Online*.

⁸⁴ Stanley Yates. *J.S. Bach: Six Unaccompanied Cello Suites Arranged for Guitar*, Stanley Yates Series. Pacific, Missouri: Mel Bay Publications, Inc., 1998, 154.

⁸⁵Darren Bruce Bastian, "Bach Transcription for Marimba: Creating an Authentic Performance Edition of Johann Sebastian Bach's Sonata No. 1 for Violin Solo, BWV 1001, and Sonata

The selection of which harmonies to expand and which to leave is nothing short of crucial. Whilst it is a viable option to uncover the extra pitches from the already expanded harpsichord edition, the marimba lacks the polyphonic capabilities of the harpsichord, and thus, is not always capable of emulating the multiple voices that the harpsichord can maintain concurrently.⁸⁶ So when is it appropriate to thicken the texture, essentially adding an extra voice to the counterpoint?

The ill treatment of such realisations can result in a sudden entry of an extra voice in the harmonic texture, followed by an abrupt dismissal of the same voice, as the marimbist attempts to cope with the sudden density of notes within the passage. As fore mentioned, the implied harmonies resulted from a desire to maintain a rhythmic drive in the music, so any alteration that would inhibit this sole desire is counterproductive, and therefore inappropriate.

Any transcription must employ musical judgement as to when and where harmonic expansion of the texture is likely to be musically desirable. In general, cadence points, climaxes, or other points of structural arrival, are desirable zones for harmonic/textural expansion. Multiple examples of this can be seen already within Bach's violin sonata. In **figure 34**, the first chord shown (A minor in root position) displays an instance where three voices are present to strengthen and fill this cadential moment, before quickly dissipating into one solo voice. Across **figure 35**, the voicing varies from anywhere between one and four voices, reaching its pinnacle at the end of the figure, another major cadential point in the *Fugue*.

No. 2: Grave, BWV 1003, Using Guitar and Lute Transcriptions as Models." The University of Arizona, 2009, 25-28.

⁸⁶ Edwin M. Ripin, and Howard Schott, "Harpsichord. 1: Structure" *Grove Music Online*, accessed October 4, 2012, *Oxford Music Online*.



Figure 34: mm47-48 of Fugue from BWV 1003⁸⁷



Figure 35: mm69-71 of Fugue from BWV 1003⁸⁸

The two figures below (**figures 36 and 37**) demonstrate two different examples in which the sonata may have its harmony realised for performance on the marimba. In these two examples, the passage selected to expand harmonically are both cadential features within the music. Furthermore, the chords selected to be realised, were chords that were specifically implied in the BWV 1003 and realised in BWV 964.⁸⁹

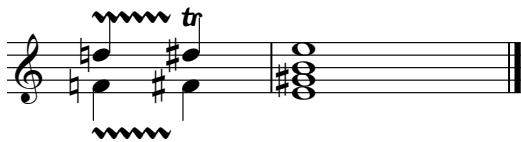


Figure 36: mm22b-23 of Grave from BWV 1003⁹⁰



Figure 37: mm11-12 of Andante from BWV 1003⁹¹

The expansion of harmonies and realisation of chords in Bach's music is not uncommon, with many transcriptions featuring an extension and addition of other

⁸⁷Peter Wollny, *Johann Sebastian Bach, Three Sonatas and Three Partitas for Solo Violin*. Kassel: Barenreiter, 1720, 19.

⁸⁸Peter Wollny, *Johann Sebastian Bach, Three Sonatas and Three Partitas for Solo Violin*. Kassel: Barenreiter, 1720, 20.

⁸⁹Darren Bruce Bastian, "Bach Transcription for Marimba: Creating an Authentic Performance Edition of Johann Sebastian Bach's Sonata No. 1 for Violin Solo, BWV 1001, and Sonata No. 2: Grave, BWV 1003, Using Guitar and Lute Transcriptions as Models." *The University of Arizona*, 2009, 50-53.

⁹⁰Peter Wollny, *Johann Sebastian Bach, Three Sonatas and Three Partitas for Solo Violin*. Kassel: Barenreiter, 1720, 19.

⁹¹Peter Wollny, *Johann Sebastian Bach, Three Sonatas and Three Partitas for Solo Violin*. Kassel: Barenreiter, 1720, 24.

voices and added bass notes.⁹² The marimba, with its strong ability to bring out multiple voices and its extensive lower range in comparison to the violin allow it to embody an ideal candidate for the harmonic expansions discussed in the chapter and realised in the harpsichord edition. The most important consideration when translating these expansions onto marimba is the preservation of the music, and the direction that the existing harmony provides. Through the possibility of harmonic expansion, the performer must be vigilant to not detract from the score, but enhance and thicken its existing harmonic identity.

⁹²Darren Bruce Bastian, "Bach Transcription for Marimba: Creating an Authentic Performance Edition of Johann Sebastian Bach's Sonata No. 1 for Violin Solo, BWV 1001, and Sonata No. 2: Grave, BWV 1003, Using Guitar and Lute Transcriptions as Models." The University of Arizona, 2009, 25-28.

V. Sustain

One of the idiosyncratic limitations of the marimba that immediately affects its ability to perform works from the string repertoire is its inability to perform sustained notes. Whilst extended techniques such as utilising bowing the bars of the marimba create a apparently sustained note, it is not a practical option in the approach to sustain within Bach's sonata.⁹³ To this end, the performer must devise a way to move past this hurdle, without disrupting the natural musical line, or disrupting the rhythmic elements within the work. There are several ways in which a performer can translate the sustain of a chord or note onto the marimba. This chapter examines the use of five such techniques: (i) tremolo, (ii) arpeggiation, (iii) ornamentation, (iv) the manipulation of tempo through rubato, and (v) dynamic control. The marimbist can utilise any of these techniques to acquire a stronger sense of sustain within the sonata.

A. Tremolo

By far the most common method of sustaining a note on the marimba, the tremolo is essentially a roll on a single note or chord, in which the repeated striking of the bars allows for the desired pitch to continue to sound for the required period of time, without a sense of decay.

In a recording of the A minor sonata by renowned marimbist Leigh Howard Stevens (transcribed by Stevens to B minor), Stevens adopts the tremolo as a method of sustain in the opening of the *Grave* movement.⁹⁴ Stevens is widely renowned for his revolutionary technique in four mallet playing, adapting and designing his own technique for marimba.⁹⁵ One of the stand out features of Stevens'

⁹³Nicholas Parnell, "Technique as a Solution to Artistic Problems in Solo Classical Vibraphone Performance." The University of Adelaide, 2009, 31.

⁹⁴ Johann Sebastian Bach, Sonata in B Minor, S. 1003, from Bach on Marimba. Leigh Howard Stevens (Marimba), MusicMasters MMD 60124 F, 1987, compact disc.

⁹⁵ L.H. Stevens, Method of Movement: For Marimba, with 590 Exercises: Marimba Productions, 1979, 35-37.

technique is the ability to 'ripple roll', a style of tremolo designed to disguise the rhythmic component of tremolo on the marimba.⁹⁶

The immediate issue of this technique is that the tremolo does not effectively translate into a single continuous sound, but instead generates an apparent rhythm. Whilst the note or chord may appear sustained to the performer, it is difficult to avoid the fast rhythm of repetitive strikes that the tremolo creates.⁹⁷ There are however, as with all rules, an exception in which performers utilise the tremolo in a stylistically appropriate performance on the marimba.

The tremolo is commonly found in the performance of chorales, in which an appropriate mallet choice becomes essential. A heavier, softer mallet is generally selected to draw the maximum resonance from the lower register of the marimba, in which the optimum roll speed can emulate a well controlled roll on the timpani, where the audible result is a clear single pitch.⁹⁸ This effect is lost on any tremolo that occurs in the upper registers of the marimba, or when the performers choice of mallets are too hard, inhibiting the concealing of the contact sound produced when the mallet strikes the bars. The A minor sonata generally rules out this approach in regards to both of these considerations as it requires a harder quality mallet given the register in which the sonata exists. In an effort to preserve an authentic approach to the work, the tremolo is usually avoided within the performance of Bach's solo string repertoire.

B. Arpeggiation

In the case of attempting to prolong the duration of a chord, the use of arpeggiation is a simple and effective method of sustain. This is a method adopted not just by marimbists, but also harpsichordists, guitarists and lutanists alike. All of these

⁹⁶ L.H. Stevens, *Method of Movement: For Marimba, with 590 Exercises*: Marimba Productions, 1979, 35-37.

⁹⁷ Brian Cole, "Baroque Performance Practice and the Marimba Transcription." *Percussive Notes* 29, no. 5 (1991): 7-9.

⁹⁸ Duncan Patton. "Practicing the Timpani Roll." *Percussive Notes*, April 2003, 96.

instruments, like the marimba, feature a lack of sustain in their design.⁹⁹ Each instrument allows for a strong attack on the note, followed by an inevitably fast decay.¹⁰⁰ The way these arpeggios are treated in terms of their placement allows for the performer to elongate the note value, and draw out its sound to the next note, translating into a sustained chord. An example passage in which a marimbist might utilise this technique is exhibited in **figure 38**.



Figure 38: mm20 of Grave from BWV 1003¹⁰¹

In this example, the third beat features a triple stop of D#, C and A. This chord, featured in the *Grave*, is an ideal opportunity for the marimbist to utilise this method of arpeggiation as a form of sustain. The permutation of the notes that the marimbist would use should ascend, in the same way that Richard Tognetti does in his recording on the violin, as it leads into the upper register of the following passage.

From the same movement, we can observe yet another instance in which the marimbist can arpeggiate a sustained note. The beginning of the movement, and also the sonata, features a dramatic A minor chord. This chord is often approached by means of arpeggiation, as opposed to multiple stopping on the marimba. The arpeggiation on the violin acts as a means of overcoming the inability to perform the

⁹⁹Darren Bruce Bastian, "Bach Transcription for Marimba: Creating an Authentic Performance Edition of Johann Sebastian Bach's Sonata No. 1 for Violin Solo, BWV 1001, and Sonata No. 2: Grave, BWV 1003, Using Guitar and Lute Transcriptions as Models." *The University of Arizona*, 2009, 12-14.

¹⁰⁰Brian Cole. "Baroque Performance Practice and the Marimba Transcription." *Percussive Notes* 29, no. 5 (1991): 7-9.

¹⁰¹Peter Wollny, *Johann Sebastian Bach, Three Sonatas and Three Partitas for Solo Violin*. Kassel: Barenreiter, 1720, 19.

four notes simultaneously.¹⁰² In the case of the marimba, the arpeggiation is employed to sustain the A minor chord to its desired length.

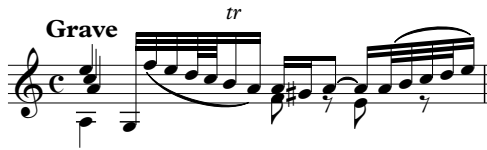


Figure 39: mm1 of Grave from BWV 1003¹⁰³

C. Ornamentation

The use of arpeggiation only serves as a means of elongating chords within a passage. This does not provide much help in the scenario of a single held note. In this instance, there are two immediate options presented to the player, one being the use of a tremolo (although the negative aspects to this method have already been discussed)¹⁰⁴ and the use of embellishments.

The art of improvisation was affluent during Bach's time and it was common practice for the interpretation of a composer's work to be left to the discretion of the performer. The performer would interpret and style the work through their own improvisations and ornamentations.¹⁰⁵ Bach wrote, for his son Wilhelm Friedemann, an instructional for the harpsichord in 1720 titled *Clavierbuchlein*. This instructional pertains to the approach and execution of embellishments within Bach's music. It is important to note that this example, whilst justifying the importance of ornamentation within the baroque style, pertains to a French style of ornamentation, and not the Italian style which the A minor sonata is written in.

¹⁰² Bachmann Werner, "Bow. 1: Origins" *Grove Music Online*, accessed June 14, 2012, *Oxford Music Online*.

¹⁰³ Peter Wollny, *Johann Sebastian Bach, Three Sonatas and Three Partitas for Solo Violin*. Kassel: Barenreiter, 1720, 18.

¹⁰⁴ Brian Cole. "Baroque Performance Practice and the Marimba Transcription." *Percussive Notes* 29, no. 5 (1991): 7-9.

¹⁰⁵ Peter Holman, "Notation and Interpretation." In *A Performer's Guide to Music of the Baroque*, London: The Associated Board of Royal Schools of Music Publishing, 2007, 43-48.

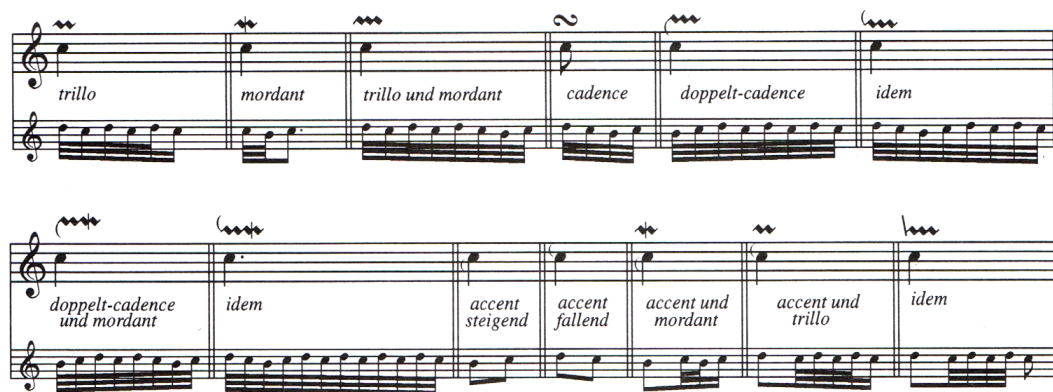


Figure 40: Instruction of ornamentation from Clavierbuchlein (1720)¹⁰⁶

Figure 41: Example of Italian ornamentation of a Corelli violin Sonata¹⁰⁷

In **figure 41**, an example of Italian styled ornamentation during the baroque period is depicted. The example shows a violin sonata of Arcangelo Corelli (1653-1713), an Italian composer and violinist.¹⁰⁸ His original score is notated at the

¹⁰⁶Stanley Yates, *J.S. Bach: Six Unaccompanied Cello Suites Arranged for Guitar*, Stanley Yates Series. Pacific, Missouri: Mel Bay Publications, Inc., 1998, 169.

¹⁰⁷Neal Zaslaw, "Ornaments for Corelli's Violin Sonatas, Op.5." *Early Music* XXIV, no. 1 (1996): 100.

¹⁰⁸ Michael Talbot, "Corelli, Arcangelo." *Grove Music Online*, accessed October 12, 2012, *Oxford Music Online*.

bottom of the figure, with the three staves on top depicting various interpretations of his score, notated complete with ornamentations and embellishments. This style of ornamentation is in line with the practice of Italian diminution, where larger note values are broken down into smaller divisions as part of the ornamentation.

If we observe the scores of Bach, it is easy to realise that the score has already been embellished by Bach's own ornamentations. However, these minor inclusions of ornamentation are designed for the violin, for a musical medium that in its nature is quite different from the marimba.¹⁰⁹ In the harpsichord edition, along with the use of extra voices and pitches to thicken the harmony vertically, Bach also extends the harpsichord score horizontally, further embellishing its melodies to mask its inability to sustain. With this knowledge, it is clear that if Bach reworked this sonata for marimba, the use of ornamenting notes to create sustain would have occurred.¹¹⁰

The following example compares the same passage for both violin and harpsichord in which the marimbist could replicate the harpsichord ornamentation as a means of sustaining its single note length.



Figure 42: mm11 of Grave from BWV 1003¹¹¹



Figure 43: mm11 of Grave from BWV 964¹¹²

¹⁰⁹Darren Bruce Bastian, "Bach Transcription for Marimba: Creating an Authentic Performance Edition of Johann Sebastian Bach's Sonata No. 1 for Violin Solo, BWV 1001, and Sonata No. 2: Grave, BWV 1003, Using Guitar and Lute Transcriptions as Models." The University of Arizona, 2009, 12-14.

¹¹⁰Darren Bruce Bastian, "Bach Transcription for Marimba: Creating an Authentic Performance Edition of Johann Sebastian Bach's Sonata No. 1 for Violin Solo, BWV 1001, and Sonata No. 2: Grave, BWV 1003, Using Guitar and Lute Transcriptions as Models." The University of Arizona, 2009, 10-11.

¹¹¹ Peter Wollny, *Johann Sebastian Bach, Three Sonatas and Three Partitas for Solo Violin*. Kassel: Barenreiter, 1720, 18.

As is clear in the example, the A on beat three in the harpsichord edition has been highly ornamented to aid in its sustain in comparison to the E in the violin edition, which is simply a dotted quaver. Beat four depicts yet another instance in which the harpsichordist, and indeed a marimbist, could use arpeggiation to elongate the second dotted quaver of the passage.¹¹³

D. Tempo and Rubato

Rubato is the borrowing or 'robbing' of time from one beat or phrase to another. The principal rule that should be observed in rubato is that the borrowed time is always returned, thus the resultant time is more or less unchanged. Rubato in a baroque sense varies significantly from how we perceive rubato in a modern context. The early sense of rubato allowed for slight tempo fluctuations within individual beats, whilst the bass would maintain a steady and consistent sense of the beat. The fluctuations within each beat (rubato) were used for the purpose of expression alone.¹¹⁴

The careful selection of tempi when performing the sonata is crucial to both the feel and momentum of the movements. Furthermore, use of rubato and phrasing to move through passages can allow the performer to 'push' through these 'sustained' passages, eliminating the otherwise apparent break through the lack of sustain. This can effectively remove the sense of silence that is left between notes, making full use of the natural resonance of the marimba.¹¹⁵

¹¹²Johann Sebastian Bach. "Sonata BWV 964." IMSLP, http://erato.uvt.nl/files/imglnks/usimg/b/b7/IMSLP05830-Bach_-_BGA_-_BWV_964.pdf.

¹¹³Brian Cole. "Baroque Performance Practice and the Marimba Transcription." *Percussive Notes* 29, no. 5 (1991): 7-9.

¹¹⁴Richard Hudson. "Rubato." *Grove Music Online*, accessed July 12, 2012, *Oxford Music Online*.

¹¹⁵Kubik Gerhard, James Blades, and James Holland. "Marimba." *Grove Music Online*, accessed July 9, 2012, *Oxford Music Online*.



Figure 44: mm3-4 of Grave from BWV 1003¹¹⁶

Each of these bars from the *Grave* feature dotted quaver rhythms, which in the context of the slower movement make them notes of substantial length. It is during these moments that the performer may decide ever so slightly to move through these 'gaps' in the rhythm, with a sense of forward drive right through to the next phrase. The result is an overall shape that infers connection between the individual passages, each commencing with a new energy, and most importantly, without the noticeable break in the rhythm.

Considering the acoustic space in which the performance will occur is another important factor in relation to the selection of tempi. In a setting more similar to a cathedral, the performer must consider the enhanced natural reverb that exists.¹¹⁷ This can easily aid the marimbist, as he or she can make use of this enhanced resonance, especially in marimba's lower register, to emulate sustain. The contrasting setting would be in an acoustic more similar to a practice room, where there is almost no natural reverb, and all the acoustic sound is simply absorbed.¹¹⁸ In this setting, the concept of movement that was just discussed is of utmost importance to the marimbist. In order to keep the musical line fluent and connected, the performer must move through these otherwise apparent silences or lack of sustain, to impart to the audience a sense of the rhythmic and melodic ideas that exist within the score.

¹¹⁶Johann Sebastian Bach, *Three Sonatas and Three Partitas for Solo Violin*. Edited by Peter Wollny. Kassel: Barenreiter, 1720, 18.

¹¹⁷ Ronald Lewcock, and Pirn Rijn, "Acoustics, 1: Room Acoustics" *Grove Music Online* accessed July 9, 2012, *Oxford Music Online*.

¹¹⁸ Ibid.

E. Dynamic Control

Most of the methods that have been discussed in this chapter are approaches that appear commonly in harpsichord performance, as the harpsichord and marimba share similar timbral qualities. Both instruments feature a strong percussive attack, followed by a sharp decay. One inherent quality that the marimba holds over the harpsichord is its vast array of dynamics.¹¹⁹ This difference is brought on by the 'touch', or the ability for the marimbist to alter the velocity of the attack, the way in which bars are struck in terms of weight and mallet choice. These contrasts allow the marimba to manipulate the perceivable outcome of the attack and decay on the marimba, translating into an illusion of a more sustained note. This is achieved by selecting a mallet that optimizes the resonance of the register in which you are playing, and to perform the notes in the optimum striking position (antinode).¹²⁰ Most importantly, the performer strikes the note with less force than would be considered normal, performing at a softer dynamic level. The ramifications of these actions would drastically lower the degree of the initial attack of the note, without noticeably affecting the speed of the decay. The result is a seemingly elongated decay, creating an illusion of a stronger and longer sustain within the note. This method is most effective on the marimba in the mid and lower range of the instrument. As the pitches move lower down, where the natural resonance of the marimba is strongest, and as the dynamic level diminishes, the effectiveness of this technique is amplified.¹²¹

¹¹⁹Darren Bruce Bastian, "Bach Transcription for Marimba: Creating an Authentic Performance Edition of Johann Sebastian Bach's Sonata No. 1 for Violin Solo, BWV 1001, and Sonata No. 2: Grave, BWV 1003, Using Guitar and Lute Transcriptions as Models." The University of Arizona, 2009.

¹²⁰Nicholas Parnell, "Technique as a Solution to Artistic Problems in Solo Classical Vibraphone Performance." The University of Adelaide, 2009, 24-26.

¹²¹Kubik Gerhard, James Blades, and James Holland, "Marimba." *Grove Music Online*, accessed July 9, 2012, *Oxford Music Online*.

VI. Conclusion

In the transcribing of Bach's solo string repertoire to marimba; the transcription process draws attention to a number of key issues and problems that arise. These issues or problems pertain to the technical facility of the marimba and its inherent differences as an instrument to those of the string family, and in particular, the violin. The dissertation serves to address these issues, providing the reader with a series of techniques and concepts that will enable them to successfully translate the works of Bach's solo string repertoire onto marimba, with a particular focus on the translation of the A minor sonata (BWV 1003).

This dissertation divides these issues into four main areas: articulation, arpeggiation, harmonic expansion and sustained notes. While each of these areas bleed into each other, they individually highlight the principle issues that the marimbist needs to address the technical facility of their instrument in order to effectively perform a stylistic and musical interpretation of Bach's works. These discussions focus on the Bach's A minor sonata, and the pursuit towards a stylistically accurate performance of the sonata on the marimba. The dissertation features a selection of examples within the A minor sonata that exemplify the techniques and issues raised through the transcription process. These examples are selected and designed to assist and clarify the discussions within the dissertation.

In the first chapter, three techniques are discussed in the approach to articulation. I have personally found that the hand-to-hand sticking is the most versatile approach to many of the passages that the performer faces within the A minor sonata. Though each of the other techniques discussed are important for the marimbist to grasp as a technical concept, they are case specific, and therefore, not as adaptable as the hand-to-hand method. The second chapter's discussion of arpeggiation, which ties heavily into the concept of chordal treatment, examines two main methodologies towards arpeggiation. The practice of arpeggiation is not too dissimilar to the process of performing a drum fill within a chart, as the arpeggiation is an artistic license for the performer to express and demonstrate their understanding of the music and their natural musicianship. Like a good drum fill,

this execution of arpeggiation must be stylistically appropriate and musically tasteful. As discussed in chapter three, the possibility of harmonic expansion is discussed in relation to the implied harmonies within the A minor sonata. The discussion concludes that the most important factor to consider when exploring the expansion of implied harmonies is that the expansions are musically suitable, and that they do not detract from the work. For this reason, the chapter suggests that the marimbist only expand harmonies in instances where the chords emphasise a cadence point, or major structural arrival. The fourth chapter considers the use of five different technical approaches to performing sustained notes on the marimba. Of the five techniques considered, in the instance where there is a chord present arpeggiation is arguably the most stylistically-viable and historically-informed option. In instances where there is but a single voice available to the performer, ornamentation and stylistic embellishments become the most appropriate options, keeping in line with the practices of HIP. The use of dynamic control as an approach towards sustained notes poses an interesting possibility that should be considered in conjunction with the other performance variables (tempo, acoustics and mallet choice).

Each of the techniques discussed throughout this dissertation can be utilised by the performer in a variety of circumstances. All of these techniques are appropriate, both stylistically and musically, and given the right circumstances and performance contexts, allow for the marimbist to effectively translate the music of Bach from the violin to the marimba. It is desirable for the marimbist to have an understanding of each of the discussed techniques, allowing them to have a variety of options for any given performance situation. In keeping with the improvisatory style of the baroque period, the performer should have a variety of options or possibilities ready for each of the discussed areas. The considered approaches within this dissertation are designed to empower the performer to make musically informed decisions (both stylistic and historical) with regards to their approach in translating Bach's violin sonata onto the modern marimba. This ultimately allows

the performer a greater freedom and opportunity for expression and musicality within the style of the work.

The discussions and examples are not a definitive instruction toward the performance of the sonata, but rather an objective approach to uncovering and exploring the various methodologies available to the marimbist in the performance of the sonata on the marimba. The effectiveness of any of the fore mentioned techniques are, for the most part, in the hands of the performer, and his or her ability to execute the chosen approach with conviction and musicality.

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