

AN EXAMINATION OF SELECTED WORKS FOR PERCUSSION: PRELÚDIO NO. 1 MI
MENOR (E MINOR), OP. 11 BY NEY ROSAURO, PRELÚDIO NO. 2 LA MAIOR (A
MINOR) BY NEY ROSAURO, ROTATION IV BY ERIC SAMMUT, WATER FALLS FOR A
DESERT BY GREG COFFEY, STRANDS OF TIME BY BRIAN BLUME, SURFACE
TENSION BY DAVE HOLLINDEN, BITSMOKE BY CASEY FARINA

by

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Abstract

This is a report intended for musicians and scholars who seek to enhance their understanding of any number of the following compositions: Prelúdio No. 1 Mi Menor (E Minor), op. 11 by Ney Rosauro, Prelúdio No. 2 la maior (a minor) by Ney Rosauro, Rotation IV by Eric Sammut, Water Falls for a Desert by Greg Coffey, Strands of Time by Brian Blume, Surface Tension by Dave Hollinden, bit smoke by Casey Farina.

Each work has been analyzed examined in accordance with Jan LaRue's *Guidelines For Style Analysis*. For some compositions including only relative-pitch instruments, analysis of harmony has been omitted. For all compositions, the author has added notable performance considerations, essential technical and interpretive considerations in accord with LaRue's guidelines. Therefore, the approach taken in analytical categories of this document can be exhibited as Sound, Harmony, Melody, Rhythm, Growth, and Performance.

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Dedication

This report is dedicated to my family, Mom, Dad, Erin, Jim, Nicole, Timothy, Leah, Mathew, Patricia, Bridget, Elizabeth, Peter, Catherine, all of my beautiful nieces and nephews, and to all of my teachers, especially Thomas E. Coffey Jr., Cynthia Coffey, Mr. Nate Campbell, Mr. Al Rometo, Mr. Don Linn, Dr. Kurt Gartner, and Dr. Frank Tracz.

Preface

This document was prepared as an accompaniment to a percussion recital presented by the author on April 22, 2012.

Chapter 1 - Preludio Prelúdio No. 1 Mi Menor (E Minor), Op. 11

Biographical Information on the Composer

Ney Rosauro was born in Rio de Janeiro, Brazil on October 24, 1953. He started studying percussion in 1977 with Luiz Anunciacao of the Orquestra Sinfonica Brasileira in Rio de Janeiro. Rosauro studied composition and conducting at the Universidade de Brasilia. He then received a Master's Degree in Percussion at the Hochschule für Musik Würzburg in Germany under Professor Siegfried Fink. He completed his doctorate at the University of Miami under the supervision of Fred Wickstrom. From 1975 to 1987 he was Instructor of Percussion at the Escola de Música de Brasília, and timpanist with the Orquestra do Teatro Nacional de Brasilia. From 1987 to 1999 he was Director of Percussion Studies at the Universidade Federal de Santa Maria in South Brazil. From 2000 until 2009 he was director of percussion studies at the University of Miami in Coral Gables, Florida. ¹

Theoretical Analysis

Ney Rosauro wrote the following about his *Prelúdio No. 1: Prelude No.1 for Solo Marimba* was originally written for guitar, explaining the harmonies from flamenco music, as well as the Spanish mood of the work. The marimba version was completed in 1983 and is dedicated to Rose Braunstein. Throughout its three themes, the spirit of the Spanish music can be felt, and the fingerings of guitar arpeggios are suggested in the third theme. ²

Sound

The term *flamenco* is generally used to describe a particular body of *son*, dance and solo guitar music, mostly emanating from Andalusia in southern Spain. ³ Rosauro chose the marimba to emulate that of a traditional flamenco guitar. The marimba's mixture of both a percussive and resonant characteristics is imitative of the timbre of the traditional instrument. Also, the extended range of the marimba allows the player to adapt both the style and total spectrum of frequencies employed by the guitar. When dealing with written indications of dynamics, Rosauro was relatively conservative with their inclusion in the first prelude. However, there are many implied

¹ Ney Rosauro, *Three Preludes For Solo Marimba* (Brazil: Propercussa, 1990), 1st mov.

² Ibid.

³ Katz, Israel J., "Flamenco [cante flamenco]," *Grove Music Online*, ed. Deane Root. <<http://www.oxfordmusiconline.com>> (Accessed 2011-2012).

dynamics throughout the piece. For example, the opening melodic line of the piece rises and falls quite regularly, concluding with a half cadence shown in figure 1-1.

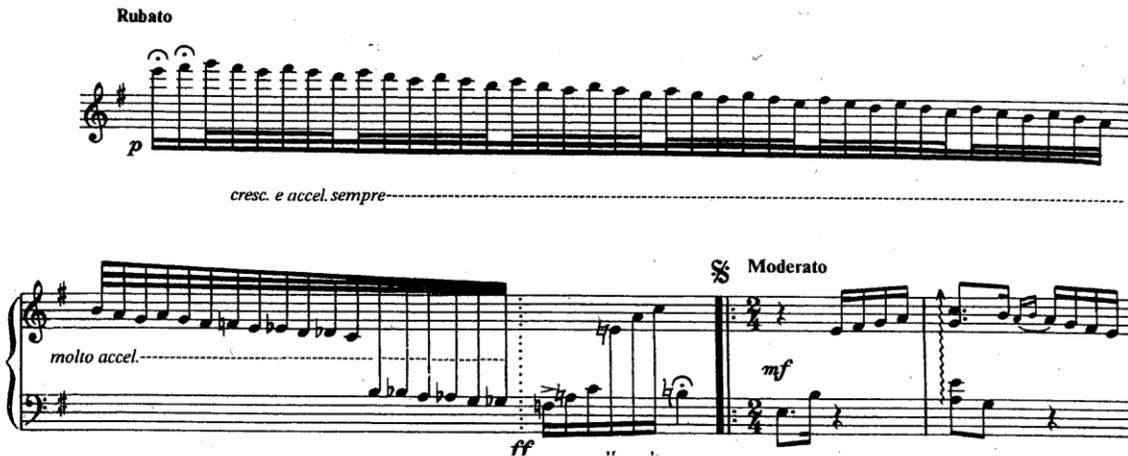
Figure 1-1 mm.1-6: Rise and Fall of Melodic Content

The musical score for Figure 1-1, measures 1-6, is presented in two systems. The first system covers measures 1 through 6. The right-hand part (treble clef) begins with a melodic line marked *molto accel.* and *ff*. The left-hand part (bass clef) provides harmonic support. A section starting at measure 5 is marked *rall. molto* and *mf*. The tempo is indicated as *Moderato*. The second system shows two endings. The first ending (marked '1.') leads to a section marked *poco rall.* and the second ending (marked '2.') leads to a section marked *rall.*. Both ending sections feature triplets in the right hand.

Harmony

This entire prelude is in the key of E minor. There are many chord progressions that cadence strongly in the key of E minor creating a stable sense of tonality. An example of the immediate sense of tonality could be taken from the very first measure of the piece shown in figure 1-2.

Figure 1-2 mm.1-3: Opening Content



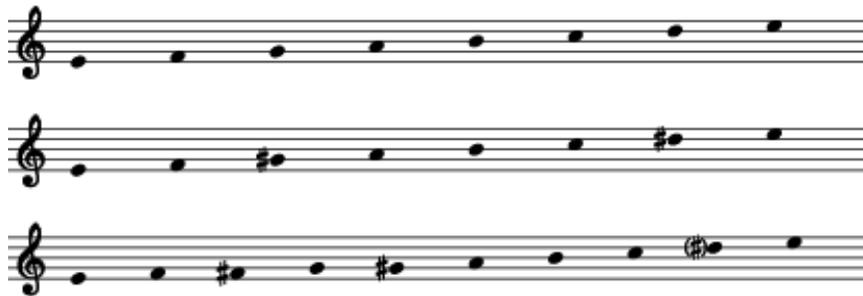
Beginning in m. 2, the majority of the harmonic motion is based upon the downward progression from tonic to dominant. Each time the melody reaches its climax, Rosauero uses strong cadences in an arpeggio to stabilize the tonal center. The initial chord of the A section (m.1) is an A minor seventh chord. The next two chords, played in an arpeggio, are much more open in their structure due to interval spread of the stacked fifths. The D-sharp found on the third partial of the triplet in the first ending is important for the cadential sequence and the establishment of E minor as the key.

The *a tempo* section (m. 7) is in the key of E minor. It then begins to cadence in E minor's relative major, G major. From G major, it then cadences in the key of C major followed by a final half cadence in the home key of E minor. This progression creates a strong feeling of growth and rising tension through the use of the minor seventh. Rosauero's use of the seventh scale degree within the harmony plays an important role in the harmonic progression. The seventh is used to build tension and a strong sense of tonality that gives the piece a very traditional style and harmonic progression. Rosauero also uses the seventh to create a strong sense of harmonic depth both in color and character. In the second half of the piece, Rosauero keeps E minor as the tonal center. The majority of this section has a pedal tone of E underneath the harmonic and melodic content. This solidifies the tonal center and overall character of the piece as E minor. Both the harmonic and melodic content of this section can be characterized as anchored. While each bit of harmonic and chromatic motion freely moves within the key area, each note is governed by a reiteration of the pedal E underneath the harmonic structure.

Melody

This piece is composed of three primary melodic themes. The first theme begins at the *moderato*. This first theme creates a cascade effect with its falling progression, which comes to rest at the half cadence in m. 5. Each time the melodic line moves upwards towards a climax, it is immediately followed by a regression. This push and pull of the melodic content only ceases at the marrow of the progression, the half cadence. The second theme, starting at the *a tempo*, employs the use of the seventh scale degree and a rising chord progression that moves towards the cadence, which then returns to the home key. The third and final theme of the prelude is a combination of the first two melodies. The third theme combines the use of progression, regression and an arpeggio to create a melody that is unique and varied. As in the popular music of Andalusia, the scales used for Flamenco tend to closely associate with three principal types: the medieval Phrygian, the Arab *Maqam Hijazi*, and a bimodal configuration alternating between major and minor seconds and thirds.⁴ Figure 1-3 shows these three principal types in succession.

Figure 1-3 The Main Scale Types in Flamenco Music



Throughout the piece, the initial entrance of the melodic content begins in the higher register of the instrument, usually in the tonic key, followed by a gradual descent of the melody. This technique can be traced all the way back to Joseph Riepel and his terms “mountain”, “fountain” and “bridge”, referring to the three characteristics of eighteenth-century harmonic and

⁴ Katz, Israel J., "Flamenco [cante flamenco]," *Grove Music Online*, ed. Deane Root. <<http://www.oxfordmusiconline.com>> (Accessed 2011-2012).

melodic movement. For the majority of the piece the melody takes on a *fonte* or fountain characteristic because of its fountain-like nature.⁵

Rhythm

The specified note lengths and articulations that are found on the page simply give the performer an interpretive starting point. If one were to continue past this layer of directness, one would open an extensive world of stylistic considerations and interpretation. The texture varies throughout the piece from monophonic to homophonic to polyphonic. For example, the first four measures of the piece do not include any rhythmic layering, while the first two themes of the piece use arpeggios and cadences to enhance the melodic character.

Each note of the melodic line is placed within what can be explained as the continuum. The continuum goes beyond meter to represent the whole hierarchy of expectation and implication of rhythm.⁶ Rosauero uses the rhythmic component of stress and lull in the piece quite often. In mm. 1-4, the stress can be seen in the rising intensity of rhythmic duration from the dotted eighth-note into the four-note grouping of sixteenth-notes. The lull can be found in the glissando found following the sixteenth-note groupings. All of this is accomplished without the aid of any specified meter or pulse. This sort of stress and lull can be found throughout the piece on a variety of different levels.

Growth

This work has three main sections. Each section is connected by one tonal center, however the three sections also have differences that set them apart. The primary organizational element of this piece is melody. Each progression and section is connected by the unifying voice of the melody. The structure of the piece is very interesting as it can be described as reflective in nature. The piece opens with a falling E minor scale and ends with a rising E minor scale. The first section melodically falls while the second melodically rises. Each of these compositional techniques aid in the overall growth of the piece.

⁵ Ratner, Leonard G., Emmerig, Thomas, "Riepel, Joseph," *Grove Music Online*, ed. Deane Root. <<http://www.oxfordmusiconline.com>> (Accessed 2011-2012).

⁶ Jan La Rue, *Guidelines For Style Analysis*, 2nd ed. (Michigan: Harmonie Park Press, 2008), 90.

Performance

Rosauro's first prelude poses some challenges to the performer. The first challenge is the interplay between mallets two and three using a four-mallet grip. In the opening and closing sections of the piece, along with the ornamentation within the inner sections, the performer must have control of these two mallets. The second and final major challenge posed to the player is the double lateral movement in the third section between mallets three and four. This section requires not only speed in the movement between the two mallets, but it also requires accuracy as the left hand moves around the keyboard. *Prelúdio No. 1* requires a four and a third octave marimba. The author recommends using a medium-soft, yarn mallet because of its ability to produce a warm sound while maintaining clear articulation.

Chapter 2 - Prelúdio No. 2 La Maior (A Major)

Theoretical Analysis

The following is a theoretical analysis of *Prelúdio No. 2* by Ney Rosauero: *Prelude No.2* was written as homage to the great Brazilian composer Heitor Villa Lobos, who continues to serve his main inspiration and motive for writing music with Brazilian roots. The first theme is a tribute to the master, and the second and third themes are based on melodic sequences that are characteristic of the *Bachianas Brasileiras* series of Villa Lobos as well as on diminished chord passages that are common in his works for guitar.⁷

Sound

Much like the first prelude, the second is written for the marimba and its warm, percussive timbre. The written music employs the wide range of the instrument and the timbre throughout the piece is consistent. Rosauero's writing highlights the range of the instrument through the use of arpeggio runs that move up and down the length of the keyboard. Figure 2-1 shows how Rosauero utilized the arpeggio to showcase the range of the instrument.

Figure 2-1 mm. 41-46 Arpeggio Pattern

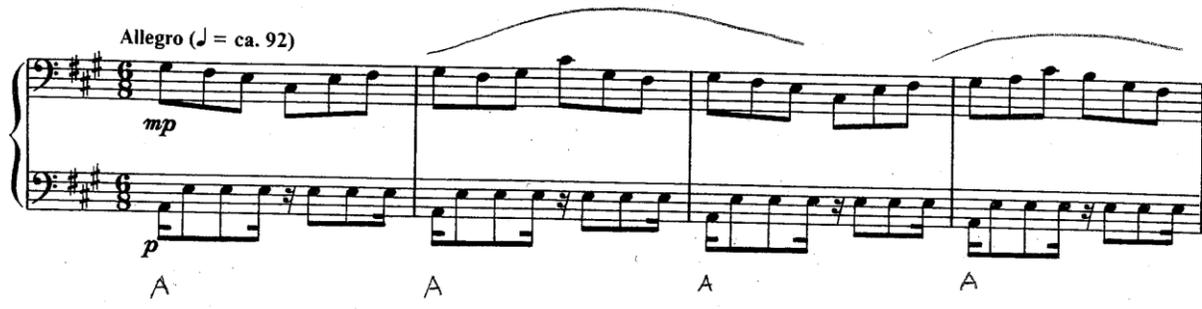
The image displays a musical score for piano, specifically focusing on measures 41 through 52. The score is arranged in two systems. The first system covers measures 41 to 46, with a first ending bracket over measures 42 to 46. The second system covers measures 47 to 52. The music is written for both the right and left hands. The right hand features arpeggiated patterns, including triplets in measures 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, and 52. The left hand also features arpeggiated patterns, including triplets in measures 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, and 52. The score includes dynamic markings such as 'poco cresc. e rall.' and 'mf', and a tempo marking '(in tempo)'. The key signature is one sharp (F#), and the time signature is 4/4.

⁷ Ney Rosauero, *Three Preludes For Solo Marimba* (Brazil: Propercussa, 1990), 2nd mov.

Harmony

A major is the harmonic center of this work. Figure 2.2 shows the opening of the piece which features melodic content hovering over an A pedal, played by the first mallet in the left hand.

Figure 2-2 m.1 Melodic Content Over A Pedal



The descending and ascending diminished chords found in the second section of the piece are a clear reflection of the music of Heitor Villa Lobos. Villa Lobos had a style that blended European baroque style with Brazillian folk music.⁸ In *Bachianas Brasileiras no. 2*, Villa Lobos uses this technique to aurally depict the speed of a locomotive. Rosauros inspiration becomes even more clear in the third section of the piece.⁹ In *Bachianas Brasileiras no. 5*, Villa Lobos uses the soprano voice to sing long, arching phrases that suggest something with unending qualities. Rosauro uses this technique in the fourth mallet in the right hand as it soars over the underlying harmony with long, arching like motion.¹⁰

Melody

For the most part, the melodic lines are heard in the soprano voice and played by the fourth mallet in the right hand. Throughout the piece, one can clearly hear the Pucinni-like lyricism that was typical in the *Bachianas Brasileiras* works of Villa Lobos. The opening melody is lyrical and expressive yet remains attached to the left hand accompaniment. This

⁸ ¹Béhague, Gerard, "Villa-Lobos, Heitor," *Grove Music Online*, ed. Deane Root. <<http://www.oxfordmusiconline.com>> (Accessed 2011-2012).

⁹ Béhague, Gerard, "Villa-Lobos, Heitor," *Grove Music Online*, ed. Deane Root. <<http://www.oxfordmusiconline.com>> (Accessed 2011-2012).

¹⁰ Ibid.

opening motive illustrates Rosauro's ability to write both lyrically and maintain rhythmic energy simultaneously. The second theme, which begins in m. 34, is much more romantic in character due to the interpretive freedom and inverse nature of the harmonic content. The third and final theme highlights the upper range of the instrument by featuring the long, arching phrase structure by the soprano voice.

Rhythm

Primarily, the first theme is sixteenth-note based. The melody is played with the fourth mallet of the right hand while the other mallets fill in the other partials of the four-note grouping of sixteenth-notes. At the *meno moso* (m.59), the composer indicates the expression *poco rubato*. This is a great example of the rhythmic stress that can be applied in order to bring out the melodic content. At the return of the first theme, at the *allegro* (m.75), Rosauro alters the rhythmic structure to create a strong sense of syncopation. The right hand plays double stops while the left hand once again fills in the remaining partials of the sixteenth note grid.

Growth

The first theme presented in this second prelude features the feeling of expansive continuation. The melody line flows over the static bass note creating tension by the simple relationship between the two. The flow of the melodic line eventually breaks from the bonds of the first theme and continues to flow upward. This sense of growth is evident throughout the piece both in rhythmic and melodic intensity. Shape plays an important roll in the overall structure and growth of the second prelude. According to La Rue, musical shape is characterized very simply as the memory of movement.¹¹ An example of this shape can be taken from the *meno mosso* (m. 59). The initial notes of the *meno mosso* have the players hands moving in contrary motion towards each other. The dissonance caused by this antagonistic motion is relieved by the melodic lines reaching one another and then returning back from whence they came. This melodic motion creates much larger shape of tension and release.

¹¹ Jan La Rue, *Guidelines For Style Analysis*, 2nd ed. (Michigan: Harmonie Park Press, 2008), 1-3.

Performance

The performer will face certain challenges that the performer will face when playing the piece. Technically, the performer will need a strong understanding of the main strokes in the four mallet technique, especially single independence between mallets two and three.

Figure 2-3 mm. 41-46 Single Independent Strokes

The musical score consists of three systems of piano music. The first system (mm. 41-42) features a first ending bracket over measures 41 and 42. The tempo is marked '(in tempo)'. The second system (mm. 43-44) continues the melodic line with triplets. The third system (mm. 45-46) includes dynamic markings: 'cresc.' leading to 'ff' and 'rall.', followed by 'decresc.' and 'mp'. The piece concludes with a double bar line and repeat signs.

Figure 2-3 shows a passage that requires the performer to move up and down the range of the keyboard using the single independent stroke type. Quick and expansive arpeggios require the performer to carefully consider all sticking possibilities. Another challenge that is presented to the performer is the wide interval spreads between the hands. This requires the player to accurately hit the correct pitches while the hands are moving in opposite directions on opposite ends of the keyboard as shown in figure 2-4.

Figure 2-4 mm.72-73 Mallet Movement in Contrary Motion



Finally, the performer will need to have a clear picture of the shape and growth when playing the piece. Each theme requires a sense of musicality that can only be provided by the player. An in-depth analysis of the piece and its shape would be helpful when deciding phrase shape and overall interpretation. *Prelúdio No. 2* requires a four and a third octave marimba. The author recommends using a medium-hard yarn mallet because of the notated rolls in the higher register. The author also recommends using mallets with ratan handles due to the rigidity of the material. Measure requires the player to perform double stops that shift quickly back and forth. Having birch handled mallets will help keep the mallets from flexing.

Chapter 3 - Rotation IV

Biographical Information on the Composer

Eric Sammut was born in Toulouse, France, where he studied piano and percussion and became known for his musical abilities at an early age. His varied musical experiences have led him to appreciate music of many genres, from those of Bach and Mozart to jazz and rock. After his studies at the Conservatoire Supérieur de Musique de Lyon he became the Principal Percussionist at the Opera. His passion for the marimba emerged during this period, as he found a new musical and technical approach to the instrument. In 1995 he won the Leigh Howard Stevens International Marimba Competition and toured the USA, performing concerts and conducting master classes. Since then he has given recitals in France, Europe, Asia, and the USA, gaining recognition as an international artist. He now serves as First Timpanist of the Orchestre de Paris and teaches marimba at the Conservatoire de Paris. Specializing in the art of improvisation, his scope of musical interactions ranges from Bach to Cole Porter and from Prokofiev to Edith Piaf. Sammut has also become one of the foremost composers of music for the marimba and actively promotes the instrument throughout France.¹²

Theoretical Analysis

Sammut's *Four Rotations* have become recognized as standard works for solo marimba. In *Four Rotations* all of the mallets are important, because of Sammut's use of the single alternating strokes in both the melody and accompaniment.

Sound

The timbre of the marimba is the fundamental sound of the piece. Sammut moves his melodic content up and down the range of the instrument to showcase the beauty of the marimba. One particular idiom that is utilized throughout the piece is the double stop. Both in thirds and octaves, the double stop enhances the melodic character by creating the illusion of many players.

¹² Eric Sammut, "Artists/composers - Artists," Mostly Marimba, <http://www.mostlymarimba.com/artists/457.html?itemid=27> (accessed 2011-2012).

Harmony

“Rotation IV” is in the keys of F minor, E minor, and F-sharp major, respectively. Most of the harmonic content in the piece comes from the coloring and ornamentation surrounding the melodic line. The grace note G found throughout the piece acts as a lower neighbor to the Ab, which is the third in an F minor triad. In A section (mm. 1-18), Sammut uses these grace notes as neighboring tones to establish a new key center in relation to the home key. Section B (mm. 20-31) then modulates to the key areas of E minor and F-sharp major, which are both lower and upper neighbors of the original and most prevalent key. The final ending (mm. 53-55), in the key of G major, can be harmonically traced back to the grace note G found in the A section. One of the key harmonic components of this rotation is Sammut’s transitional harmony.¹³ Sections A and B are both linked by a single transitional motive in the key of E dorian shown in figure 3-1.

Figure 3-1 m.16 Transitional Motive

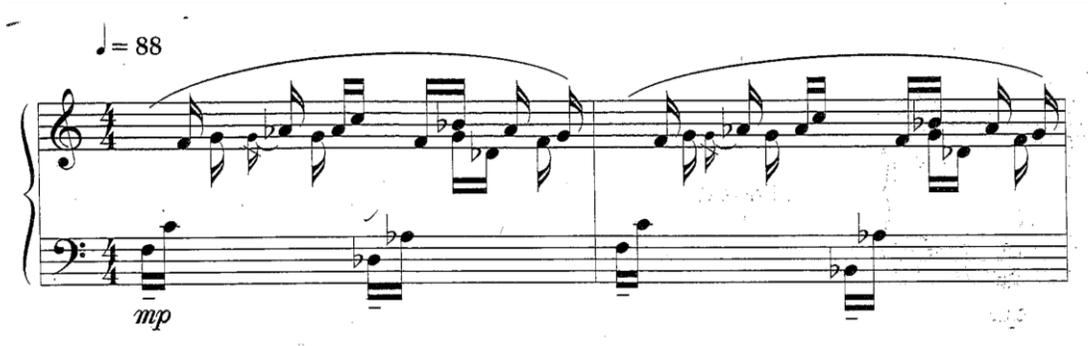


Melody

Frequent chromatic and diatonic harmony is used to add color and tension within the melodic line. The line is articulated with tenuto marks to emphasize certain pitches in the melodic structure. This first A section is characterized by the flowing sixteenth notes that do not overtly emphasize the meter or pulse. Figure 3-2 shows the flowing sixteenth notes and tenuto markings that can add weight to the notes with this articulation.

¹³ Suen, Ming-Jen. “An Analysis and Comparison of Four Rotations Pour Marimba, a Solo Marimba Suite, by Eric Sammut.” D.M.A. diss., University of North Texas, May 2011.

Figure 3-2 Flowing Sixteenth Note Pattern from mm.



The B section (mm. 20-31) has a change both in melodic content and metric feel. While the B section maintains the characteristic of flowing sixteenth-notes, it has a difference in the metric structure. This new feeling of three is also accompanied by a new key area and interjecting double vertical chords. Figure 3-3 shows the change in time signature that helps to move away from the first theme's content.

Figure 3-3 mm. 20-22 Time Signature Change



Rhythm

Primarily, Sammut utilizes a pattern of continuous sixteenth notes to provide flow and energy in the work. Time signatures within the piece can vary depending upon the section. For example, the A section of the piece has very little variety in time signatures due to the harmonic content and overall lack of movement away from the tonal center. As the piece moves into the B section, rhythmically speaking, the piece begins to open up and the time signature changes much more rapidly.

Growth

The very first section of the piece can be characterized by the word “growth.” The opening melodic line seems to grow out of the very first note of the phrase. Sammut’s use of scale patterns and arpeggios help to solidify the overall characteristic of growth. Besides the dynamic markings, which range from *mp-f*, Sammut also marks a *poco. rall.* at the end of every section as well as a *sostenuto* marked in m. 43. Sammut also notates each melodic phrase with *legato* slur markings which help to provide a better understanding of the overall growth of the piece. “Rotation IV” can be formally characterized as being in ternary form.¹⁴ Table 1 lists each section and its respective measure numbers.

Table 1 Rotation IV Form Chart

Section	Measure number	Time signature	Tonality
A	1-9	4/4*6-14/16-7/16-9/16	F minor
A'	10-18	4/4*6-14/16-7/16-11/16	F minor
Transition 1	19	4/4	E Dorian
B	20-31	2/4-3/8*11	E minor
Transition 2	32	4/4	E Dorian
B'	33-43	11/16-14/16-6/16-11/16-14/16-(6/16-5/16)-(6/16-5/16)-10/16-17/16	F# major
A'	44-52	4/4*6-14/16-7/16-11/16	F minor
Coda (Transition 3 +ending phrase)	53-55	7/4-7/16-2/4	B minor-G major chord

15

¹⁴ Suen, Ming-Jen. “An Analysis and Comparison of Four Rotations Pour Marimba, a Solo Marimba Suite, by Eric Sammut.” D.M.A. diss., University of North Texas, May 2011.

¹⁵ Ibid.

Performance

The performer of Eric Sammut's "Rotation IV" must be able to execute all of the main four-mallet technique stroke types. "Rotation IV" requires the player to use the single independent, single alternating, double vertical, and double lateral strokes within the piece. The performer will need to have these basic stroke types mastered before an efficient and productive rehearsal on the piece can be attempted. While the piece only requires a four and one-third octave marimba, the written range of the piece takes advantage of the entire keyboard. This will require a mallet that can provoke the lower fundamental while maintaining a clear articulation in the higher register.

Chapter 4 - Water Falls for a Desert

Biographical Information on the Composer

Originally from Kinderhook, NY, Greg Coffey received his undergraduate degree from the University of Nebraska at Lincoln, studying percussion under Al Rometo. While earning his B.A. in Music Education, Greg performed in numerous ensembles at the college including the nationally recognized “Pride of All Nebraska” Cornhusker Marching Band. Greg spent two years as Director of Percussion at Lincoln North Star High School where he concurrently fulfilled his student teaching duties. Greg’s percussion arrangements have been heard across the Midwest, and have been played by groups such as the University of Nebraska Marching Band. Greg Coffey is currently finishing his Master’s degree in percussion as a Graduate Teaching Assistant under Dr. Kurt Gartner and Dr. Frank Tracz.

Theoretical Analysis

Water Falls for a Desert was “written as a dedication to my parents and everything that they have done for me.” The piece features a constant cycle of rising and falling melodic material, evoking hydrologic cycle and the falling of water as rain. This piece emphasizes the lower range of the five-octave marimba, and takes advantage of the somewhat complex acoustics of the instrument (especially in the lower range) which causes harmonies that might ring clear and bright on other instruments to be heard as richer, warmer, and more complex on the marimba. A false ending and surprising harmonic modulation precede the delicate ending.¹⁶

Sound

The primary timbre of the piece is the warm and percussive sound of the marimba. One particular characteristic of the piece is exploitation of the lower range of the instrument while maintaining a clear and clean melodic line. The piece calls for a medium-yarn mallet that allows the lower range to speak clearly without the harsh attack of a harder mallet. The piece also requires the player to strike the tone bars on their nodal points during certain sections of the

¹⁶ Craig Weston Notes

piece. This creates a sonority that is both thin and distant to imitate the sound of that one would hear under water.

Harmony

The opening of the piece features a series of seventh chords that move down the contour of a mixolydian scale in the key of F major. Figure 4-1 shows the introduction and how it is notated:

Figure 4-1 m. 1: Introduction

The musical notation for Figure 4-1 m. 1: Introduction is written for Marimba. It consists of two staves: a treble clef staff and a bass clef staff. The time signature is 5/4. The key signature has one flat (B-flat). The treble staff begins with a series of chords, each marked with a triplet of eighth notes. The bass staff has a single eighth note. The piece concludes with a double bar line.

The main motive of the piece is in the key of F major. After the repeat of the opening motive, through the use of a deceptive cadence, the key moves to F-sharp major. “The fluidity of music must always be perceived as a stream (whether a spring, brook, or river) with tributaries of many sizes from many directions, never as a scattering of ponds and lakes, or worse still, as buckets and boxes into which a composer pours his thoughts.”¹⁷ The author uses these words from La Rue’s book to properly describe the concept behind the harmonic writing. Through the use of common tones, especially the raised seventh, Coffey attempts to connect each tonal center with each other to create a stream-like motion throughout the piece. Figure 4-2 and 4-3 show how Coffey uses the raised seventh as the common tone to connect the two passages.

¹⁷ LaRue, Jan. *Guidelines for Style Analysis*. 2d ed. Warren, MI: Harmonie Park Press, 1992. Pg. 115-116

Figure 4-2 m. 11: Pivot Tone and Modulation



Figure 4-3 mm. 15-16: Pivot Tone and Modulation



Figure 4-2 and 4-3 are taken from mm. 12-13 of the piece. The F that occurs on beat four of m. 12 acts as the pivot note to the new tonal center. What was once the tonic has now become the raised seventh scale degree of the new key.

Melody

The introduction of the piece includes a falling mixolydian scale supported by an arpeggio of the chords underneath. This introduction returns during the recapitulation. The main motive comprises large leaps within the chord structure of the tonic to create a sense of openness and melodic freedom. The first motive (m. 1) spans the range of the instrument without sacrificing the linear appeal of the melodic line. Each mallet during different points of the opening motive has an integral part of the melodic line. Instead of having one mallet take control of the melodic content, each mallet shares the melodic structure. Figure 4-4 is taken from the piece and illustrates the melodic distribution among the four mallets.

Figure 4-4 m. 2: Mallet Balance

Moderato



Underneath the melodic motive, the listener also hears a rhythmic motive that is subtly imbedded within the main melodic line. As the work's melodic and harmonic content moves into a different tonal center, the rhythmic motive takes over and becomes a more compelling line in the piece.

Figure 4-5 m. 14: Accent Pattern



Figure 4-5 shows how the accented notes on the different subdivisions of the sixteenth note create an underlying rhythmic motive that occurs throughout the piece.

Rhythm

With few exceptions, the rhythmic content of the piece is primarily based upon the sixteenth-note subdivision of the quarter-note. One example of this rhythmic exception is at the recapitulation where the pattern breaks and the form returns to the opening motive of the piece. The most important aspect of the rhythmic nature of the piece is that it maintains a sense of flow regardless of the written notation. Very rarely does the piece move away from the sixteenth-note basis that defines the rhythmic structure of the piece.

Growth

The primary component of growth in the piece is the rise and fall of the melody in sixteenth-notes. Along with the rhythmic intensity that is created throughout the piece, the harmonic content also plays a pivotal role in the creation of growth. For example, the movement in mallet two as it is playing the major second interval creates tension and release that adds to the growth. As mentioned earlier, Coffey uses common tones to connect harmonic passages. This creates a sense of flow and unity that aids in the process of growth.

Performance

Water Falls for a Desert uses two primary stroke types with which the performer must be familiar with. The first and most obvious is the single alternating stroke. The entire piece is based upon the rhythmic pattern and permutation of sixteenth notes. These sixteenth-note passages are permuted as the sticking 1,2,3,4. The second most used stroke in the piece is the double lateral stroke. This is composed of single motions that produce two successive pitches. It begins as a double vertical stroke but goes through a split second change where one mallet strikes before the other.¹⁸ The third most prominent stroke type is the double vertical. It is imperative that the performer be able to play each note of the double vertical simultaneously. This can pose some challenges especially where the performer must play the double vertical strokes move up and down the keyboard. Figure 4-6 illustrates an example of double vertical strokes.

Figure 4-6 m. 12: Double Vertical Strokes



¹⁸ Stevens, Leigh Howard. *Method of Movement for Marimba*. Asbury Park: Keyboard Percussion Publications, 2000.

The piece requires a five-octave marimba. Due the wide pitch range required of the piece, the author recommends using medium-hard yarn mallets that can speak well in both the upper and lower ranges of the instrument.

Chapter 5 - Strands of Time

Biographical Information on the Composer

A native of Logansport, Indiana, Brian Blume is currently percussionist with the Terre Haute Symphony Orchestra and has also played with the Lafayette Symphony, Columbus Indiana Philharmonic, Carmel Symphony, and Bloomington Camerata Orchestra. His performance experience goes far beyond orchestral playing, however, and includes solo marimba and percussion, new music performances, electronic music, and drum and bugle corps.

Blume is an active composer, arranger, educator, clinician, and adjudicator in Indiana and throughout the Midwest. He has received numerous commissions and has works published by Tapspace Publications, PercMaster Publications, and drop6 media. Blume currently teaches percussion at Center Grove High School in Greenwood, Indiana, where he has helped their percussion ensemble earn invitations to perform at the Midwest Clinic and the Percussive Arts Society International Convention, and earn a bronze medal at the Winter Guard International World Championships, all in the same year. Blume has taught several drum corps and the Indiana University Marching Hundred Drumline.¹⁹

Blume earned both Master and Bachelor of Music degrees in percussion performance from Indiana University's Jacobs School of Music.

Theoretical Analysis

Strands of Time is a marching snare drum solo written specifically for the concert hall. It is accompanied by a pre-recorded audio soundscape which weaves the acoustic sound into a futuristic digital realm. The title refers to the idea of multiple strands (or threads) of live and electronic music that intertwine and blend to create a unified whole.²⁰ The piece requires precise

¹⁹ Brian Blume, "Biography Page," BrianBlumeMusic.com, <http://www.brianblumemusic.com/main/home.html> (accessed 2011-2012).

²⁰ Brian Blume, *Strands of Time* (Portland: Tapspace, 2010), page nr.

tempo mastery and rudimental control. Accompaniment is provided in digital audio format and a variety of setup suggestions are provided in the score.²¹

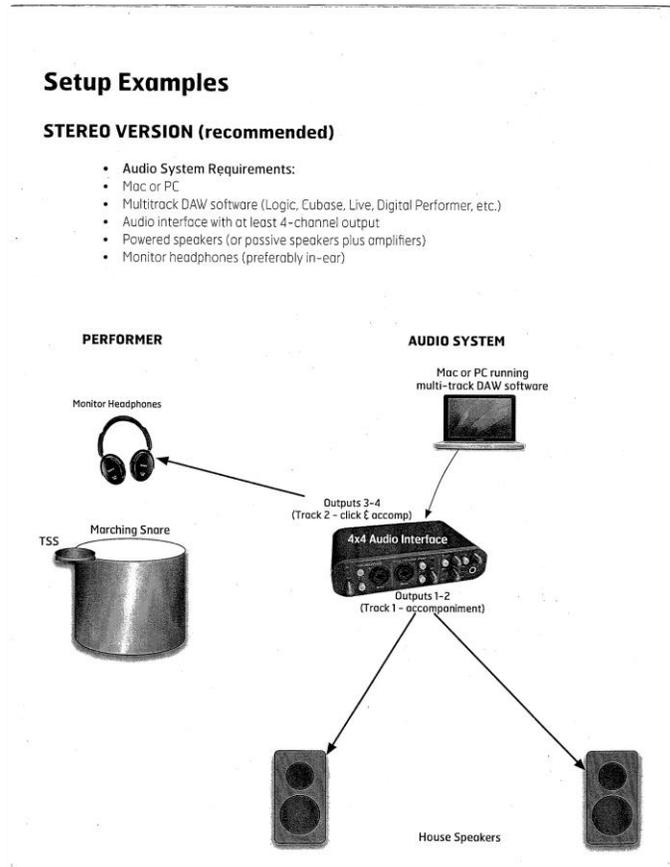
Sound

When Blume began composing this piece, he was in the process of completing a computer music course in his graduate studies, and decided that he wanted to apply some of this knowledge to the composition. However, he did not yet have the skills or time to do exactly what he had originally intended, which was to use live processing and delays. Consequently, he composed the piece for solo percussion with electro-acoustic accompaniment, which makes the piece more accessible to performers.²² Figure 5-1 shows an example of one of the set-up guides that Blume provides in his score.

²¹ Ibid.

²² Brian Blume briancblume@gmail.com, RE: Strands of Time [Email to Greg Coffey gcoffey@k-state.edu March 13, 2012].

Figure 5-1 Audio Set-Up



The primary timbre of *Strands of Time* is produced by the marching snare drum or field drum. For the performance, the author chooses to use a marching snare drum with a Kevlar batter head. The characteristic timbre of the Kevlar is tight and very dry. This is caused by the high amount of tension put on the batter head. For the second drum, the author has chosen to use a six-inch drum, typically found on a set of marching tenor drums. The high pitch, sharp attack, and relative lack of resonance mix well with the dry sound of the marching snare drum.

The accompaniment track includes many electronic samples that are heard throughout the piece. These samples create a great depth of sound and color. The texture of the piece can be described as primarily polyphonic. The performed music is constantly accompanied by the electronic track creating a greater sense of melodic independence and layering.

As for the track itself, Blume knew that he wanted it to be more of an atmosphere/soundscape, rather than something that provided only harmony or musical structure. The use of delay naturally creates an illusion of endless space in the listener's ear, and Blume

enjoyed the idea of creating a sort of cavernous, almost mysterious atmosphere. Blume also chose lower frequency sounds in the accompaniment to compliment the bright timbre of the snare drum.²³

Strands of Time presents two primary textural landscapes. In the opening section of the piece, the texture is sparse. In this section, the accompaniment track consists of ambient background sound, adding punctuation to the rhythmic content being played on the snare drum and smaller high-pitched drum. The second section, beginning at letter A (m. 22), becomes much more dense as the accompaniment track creates a more prominent third voice.

Melody

The melodic content of the piece moves between the electronic track, the small high-pitched drum, and the marching snare drum. The very first notes played on the marching snare drum and small drum make up the first and most prominent motive of the piece.

Figure 5-2 mm.1-3: First Motive

The musical score for the first motive (measures 1-3) is presented in 8/4 time with a tempo of 90. It consists of two staves: 'ack' (top) and 'im' (bottom). The 'ack' staff begins with a half note followed by a quarter note, then a sequence of eighth notes. A 'click' is indicated above the first quarter note. The 'im' staff has a half note in the first measure, followed by a snare drum pattern in the second and third measures, marked with 'RRRR' and a 'TSS' box. Dynamics are marked as $p < f$.

Figure 5-2 shows the clear motive that starts and ends the piece. This opening motive can also be found in fragments throughout the score. The initial motive is not necessarily developed: instead it is simply used in different contexts and different voices, while other motives and themes are explored. As the piece moves forward, more conversation begins to happen between the soloist and the track. After letter E, the snare drum in the track begins to take on its own personality, and more snare drum voices enter as the piece almost spirals out of control towards

²³ Brian Blume brianclume@gmail.com, RE: Strands of Time [Email to Greg Coffey gcoffey@k-state.edu March 13, 2012.

the end.²⁴

The piece continues to briefly develop this initial theme up to rehearsal mark A. Rehearsal mark A signals the beginning of the complex counterpoint between the performer and accompaniment track. The piece then enters into a much more developmental style where, admittedly by the composer, the initial theme is relatively ignored. The initial motive returns at the end of the piece. Figure 5-3 shows this final entry of the initial motive.²⁵

Figure 5-3 Final Entrance of Motive

The musical score for Figure 5-3 shows two staves. The upper staff features a melodic line with a crescendo from *pp* to *ff*, marked with a slanted line and the labels *pp* and *ff*. Above the staff, there are three accents (*v*) and a 'delay' marking. The lower staff features a bass line with a crescendo from *mf* to *ff*, also marked with a slanted line and the labels *mf* and *ff*. The score concludes with a double bar line.

Rhythm

Perhaps the most intricate and intriguing of all of the musical elements in the piece is that of rhythm. Blume shows a mastery for complex rhythmic writing in the piece by utilizing polyrhythms, hemiolas, and various hybrid rudiments at high speeds. The first instance of polyrhythmic writing can be illustrated in mm. 38-42.

²⁴ Ibid.

²⁵ Brian Blume briancblume@gmail.com, RE: Strands of Time [Email to Greg Coffey gcoffey@k-state.edu March 13, 2012.

Figure 5-4 mm.38-43: Polyrhythm

The musical score for Figure 5-4, measures 38-43, is written in 1/2 time. It features a piano (p) and forte (f) dynamic range. The left hand (L) plays a complex ostinato pattern with a 'w/ butt (center)' instruction. The right hand (RH) plays a different ostinato pattern, with a 'triangle' rhythm and an instruction to 'RH improvise based around triangle rhythm (in track)'. The score includes a 'C' time signature change and a 'w/ tip to E' instruction.

Figure 5-4 illustrates how Blume used polyrhythm to create interaction with the track and performer. The right hand establishes an ostinato pattern made up of three note groupings, while the left hand plays a different ostinato pattern that closely mimics the quarter note. The left hand pattern also lines up vertically with the accompaniment track that, at times, has its own polyrhythm as well.

Growth

From the beginning of the piece, Blume establishes energy and intensity with the application of dynamic swells and bright tempos. The track also adds in the growth process by using long synth pad programs that, over time, grow dynamically. The development and implementation of the polyrhythms help to add melodic interest as well as overall density. The gradual increase of density is further provoked by rudimental complexity that seems to grow in difficulty level as the piece develops.

Performance

Blume's *Strands of Time* poses many performance challenges. Besides the obvious rudimental skill level that is required, the performer must also have a strong grasp of metric relationships and the ability to play alongside a fixed music track. The piece also requires a great deal of dynamic control while playing difficult rhythms. Having spent a great deal of time

developing the technique required to play the piece, the author recommends using some kind of audio manipulation software to slow down the accompaniment track for early rehearsal.

Chapter 6 - Surface Tension

Biographical Information on the Composer

Dave Hollinden has composed extensively for percussion, and his music is widely performed in the United States and overseas. He has been the recipient of grants from Artist Trust, the Seattle Arts Commission, the National Foundation for Advancement in the Arts, and the Artist Support Program of Jack Straw Productions. His Bachelor's Degree in Composition is from Indiana University, where he studied with Harvey Sollberger and Juan Orrego-Salas. He received his Master's Degree in Composition from the University of Michigan, where he studied with Fred Lerdaahl, William Albright, and Leslie Bassett.²⁶

Theoretical Analysis

Surface Tension is written for two players with multi-percussion arrays. The themes in *Surface Tension* are based upon the musical styles of rock and jazz. They are very metric and beat-oriented, and are treated in a sonata form. The composition includes a variety of interactions between the two performers, such as passages in unison, sections with tight counterpoint, and the exchange of both improvised and notated solos.²⁷

Sound

Surface Tension employs a great variety of timbres from the percussion medium. Figures 6-1 and 6-2 are taken from the score of *Surface Tension*. The diagrams outline the instruments and their respective notation.

²⁶ Dave Hollinden, "Biography," Dave Hollinden/Music Composer, <http://www.davehollinden.com/> (accessed 2011-2012).

²⁷ Dave Hollinden, "Surface Tension," Dave Hollinden/Music Composer, <http://www.davehollinden.com/> (accessed 2011-2012).

Figure 6-1 Player One Notation and Set-Up

Player 1

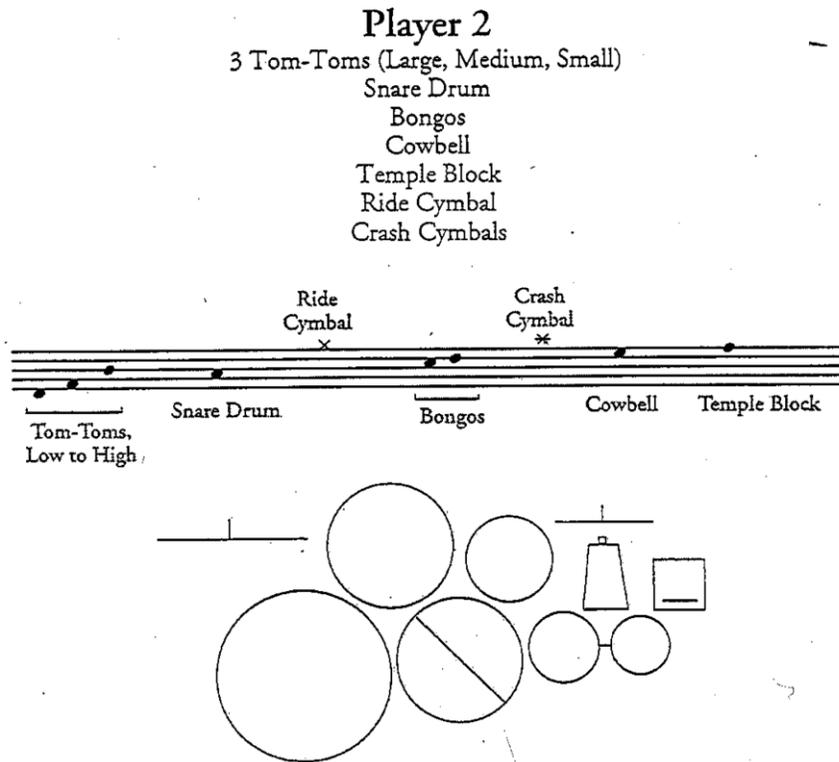
4 Tom-Toms (very large, medium, small, very small)
Snare Drum
Tambourine with Head
Cowbell
Woodblock
Hi-Hat
Crash Cymbals
Chinese Cymbal

Hi-Hat Crash Cymbal Chinese Cymbal

x * x

Tom-Toms, Low to High Snare Drum Tambourine Cowbell Woodblock

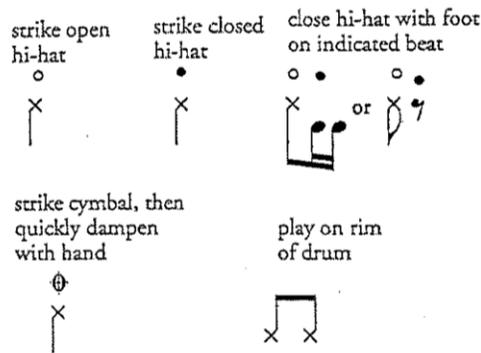
Figure 6-2 Player Two Notation and Set-Up



Throughout most of the piece, the timbre groups are separated by theme. For example, the very first theme heard in the piece (m. 1) includes the timbre of the larger toms and snare drums. This creates individuality among the formal sections both in written notation and character of sound. Hollinden exercises further control over timbre by specifying instrument-specific techniques used in the piece. Figure 6-3 shows the diagram that has been taken from the score.

Figure 6-3 Notation

Other Notation:



The third and final theme of the piece is much more intricate both in style and notated articulation. This final theme is in a three-four time signature that creates a stark relief from the first two themes of the piece. The third motive is unified by the unison figure found in mm. 32-34 starting with a triplet, followed by a quarter note to eighth note. Figure 6-5 is taken from mm. 32-34 and shows the initial entrance of the third motive.

Figure 6-5 mm. 32-34: Unison Figure

$\text{♩} = 3$ $\text{♩} = 150$ *Tightly Stretched, Taut*

The musical score for Figure 6-5 shows two staves of music. The top staff starts with a dynamic marking of *sub. p* and a tempo marking of 150. The bottom staff starts with a dynamic marking of *sub. p*. Both staves feature a triplet of eighth notes followed by a quarter note and an eighth note. The dynamic marking changes to *ff* in the latter part of the passage. The score includes various articulation marks such as accents and slurs.

Through metric modulation, Hollinden creates smooth transitions between sections. To illustrate this technique, Hollinden uses metric modulation in between sections. Hollinden uses an ostinato pattern typically from the measure before the change as a pivot point. From this ostinato pivot point, the new tempo and rhythm is established. Figure 6-6 illustrates an example of metric modulation.

Figure 6-6 mm. 27-36: Metric Modulation

The musical score consists of two systems for two players, P1 and P2. The first system (mm. 27-30) is in 3/4 time. P1 and P2 play complex rhythmic patterns with accents and slurs. Dynamics include *ff*. A tempo marking below the first system reads: $\text{♩} = 3$ ($\text{♩} = 150$) *Tightly Stretched, Taut*. The second system (mm. 31-36) shows a metric modulation to 3/2 time. P1's part starts with *sub.p*, followed by *ff* and *sub.p*. P2's part starts with *sub.p*, followed by *ff* and *sub.p*. The modulation occurs at the beginning of m. 31, where the first two partials of P1 and P2 are quarter and two sixteenth notes, respectively, which are imitative of P2's rhythm in m. 32.

In each instance, the metric modulation takes place before the listener realizes that it has occurred. In this example, count four of m. 31 acts as the pivot point. The quarter-note and two sixteenth-notes on the second and third partial are imitative of the rhythm of player two in m. 32.

Growth

The primary organizational element of the piece is timbre. Hollinden uses the various percussion instruments to facilitate growth throughout the piece. The dynamics of the piece range from *p* to *fff*. This requires the player to have a full understanding of each instrument and its dynamic capabilities. Hollinden uses crescendos and diminuendos to further facilitate growth. Each large section is connected by transitory material, in which multiple timbral areas are explored. Through the addition and subtraction of instruments, Hollinden created density that aids in the overall flow and growth of the piece.

Performance

Hollinden has asked that the performer to be very clear about the details of the music, especially the phrasing. The performer should be aware of the individual gestures and motives in the music down to the smallest practical level, and be able to articulate them clearly while performing. There are often a number of details that are overlooked when performing this piece. For example, it is important to understand how each player's part works with the others. Moments of complete originality and separation from the other player are rare. These details need to be made clear in the performer's mind, and to be made clear to the audience during the performance. Thus, what Hollinden wants the performer to portray is an accurate rendering of the music, and what he wants the audience to experience is the music. Any additional experiences will be those that the music inspires in the performer and/or the listener.²⁹

²⁹ Dave Hollinden, "Surface Tension," Dave Hollinden/Music Composer, <http://www.davehollinden.com/> (accessed April 2, 2012).

Chapter 7 - bit smoke

Biographical Information on the Composer

Casey Farina received his Bachelor's and Master's degrees in percussion at Arizona State University. As a doctoral student at Northwestern University, Farina received a grant from Center for Interdisciplinary Research in the Arts (CIRA). With the help of the grant, Farina explored spatial sound via a fleet of music-emitting robotic blimps. These earlier experiments and studies show Farina's interest in moving beyond the paradigm of the traditional concert hall.³⁰

Theoretical Analysis

One of Farina's that shifts the traditional paradigm is *bit smoke*, a composition for a quartet of indeterminate instrumentation. This work comprises an animated graphical score, which serves as primary musical source material for performers and is projected on screen as an integrated visual element of the piece for audiences. Each player is assigned a specific quadrant from which they will receive their visual cues. *bit smoke* represents a balance of progressive means of musical transmission with a real sense of the historical context in which the piece was composed.³¹ Figure 7-1 shows the quadrant being split into two main sections.

³⁰ Kurt Gartner, "'bit smoke' Casey Farina and the Animated Graphical Score," *Percussive Notes* (2008): 22-23.

³¹ Ibid.

Figure 7-1 Two Quadrant Example



Sound

Although the work has been performed with various types of instrumentation, the author has chosen to use two vibraphones and two marimbas with various types of cymbals for the quartet. These instruments offer a variety of sonorous qualities that lend themselves well to the piece. The marimba's timbre is dark and rich, which compliments the brighter sound of the vibraphone. An important aspect of an instrument's sound is the choice of mallet. Each player is given the freedom to choose the mallet and technique with which to play the piece. Much of the sound depends on the diameter, hardness, and materials of the mallet. Also, various techniques can be applied to create different sounds from an instrument. A specific technique is utilized during the piece is *col legno*. This is an instruction typically used for bowed string instruments that has the player strike the string with the stick of the bow, rather than draw the hair of the bow across the strings. On keyboard percussion instruments such as marimba, this creates a hard knocking or light tapping sound depending on the velocity and weight of the attack.

Harmony/Melody/Rhythm

The foundation of the composition is based upon the “bits” and “smoke” rendered on the screen that comprise the main visual vocabulary of the score. In this way, Farina provides thematic unity for the piece without falling into a narrative archetype, such as that of a silent-film

score.³² To further solidify the concept of thematic unity, the author has used specific cues in the piece to represent tonal areas or chord qualities. For example, the author has excluded the upper manual on the keyboards to avoid there ever being a complete lack of connection between the players and their tonal center (though the piece does not have to be played tonally).

Using the percussion medium to perform this work provides several advantages for the players. It allows them create great contrasts in sonic density, timbre, and volume. It also allows the players to quickly blend from articulate thematic material into a more homogeneous ensemble sound.³³ Another example of thematic unity in the piece comes from the author's own personal interpretation of specific graphics that occur in the piece.

Figure 7-2 “Water” Graphic



Figure 7-2 shows the water-like graphic that signals to each player the start of a C major seventh chord. This specific graphic creates thematic unity for the audience members while also providing a point of demarcation for the players.

³² Kurt Gartner, “‘bit smoke’ Casey Farina and the Animated Graphical Score,” *Percussive Notes* (2008): 22-23

³³ *Ibid.*

Performance

While the piece calls for quick reactions from the performers, Farina did not intend for *bitsmoke* to be a reflex test for the players.³⁴ The score should inspire the musical performance of the piece and each performer should interpret the graphic notation as he or she sees fit. When preparing the piece for performance, the author recommends that some time be spent segregating and labeling the individual graphics in order to create a better sense of unity and understanding.

³⁴ Kurt Gartner, “‘*bitsmoke*’ Casey Farina and the Animated Graphical Score,” *Percussive Notes* (2008): 22-23.

Selected Bibliography

- Blume, Brian. *Strands of Time*. Portland: Tapspace, 2010.
- Blume, Brian. "Biography Page." Brian Blume Music.
<http://www.brianblumemusic.com/main/home.html> (accessed April 2, 2012).
- Brian Blume briancblume@gmail.com, RE: Strands of Time [Email to Greg Coffey gcoffey@k-state.edu March 13, 2012].
- Brinley, Jonathan. "Senior Percussion Recital: An Honors Thesis." diss., Ball State University, 2003.
- caseyfarina@gmail.com. RE: bit smoke [Email from Greg Coffey gcoffey@ksu.edu. February 7, 2012].
- Gould, Michael. "An Interview with Composer David Hollinden." *Percussive Notes* (June 1995): 46-49. [http://publications.pas.org/archive/jun95/articles/9506.45-49.pdf#search="dave%20hollinden%20surface%20tension"](http://publications.pas.org/archive/jun95/articles/9506.45-49.pdf#search='dave%20hollinden%20surface%20tension') (accessed 2011-2012).
- Hollinden, Dave. "Biography Page." Dave Hollinden/Music Composer.
<http://www.davehollinden.com/> (accessed April 2, 2012).
- Hollinden, Dave. *Surface Tension*. N.p.: C. Alan Publications, 1994.
- LaRue, Jan. *Guidelines For Style Analysis*. 2nd ed. Michigan: Harmonie Park Press, 2008.
- Pfeifer, Brian. "An Interview with Eric Sammut." *Percussive Notes* (May 2011): 34-35.
[http://publications.pas.org/archive/May2011/1105.34-35.pdf#search="eric%20sammut%20rotation"](http://publications.pas.org/archive/May2011/1105.34-35.pdf#search='eric%20sammut%20rotation') (accessed 2011-2012).
- Root, Deane, ed. *Grove Music Online*. 2nd ed. Oxford: Oxford University Press, 2012.
<http://www.oxfordmusiconline.com/subscriber/> (accessed 2011-2012).
- Root, Deane, ed. *Grove Music Online*. 2nd ed. Oxford: Oxford University Press, 2012.
http://www.oxfordmusiconline.com/subscriber/article/grove/music/23442?q=joseph+riepel&search=quick&pos=1&_start=1#firsthit (accessed 2011-2012).
- Rosauro, Ney. *Three Preludes For Solo Marimba*. Brazil: Propercussa, 1990.
- Sammut, Eric. *Four Rotations For Marimba*. Asbury: Keyboard Percussion Publications, n.d.
- Sammut, Eric. "Artists/composers - Artists." Mostly Marimba.
<http://www.mostlymarimba.com/artists/457.html?itemid=27> (accessed 2011-2012).
- Suen, Ming-Jen. "An Analysis and Comparison of Four Rotations Pour Marimba, a Solo Marimba Suite, by Eric Sammut." D.M.A. diss., University of North Texas, May 2011.

Weiss, Lauren Vogel. "Eric Sammut Marimba Virtuosity." *Percussive Notes* (October 1996): 35-35.

Zirkle, Thomas Allen. "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." D.M.A. diss., Louisiana State University, 2003. In Electronic Thesis and Dissertation Collection, <http://etd.lsu.edu/docs/available/etd-0903103-141852/> (accessed 2011-2012).