A Style Analysis of the Following Works: *Fear of the Hunted* by Dustin Lowes, *Three Preludes for Solo Marimba* by Ney Rosauro, *buttonwood* by Evan Chapman, *Etude 29 from Trente Études pour Timbales* by Jacques Delécluse, *Canción de los Árboles* by Kurt Gartner, and *Mudra* by Bob Becker

by

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A REPORT

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Abstract

This report offers a comprehensive analysis of the pieces performed during my master's recital on March 5, 2023, at Kirmser Hall on the campus of Kansas State University. It is intended to assist musicians planning to perform and scholars seeking to gain a deeper understanding of the compositions included in the recital. Each piece has been analyzed using Jan Larue's style analysis method, except for harmonic and melodic analysis for some compositions.

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I want to thank my colleagues and friends for their support and encouragement throughout my graduate experience. Their camaraderie, collaboration, and unwavering support have made this journey one of the most rewarding experiences of my life. The time spent learning and growing with them will be cherished by me for years to come.

Dedication

This report is dedicated to Mr. Matt Gullickson, the person responsible for igniting the fire within me that led me to earn my master's degree in music. Mr. Gullickson saw the potential in me when others did not, and his unwavering belief in my abilities and potential fueled my passion for music and learning.

Throughout my academic journey, Mr. Gullickson has supported me every step of the way. He has been more than just a teacher and a mentor – he has been an inspiration and a friend. His dedication to music education and his passion for teaching has profoundly impacted my life, and I am forever grateful for his guidance and encouragement.

None of this would have been possible without Mr. Gullickson sparking my flame and instilling in me a love for music that continues to drive me to this day. This report is a testament to his belief in me and his influence on my life. I am proud to dedicate it to him as a small token of my appreciation and gratitude.

Preface

Jan La Rue's *Style Analysis* is a systematic approach to studying the music of contemporary composers.[1] La Rue's approach involves separating and inspecting the various elements of a composer's music into categories such as sound, harmony, melody, rhythm, and growth. Researchers can better understand a composer's unique musical language and style by examining these elements in detail.

In terms of sound, La Rue's style analysis considers the piece's overall tone, color, and timbre, including the instruments or voices used. For harmony, the analysis interrogates chords and harmonic progressions employed by the composer and the relationship between various parts or voices. Melody is analyzed in terms of its shape, contour, and development throughout a piece. Rhythm is also carefully considered, with attention to patterns, accents, and syncopation. Finally, growth refers to a composition's overall structure and development, including its form and thematic material.

The analysis method developed by LaRue is particularly well-suited for studying percussion literature, given the tendency of percussion instruments to produce complex and intricate rhythmic patterns. By closely examining the sound, rhythm, and growth of a percussion piece, researchers can gain valuable insight into the composer's approach to composition. In some cases, percussion literature may lack a traditional melody and harmony in the tonal sense, as the instruments used often produce non-pitched or indeterminate pitches. However, these instruments possess relative pitches that can be related to one another through texture, a key

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[1] Jan LaRue, "Fundamental Considerations in Style Analysis, *Notes*, no. 3 (1969): 447-464. https://www.jstor.org/stable/895339

element of sound in LaRue's analytical approach. Rather than being primarily concerned with melody or harmony, the order in which instruments are played and the way the composer layers sounds through texture are the primary means of creating melody and harmony. This unique approach makes the LaRue method a particularly fitting lens through which to analyze percussion literature in contrast to other styles of analysis. Overall, LaRue's analytical method provides a comprehensive and nuanced way of analyzing music that can be applied to various musical styles and genres and is particularly well-suited to the analysis of percussion literature. Note that each chapter's theoretical analysis sections will begin with program notes of the piece to give context for the analysis.

Chapter 1 - *Fear of the Hunted* by Dustin Lowes

Biographical Information on the Composer

Dustin Lowes (b. 1981) is a multifaceted musician, mathematician, and self-published composer. Although he has not received formal composition training, his extensive percussion background has informed his elaborate arrangements. Lowes's passion for percussion led him to join various drumlines, including the Glassmen Drum & Bugle Corps, where he served as a bass tech from 2004-2006.[2] He also co-founded the Pittsburgh Steeline, the official drumline of the Pittsburgh Steelers.

Lowes has participated in numerous competitions and events throughout his career, including the Percussive Arts Society International Convention. In 2007, he premiered "Electrolution," a standout performance demonstrating his creativity and technical prowess. He was also a finalist in the Percussive Arts Society composition contest with his piece *Fear of the Hunted,* which placed third in 2005. Lowes's music career hit a significant milestone in 2011 with the release of his first album, "Midnight Magic," digitally distributed on iTunes. He is a registered ASCAP artist and publisher, and his music has been used in various settings, including indoor competitions.

In addition to his music career, Lowes holds a Bachelor of Science in Mathematical Sciences from Penn State University, an Associate of Science in Math & Science from the Community College of Allegheny County, and a Master of Science in Mathematical Statistics from the University of West Florida. Lowes's music is known for its intense, spooky

[2] Dustin Lowes, “About,” *DustinLowes.com*, accessed May 2, 2023, https://www.dustinlowes.com/about.

atmospheres that captivate listeners with dark and rhythmic narratives. He continues to create and publish music today, impressing audiences with his innovative approach to composition.

Theoretical Analysis

This chapter will focus on the analysis of the first movement of *Fear of the Hunted, "*The Hunted."

"Near the beginning of the 19th century, an illness infected Europe in waves - cholera. Alfred Rethel drew Death as a cutthroat, and later engraved it. Rethel was inspired by the celebrated poet Heinrich Heine who had written about the sudden outbreak of cholera, in the year 1832 at a masquerade during the carnival of Paris.

Imagine yourself standing in the middle of the mall. Suddenly, the person next to you drops their bags. Before you can say anything, you notice others dropping their bags and running. In the midst of your own panic, you hear an announcement over the loudspeakers. "Ladies and gentlemen, we ask that you please remain calm. The President of the United States has announced that we are under a nuclear attack. Everyone is to take immediate..."
Fear of the Hunted starts your journey from that very moment. In the first movement, *The Hunted*, time unravels slowly. In the nuclear attack, much like an outbreak of cholera, you have time to fear Death. Moments of denial and sheer panic overwhelm your every move. You watch in terror, as Death arcs overhead. As the first movement ends, bombs explode on the nearest major city.

Thousands of souls wash over you as Death's angels start the second movement, *The Arrival*. Much like an epidemic, friends and family members begin to die from contamination. You realize that even your own survival is no longer a possibility. Your body becomes a slave to

Death's angels, for you have been infected as well. Your heart pounds with panic as death lifts you by the throat into the air. His grip steals your last breath.

No one dies peacefully, not in their final moments, not with their last breath."[3]

Section	Measure Numbers
The Hunted	1-12
Informed	13-61
Denial	62-107
No Escape	108-144
Panic	145-189
In Sight	190-209

Table 1.1: *Fear of the Hunted* Formal Structure

Sound

Fear of the Hunted is a piece written for solo multi-percussion and electronica. Electronica is a broad genre of electronic music that emerged in the 1980s and encompasses a wide range of sub-genres such as techno, house, ambient, trance, and many others. It is characterized by using electronic instruments, digital technology, and computer-based

[3] Dustin Lowes, *Fear of the Hunted*, (Pittsburgh, PA: DRL Productions, 2005).

production techniques to create a distinctive sound that is often experimental, abstract, and futuristic. Electronica music typically employs repetitive rhythms, synthesized melodies, and sound effects, often featuring non-traditional song structures and improvisation. The genre has evolved significantly over the years, influenced by various musical styles and technological advancements, and is a popular form of music today.[4] The solo is a programmatic work telling the story of a nuclear attack and draws influence from German artist Alfred Rethel's drawing *Death as a Cutthroat* (Figure 1.1)

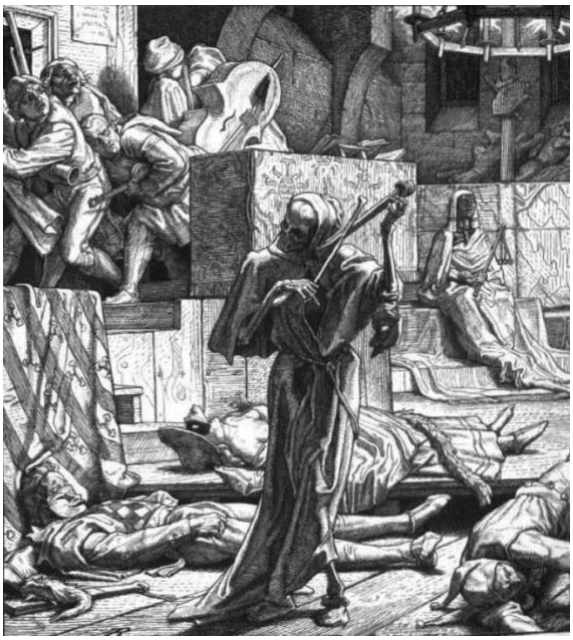

Figure 1.1: Alfred Rethel's *Death as a Cutthroat*

[4] MasterClass, "Electronic Music Guide: The History and Sound of Electronica," *MasterClass*, September 14, 2021, https://www.masterclass.com/articles/electronica-music-guide#7F3SosWYnvuMXKSQMWbjp1.

The drawing was inspired by the cholera pandemic at the start of the nineteenth century in Europe. Movement one, which will be analyzed, depicts the events of the nuclear explosion. The setup for the piece calls for a piccolo snare drum, kick drum, toms, bongos, wood blocks, a brake drum, and a cymbal made by Zildjian called a Re-Mix EFX (Figure 1.2).

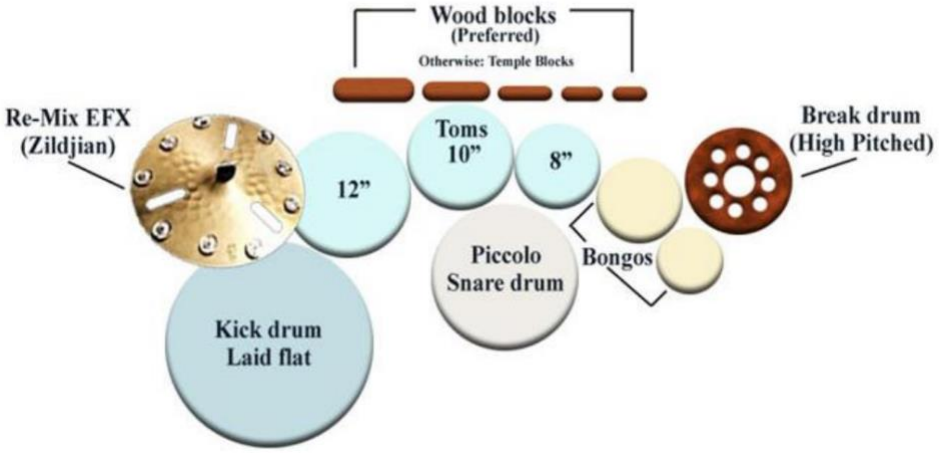

Figure 1.2: Set-up for *Fear of the Hunted*

Any cymbal with a low pitch and dark color and overtones will work to match the dark timbre of the piece. This setup combined with the synthesized sounds of the prerecorded track both work together and contrast texturally. At times, like in *The Hunted* section, most of the texture is created by the prerecorded track with high-pitched sizzling sounds and low-pitched, dissonant string sounds with the cymbal adding a metallic sound filling the higher range creating an unsettled and eerie texture. To conclude the section, the snare drum enters adding a more aggressive and harsh timbre. This section builds from *piano* to *fortissimo* within twelve measures, making for a dramatic build to the first statement of the piece.

The track and soloist interact differently in the *Informed* section. The soloist plays nearly completely in unison with the track with a few one-count interjections from the soloist and the track. The track is primarily composed of synthesized string sounds and the solo part is written primarily on the membranophones. The snare voice contrasts with bass and tom voices. This texture of unison sounds between the two entities continues throughout the next several sections in varying degrees where the soloist interjects. Some last only a count back and forth like in m. 79, and there are times like in mm. 49-50, 82, 91-92, 98-99 where the track is the only voice. These are sections of less rhythmic density and are usually just long sustained pitches that are dissonant, leading to resolution at the entry of the soloist.

The most dramatic shift in texture comes at m. 108, which is the beginning of the *No Escape* section. In this section, it can be thematically implied that the victims of the nuclear attack have lost hope and have come to terms that there is *No Escape*, hence the name of the section. The snare drum strainer is turned off at the beginning of this section and the track carries the intrigue for several measures while the performer outlines the sixteenth notes performed by the track, adding interjection that strongly contrasts the track. The track sounds like a triangle being plated at an exceptionally soft dynamic while the performer strikes the brake drum at *fortissimo* with a brass mallet, creating a piercing texture. This texture is contrasted dramatically, starting in m. 120, with the toms at the *pianissimo* dynamic and a much less sharp timbre that balances well with the low synthesized string voices introduced in the track in the measures preceding.

Although the toms are used in the previous sections, the overall sonic palate changes with the snare wires being turned off at the beginning of the section and the snare drum is not used

throughout the rest of the movement. In contrast, the snare drum's rhythmic density and texture dominated the foreground of the piece, which is now taken over mainly by the tom voices.

Harmony

Harmonically, Lowes explores the *Ionian* (scale degree 1), *Dorian* (scale degree 2), and *Locrian (*scale degree 7) modes throughout the piece, using consonant intervals such as octaves, thirds, and fifths based on those scale degrees. The sounds used in the upper voices are composed of textual metallic and synthesized sounds while the root notes are communicated with low-string sounds. Harmony can also be analyzed through timbre and texture covered in this chapter's sound section. Instead of specific notes in a key creating traditional harmony, the interplay between the track and the instruments played by the soloists creates unique sonorities that related more to the relative pitches rather than a specific organization of defined pitches.

Melody

The melodic content of the track is straightforward, moving in a motion of steps and skips consisting of two or three melodic notes. This can be heard in the melodic theme introduced in m. 13, alternating between G and E. The soloist works with the track to support the melody rhythmically and outline the contours of the lines. When melodic lines ascend, the multi-percussion part is written in parallel motion, also ascending. Although the percussion instruments are those of infinite pitch, contour and shape can still be distinguished through their relative pitch difference. For example, the bass drum is at a lower relative pitch than the snare drum, although neither of the instruments is tonal.

Rhythm

Lowes suggests that the piece should be practiced with the track or a metronome to ensure proper alignment between the performer and the track. The solo comes with two tracks - one for the audience to hear, and one with a click track combined with the audio track for the performer to listen to ensure proper alignment and precision. The separation of the click tracks and the track for the audience to hear can be split using a digital audio workplace and a mixer to direct the click to the in-ear monitors of the performer, and the track intended for the audience to hear to be played through speakers.

Rhythmically, this solo can be characterized as very rhythmically dense, requiring the performer to perform fast and technically demanding passages. Lowes has a strong background in rudimental percussion and utilizes that vocabulary throughout the work. Paradiddle-diddles and double-stroke rolls are present throughout the piece, outlining the melodic content of the track the way a percussion arranger would outline the horn parts in a drum corps arrangement. It is easy for the rhythmic density of the piece to overpower the track and the musical intent of the work. Like in rudimental percussion, it is essential to work on dynamic contrast between the accented and unaccented notes, as the accented notes act as the fabric that connects the accents. The accented notes are meant to be heard and interact with the track, specifically in the two height sections in mm. 40-41. The accents support the rhythms being played between pre-recorded tracks while the unaccented notes fill in the spaces between the rhythms creating rhythmic intrigue (Figure 1.3).

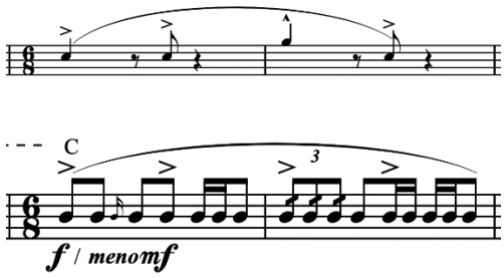

Figure 1.3: Measures 40-41 of *Fear of the Hunted*

Another example of this kind of writing is clear in mm.139-140 where the track has dotted quarter notes and the soloist is playing accents in unison with the track while filling in the space with softer notes of higher rhythm density (Figure 1.4).
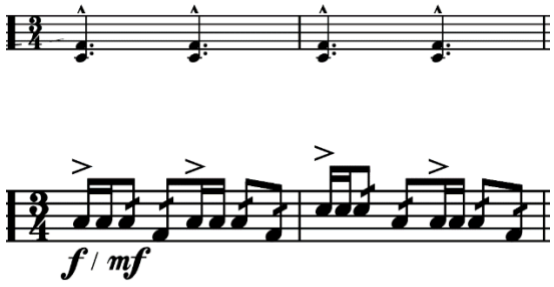
Figure 1.4: Measures 139-140 of *Fear of the Hunted*

The space is filled in with a rudiment often used in marching percussion called the paradiddle-diddle.

The first several sections (*The Hunted through No Escape)* are composed of extremely rhythmically dense passages, fast tempos, thick unison textures between the track and the soloist, and lots of meter changes that all create a feeling of hurried panic.

This piece is challenging rhythmically due to the fast tempo (195 beats per minute). One challenge of the piece is the terraced tempo change, which accelerates the piece from 120 beats per minute to 195 beats per minute over sixteen measures (Figure 1.5).
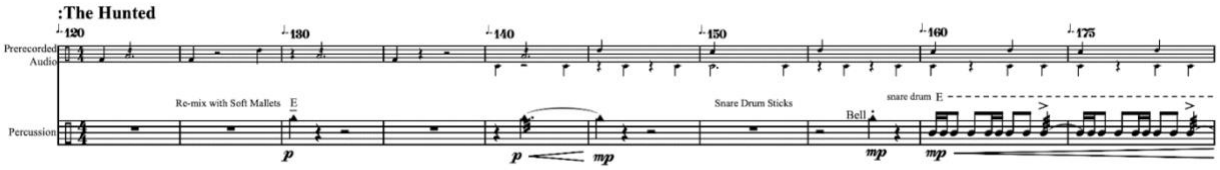
Figure 1.5: Measures 1-10 of *Fear of the Hunted*

Lining this up with the track can be difficult and takes some time to get the feel of the tempo changes with the track. Along with the swiftness and changes in the tempos, the meter changes frequently. In the *Informed* section alone, it switches between5/8, 7/8, 6/8, and 9/8 within the span of five measures (Figure 1.6)
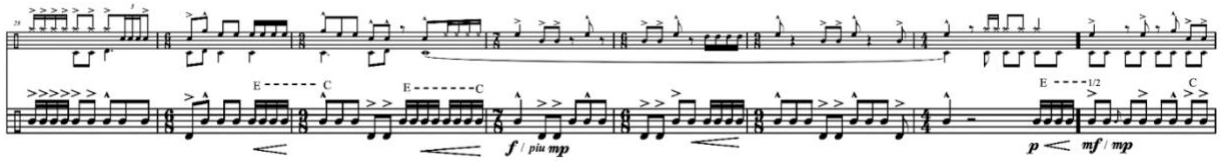
Figure 1.6: Measures 28-35 of *Fear of the Hunted*

The performer must learn the part at an elevated level as it is easy to miss an eighth note and be separated from the track for a long time.

Growth

In terms of growth, Lowes creates characteristic textures and timbres with his use of synthesized sounds found in the track along with the interplay of the acoustic percussion sounds. This can be seen in mm.79-81 (Figure 1.7).
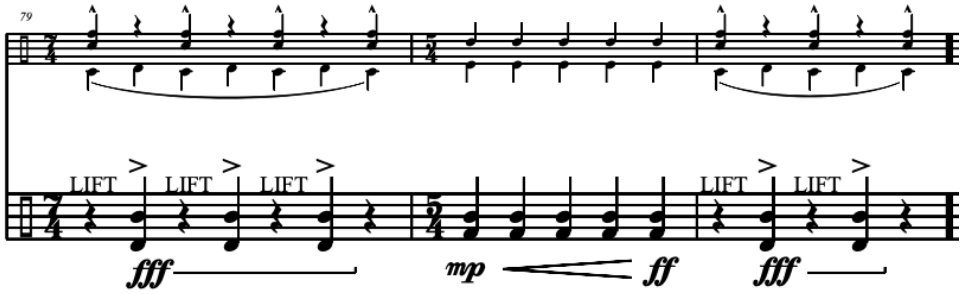
Figure 1.7: Measures 79-81 of *Fear of the Hunted*

There is nuanced interplay at all altitudes of Lowes' composition from contrasting interjects between the track and the performer from count to sound, like in m. 81. From the beginning of the piece to the *No Escape* section, *Fear of the Hunted* is filled with exciting and virtuosic rudimental percussion vocabulary that is rhythmically dense and difficult to perform. From the *No Escape* section to the end, the tempo stays the same, but the energy and drive are lulled with the use of thin textures and less frequent meter changes.

This piece is an excellent challenge for any percussionist and appeals to those with a strong marching percussion background because a lot of the skill sets required to perform the piece are already taught on the marching field. For those who do not have a marching background, this piece would serve as an excellent piece to dive into the world of rudimental percussion.

Chapter 2 – *Prelude No. 1 in E Minor* by Ney Rosauro

Biographical Information on the Composer

Ney Rosauro (b. 1952) is an accomplished composer and performer from Rio de Janeiro, Brazil, and has performed in more than forty-five countries. He has degrees from the Universidad de Brasilia - Hochschule Für Musik Würzburg in Germany and the University of Miami. He was the director of Percussion Studies at the University of Miami from 2000 to 2009. According to the biography on Rosauro's website, he is considered one of the most influential percussion composers of the 20th century. He has composed hundreds of solos and ensemble works, as well as method books, all of which are written in his unique and distinguishable style. His Marimba Concerto is argued to be one of the most popular concertos in all percussion literature.

In his compositions, Rosauro "combines charming melodies with catchy rhythms, uses the rich elements of Brazilian folklore to create stylized compositions that are full of life and fantasy, and has been enchanting audiences all over the world."[5] Rosauro has lived in Germany, Brazil, and the United States and is a believer that "the more experiences you have in life, the richer your life is, and the better composition is."[6] He believes that learning other cultures' music, language, and dances enhances his ability as a composer and claims that an extensive musical experience formed his musical identity.[7] Rosauro's composition style is heavily influenced by

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[5] Ney Rosauro, "About Ney | Ney Rosauro," *NeyRousauro.com*, 2023, https://www.neyrosauro.com/about/.

[6] Christian Baldini, "Ney Rosauro in Conversation with Christian Baldini," March 26, 2022, 38:55, https://www.youtube.com/watch?v=2DkAV3nZR7g

[7] ibid.

Brazilian classical and popular music and Western classical music. In an interview with Christian Baldini, Rosauro states that he starts composing in a composer's style that inspires him and ends the composition process in his style.

Theoretical Analysis

"*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."[8]

Section	Measure Numbers
Intro	1-2
A	3-8
B	9-22
C	23-77
Coda	78-80

Table 2.1: *Prelude No. 1 in E Minor* Formal Structure

[8] Ney Rosauro, *Prelude No. 1*, (San Antonio, Texas: Southern Music Company, 1990).

Sound

Prelude No. 1 is written for a 4.5-octave marimba, and nearly the full range of the instrument is used. Rosauro stated that he originally wrote the work on guitar and later adapted it for the marimba.[9] Rosauro suggests that the performer uses medium mallets to get a rich and full-bodied characteristic sound through the full range of the instrument. However, the touch on the instrument should be factored in, as medium mallets may sound too articulate and harsh in the lower octaves, while the upper octaves may need to speak more. The performer may consider a graduated set of mallets to remedy this issue, although it should not be used as a crutch for bad touch on the instrument.

In a conversation with Ney Rosauro, the composer spoke of his upbringing as a guitarist and bass player and how he grew up playing popular Brazilian music.[10] This background has a profound effect on the way Rosauro approaches composition. For example, the arpeggios on the downbeats of mm. 4, 5, 6, 9, 11, and 13 should create a similar texture to a guitar player strumming a chord. This effect is achieved with two connected double lateral strokes starting on the left hand, going from mallet one to two, and ending with the right hand going from mallet three to four. Another example of guitar influence in Rosauro's writing can be found in the C section (mm. 23-78). This section is heavily influenced by the *toccata*, a famous guitar style dating back to the Renaissance Era. The toccata style has a drone in the lower register while the melody is played in the upper range in a free and improvisatory nature, creating a distinct

[9] Ney Rosauro, Zoom interview with author, March 31, 2023.

[10] ibid.

texture.[11] In this style, the composer highlights the performer's technical facility on the marimba, and this section does just that.

In Prelude No. 1, quick double lateral strokes in the right hand provide the drone, characteristic of the toccata style. The performer should take particular care in ensuring the drone does not overpower the melody, as it can be challenging to execute double lateral at a soft dynamic. The double lateral drone alternates between the interval of a fourth on the notes B and E, and the interval of a third on the notes C and E. The interval of a third, first seen in mm. 56-59 will require slightly more torque from the wrist to speak at the same dynamic level as the fourth.

Harmony

Ney Rosauro's *Prelude No. 1* is written in the key of E minor and opens with a descending tonal sequence (Figure 2.1) starting in E minor and ending chromatically, spanning the full range of the instrument.

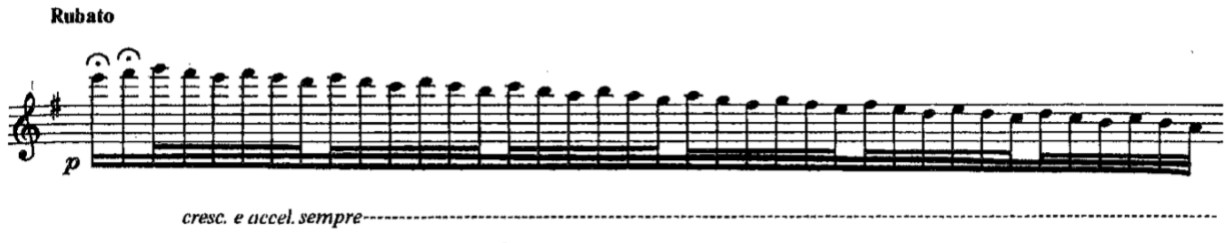

Figure 2.1: Measure 1 of *Prelude No. 1 in E Minor*

[11] *Encyclopedia Britannica*, s.v. "toccata." accessed May 2, 2023. https://www.britannica.com/art/toccata

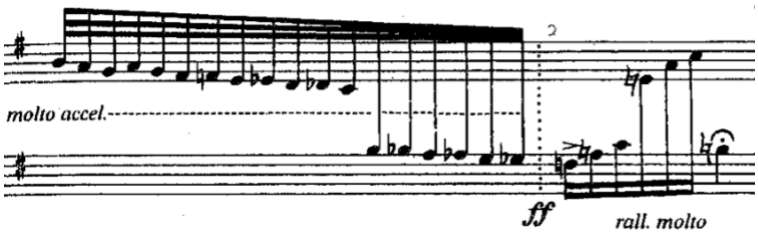

Figure 2.2: Measure 2 of *Prelude No. 1 in E Minor*

The chromaticism creates tension leading to the resolution in the form of a perfect authentic cadence to begin the A section (m. 3) that firmly establishes the tonality of the piece. Rosauro features colorful harmonies and extended chords such as sevenths and ninths in the A (mm. 3-8) and B (mm. 7-22) sections, all used significantly in building tension and creating contrast between moments of dissonance and consonance. Rosauro uses pedal chords in the C section (mm. 23-74), with individual chords repeated extensively, sometimes up to ten measures (mm. 23-32). These pedal chords create a sense of cyclical motion in the right hand while the melody played by the left hand performs several eight-note octave leaps over the right hand.
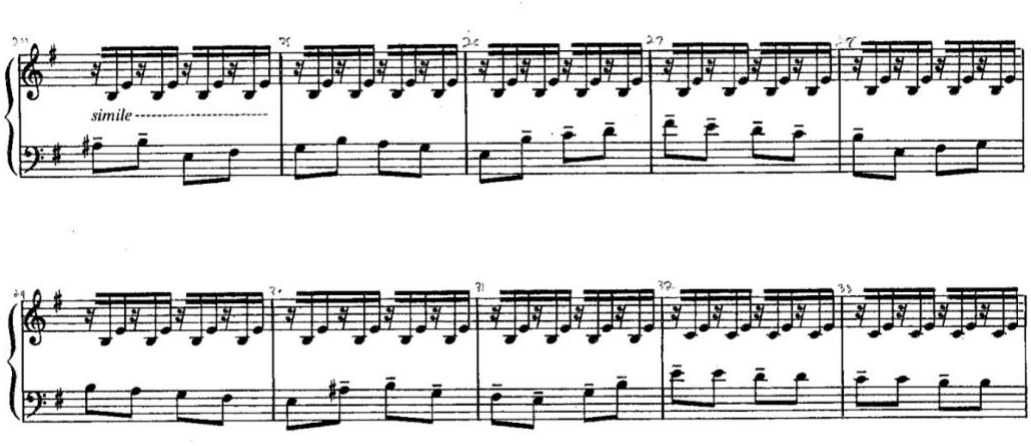
Figure 2.3: Measures 24-28 of *Prelude No. 1 in E Minor*

Through this compositional technique, Rosauro contrasts the A (mm. 3-8 Figure 2.4) and B (mm. 7-22, Figure 2.5) sections, where the harmony changes more frequently.

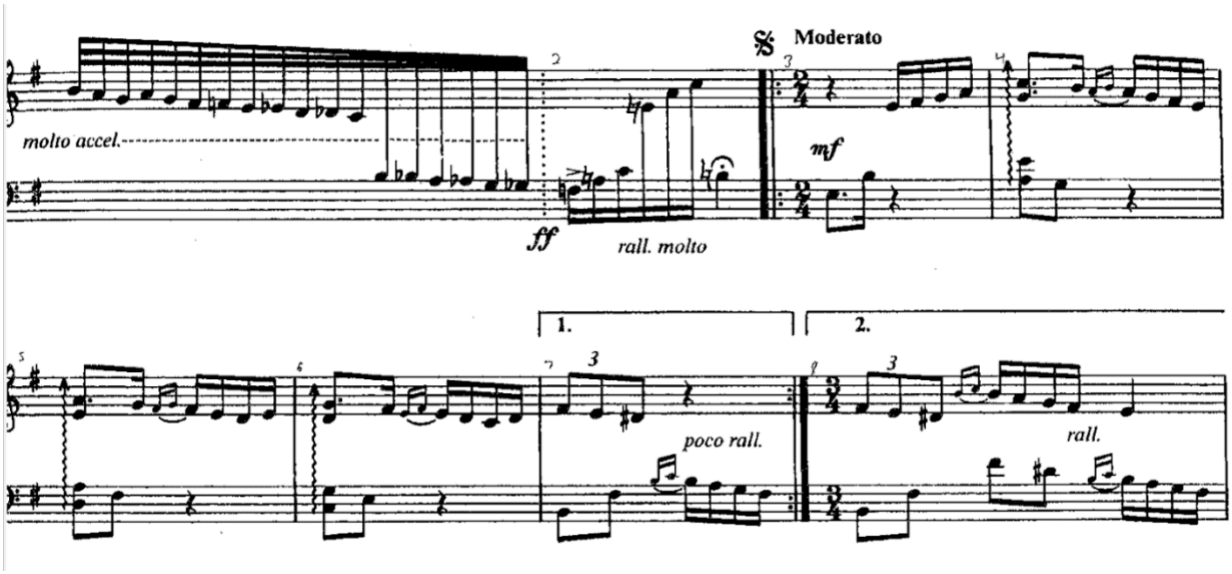

Figure 2.4: Measures 2-8 of *Prelude No. 1 in E Minor*
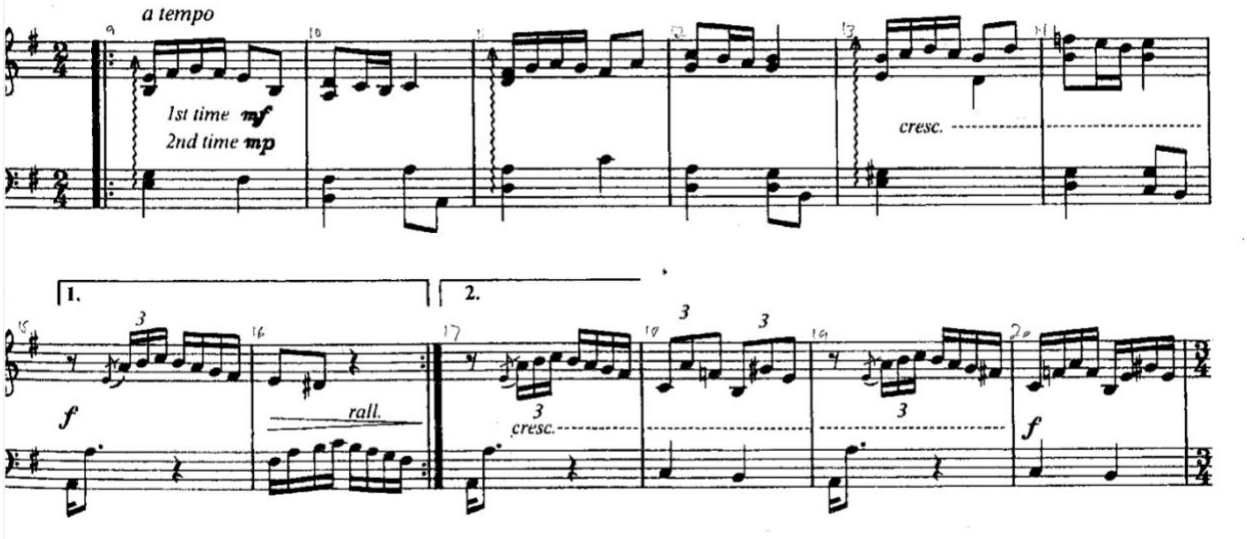
Figure 2.5: Measures 9-20 of *Prelude No. 1 in E Minor*

As far as developing the player's technical ability, the pedaled chords allow the performer to focus on developing the 3-4 double lateral technique in the right hand. This is advantageous for students as it develops the technique through repetition while being forced to think musically. A helpful practice technique is to pedal on the first chord and improvise in the key to gain command of the key, the more leisurely single independent strokes in the left hand, and the more challenging double lateral strokes in the right hand. Overall, *Prelude No. 1* showcases Rosauro's prowess as a percussionist and composer while highlighting his mastery of advanced harmonic concepts.

Melody

Rosauro states that he uses only melodies of his original design. As previously stated, he is heavily influenced by his classical and Brazilian roots. He states that he will sometimes wake up in the middle of the night to record an idea that comes to his head. The melodies heard in the first prelude personify his Brazilian heritage with his reflective and dream-like melodies. Rosauro embellishes the melody throughout the A and B sections with grace notes, polyrhythms (Figure 2.6), and arpeggios (Figure 2.7), spanning the complete range of the instrument. These compositional details require dexterity and precision to ensure these embellishments enhance the melody rather than detract due to a performer’s lack of technical facility and understanding of the primary rhythm.
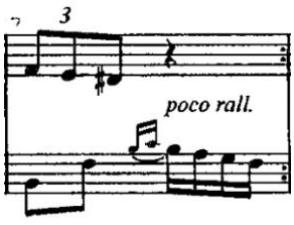
Figure 2.6: Measure 7 of *Prelude No. 1 in E Minor*
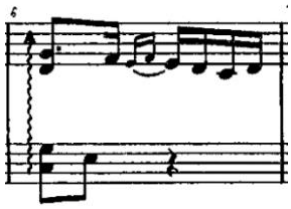
Figure 2.7: Measure 6 of *Prelude No. 1 in E Minor*

While there is a sense of inherent rubato in the A and B sections, it is advised that the performer can play the melody with a metronome. This will ensure the correct interpretation of the grace notes. In the C section, the left hand carries the melody and is tasked with fast octave leaps that require the left hand to cross over the right, simultaneously executing the soft double lateral strokes, as noted above (Figure 2.8)
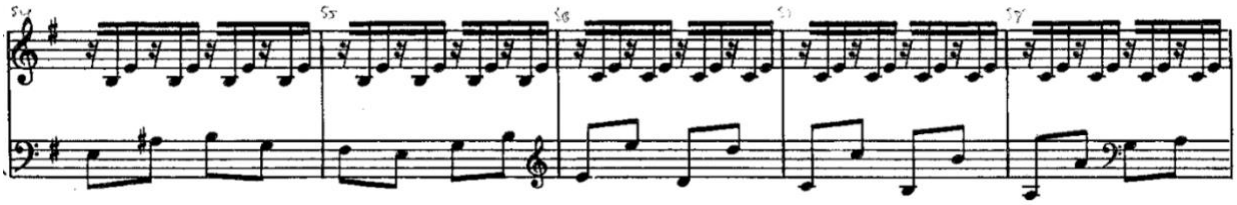
Figure 2.8: Measures 54-58 of *Prelude No. 1 in E Minor*

Rhythm

In his work, Rosauro highlights his skillful use of rubato and accelerando to create a sense of rhythmic tension and release. The A and B sections of the piece are written in 2/4- and 3/4-time signatures, respectively, and feature primarily sixteenth-note rhythms. However, rallentando is written at the ends of phrases to add rhythmic tension and release, drawing the listener's ear. As the piece progresses, more complex rhythms, such as sextuplets, are introduced.

Learning the piece with a metronome is recommended to understand the basic structure of the rhythms.

The C section is written in 2/4 time and utilizes ostinato patterns to create an almost hypnotic effect by way of a repetitive sextuplet rhythm throughout the entire section. This section highlights the performer's ability to execute the challenging double lateral skill set before returning to the A section. Rosauro's Prelude No. 1 demonstrates his proficiency in rhythm and provides an exciting challenge for performers looking to push their technical abilities to the limit. With its use of rubato, accelerando, and complex rhythmic ideas, this piece is a prime example of Rosauro's innovative approach to marimba composition.

Growth

The overall form of Rosauro's Prelude No.1 for solo marimba reveals the composer's knowledge in crafting a cohesive musical structure. The prelude is divided into three main sections: A (mm. 3–8), B (mm. 9–22), and C (mm. 23–78). The piece opens with a descending E minor to chromatic scale serving as a springboard for the three main sections. Section A sets the tone of the piece by establishing the E minor tonality and overall style. The B section is like the A section in style, meter, and dynamics, but presents a different rhythmic idea in the melodic line. Harmonically, the A and B sections are remarkably similar regarding the speed of harmonic motion. However, the C section contrasts the A and B sections in many ways. The C section is written at a faster tempo (100 BPM), with less frequent harmonic changes, and uses sextuplet rhythms almost exclusively.

Playing Rosauro's Prelude No. 1 has several benefits from both pedagogical and aesthetic standpoints. First, Rosauro considers this one the easiest of the three preludes but still challenges

the performer's technical ability, particularly in developing the double lateral skill set in the right hand. Second, the ratio of notes learned versus those played in full is appealing to a newer performer. After the C section, the performer returns to the A, B, and C sections, making it twice the length without the need to learn new material. Rosauro wrote Prelude No. 1 to develop his technique as a percussionist. This prelude is a good piece to develop a broad array of skills such as arpeggios, polyrhythms, grace notes, and quick double vertical strokes. The skill sets in this piece are built on the skill sets taught by the second and third preludes as well as Rosauro's marimba concertos as Rosauro strongly suggests that anyone interested in playing any of the concertos should play all three preludes first. Overall, Rosauro's Prelude No.1 is tightly constructed, with each section serving a distinct purpose while contributing to the overall narrative arc of the composition.

Chapter 3 – *Prelude No. 2 in A Major* by Ney Rosauro

Theoretical Analysis

"Prelude No. 2 was written in 1986 as an homage to the great Brazilian composer Heitor Villa Lobos, who continues to serve as my 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."[12]

Section	Measure Numbers
A	1-33
B	34-58
C	59-74
A'	75-82

Table 3.1: *Prelude No. 2 in A Major* Formal Structure

Sound

Ney Rosauro's Prelude No. 2 in A Major contrasts the first and third preludes in many ways. Rosauro creates a driving rhythmic pulse and bright tonal colors in this prelude. One

[12] Ney Rosauro, "Three Preludes for Solo Marimba," *NeyRoasauo.com*, accessed May 3, 2023, https://www.neyrosauro.com/works/three-preludes-marimba/.

particularly striking aspect of this work is its use of vertical and horizontal dynamic contrast. The term vertical refers to the simultaneous relationship between multiple notes played at the same time or how different notes interact with each other, and the term horizontal refers to the linear progression over time. Rosauro's Prelude No. 2 features a broad range of horizontal dynamics contrasts, with *pianissimo* sections at the beginning of the piece in the left hand and the opening of the C section. The piece slowly builds to a *fortissimo* at the peak of the work in measure 57 of the C section. Vertically, the performer is challenged with executing several different dynamic ranges from mallet to mallet. For example, throughout the A section, rather than all four mallets playing the same dynamic, mallets three and four which are playing the melody need to be brought to the foreground and are written at a *mezzo piano* dynamic. Mallet one which is playing the downbeats, written at *piano,* should be played slightly quieter than the melody. The upbeats played by mallet two in the left hand should be more felt than heard and therefore be played at a dynamic lower than *piano*.

In the first motif of the piece, the performer should consider at least three levels of dynamics to communicate the intended timbre and dynamic balance of the piece (Figure 3.1).
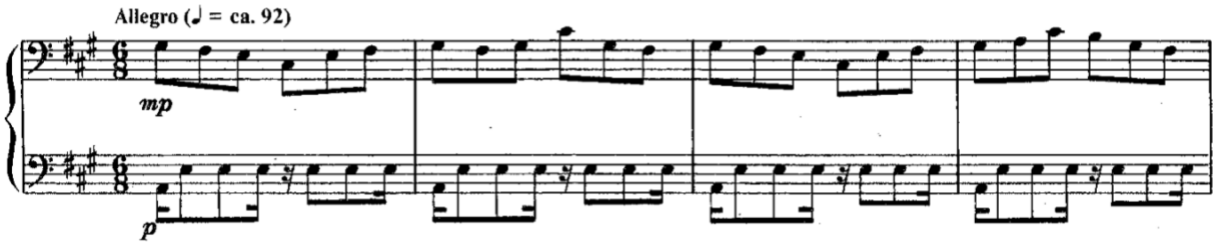
Figure 3.1: Measures 1-4 of *Prelude No. 2 in A Major*

The left hand is written at *piano*, and the right hand is written at *mezzo piano*. The performer should consider slightly emphasizing the downbeats in the left hand while keeping the upbeats in the left hand slightly softer dynamically. The melody in the right hand is written at *mezzo piano*, and the performer should feel liberated to ebb and flow freely and expressively in terms of dynamics and tempo. This prelude may benefit the most sonically with a graduated set of mallets—a softer mallet in positions one and medium mallets in positions two and three. A mallet of the same hardness as mallets two and three would be appropriate, but the performer should feel free to experiment with an even harder mallet in position four.

Harmony

This work is written in A major and features an intricate harmonic structure that captivates the listener throughout the piece. The piece begins with a series of pedaled A major chords in the A (mm.1-34) section before moving on to a lively and classically influenced B (mm. 35-58) section underpinned by an ever-shifting harmonic foundation. The harmonies are often unexpected and surprising, with Rosauro expertly playing with traditional Western chord structures to create something unique and engaging. His use of added elevenths creates beautiful dissonance, particularly in the C section, and his use of dissonant sequencing that leads to satisfying resolutions in the B section are a few examples of this. Rosauro explores all three permutations of diminished scales within the B section (mm. 35-85), which keeps the listener engaged and the harmonic soundscape fresh, making this prelude an excellent piece for students and performers alike to get musical experience performing the diminished scales in a musical context.

Melody

Rosauro employs a range of rhythms and time signatures throughout the piece, adding depth and complexity. The repetitious rhythms of the melodies throughout the piece give the performer plenty of room for expression and individual interpretation regarding how to shape the melodies throughout all sections. This composition showcases Rosauro's exceptional ability to balance technical virtuosity with an emotive musical expression that engages the audience.

Rhythm

The piece is written in both 6/8- and 4/4-time signatures. The entire A section is composed using an upbeat figure in the left hand that continues while the right hand explores the melodic eighth note figure creating a compound rhythm that sounds like straight sixteenth notes (Figure 3.1). This use of rhythmic ostinato is a similar compositional technique that Rosauro used in the C section of the first prelude, where one hand pedals and the other hand plays the melody creating a compound rhythm. This motif stays the same rhythmically throughout the A section (mm. 1-34). The rhythmic motif returns at measure seventy-five, the beginning of the A section until the end of the piece, although this time, count one and count four are emphasized which keeps the rhythm the same as the original motif found at the beginning of the A section, giving the section a more grounded feel with the emphasis on both strong beats of the 6/8 time signature (Figure 3.2).
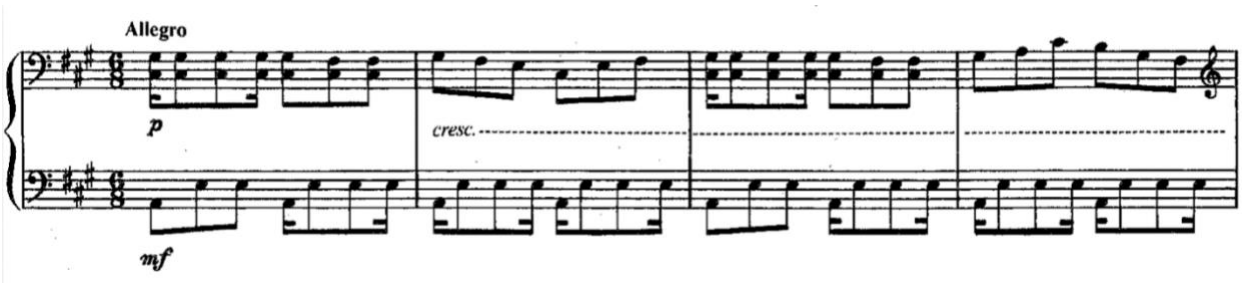
Figure 3.2: Measures 75-78 of *Prelude No. 2 in A Major*

Additionally, Rosauro creates rhythmic intrigue through his rhythmic modulation to add metered-out tension and release with the use of sixteenth notes and sextuplets at the same tempo rather than the part slowing down or speeding up the tempo (Figure 3.3).
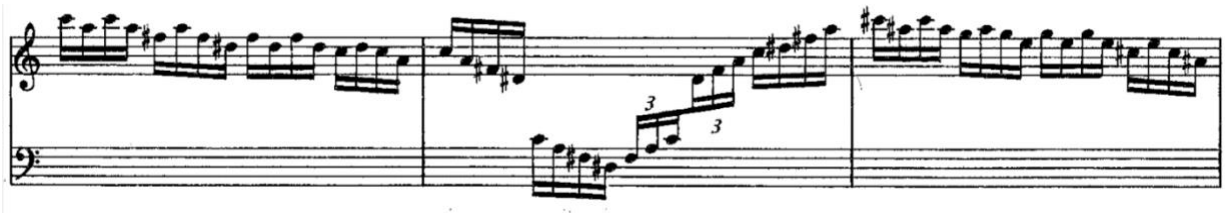
Figure 3.3: Measures 45-47 of *Prelude No. 2 in A Major*

Growth

The piece opens with an introductory section that sets the tone for what follows: a gentle, Brazilian-influenced, 6/8 melody in the key of A major. Rosauro develops the A section through variations on the first four measures of the prelude. Rosauro adds new themes and textures as the piece progresses. In the B and C sections, Rosauro leans on his classical influences as a performer and composer before returning to a modified version of the original melody. One notable feature of this prelude is its alternating rhythms between different sections. This creates a sense of playful experimentation, characteristic of a prelude, while maintaining coherence.

Overall, this piece showcases Rosauro's talent for crafting intricate compositions that are both technically demanding and emotionally expressive.

Percussionists should consider learning *Prelude No. 2* to stretch their musicality. Rosauro states that he wrote this prelude to challenge the performer less on a technical level and more on a musical one.[13] Long phrases with minimal indication of musical direction require the performer to learn how to build a musical phrase. The piece also teaches the performer how to navigate and interpret *rubato*. Rosauro comments that more contemporary music is all about playing many notes, and there is not as much opportunity to practice musicality and expression.[14] In conclusion, playing Ney Rosauro's *Prelude No. 2* can provide an enriching musical experience and an opportunity to develop expressiveness and musicality, making it an excellent addition to any percussionist's repertoire.

[13] Rosauro, interview with author.

[14] Ibid.

Chapter 4 - *Prelude No. 3 in C Major* by Ney Rosauro

Theoretical Analysis

"Prelude No. 3 was written in 1987, soon after my arrival in Santa Maria, RS, Brazil, and is dedicated to my first percussion teacher, Luiz Anunciaçao. The introduction and coda are presented with rolls and are in a choral style. In the second part, two new themes are introduced in a fast-alternating motion of the mallets, demonstrating the virtuosity through expressive melodies."[15]

Section	Measure Numbers
A	1-21
B	22-58
C	59-114
B'	115-144
A	145-152

Table 4.1: *Prelude No. 3 in C Major* Formal Structure

Sound

Prelude No. 3 in C Major by Ney Rosauro is written for a 4.3-octave marimba. The piece is heavily influenced by Rosauro's background in guitar. As a result, Rosauro features melodic and harmonic content like the previous two preludes. Rosauro creates a complex texture through

[15] Ney Rosauro, "Three Preludes for Solo Marimba."

the sustaining rhythms and dissonant, extended harmonies of the A section (mm. 1-21) that contrasts the long string of fast sixteenth-note rhythms and consonant diatonic harmonies of the B (mm. 22-58) and B' (mm. 115-144) sections.

The A section (mm. 1-21) of the piece is written in the style of a chorale, emulating the sustain of the human voice on the marimba by way of rolls. To achieve the characteristic sound of a chorale, the performer needs to understand that chorales are traditionally sung in four voices: soprano, alto, tenor, and bass. The four voices work together to create one homophonic fabric, and the performer must always understand where the melody lies and how the voices should be balanced.

Lastly, the dynamics in *Prelude No. 3* are crucial in creating its effect. An example where the dynamics are specifically important is in the B section. The melody is executed in mallet four while mallets one, two, and three provide harmonization. The skillset needed to perform this section is double lateral in the permutation of 4-3-1-2. It is easy for the skill set to overpower the music where the melody should be foreground and the harmonization should support the melody in the background (Figure 4.1).
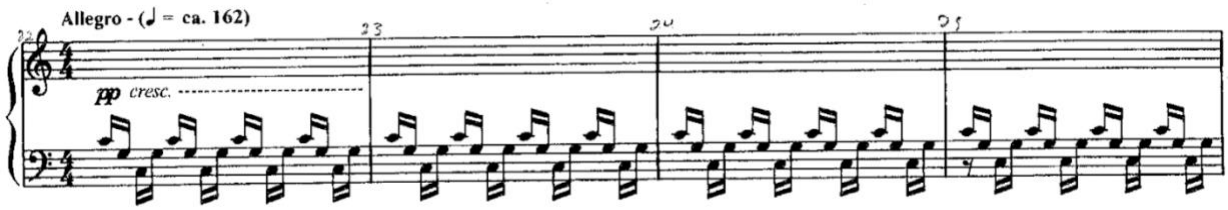
Figure 4.1: Measures 22-25 of *Prelude No. 3 in C Major*

As referenced in previous chapters on the preludes, Rosauro is heavily influenced by guitar music, and this is one of the sections that is composed heavily with that influence. Like the

C section in Prelude No. 1, the melody should be in the foreground while the other notes function as an accompaniment rather than an articulate rhythmic idea. It is easy for the performer to get carried away thinking about sixteenth-note double verticals rather than communicating a musical message that seeks to emulate toccata guitar music.

When working on the technique for this section, it is suggested that the performer can perform just the melody by itself and keep the melody in mind when building up the technique to perform the sections. The double lateral in the left hand needs to be two exceptionally soft notes and the double lateral in the right, mallet three needs to blend with both mallets in the left hand while mallet three has the freedom to play accents and shape the melody. This is just one of many reasons why Rosauro's Preludes are excellent solos to develop both musicianship and technique.

Rosauro employs various dynamics, from soft, delicate passages, such as the A section, to climactic *fortissimo* ones, like in the B' section starting in m.115, allowing for contrast and drama throughout the piece. This provides a means of building tension and excitement, adding to the overall fabric of the piece, which is one of excitement and energy with a sense of forward momentum that builds throughout.

Harmony

Prelude No. 3 by Ney Rosauro is a musically rich and complex piece that employs a variety of chord progressions and harmonic devices to create interest and tension in the music. The harmonies used in the A section are colorful and tense, featuring non-diatonic chords consisting of sharp ninths, eleventh, and thirteenths and unresolved dissonances found in m. 6. All these harmonic devices add depth and complexity while building tension resolved with a

colorful C dominant seventh chord with an added ninth. The piece is written in the key of C major, although the tonic is not firmly established until the B section (mm. 22-59). Rosauro explores different inversions of C major and A minor, creating a beautiful homophonic texture.

Rosauro employs thematic transformations throughout the piece with tonal centers to create interest and development. For example, in the C section (mm. 59-114), he uses chromatic movement in measures 85 and 86, moving from G major to F sharp major, landing in E minor (Figure 4.2) This provides a sense of fluidity and connection between different thematic materials in the section. Overall, Rosauro's skillful use of harmony in *Prelude No. 3* is musically rich and complex, with a sense of coherence and structure.
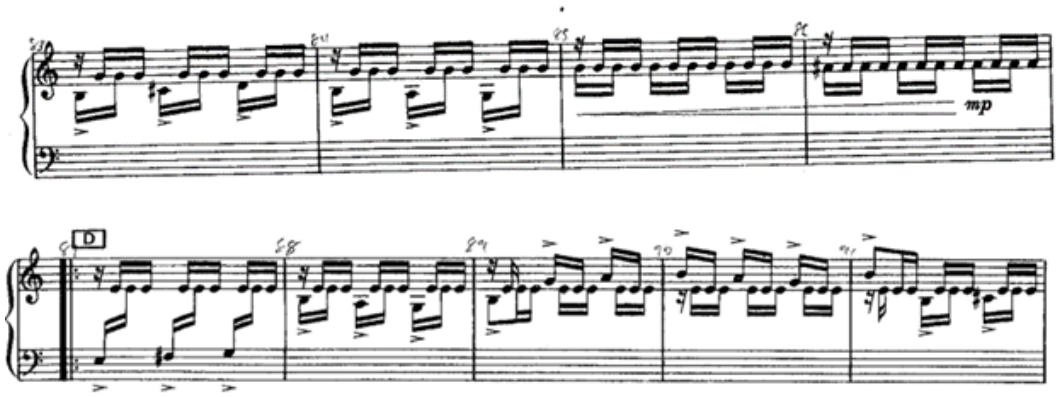
Figure 4.2: Measures 83-91 of *Prelude No. 3 in C Major*

Melody

The use of patterns in the music is noteworthy. Rosauro often employs repeating motifs and patterns throughout the piece, creating a sense of unity and coherence. He often varies or adds to these patterns, creating a sense of development and complexity. For example, the melody is established in C major in the B section and returns following the C section in what I interpret as the B' section. Rosauro takes the melody of the B section and transposes it up the interval of a

fifth to G major and changes the texture the add intensity and direction. Instead of the 4-3-1-2 permutation, Rosauro has the right hand play double laterals in the right hand and the same 1-2 double lateral permutation in the left hand and flips the melody from being on the downbeat to being on the upbeat. Rosauro is an expert in taking a simple melody and taking the listener on an emotional journey while keeping things fresh and new yet familiar at the same time. This compositional style is beneficial for both the listener and the performer. For the listener, it provides enjoyable and recognizable material. For the performer, it makes the pieces slightly more accessible to learn because of the familiar patterns and motifs while still challenging them with new techniques. In conclusion, Rosauro's use of patterns in his music is a testament to his skill as a composer. He creates a sense of unity and coherence while adding complexity and development to his pieces. His ability to take a simple melody and turn it into an emotional journey is truly remarkable.

Rhythm

Prelude No. 3 is written on 4/4 and ¾ time signature with most of the piece in 4/4. The piece has little rhythmic complexity, being primarily composed of half, quarter, and dotted quarter notes in the A section, and the B, C, and B’ are almost exclusively one long string of 16th notes. The rhythm in the opening and closing sections (A section) are chorale sectionals that feature sustained rhythms tied together, making it challenging for the performer on the marimba as chorales were originally vocal works. The goal is to make it sound like long tones and make the notes flow together effortlessly. The marimba, unlike wind instruments or the voice, does not sustain as long when played. Connecting notes in this section can be particularly challenging as the performer needs to perform a consistent single-stroke roll to emulate the sustain that is trying

to be realized while executing, at times, large interval shifts and choreography. One particularly difficult interval change to keep connected comes from m. 7 into m. 8. Mallet 4 is in the upper manual (Eb) while mallet 3 is on the lower manual (A) and the left hand is at the interval of 5th. The right-hand interval needs to spread out from a fourth to a fifth and mallet 4 needs to move to the lower manual (F) and mallet 3 needs to jump to the upper manual (Ab) while the left-hand goes from the interval of a 5th to a 3rd. This is easily connected with four voices as it would be performed in the original form of a chorale, but on marimba, it is much more difficult to create the same effect.

The performer should practice this section in a few diverse ways. First, the performer needs to understand each chord change and just practice playing one chord then moving to the next chord out of time to understand the choreography involved in moving from chord to chord. From there, take the progression of chords in order and play each one on the downbeat and take a full measure to move to the next chord maintaining relaxation throughout. As the performer gains proficiency, try and change chords every three quarter notes, then two, then to the point where you can shift from chord to chord in time to quarter notes. The performer should not be worrying about the roll yet, just striking the chord once. From there, stroke the chords, in time with a metronome, now moving as the chord changes move in the written music. For example, in the first measure, the chords change on counts one, three, and four (Figure 4.3).
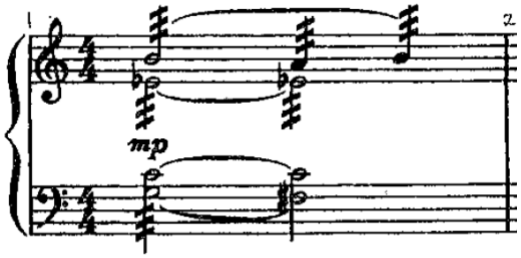
Figure 4.3: Measure 1 of *Prelude No. 3 in C Major*

The other way to break down the A section is to play transition from chord to chord using various rhythmic hand speeds. For example, m. 2 consists of two chords, the first on the downbeat and sustaining two counts then changing chords and that chords strings for two counts. First, play the first chord alternating in quarter notes. Your right hand plays on count one, and your left hand plays on count two filling up the space of two counts, then do the same things on the next chord. From there you can repeat the process with faster alternating hand speeds up to thirty-second notes. The faster hand speeds will create the sustain needed to connect the notes and you will have control over the time. With the A sections being a chorale, there is room for individual expression within the section where the performer manipulates roll speed and tempo based on phrase markings and where you are in the harmonic progression, and it may make it easier to connect the notes. The performer may also consider rolls at a faster hand speed to communicate a louder dynamic and more intensity, and a slower hand speed can be used to communicate a quieter dynamic and less intensity. The ability to manipulate hand speed in rolls will help the performer bring out the musical shapes indicated in the music.

The B, C, and B' sections are one long string of 16th notes, but the challenge is making the sixteenth notes sound like a sustained sound because the melody is written on the down beats in quarter notes, and the other three 16th notes provide harmony. The intent is not for it to sound mechanical. Although the virtuosic technical ability needed to execute this section can become the primary focus of the performer's practice, the piece will only be fully realized once the performer understands the musical message that Rosauro is trying to communicate. It is elevated risk and reward as the technical ability needed to execute is high, and the musical aspects of the

piece are simple. Performers must carefully consider musical nuances to make the piece sound expressive.

Prelude No. 3 in C Major by Ney Rosauro is a dynamic and complex piece for solo marimba. Jan La Rue's Style analysis allows us to examine the various elements that contribute to the rhythmic and textural qualities of the music. Surface rhythm, continuum, meter, interactions, patterns of change, and fabrics are essential to consider when performing this piece. The chorale style of the A sections is composed of long, sustained rolls and colorful harmonies such as chords with added nineties, elevenths, thirteenths, and even a tritone substitution. To the heavily diatonic section composed in the style of guitar music executed with virtuosic double lateral strokes. While the surface rhythm of Prelude No. 3 is not complex, it is important to focus on the rhythm's interactions throughout the piece in terms of not only the rhythms played from count to count, but the bigger phrase. For example, The B and C sections are one long string of 16th notes. The surface rhyming can be understood by anyone with a considerably basic knowledge of music. It is easy to look at the surface rhythm and undermine the piece. It is not only technically challenging, but the music needs to be performed with nuance and direction for the full musical message to be realized.

Growth

The large-scale growth of the composition is an essential aspect to consider when diving into the piece. Rosauro constructs the piece in a way that builds from a gentle, lyrical introduction in the A section to a virtuosic and sonorous B’ section serving as the climax of the piece. In addition, the piece's structure allows for development and progression, with each section leading naturally into the next. The A section connects seamlessly to the B section in

measure 21 with the use of a C major seventh with an added ninth. The A section is full of colorful tritone substitutions, sharp elevenths, and ninths while the B section is completely diatonic in the key of C major. The C major seven with the added ninth transitions connects the sections well. The color and dissonance from the A section are evident through the added ninth. The traditional diatonicism of the B section is there is the C chord, foreshadowing the tonic to follow. From the B to the C sections Rosauro employs a chromatic transition that opposes diatonicism completely. The end of the B sections steps down chromatically setting up the C sections to be modal. From there, the B' section returns to diatonicism with the use of the B section theme transposed up and performed with different skill sets and a fuller texture with the double vertical double stroke performing the melody. The B' section ends with a storing and elongated C major resolution in m. 137 establishing the returning home to C major. Then, the first six measures of the A section return with identical chord vocabulary in m.145. The only difference between the A section at the beginning and the end is the chord it ends on. The Three Preludes end on a C minor major seventh with an added ninth. The composition entitled Prelude No. 3 by Rosauro exhibits a notable degree of musical diversity by effectively utilizing a limited number of ideas and implementing various compositional techniques. This musical piece develops the performer's technical abilities and challenges their understanding of music theory, making it an optimal selection for performers of all skill levels.

Chapter 5 - *buttonwood* by Evan Chapman

Biographical Information on the Composer

Evan Chapman (b.1989) is a musician, entrepreneur, and educator known for contributing to the percussion and composition idioms. He co-founded Four/Ten Media, a production company specializing in music videos for contemporary classical and chamber percussion music. Chapman is also a member of the band Square Peg Round Hole, which combines chamber percussion, rock, electronic, and pop music. His compositional style is heavily influenced by modern classical music, Sō Percussion, Son Lux, and various world percussion styles.[16]

Chapman studied classical percussion performance at the Indiana University Jacobs School of Music, where he developed a deep understanding of classical music and percussion. He gained valuable experience collaborating with world-renowned musicians and taking part in the Sō Percussion Institute.[17]

Chapman's work at Four/Ten Media has earned him numerous accolades as a creative entrepreneur. He has worked with contemporary music's biggest names, such as Phillip Glass, Steve Reich, The New York Philharmonic, and Wynton Marsalis. He has collaborated with Sō Percussion, The LA Percussion Quartet, the Eastman School of Music, and Third Coast Percussion.[18]

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[16] @ Percussion, "@ Percussion 106 with Evan Chapman," August 17, 2017, 1:08:03, https://www.youtube.com/watch?v=AcIPO5annsc.

[17] Ibid.

[18] University of Nebraska-Lincoln, "Guest Artist Chapman presents new works for drumset and electronics," *University of Nebraska-Lincoln*, accessed May 2, 2023,

Chapman currently resides in Philadelphia, Pennsylvania, where he continues pushing contemporary music's boundaries and building on his success as an educator, performer, and entrepreneur. His unwavering commitment to his craft has made him a prominent figure in the music industry, inspiring countless musicians and impacting the world of percussion.

Theoretical Analysis

"As a drum set player, my immediate instinct when writing percussion music is to add instruments to allow for more textures. Low sounds, high sounds, short sounds, long sounds, warm sounds, harsh sounds. Because of this instinct, most of my percussion music uses some kind of multi-percussion setup with several different timbre sources. When I was given the task of writing a piece for only solo snare drum & electronics, it really pushed me out of my comfort zone (to the point of doubting whether I could even do it at all) and forced me to get creative. So many snare drum solos incorporate the same types of rudiments and licks, and I wanted to avoid that style of writing at all costs.

buttonwood is equally inspired by two things: 1) drummer Ian Chang, of avant-garde electronic pop band Son Lux, who utilizes the snare wires in fascinating ways, and 2) the techniques utilized in playing the repinique, a Brazilian metal drum that is usually played with one hand and one stick. I made a very conscious effort to limit myself to only writing for one performed instrument and one instrument in the backing track, so the only source of audio in the

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https://newsroom.unl.edu/announce/musicatunl/8463/48444#:~:text=Evan%20Chapman%20is%20a%20percussionist,blending%20multimedia%20and%20contemporary%20music.

backing track is a Rhodes keyboard. The Rhodes was recorded, sampled, and chopped up using a piece of hardware called a 'Kaoss Pad.'"[19]

Section	Measure Numbers
Intro	1-8
A	9-26
B	27-46
C	46-53
D	54-74
Coda	75-82

Table 5.1: *buttonwood* Formal Structure

Sound

buttonwood is a composition by Evan Chapman written for solo snare drum and audio track. In the piece, Chapman explores a range of unusual timbres achievable through extended techniques, such as tapping fingers on the snare wires, strumming the wires with the hand and stick, scraping fingernails along the wires, and snapping fingers. The snare drum is played on the

[19] Evan Chapman, *buttonwood*, (Pittsburgh, PA: 2016).

resonant head with the snare wires facing up, supplying a unique playing surface thinner than the batter head.

Chapman uses traditional snare drum sounds and extended techniques, with regular strokes, flams, buzzes, and rim shots alongside the tapping, strumming, scraping, and snapping techniques. According to the composer, the inspiration for the piece comes from two places.[20] First, Chapman draws on the techniques used in playing the repinique, a Brazilian metal drum played with one hand and one stick. Second, Ian Chang, the drummer of avant-garde electronic pop band Son Lux who uses snare wires in unique ways, inspired Chapman's piece. *buttonwood*'s accompaniment track creates a unique ambiance and lends itself heavily to minimalism. The track includes repetitive digitally processed synthesizer sounds. The track balanced with the unique snare drum textures creates a sonorous sound that transcends the two entities and creates the unique ambiance referred to previously. The composition covers the full range of written dynamics, from niente to *fortissimo*; this will be expanded upon in the growth section of the chapter. The composer stresses the importance of balance between the snare drum and the prerecorded track. The two should work together to create a unique and cohesive texture.

Rather than using several different instruments in a more extensive setup to achieve a range of textures, Chapman uses extended techniques to create a fresh and unexpected journey for the listener. The result is a texturally novel composition showcasing the snare drum's versatility as a solo instrument. Overall, buttonwood is a fresh piece for percussion that stretches the boundaries of how many timbres can be drawn out of a snare drum.

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[20] Chapman, *buttonwood*.

Harmony

A single melodic line, unaccompanied by any harmony or counterpoint, characterizes the homophonic texture of the track. This monophonic texture creates a sense of minimalism and simplicity, shifting focus to the novel texture created with the synchronization of the track and snare drum. Additionally, the track features various rhythmic that support the melodic line of the track and serve as a link between the melody in the track and the soloist. These rhythmic features contribute variety, add interest to the music, and reinforce the underlying pulse and groove.

Melody

buttonwood features a monophonic melodic line that is supported by the solo snare drum part. Chapman skillfully employs extended techniques, as discussed in the sound section of this chapter, to create textures that support the contour of the melodic line. These extended techniques are organized by relative pitch. Despite the infinite pitch of the snare drum, the extended techniques enhance the melodic material throughout the piece.

Rhythm

buttonwood is written in 4/4 time throughout the piece. The composer creates rhythmic intrigue and subtlety within the written 4/4 measure at a smaller rhythmic dimension. Rhythms beat to beat vary heavily, splitting one count into odd rhythms such as septuplets, nonuplets, and quintuplets. The performer has the additional challenge of splitting these novel rhythms between one stick and one hand. To practice this, the performer may consider practicing basic sticking patterns at the written tempo by using the odd rhythms to develop fluency in performing the rhythms.

Syncopation is one compositional technique Chapman uses to create tension, particularly in mm. 17-20 and mm. 49-52 sections. The syncopation in m. 17 not only creates the illusion that the music is off beat but gradually obscures the beat entirely as that figure is repeated three more times before the release of the tension through less syncopated rhythms on the downbeat in m. 21 (Figure 5.1).

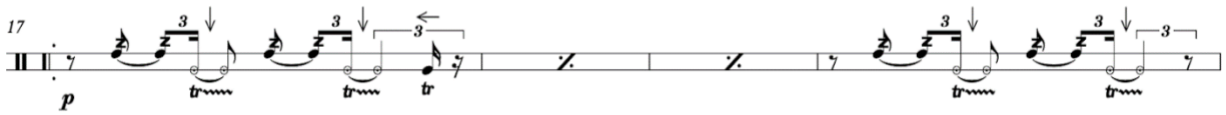

Figure 5.1: Measures 17-20 of *buttonwood*

Mm. 49-52 (Figure 5.2) utilizes a dotted eighth pattern over an underlying sixteenth note subdivision with the emphasis starting on the second part of the sixteenth notes. This pattern comes out of the syncopation into triplets with an emphasis on the third partial.

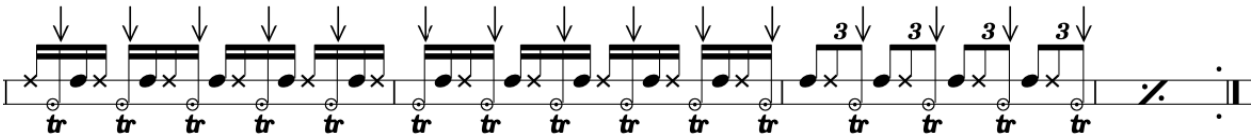

Figure 5.2: Measures 49-51 of *buttonwood*

Polyrhythm is used in the D section (mm. 54-74) to create tension and to build the section to its climax via rhythmic density. The same ten measures are repeated four times, each ending with more rhythmically dense polyrhythms. The audio track provides the quarter note; each phrase adds one more note throughout the last measure. In mm. 54-63, whole note triples are

juxtaposed over the quarter note in the first ending, followed by unison quarter notes in the second ending. In mm. 64-74, the first ending features five notes over the space of four quarter notes, and in the second ending two bars of quarter note triplets are written over quarter notes that *crescendo* to *fortissimo*, serving as the climax of the piece (Figure 5.3).
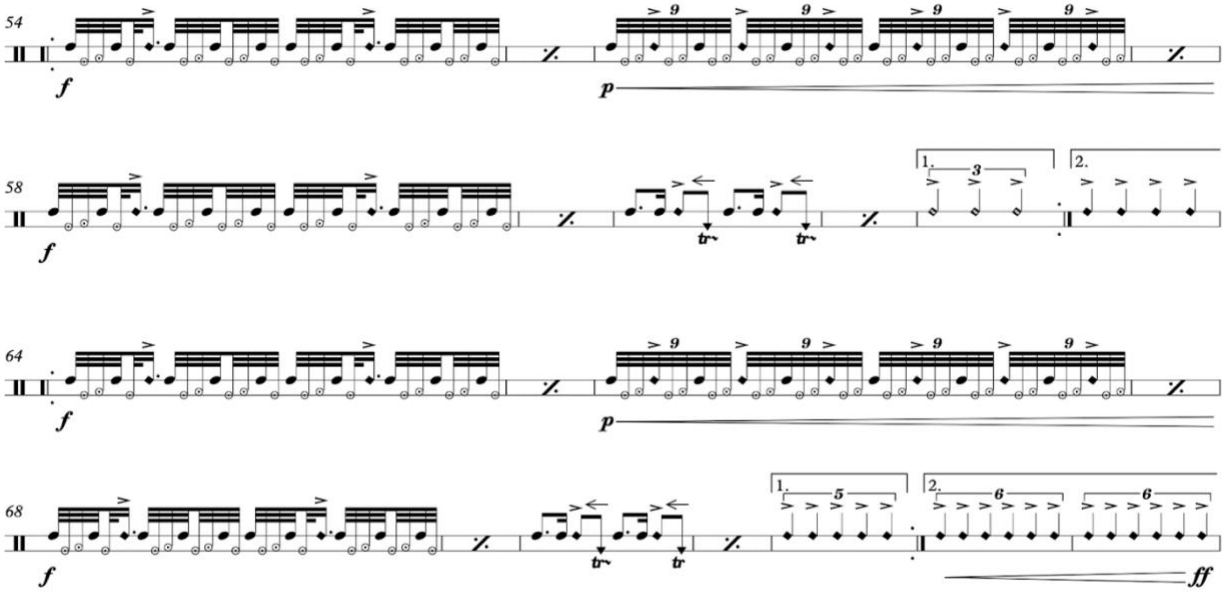
Figure 5.3: Measures 54-74 of *buttonwood*

Growth

The piece comprises four main sections. The A section is from mm. 9-26, the B section is from mm. 27-46, the C section is from mm. 46-53, and the D section is from mm. 54-74. The piece begins with a quarter note ostinato growing from *niente* (Figure 5.4) into the first section and ending with a *piano* eighth note ostinato with syncopated interjections (Figure 5.5).

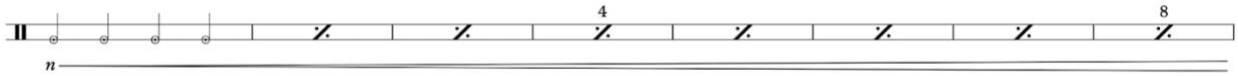

Figure 5.4: Measures 1-8 of *buttonwood*

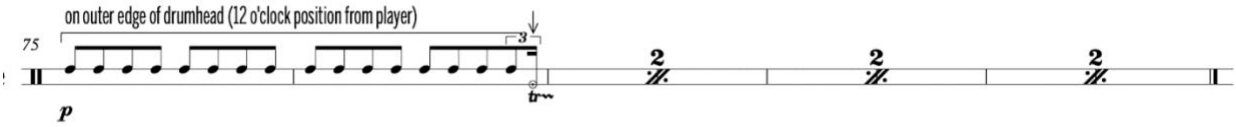

Figure 5.5: Measures 75--82 of *buttonwood*

The relationship between the sections can be easily identified through the corresponding rhythmic motifs and dynamics. The A section consists of three prominent rhythmic motifs (Figures 5.6, 5.7, and 5.8).
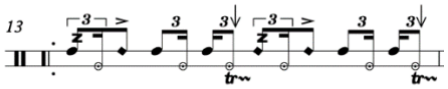
Figure 5.6: Measure 13 of *buttonwood*

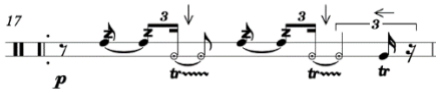

Figure 5.7: Measure 17 of buttonwood
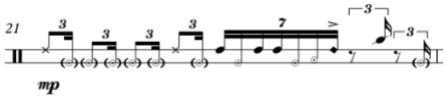
Figure 5.8: Measure 21 of buttonwood

These motifs are written as a dynamic no louder than *mezzo piano*, and the rhythmic density is relatively thin compared to the following sections. The section fades with an unresolved eighth note ending in the first ending. The continuous eighth notes lead the listener to assume the eighth notes will lead to the downbeat of m. 13 but instead, the eighth notes stop on the *and* of count three, and count four is filled in with the audio making a glitching sound before the repeat. The second ending (m.25), is identical to the first, leading the listener to think it is going back into the softer, less rhythmically dense section starting in m. 13 but instead, moving on to the B section starting in m. 27.

The B section features more rhythmically dense rhythms, such as thirty-second notes and sextuplets, louder dynamics, and more dynamic contrast. This section is more upbeat and energetic and is less syncopated rhythmically than the A section. This piece is more of a textural composition, meaning the intrigue of the piece is carried by way of unique textures created by extended techniques juxtaposed over the track rather than dense rhythmic complexity, but the B section is the more rhythmically dense section. The B section ends similarly to the A section, with *piano* eighth notes on the edge of the drum. The second ending fades to *niente* and sets up the C section.

The C section is the soft section dynamically written entirely at *pianissimo*. This section contrasts the B and D sections surrounding it, which are more rhythmically dense and louder dynamically. The C and A sections are similar as they both feature softer dynamics and more syncopation with less downbeat given and more rhythmic uncertainty. The C section repeats four times and includes extended syncopated rhythmic patterns with implied emphasis for the lister not to know where the downbeat is.

buttonwood by Evan Chapman is an excellent solo to perform for several reasons. First, it is a novel piece that can contrast traditional percussion literature typically played at a recital. Pedagogically, it challenges performers to think more about the sounds and textures they create and develop an understanding of complex rhythms and syncopation. Finally, the piece serves as a bridge between art music and popular music which will contribute to the survival of the art form of percussion in the generation to come.

Chapter 6 - *Etude 29* from *Trente Études pour Timbales* by Jacques Delécluse

Biographical Information on the Composer

Jacques Delécluse, a prominent percussion composer of the twentieth century, is highly respected for his invaluable contributions to the music industry. Born in France in 1933, Delécluse honed his skills as a timpanist and swiftly rose to become the chief timpanist of the Orchestre de Paris. He has authored numerous influential books on percussion technique, including the widely recognized *Douze Études pour Caisse-Claire* (Twelve Studies for Snare Drum) and *Méthode de Timbales* (Timpani Method), which have become standard texts in music schools across the globe. In recognition of his exceptional service to percussion education, Delécluse received various accolades, including the Légion d'honneur in 2009 and the Percussive Arts Society Lifetime Achievement Award in 2015. He has made an impression as a performer, composer, and educator, inspiring countless musicians and revolutionizing how percussion is taught and comprehended.[21]

Theoretical Analysis

"These Thirty Studies have been carefully graded. They are built on technical examples particularly chosen for this effect and adjusted to each single problem. A good knowledge of

[21] Frederic Macarez, "Jacques Delécluse," *Percussive Arts Society*, accessed May 2, 2023, https://www.pas.org/about/hall-of-fame/jacques-delecluse.

rhythm will be essential for obtaining the highest benefit from these studies in which metronomic tempi and other additional directions shall be observed with the greatest attention.

The 1st Book is meant for students who just started learning the technicalities of the instrument. The knowledge required in this book will be developed with new rhythms in the 2nd. The 3rd Book will suit those students who already have an excellent command of rhythms and the technical problems on the instrument. These last studies are not preceded by examples, and they should not be tried before the first two books are thoroughly mastered since they are a recapitulation on a higher technical level."[22]

Section	Measure Numbers
A	1-39
B	40-61
C	62-78
D	79-92

Table 6.1: *Etude 29* from *Trente Études pour Timbales* Formal Structure

Sound

Timpani are membranophones with a deep and resonant sound and variable pitch. The performer must understand how to achieve a characteristic sound on the instrument to provide the intended timbre of the etude. The performer must have a good "mental aural picture" to quote

[22] Jacques Delécluse, *Trente Études pour Timbales,* (Paris: Editions Alphonse Leduc, 1970).

Gary Cook, an accomplished percussion performer, and pedagogue, of the characteristic sound. The sound should be open, warm, and resonant as default and this "mental aural picture" can be developed by listening to high-quality recordings and live performances of professionals.

While the technique, head selection, and mallet selection may vary from professional to professional, it is generally accepted by all that the timbre of the instrument should be deep, open, warm, and resonant. The quality and condition of the drums will be a factor in the sound one can achieve and the tuning of the heads. The heads must be in tune with themselves, meaning all the lugs are at the same pitch for the drum to resonate in tune and allow the performer to communicate the written pitches in Etude 29 as clearly as possible.

Texturally, *Etude 29* has a primary monophonic texture except for mm. 26-33 where a homophonic texture appears (Figure 6.1).
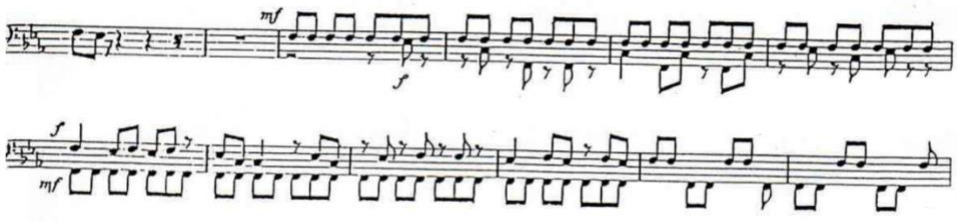
Figure 6.1: Measures 26-33 of *Etude 29*

In mm. 26-29, an accompanying eighth-note ostinato on an F (23" drum) at the upper end of the register of the instrument supports the melodic idea that happens below it. In mm. 30-33 the same ostinato is performed, now an octave lower on the thirty-two-inch drum, while the melodic content appears higher, pitch-wise, than the supporting ostinato. The performer needs to ensure the melody is brought to the foreground and the accompanying eighth note ostinato stays in the background.

Due to the monophonic texture and limited pitch vocabulary, dynamics become paramount to keep the sonic palate diverse. The solo feathers dynamic markings from *pianissimo* in the first four measures of the solo, to *fortissimo* in measures 57-58 and in the penultimate measure of the piece. The performer should pay attention to the multi-measure *crescendos* written from mm. 5-9 as well as mm. 85-90. If the *crescendo* happens too fast it forces the performer to either peak too soon or overplay, resulting in an undesirable, non-characteristic sound. As a general guideline, the following table relates the written dynamics found in *Etude 29* to a tangible metric in the form of inches.

Dynamic	Stick Height
piano	1-2 inches
mezzo piano	3-5 inches
mezzo forte	6-8 inches
forte	9-11 inches
fortissimo	12-15 inches

Table 6.2: Timpani Dynamics and Stick Heights

Harmony

Etude 29 is a tonal work written with three flats in the key, which can be interpreted as either E flat major or its relative natural minor, C minor. Since the first and last set of pitches (F, C, E flat, F) for a C minor chord with an added fourth, it can be assumed that Delécluse composed this solo in C minor. Below is a chart outlining the harmonies for each section of the piece.

Section	Tunings
A	F, C, E flat, F
B	G, C, E flat, F
C	G, B flat, E flat, F
D	F, C, E flat, F

Table 6.3: *Etude 29* from *Trente Études pour Timbales* Tunings

The opening (A) and closing (D) sections of Etude 29 consist of notes that build a C minor, add a four chord with C being the root and E flat serving as the third and the Fs serving as the added fourth. In the transition from the A to the B section, the F in the lower octave is raised to a G, adding the fifth to the C minor triad while maintaining the added fourth in the upper octave. A pitch change occurs in m. 62 during the fermata where the C moves down to a B flat forming an E flat major chord with an added second. That chord is the major three in the key of

C minor which is the one chord in the relative major and this makes sense as this section sounds distinctly major. At the conclusion of the C section, the initial tuning scheme of the A section returns along with rhythmic similar rhythmic motives.

Melody

Melodic content in Etude 29 only consists of four notes at a time in each section, and there are no written pitch changes in the middle of the phrases. The notes used to construct each section's melodies are in the chart in the harmony section of this chapter. While writing in stepwise motion is considered good part writing in many cases in Western music, that is not always the case when performing melodies on the timpani. For example, in the opening measure of the etude, there is a leap down a fifth, a leap up a seventh, a skip down a third, and a skip back up a third (Figure 6.2). For the melody to seamlessly flow, the performer needs to consider efficient stickings to communicate a coherent and connected melody.
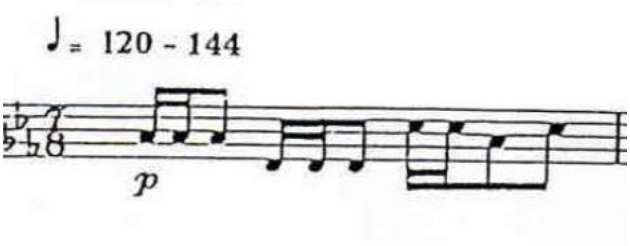
Figure 6.2: Measure 1 of *Etude 29*

In the case of the first measure, the second biggest leap in the measure is an easy motion to perform in terms of the melody because the C is on the twenty-nine-inch drum, and the F is on the thirty-two-inch drum which is adjacent to the twenty-nine. If the performer considers a

sticking that flows efficiently to the next, the melody will be smooth and connected. It is suggested that the performer plays the first two counts left-hand lead and natural sticking to create the most ergonomic motion from melodic note to melodic note.

There are two other sections where sticking plays a vital role in exciting the melody. The first is in mm. 47-54 (Figure 6.3).

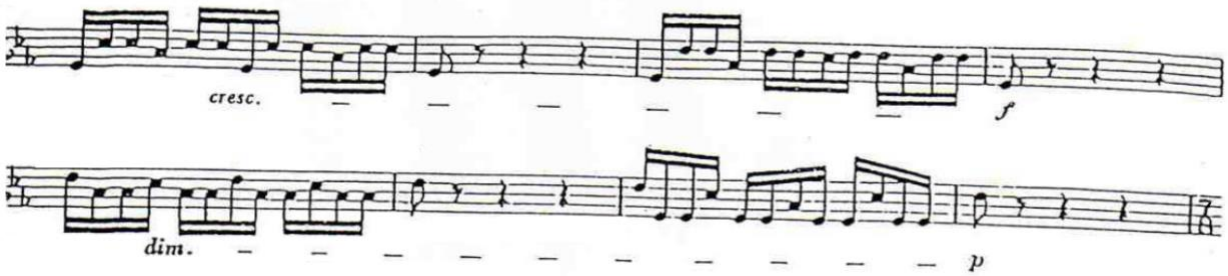

Figure 6.3: Measures 47-54 of *Etude 29*

To achieve the most consistent sound in a percussion instrument, alternating or natural sticking methods are the go-to. In the case of the passage that starts at m. 47, this is not the best choice. Due to the melody's motion moving in a dotted eighth-note rhythm, it makes the most sense to keep the melody on one hand while filling in the harmonic notes. This approach has two main benefits; first, the melody can stay connected because the hand performing it is free to ascend and descend comfortably across the drums while the other hand stays anchored on the same note for up to four measures, and second, it mitigates the need for the performer to cross over which can lead to inconsistency in sound.

While crossing should be avoided, if possible, an argument can be made for it in m. 88 (Figure 6.4). All the notes in these measures are considered melodic notes and to keep them as

connected as possible, an alternating sticking makes the most sense, but it will force the performer to execute a cross. Starting m. 88 on the left hand and continuing an alternating sticking throughout requires the left hand to cross over the right to play the E flat on the seventh sixteenth note of the measure. Measure 89 is identical and can be approached the same way.
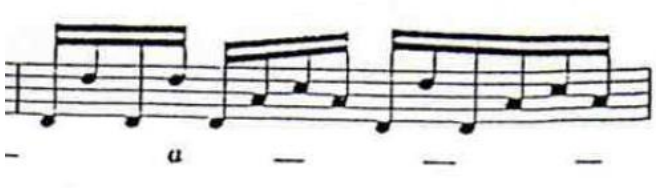
Figure 6.4: Measure 88 of *Etude 29*

Rhythm

Delécluse's Etude 29 is written primarily in the meter of 7/8 with some phrases moving to 3/4 and the occasional 3/8 and 4/4 measure appearing in the B section. The eighth-note subdivision is the connective fabric throughout the entire etude as all the rhythmically are composed in duple subdivisions. The suggested performance tempo is indicated at quarter note equals one hundred-twenty to one-hundred-forty-four beats per minute.

The main rhythmic motif of the piece appears in the first measure and is varied throughout the piece (Figure 6.2). Measure 3 is nearly identical to the original motive with a displacement of the sixteenth notes in the last grouping of three of the measure (Figure 6.5).

Figure 6.5: Measure 3 of *Etude 29*

In measure 21, we see the motif return this time with a different melodic motion and the absence of the first of three eight notes in the grouping of three of the ⅞ measure (Figure 6.6).
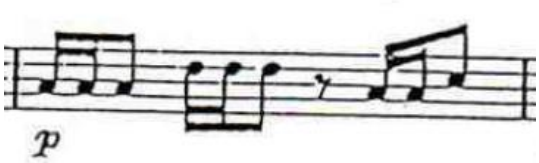
Figure 6.6: Measure 21 of *Etude 29*

In measure 56 we see the motive displaced back one eighth note creating syncopation and tension with the absence of the final three eight notes (Figure 6.7).
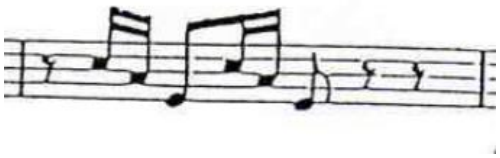
Figure 6.7: Measure 56 of *Etude 29*

In measure 58, Delécluse creates even more tension by displacing the motif one eight note further and removing all three eighth notes in the last grouping of three causing the motif to go over the bar line.

Figure 6.8: Measure 58 of *Etude 29*

The first measure of the D (m.80) opens identically as the first measure (figure) and the motive can be found in m. 86 and finally in m. 87, displaced an eighth note back causing the motif to go over the bar line like m. 58.
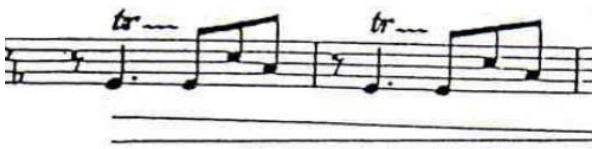
Figure 6.9: Measures 80-81 of *Etude 29*

Growth

The A section of Delécluse's Etude 29 establishes the main motive of the solo and establishes 7/8 as the primary meter of the piece. This section is unique from all other sections in its exploration of monophonic texture in contrast to the prevalent monophonic texture throughout the work. Harmonically, the A section establishes the minor tonality with the added fourth assuring the performer of the C minor tonality that is seen again in the B and returns in the D

section. In terms of tonality from section to section, the form can be characterized as an A-A-B-A organization although other aspects of La Ruse's analysis do not align with that structure. In the B section, Delécluse introduces new ideas written in 3/4 which contrasts the primarily 7/8 A section. Harmonically the A and B sections are the same with the only difference being the addition of the fifth scale degree of the C minor triad, strengthening the harmony. Melodically, this is one section where the performer needs to be very conscious of sticking and may consider breaking traditional sticking rules to find a balance between foreground melodic material, background harmony, and an efficient flow across the drums. Delécluse also manipulates the main rhythmic motif in this section upon the return of the 7/8 meter in m. 55, building tension into the conclusive resolution of the section, leading to the C section.

This section is the most different than the rest of the piece due to its frequent meter changes, the introduction of new meters, and the harmony. Before this section, 7/8 and 3/4 were the only meters that appeared, and they stayed in those meters for a subnational amount of time. Along with the aforementioned meters, 3/8 and 4/4 appear with frequent shifts between them. In the final phrase of the section, the 7/8 meter returns, and the piece stays there until the end. This section, unlike the others, which are all harmonically rooted in a C minor, is built on an E flat major chord, which is the relative major to C minor.

The conclusive section of the solo recapitulates the A section in sound, harmony, melody, and rhythm. Following the opening statement, the solo comes to a climax in the penultimate measure signaled by continuous rhythmic density, and dramatic growth dynamically from *pianissimo* to *fortissimo* in the measures leading up to it. This section is also the most challenging section from a technical standpoint because of the simultaneous demand of all the aspects listed above with the added challenge of quick lateral motions to get from drum to drum.

This culmination of compositional and performative challenges culminates into an exciting ending for both the performer and the audience.

Delécluse's Etude 29 spans the full gamut of skill sets and compositional techniques seen in the solo timpani literature and is one of the final etudes in his book, designed to be progressively harder. This piece is commonly programmed on percussion recitals due to its ability to showcase the performer's technical ability and deep understanding of the music. Erich Rieppel, the Principal Timpanist of the renowned Minnesota Orchestra, notes that Etude 29 frequently appears on the repertoire lists for orchestral timpani auditions among the world's top orchestras.

Chapter 7 - *Canción de los Árboles* by Kurt Gartner

Biographical Information on the Composer

Dr. Kurt Gartner (b. 1964) is a highly accomplished percussionist and educator, currently the Associate Director of the School of Music, Theatre, and Dance and Professor of Percussion at Kansas State University. He is responsible for teaching applied percussion and percussion methods and directing several ensembles, including the Percussion Ensemble, Keyboard Percussion Quartets, and the Latin Jazz Ensemble. Dr. Gartner is also a Tilford Fellow, having coordinated an interdisciplinary study of Cuban arts, and has previously served as a Big 12 Faculty Fellow at the University of Missouri, where he collaborated with the percussion studio and jazz program to provide instruction and performances in Afro-Cuban music and technology applications in music. Dr. Gartner has extensive orchestral experience, having played the principal timpani position with the Blue Lake Festival Orchestra and percussion/timpani positions in several symphony orchestras, including the Lafayette Symphony Orchestra, the Danville Symphony, the Lawrence Symphony, the Lawrence Chamber Orchestra, and the Topeka Symphony. In addition, he is an accomplished jazz musician. He has performed with notable artists such as "Blue" Lou Marini and Mike Mainieri and toured and recorded with tabla master Sandip Burman.[23] Dr. Gartner has also performed at showcase concerts and presented additional clinics and performances at the Percussive Arts Society International Convention.

Dr. Gartner is a respected educational consultant for several percussion equipment manufacturers, including Remo, Sabian, Vic Firth, and Etymotic Research. He previously served

[23] Kurt Gartner, "KSU Percussion Faculty," *Kansas State University*, accessed May 2, 2023, https://www.k-state.edu/mtd/academics/music/percussion/faculty.html.

as an Associate Professor of Bands at Purdue University. Dr. Gartner completed his Doctor of Arts degree at the University of Northern Colorado. He directed ensembles, taught jazz history, and was the Assistant Director of the UNC/Greeley Jazz Festival. Dr. Gartner is also a founding member and contributing composer of the Indiana-based Los Blancos Latin Jazz Band and is the technology editor for the journal Percussive Notes.[24]

Theoretical Analysis

Section	Measure Numbers
Intro	1-4
A	5-67
B	68-123
C	124-139
D	140-159
E	160-193
F	194-208

Table 7.1: *Canción de los Árboles* Formal Structure

[24] Kurt Gartner, "Dr. Kurt Gartner," *Kansas State University*, accessed May 2, 2023, https://www.k-state.edu/mtd/about/faculty-staff/music/gartner/.

Sound

Canción de los Árboles by Dr. Kurt Gartner is written for two cajóns and clave accompaniment and is heavily influenced by Afro-Cuban music. Afro-Cuban music is a vibrant genre most deeply rooted in European and African musical traditions. Textually the understanding and command of the written articulations, referred to as tones or strokes, are key to capturing the essence of the style (Figure 7.1).

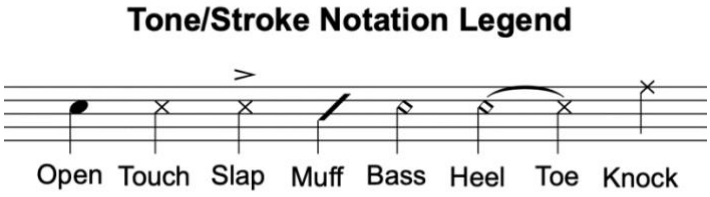

Figure 7.1: Tone/Stroke Notations for *Canción de los Árboles*

The figure above provides a comprehensive list of tones with their corresponding notation, each with a unique timbre, relative pitch, and good duration. For instance, the muffled tones are shorter than the open tones, while the slap tones have a higher pitch than the bass tones. Although cajónes produce sounds of infinite pitch, manipulating these distinct timbres enables percussionists to create melodies. Afro-Cuban percussionists invest considerable time honing their skills in producing and refining their tones.

The choice of cajón can affect the sound of the piece considerably because different instruments have different timbres themselves. Player one should use a Meinl Hybrid Slap-Top Cajón, or something similar, held between the legs and should sit on a traditional box cajon.

Player two is suggested to use a Rhythm Tech Palma Series Lap Cajon or something similar.

Harmony

The cajóns and claves do not have definite pitch and therefore cannot create conventional tonal harmony, but harmony still exists in the form of texture. With the orchestration of different tones, the piece encompasses a unique textual harmony.

One distinct textural change comes at the beginning of the *Comparsa* section, starting in m.68. Here a new texture is introduced as the Cajón 1 player plays on both the laptop cajon as well as the cajón they are sitting on. The addition of the lower-pitched cajón extends the range of the piece, adding depth and complexity to the already-established texture (Figure 7.1).
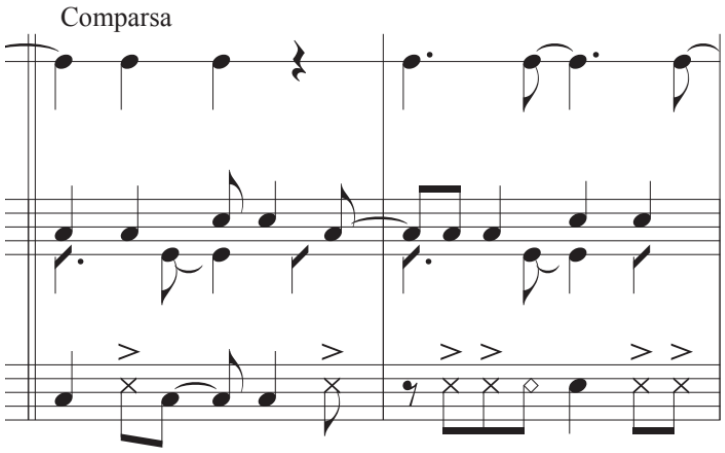
Figure 7.2: Measures 68 and 69 of *Canción de los Árboles*

Thus far, Cajon players have primarily employed two techniques: playing unison rhymes, known as calls, to indicate the end of a section; and vamping a pattern while the other player takes a solo. A notable textural change happened at the beginning of the D section when players one and two traded sols with only the accompaniment of the clave (Figure 7.3).
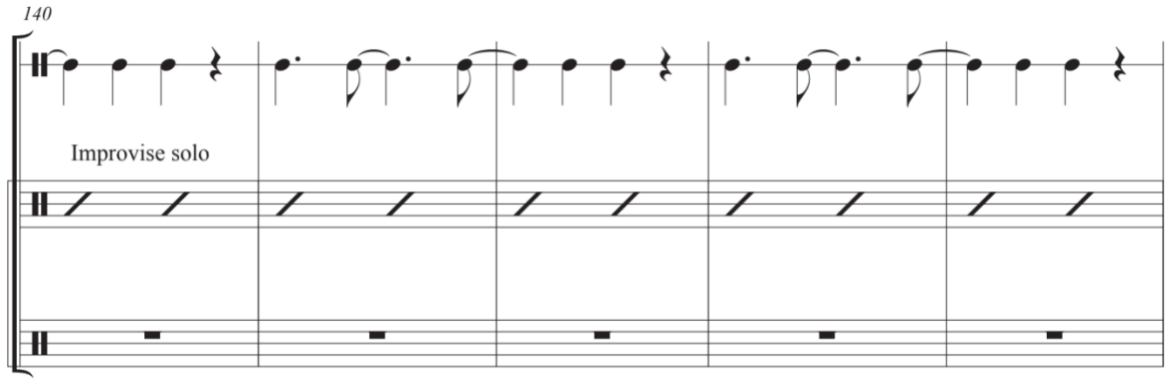
Figure 7.3: Measure 140-144 of *Canción de los Árboles*

Melody

Like the harmony, there is no inherent tonal melody in the piece, but melody can be implied with tones. The A section is a solo for the cajón 1 voice. Therefore, that performer carries the role of the melodic voice. When there is not a solo happening, the two cajon players perform in unison, converting the melody together. This was also addressed in the harmony section of this chapter. Listed below is an example of the call that leads into the D section (Figure 7.4).
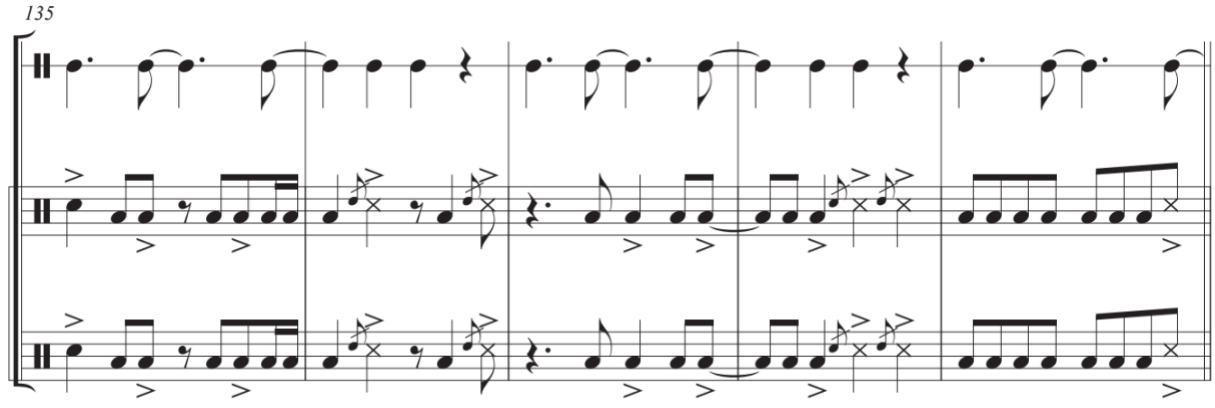
Figure 7.4: Measures 135-139 of *Canción de los Árboles*

Melodies are also created throughout the piece with the interplay of different tones between the soloist and accompanying style. This happens any time the two cajóns are playing different parts at the same time. One example of where this can be seen is in the figure below. (Figure 7.5).
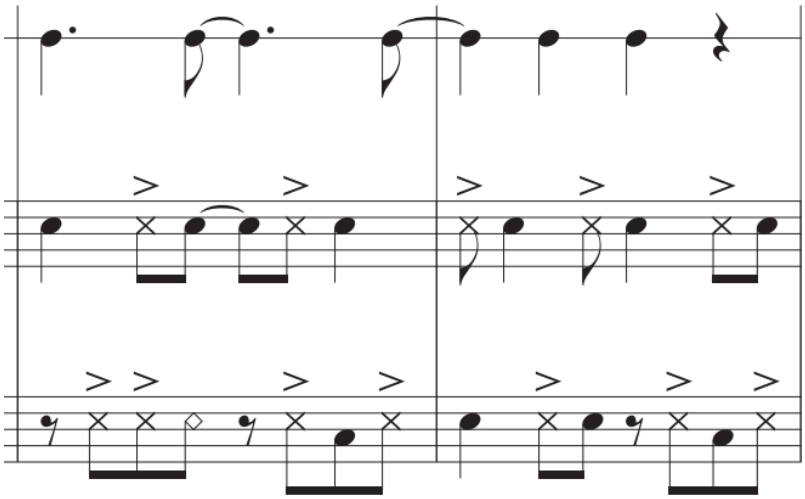
Figure 7.5: Measures 68-69 of *Canción de los Árboles*

The displaced accents between the two cajón parts create a compound melody.

Rhythm

Clave is at the heart of Cuban music and must be understood to perform *Canción de los Árboles.* Clave is a five-note rhythmic cycle that is repeated and derived from the African timeline that serves as the rhythmic key of the music. There are four main clave patterns found in Afro-Cuban music and they can be seen below.

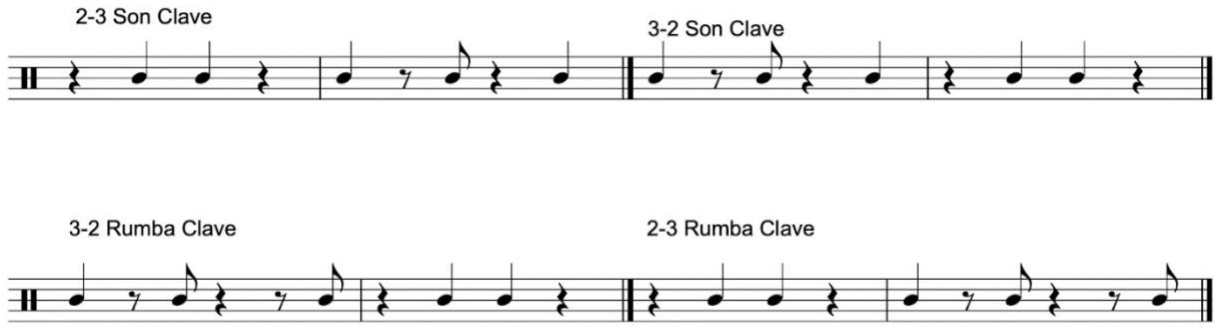

Figure 7.6: Clave patterns

Congruent with the style, everything in *Canción de los Árboles* is built upon clave, specifically Rumba Clave. The clave pattern starts in the 3-2 and flips to the 2-3 variation in m. 68 due to the five-bar break starting in m. 63, leading into the B section (Figure 7.7)
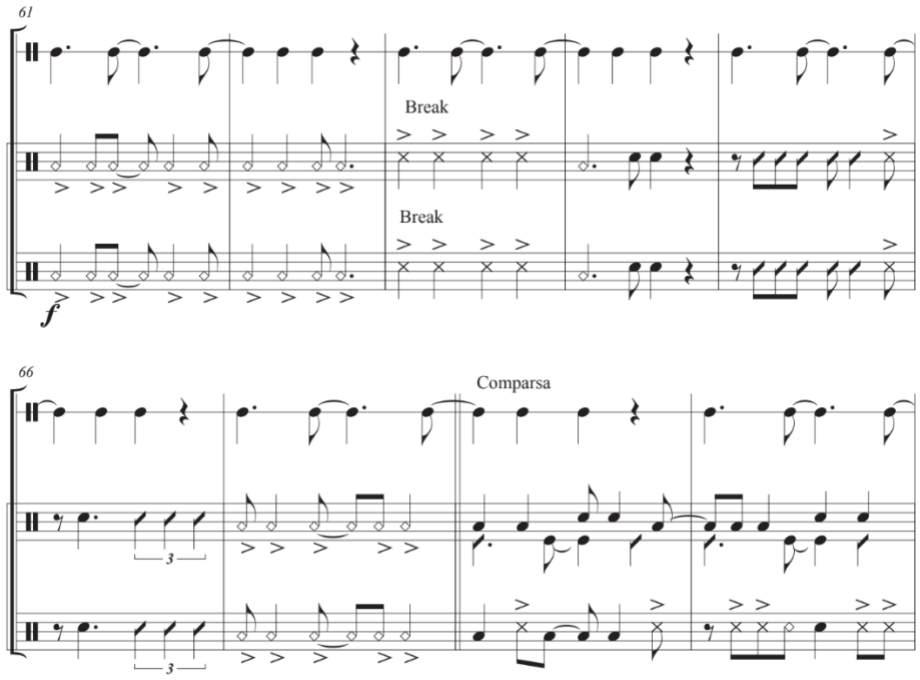
Figure 7.7: Measures 61-69 of *Canción de los Árboles*

In m. 168, a metric modulation occurs. The meter goes from a half note in cut time becomes the dotted quarter note in 6/8, creating a metric modulation. The same rhythmic figure is repeated in cut time and the 6/8 section (Figure 7.8).
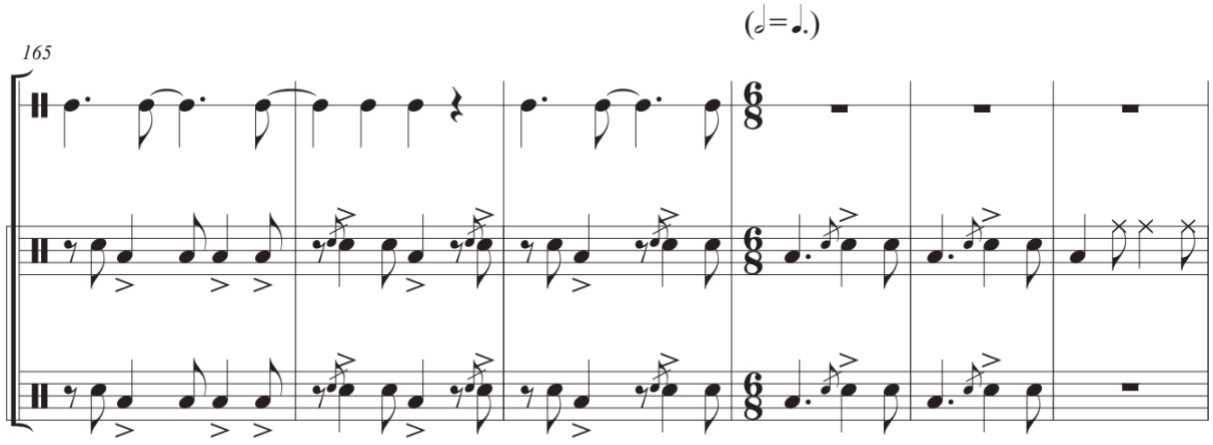
Figure 7.8: Measures 165-170 of *Canción de los Árboles*

Growth

The growth of the piece is by a few main aspects. The first is solo sections and unison rhythmic breaks. The second consideration for growth in the direction of claves and the meter in which calves are orientated. The piece opens with a *fortissimo* unison break before *decrescendo* into a thinner texture consisting of a 3-2 rumba clave pattern and a repeated accompanist groove plated by the cajón two players while player one improves with the written-out figures. Although there is a written-out number of bars, the soloist can choose to solo if they wish allowing the growth of the section to be unique to every performance. The end of the solo section is signaled with a call from the cajón once player that leads to the break into the B section.

The clave is flipped to the 2-3 rumba clave variation in this section as motioned above. The canjón one player accompanies the cajón two player in this section. The texture is much

thicker as the accompanying groove is orchestrated on both the laptop canjón and the canjón in which the player is sitting. The solo part in this section is written out and is intended to be played as written. The section ends with a call from the soloist leading into the next unison break that lasts for sixteen bars leading into another solo section beginning at m.140, the beginning of the D section.

The cajón player trades solos with the clave being the only accompanying texture and concludes with a call from the second player leading into the metric modulation break. Once the modulation has occurred from 2/4 to 6/8 with the clave in a 3-2 configuration, soloists take one more solo each and finish with a unison *accelerando* phrase reaching a climax in m. 202. The piece ends with a six-bar unison figure at *fortissimo*.

Chapter 8 - *Mudra* by Bob Becker

Biographical Information on the Composer

Bob Becker is a highly accomplished composer and performer who has contributed significantly to percussion music. He has a rich and varied musical background that began with playing marimba solos for his local church and Sunday school at the age of eight. By the age of 14, Becker debuted as a marimba soloist with the Allentown (Pennsylvania) Band, a major concert band in the United States. He went on to become a winner in the Allentown Symphony's youth soloist competition in 1964, and this marked his first performance as a marimba soloist with an orchestra.[25]

Becker attended the Eastman School of Music from 1965 to 1969 and then again from 1970 to 1971, where he studied percussion with William G. Street and John H. Beck, and composition with Warren Benson and Aldo Provenzano.[26] Although there were no courses offered in Indian classical music or tabla, he began to hear the style of music he was exposed to outside the classroom. He purchased a set of tablas in New York City and enrolled in a one-time North Indian music program at the University of Rochester during the summer of 1970. He took a course in classical music appreciation and a practical course in tabla instruction, both of which were taught by outstanding teachers Harold S. Powers and Gnan Prakash Ghosh.[27]

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[25] Bob Becker, "Bob's interview with Jonathan Latta," *Nexus Percussion*, November 1, 2007, https://www.nexuspercussion.com/2007/11/bobs-interview-with-jonathan-latta/.

[26] Bob Becker, "Bob Becker Bio," *Nexus Percussion*, accessed May 2, 2023, https://www.nexuspercussion.com/members/bob-becker/.

[27] Becker, "Bob's interview with Jonathan Latta."

Later that year, Becker heard a concert of Indian classical music by the sarodist Amjad Ali Khan and tabla artist Pandit Sharda Sahai in Rochester. Sahai was subsequently invited to a visiting artist position at Wesleyan University in Middletown, Connecticut. The world music program at this school, under the leadership of Robert Brown, was pioneering a paradigm shift in ethnomusicology by emphasizing performance ability along with pure analysis and transcription. Becker studied at Wesleyan for four years, during which time he was able to study Korean chang-go, many styles of Ghanaian dance-drumming, North Indian tabla, South Indian mrdangam, Shona mbira, and Javanese gamelan.[28]

Becker's exposure to Indian classical music has profoundly impacted his compositions and performances. His interest in this genre is reflected in his composition *Mudra*, which features a blend of Indian and Western musical styles. This piece has been widely performed and has received critical acclaim. Overall, Bob Becker's passion for percussion music and his willingness to explore different musical traditions has made him a prominent figure in the field of percussion and music.[29]

Theoretical Analysis

Section	Measure Numbers
A	1-42
B	43-117
C	118-214

[28] Becker, “Bob’s interview with Jonathan Latta.”

[29] Ibid.

D	215-269
E	270-333
F	334-382

Table 8.1: *Mudra* Formal Structure

Sound

Mudra was composed on commission in 1990 to accompany the dance *UrbhanaMudra* choreographed by Joan Phillips. Phillips looked to capture the conflicts of traditional and modern issues in a multi-curial urban society.[30] Becker composed the music to preexisting choreography that was influenced by traditional Indian dance. The accompaniment ensemble usually consists of metallic-sounding plucked chordophones such as the *sitar* that provide melodic and harmonic content, aerophones such as a *Nāgasvaram* that provides a tonic drone, and membranophones such as the tabla that serves as the principal voice of the ensemble.[31] Becker sought to capture the essence of the Indian classical instruments using Western Percussion instruments.[32] Songbells, vibraphone, and crotales are used to capture the essence of the metallic chordophones,

[30] Bob Becker, *Mudra*, (Asbury Park, NJ: Keyboard Percussion Publications, 2003).

[31] Regula Qureshi et al., "India subcontinent of," *Grove Music Online*. January 31, 2020. https://doi.org/10.1093/gmo/9781561592630.article.43272.

[32] Bob Becker, "Bob Becker: List of Compositions," *Nexus Percussion,* August 3rd, 2005, https://www.nexuspercussion.com/2005/08/bob-becker-list-of-recent-compositions/.

the marimba which serves to emulate the tonic drone of the aerophones, and the prepared drum drawing inspiration from the tabla.

Two distinct textures define the sections of the piece. The first texture is found in the A, C, and the section from m. 358 to the end. These sections share a similar rhythmical thinness, homophonic texture with softer dynamics, scored with almost exclusively keyboard instruments that bring to life the nature of the harmonic inspiration, raga *Chandrakauns* which is associated with moonlight.[33] Raga *Chandrakauns* will be explained in further detail in the harmony section of this chapter. The bass drum ostinato is employed in the first 48 measures but is written at *piano* and blends with the resonant long tones in the keyboards. The texture in these sections is very metallic and rhythmically thin highlining the harmonic and melodic material.

The contrasting texture in the B, D, E, and first part of the F section all poses a polyphonic texture and is easily identified as the sections feature the prepared drum as the lead voice. Composed of louder dynamics and a much denser rhythmic texture. The nature of the prepared drum makes these sections extremely energetic and is easily identifiable to both performers and listeners when one section ends and another one ends due to the characteristics mentioned above.

Becker emphasized the importance of the timbre of the prepared drum and how it is a defining aspect of the piece. The drum strikes a balance between the tonal and mellow timbre of the tabla while still having a playing surface with good response to able to articulate rapid rudimental figures. It is suggested that the performer use a snare drum or tom with no resonant

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[33] Joep Bor, *The Raga Guide: A Survey of 74 Hindustani Ragas*, (Wyastone Leys, Monmouth: Nimbus Records with Rotterdam Conservatory of Music, 1999).

head tuned to an A-natural and heavily muted using foam on the underside of the batter head.[34] He also notes that he switches to a heavier stick to create a bigger and more aggressive sound.

In the same interview, Becker describes his preferences for the sounds of the other instruments. He prefers two bass drums, a smaller and more articulate one for rhythmically dense passage found passages meant to be played with two mallets, and one larger bass drum with a deep and resonant timbre. He states that the two-sized bass drums help emphasize the intended timbre change in m. 293 to help signify the starting of a new phrase to keep the texture fresh with the repetition that precedes it.

The metallic keyboard instruments must achieve a homogenous and delicate sound that is celeste-like. In the case that the performers do not have access to songbells, which are no longer manufactured, it is stated that they can be substituted with a vibraphone, but the performer should be diligent in efforts to play the notes up the octave as the range of the vibraphone is lower than that of songbells. With the incorrect octave displacement, the voicing of the cords will not come across as intended. It is important that the motor of the vibraphone is turned on and off when indicated to achieve the desired effect and should be set to revolve as slowly as possible while still being able to notice that the motor is on.

Harmony

Becker states that *Mudra* is not connected to any traditional Western Classical harmonic progressions.[35] The use of harmony, he says, was intuitive and based on stacking specific intervals. *Mudra's* harmony is built upon the concept of a raga which is an Indian Classical

[34] Bob Becker, email correspondence with author, April 4, 2023.

[35] Ibid.

framework of pitches from which both melodic and harmonic content is derived and is improvisatory in nature. A raga is like a key signature or mode using Western terminology in the fact that both are built upon a specific set of pitches. Mudra uses *raga Chandrakauns* specifically as the basis of harmonic vocabulary, which is a set of five pitches, composed of the tonic, minor third, fourth, minor sixth, and major seventh scale degrees. According to Becker, the opening marimba roll serves as a drone consisting of *vadi* and *samvadi*, which translates to tonic and major fourth, which is common in the style. With the harmonic groundwork laid out by the marimba, the flat sixth and flat third scale degrees appear in the glockenspiel part starting in m. 2 ascends *raga Chandrakauns* over the next five bars (Figure 8.1).
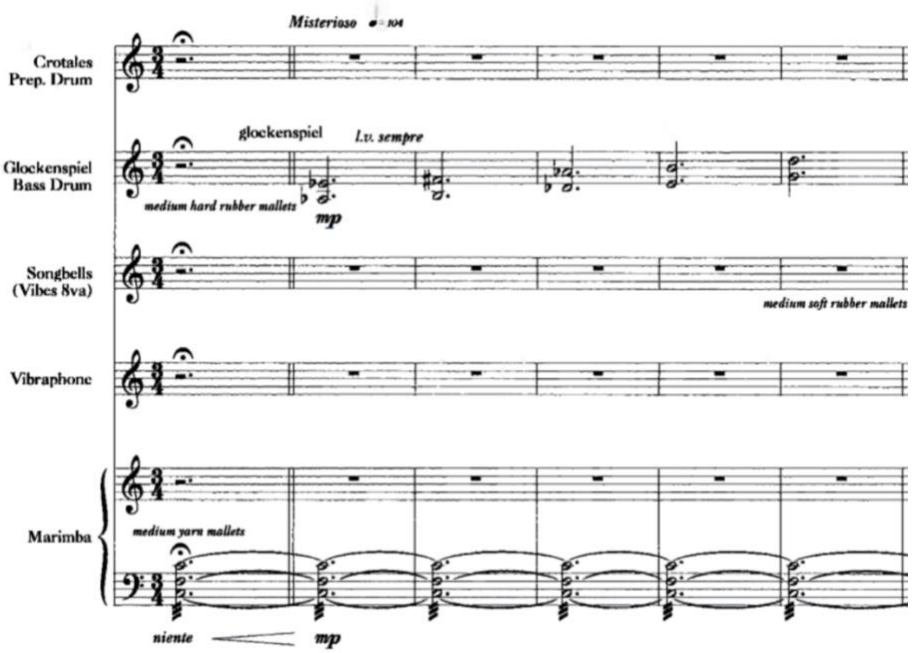
Figure 8.1: Measures 1-6 of *Mudra*

The marimba and glockenspiel stay consistent with their role harmonically as the pattern repeats three more times with C serving as the tonic, with the addition of the major seventh with the entrance of the songbells in m. 7 (second time through the C drone) (Figure 8.2).

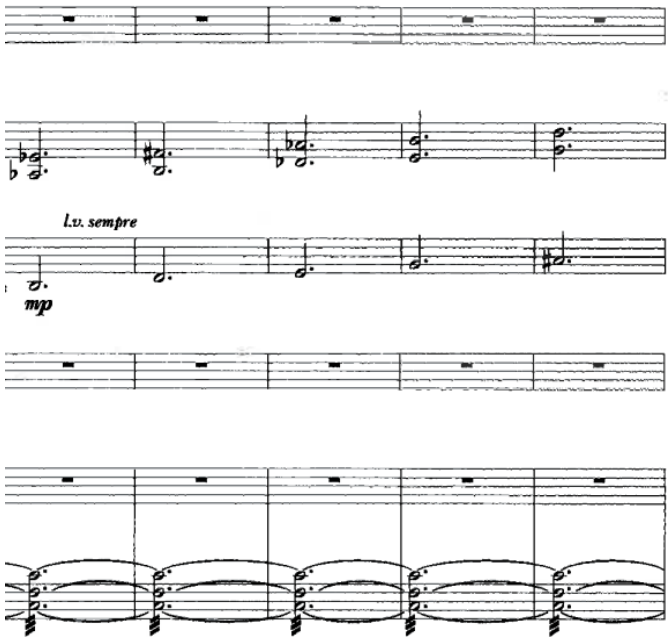

Figure 8.2: Measures 7-11 of *Mudra*

The vibraphone entrance in m. 12 (third time through) doubles the root initially established by the marimba in m. 1. In the final time through the C drone (m.17), the crotales enter, taking over for the vibraphone in the doubling of the root while the vibraphone arpeggiates the notes of the raga (Figure 8.3).
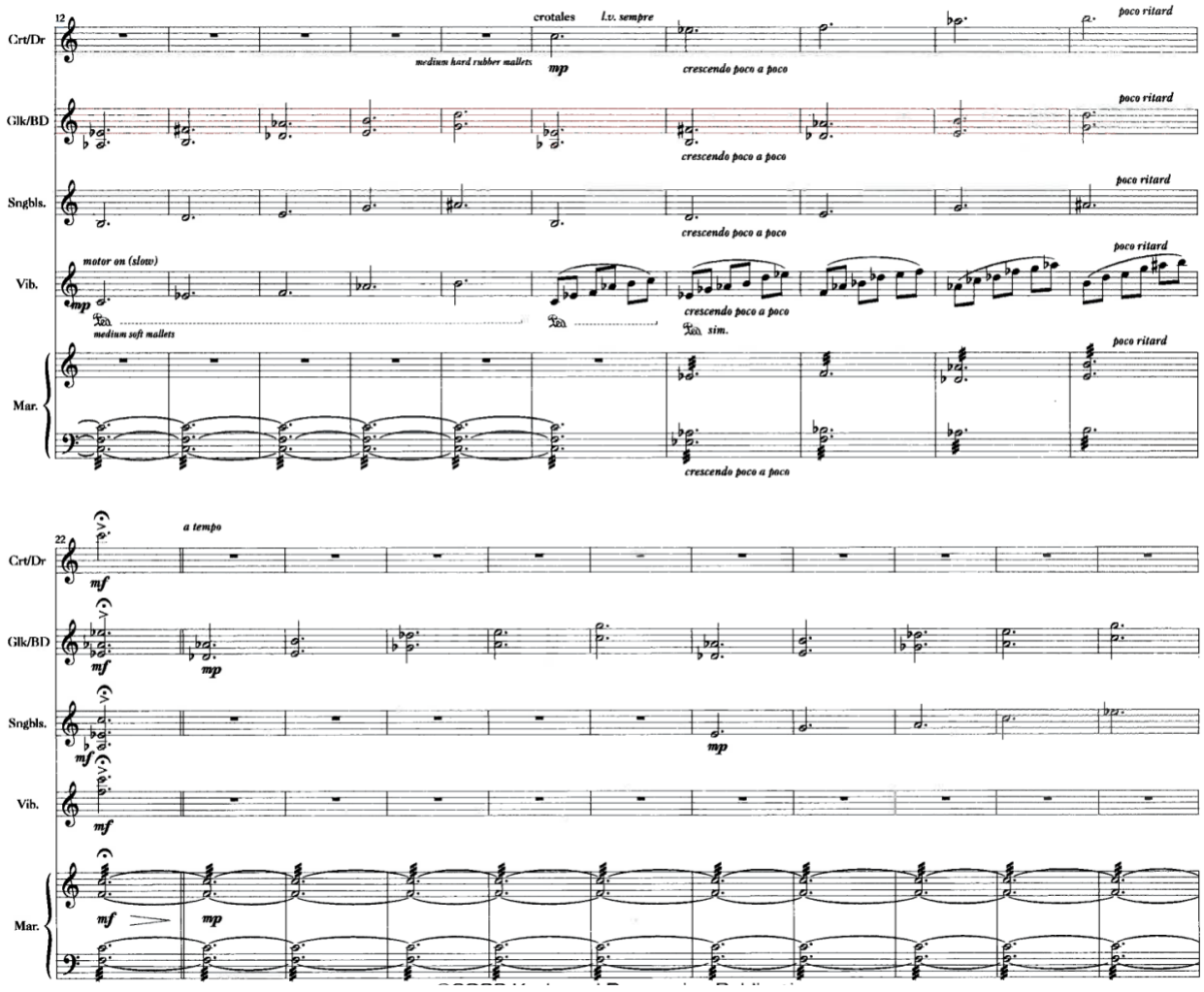
Figure 8.3: Measures 12-32 of *Mudra*

On the downbeat of m. 22, the marimba drone establishes F as the new tonic. The progression that unfolds from to beginning to m. 22 repeats verbatim, this time with the tonic of F, determined by the drone in the marimba part. The marimba outlines the sections of the piece harmonically, establishing the new tonic at the beginning of each section. This harmonic wiring is used throughout the A, B, and C sessions with the drone in the marimba establishing the tonic and the intervals of the *raga Chandrakauns* are used in relation to the given tonic to create the harmonic movement.

M. 215 is the point in the piece when Becker moves away from his invented harmonic system based on the *raga Chandrakauns* and begins to use Western chord vocabulary with the use of major, minor, and seventh chords while maintaining cohesiveness to previous sections by staking the western chord vocabulary on top of the tonic drone played by the marimba from m. 215 to the end of the piece. Harmonically mm. 211 and 213 stand out due to the added eleventh scale degree to the major triad that is written on the downbeat of those two bars. This harmonic color is not seen anywhere else in the piece and is used to signal the transition of the sessions and the use of harmony.

Melody

The melodic content of the first three sections is derived from the *raga Chandrakauns.* Like the way Becker horizontally stacks the intervals of the raga to create harmony, he extends out the same intervals vertically. It should be noted that the melody is always composed ascending from the tonic in all instances. The responsibility of carrying the melody throughout the A, B, and C sections varies in several diverse ways. To begin the B section, both the prepared drum and glockenspiel have the melody. The two melodies do not line up, causing tension to build through the phrase before resolving to the downbeat of m. 57. An over-the-bar line melody appears in m. 75 performed in unison between the prepared drum and songbells (Figure 8.4).
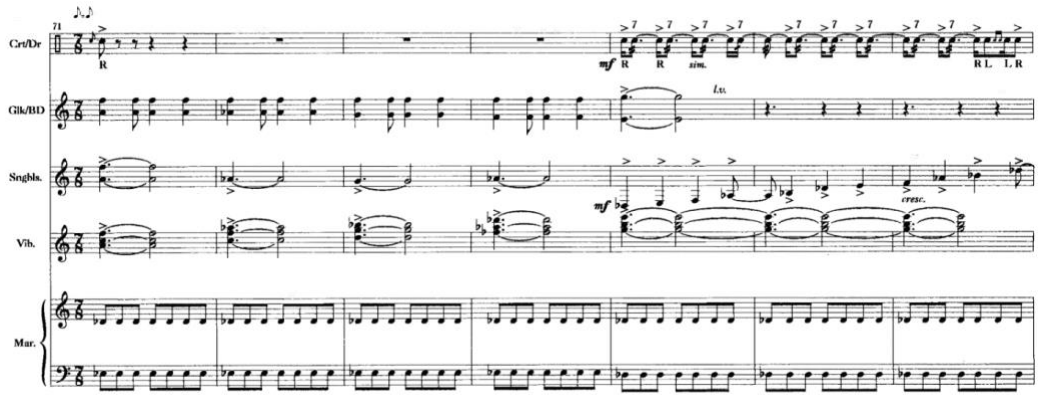
Figure 8.4: Measures 71-77 of *Mudra*

Variation in who has the melody continues through the A, B, and D section continues, primarily doubling the rhythm of the prepared drum. Here is an example from m. 247 where the songbells as the skeleton rhythm, the vibraphone plays the melody and fills in the spaces with harmonic notes, and the prepared drum double the melody while filling in the spaces between melodic notes with double stroke rolls (Figure 8.5).
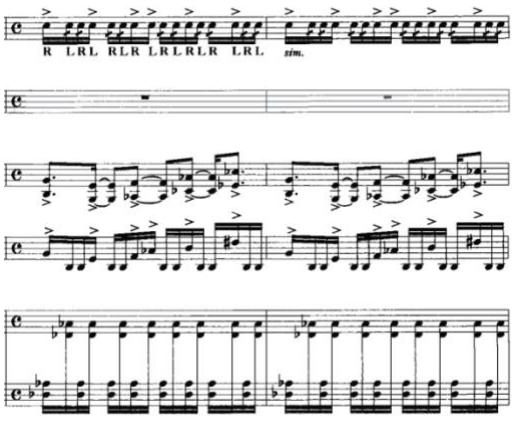
Figure 8.5: Measures 247 -248 of *Mudra*

The D section starts in m. 270 and is the point in the piece in which all the keyboard increments, minus the crotales, move to the background to provide a harmonic drone consisting

of *vadi* and *samvadi*, the tonic and fourth scale degree of the *raga Chandrakauns.* At this point, the prepared drum takes the foreground as the sole melodic voice with added midground bass drum interjections (Figure 8.6). The snare drum stays the solo melodic voice through the rest of the D section and most of the E section. In m. 363, the marimba continues the established supporting tonic drone, and the prepared drum soloist moves to the crotales, assuming the role of the melody creating while the rest of the metallic keyboards provide homophonic support through the end of the piece (Figure 8.7).
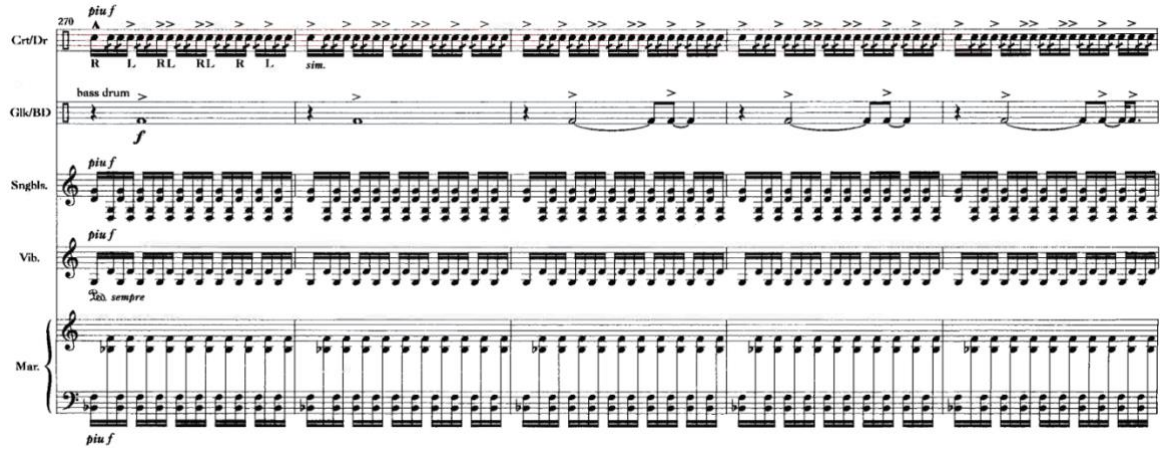
Figure 8.6: Measures 270-274 of *Mudra*

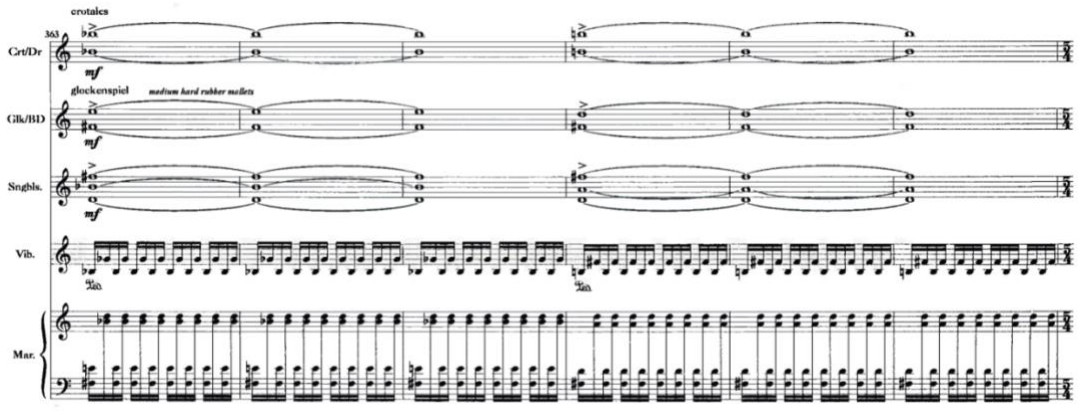

Figure 8.7: Measures 363-368 of *Mudra*

Rhythm

Mudra is a rhythmically complex piece on multiple levels. At the zoomed-in dimension of rhythmic analysis, the prepared drum part is much more difficult to perform in comparison to other parts due to the rhythmic density, such as fast thirty-second note double strokes, and the technical challenge that comes along with executing them. The prepared drum player and the rest of the ensemble are tasked with navigation- difficult independent rhymical patterns that often do not line up with the written meter or the other parts being played. This is an Indian concept called *Palta*, which, according to Becker is a term that refers to variations on a theme. Three distinct rhythmic figures that Becker varies in the piece are shown below. (Figures 8.8, 8.9, and 8.10).
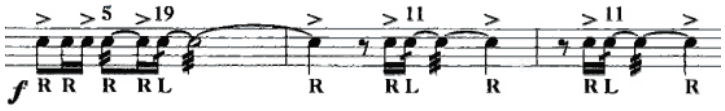
Figure 8.8: Measure 49-51 of *Mudra*
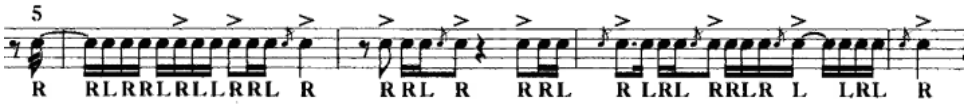
Figure 8.9: Measure 59-61 of *Mudra*
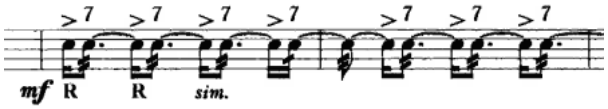
Figure 8.10: Measure 75-76 of *Mudra*

To understand this *Palta*, a non-musical analogy will be used. Every so many years, the planet reaches planetary alignment, meaning all planets are in a perfect line. When the full

ensemble lines up on a downbeat, like at m. 80, it is a metaphorical planetary alignment. When the planets are not aligned, that is equivalent to rhythmic tension. Each part is like an individual planet within the solar system. For example, the songbell part can be Earth. The speed at which each planet is orbiting the sun can be associated with the grouping of notes played by a specific part. The songbells in are orbiting at the speed of quarter notes in 75-79. The gravitational pull holding all the planets together is the eighth note, although the planets are not orbiting at the same speed, there is a unifying fabric holding everything together. The resolution of the phrase in the context of *Mudra* and the cadential resolution of the rhythmic dissonances are usually signaled by accented unison downbeats from the whole ensemble in measures where the tonic drone shifts.

An example of this can be seen from mm. 71-96. The full passage can be found in the figure below and the analysis of the individual phrases will appear following the figure. This is so the reader can see the interaction between the phrases and how they interact with each other (Figure 8.11). Rhythmically, in mm. 71-74, the glockenspiel sets up the triple-duple-duple division of the newly introduced 7/8 meter, the songbells and vibraphone outline the downbeats, while the marimba supplies the connective eighth note fabric.
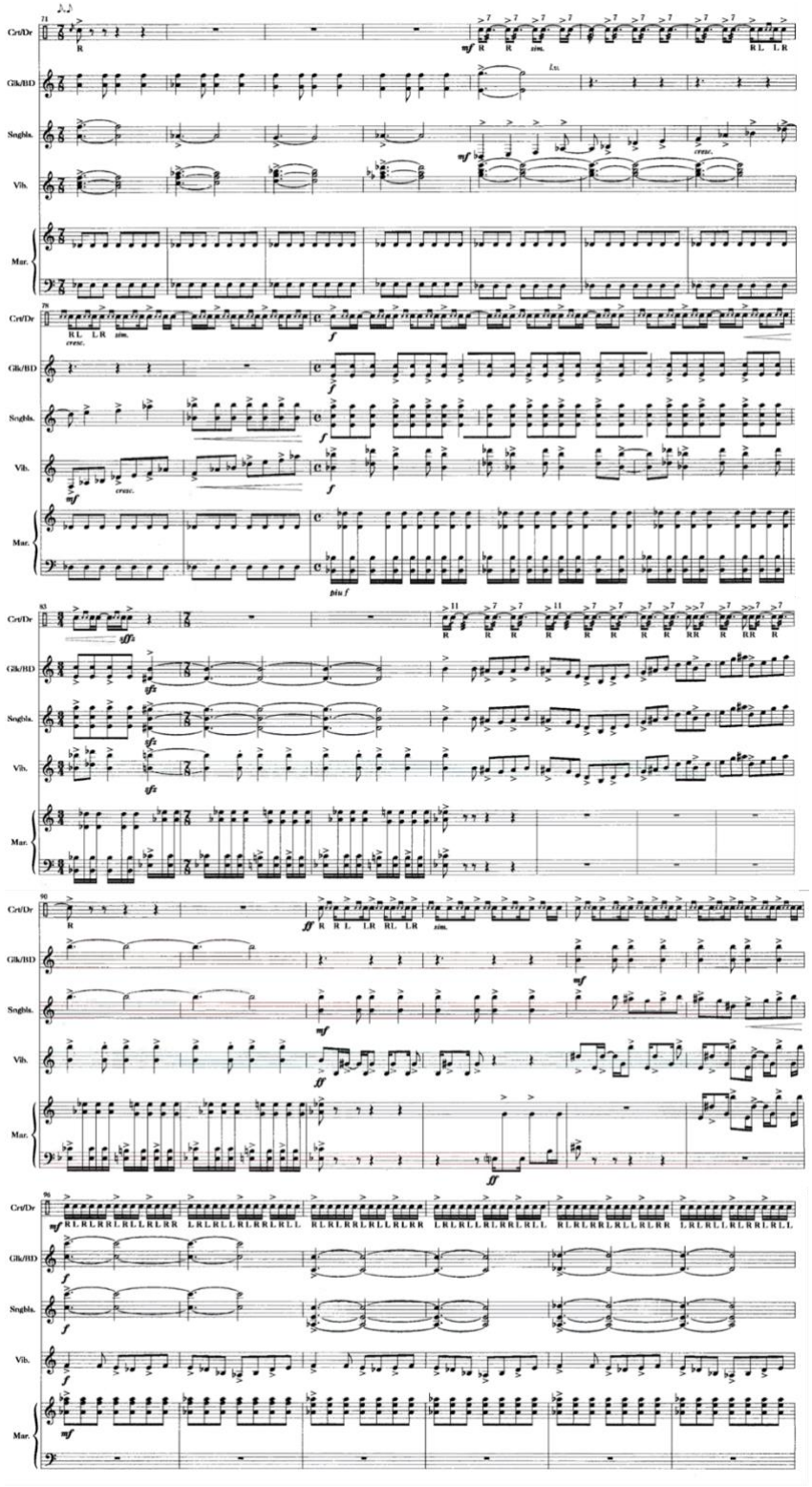
Figure 8.11: Measures 71-101 of *Mudra*

With the entrance of the prepared drum, the ensemble is in unison on the downbeat of m. 75. In this measure, the marimba continues with the eighth note pattern like the previous four bars, while the glockenspiel and vibraphone play the downbeat rests for the rest of the five-bar phrases. The songbells have four measures of quarter notes followed by one bar of eighth notes. Measures one and three feel like 4/4 measures due to the quarter notes while measures two and four feel like the quarter notes are on the upbeat due to the 7/8 meter. In m.79, the songbells land on count one and join in on the triple-duple-duple grouping set up a bar earlier in the vibraphone part and landing on the downbeat together with the full ensemble in m. 80. The songbell part resolves the rhythmic tension a bar before the end of the actual phrase. The actual phrase ends one bar after because that is when the prepared drum part resolves and the full ensemble resolves on the downbeat. The five-bar phrase from m. 75-80 can be broken up into two sub-phrases of three and two. The first three bar phrases are in unison rhythmically with the songbell part in quarter notes. In the final two bars, the prepared drum splits off from the songbell and sets up its ostinato that contrasts both the quarter note ostinato in the songbell part and the triple-duple-duple pattern in the vibraphone part taking two bars to resolve before moving on to the next *Plata* inspired phrase.

Growth

Each section is distinct from one another in serval ways and contours to the overall growth and development of the piece. In section A, the rhythmic simplicity, slower tempo, and soft dynamics serve as a good introduction to the work, allowing the unique harmonic and melodic material to be front and center in this section before developing this material using complex Indian Classical compositional techniques discussed in previous chapters.

The beginning of the B section is signaled by a transition to the A tonic as well as a subito tempo change going from 104 BPM to 132 BPM. In this section, the prepared drum introduces a new texture and adds rhythmic complexity to the piece, introducing motivic vocabulary used throughout the piece such as sixteenth note paradiddles, and thirty-second note rolls as well as tap drags. Harmonically, the marimba communicates the tonic note while the other keyboard voices contribute to the harmonic and melodic material.

The start of the C section is reminiscent of the mood of the opening, as far as the rhythmic simplicity, bringing the harmonic and melodic material to the foreground. The C section contrasts with the A section at the beginning with the 7/8 meter and the addition of the bass drum's rhythmic ostinato to provide rhythmic connectivity between the long tones in the keyboards. The second part of the C section (m. 167) is identical in all aspects of sound and rhythm with the change in the harmonic and melodic material. The tonic notes used in this section are different from the A section. The A section features C and F as the tonic notes, while the C section is built on E and B as the tonic. The conclusion of the C section signals the transition from material built on *raga Chandrakauns* to chords found in Western tonal music.

The D section emerges the way the B section emerged, cauterized with a tempo change and the introduction of the prepared drum composed with complex and rhymical dense rudimental vocabulary. The section consists of four main phrases. A twelve-bar phrase, a fourteen-bar phrase, a twelve-bar phrase, concluding with a thirteen-bar phrase leasing onto the next section. The section is developed using similar rhythmic, melodic, and harmonic material in each phrase with each phrase reordering the order of the material and changing the orchestration and roles of the keyboards.

The E section maintains the energy of the B and D sections, with similar rhythmic vocabulary in the prepared drum and the addition of the bass drum changing the texture slightly. The keyboards in these sections take a background role, providing a harmonic done of seven different chords extending for several bars and changing chords at the ends of phrases. The main rhythmic interest of the E section is the use of *ti hai* as discussed in the rhythm section of this chapter.

In the E section, the keyboards have a similar harmonic and supportive role as in the previous section and the prepared drum remains the solo voice. The rhymical material performed by the prepared drum makes this section unique. Up until now, all the rhythmic material has been duple based. The new rhythmic material introduced in the E section is sextuplet based (Figure 8.12). This rhythmic material continues through the E section. The prepared drum player moves to the crotales in m. 363. From m. 363 to the end, a similar texture like the A and C sections is present with different chord vocabulary. Tonality shifting between F sharp and B flat ending on a B minor seven chord.
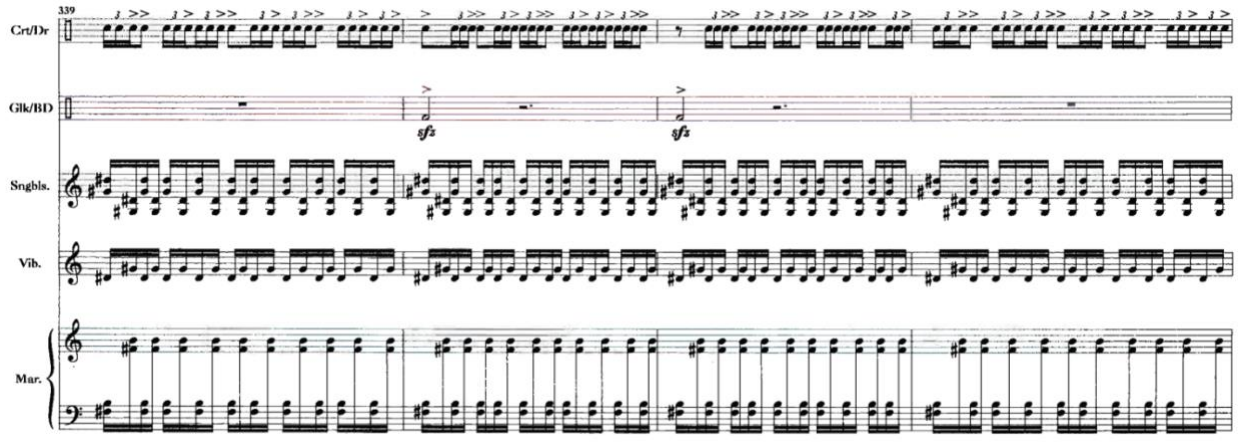
Figure 8.12: Measures 339-342 of *Mudra*

Overall, *Mudra* is a complex and rewarding piece of music to play that is deceptively difficult. Strong individual musicianship is required to navigate the complex Indian Classical compositional techniques. The juxtaposing of Western and Eastern compositional techniques makes this piece unique and will force all musicians to think differently. *Mudra* facilitates performer's self-assurance in executing their parts, comprehension of the larger musical phrase and their respective placement therein, and precision in timing with the ensemble while maintaining a balance of independent musicianship, avoiding the risk of becoming engulfed and disoriented by over-reliance on the group.

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