

GESTURE AND THE AUDITORY IMPACT ON THE PERCEPTION OF SOUND: A
PERFORMANCE GUIDE FOR UNDERSTANDING GESTURAL FUNCTION ON
PERCUSSION PEDAGOGY AND PERFORMANCE

DMA PROJECT

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ABSTRACT OF DISSERTATION

GESTURE AND THE AUDITORY IMPACT ON THE PERCEPTION OF SOUND: A PERFORMANCE GUIDE FOR UNDERSTANDING GESTURAL FUNCTION ON PERCUSSION PEDAGOGY AND PERFORMANCE

I will address the concept of physical gestures and discuss how they are applicable to the way percussionists visually and audibly perceive music. Through my research, I will focus on performance and pedagogy, seeking new possibilities for introducing percussionists at all ability levels to different articulations. Percussionists have traditionally been led to believe that they do not have the versatility over the initial musical attack and sustain that wind and string players do. This document has been developed to provide a more in-depth approach to how physical and musical gestures can function to create a more versatile and musical percussionist.

This project will discuss both musical and physical gestures and the current research behind them, as well as a spectromorphology, a method developed by Dennis Smalley to analyze graphic notation from computer-generated scores. By applying spectromorphology to percussion scores, I will examine how musical gestures are present in solo and ensemble literature, and I will offer suggestions on how to effectively apply these findings to methods of study and performance. This project concludes with a thorough breakdown of standard articulations across marimba/mallet instruments, snare drum, and timpani and provides suggestions on how to functionally utilize gestures for these articulations while offering graphs for each category that highlight the focal points for continued use.

KEYWORDS: [Gesture, Spectromorphology, Performance Practice, Perception,
Percussion]

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DEDICATION

To all the support of the mentors I have had throughout my time at the University of Kentucky, thank you for always pushing me through.

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PART ONE

CHAPTER 1

Introduction

In this study I will be examining the concept of physical gestures and discussing how they apply to the perception of music through visual and auditory formats. I will focus on a performance aspect that includes a form of musical analysis and gestural analysis, as well as a pedagogical approach that goes beyond the typical means of gestural expression and seeks to find more functional uses of physical gestural components. Emphasizing how our stroke types are only the beginning of this concept and how they can more consciously be applied to performance. A key question that I will maintain throughout my research is “does this physical gesture aid in musical contribution or it is only for ‘looks’”. Ultimately, I develop a gestural method for teaching beginning and experienced percussionists how they can be introduced to creating different articulations, timbres, and sustain.

My interest in the correlation between gesture and performance stems from my own personal experience as a musician. Gesture is a concept I have continually explored through performance practice, my experience in the marching arts, analytical techniques, application through applied lessons taught at the University of Kentucky, and as a paraprofessional and private lesson instructor within the Austin, Texas area. As a performer and educator, I always strive to find the most musical approach to the works that I am teaching or performing, and I actively seek physical, gestural methods that accurately convey my musical intent. From the teaching perspective, I find myself educating students about how we can more efficiently utilize our physical gestures to emulate musical intent and how to properly perform written articulation and timbral changes written in our works. While much of the current research focuses on gestures in

relation to musical expression, I will be taking this concept into a more actionable item, specifically dealing with the functionality of physical gestures as this area is lacking in development. By breaking down the four main stroke types, I will use those to encompass how to better facilitate moving our bodies for the purpose of informed musical intent, rather than purely relying on moving for the sake of ‘expression.’ This concept stems from the continued performative development of percussionists, and as we have continued to push ourselves more in what we can play, I find that the physical aspect of playing percussion has become too distracting and not as musically informed. The overall purpose of this concept is to continue to find ways to develop a more musical percussionist.

This dissertation discusses performative and theoretical aspects of gestures. I begin by dissecting the concept of performance gesture with relation to percussion instruments in the marching arts and then then classical solo repertoire. By citing several studies adjacent to this topic, I will illustrate how gestures can both amplify and distract from the auditory perception of sound. The theoretical chapter will display an analytical method regarding musical gestures based upon spectromorphology¹ (1997) to analyze graphic notation. This concept came from a desire to examine graphic and computer-generated scores when traditional harmonic language proved inadequate. The concepts from this theory can also apply to other types of scores. I will utilize spectromorphology to find a correlation between musical and physical gestures. This document will conclude with a thorough examination of standard articulations and how to apply gestural components to these musical concepts to effectively communicate them across the primary percussion instruments. These examinations will each conclude with a table summarizing the key

¹ (Smalley, Spectromorphology: explaining sound-shapes 1997) Need to fix this footnote...

gestural components to performing these articulations. I plan to continue working on this topic by eventually creating a method book that will outline these gestural concepts into etudes, resulting in a tangible output connected to my dissertation.

1.1 Background

Humans often have preconceived perceptions about what any given sound should "look like" based on our cultural understandings. There could be twenty people in a room with diverse backgrounds who all hear a sound from the same source. Without seeing where the sound came from, each person would have an interpretation of what visual elements might be correlated with that sound. Even with an audio-only recording, it can also be said that visual gestures potentially influence how the performer articulates their musical intent. Even without watching a performer, a person can hear when someone is musically expressive in a performance. For percussionists, much of that comes from how we physically move. If we percussionists can learn to capitalize on how we move while performing, then I believe we can significantly advance our growth as musicians and be recognized as "musicians who just happen to play percussion."

Physical gesture is defined as a movement or position of the hand, arm, body, head, or face that is expressive of an idea, opinion, emotion. In the visual realm, the gesture is how motion occurs. Gestures in this setting are what the average person would associate the word with, and they have been an area that we have utilized since we could move areas of our body. Outside of the musical realm, this is one of the earliest forms of communication we learn to use. The biggest emphasis I want to focus on with physical gestures is communication. In moments when words are not accessible, silent gestures can carry on a conversation or pass along a message. Within the

musical and art realm, think about a stage actor and how they would apply gestures to exaggerate the passage they are reciting. One can also think about conducting and how a visual gesture is used in this aspect. When a conductor shrinks their motions, typically, the musicians respond in a way that mimics the motion of condensing. We can also recall how silent movies heavily rely on these physical gestures to portray the actions and feelings that are being told on the screen. Getting an understanding of the physical gesture can help to realize that there can be other forms of how even when the gesture is silent, it can still perceive a sound.

Another understanding of gesture is as a musical element. A musical gesture refers to an action that happens within a musical composition, such as a musical motif, a specific harmonic motion, a rhythmic motif, or timbral elements. Musical gestures portray aspects of communication through written music rather than through physical motion. Understanding musical gestures requires some analytical skill, specifically a deeper understanding of music theory, but this knowledge will help the performer develop a more intimate connection with a piece and will offer the pedagogue teaching tools to aid beginner students who are not as well-versed in theoretical concepts.

The definition of gesture that I will use for this document is as follows: a *gesture* connects the audible sound and visual components carried out by a performer into one perceived physical action that depicts the performer's intention to the audience. Sounds are often associated with different visual gestures. For instance, the image of slamming an object creates an expectation that the accompanying sound will be sharp, loud, or aggressive. Similarly, upon hearing a loud, sharp, and aggressive sound, a listener might associate specific images with the source making that sound. Sound and visual image, therefore, go together and are particularly important in how a performer can emulate the music more fully beyond merely playing the notes.

Visual gestures in terms of imagery applied to wind and string instruments can create different outcomes that are often predictable to the familiar audience or even a musically trained audience. A musically informed audience can recall what a characteristic clarinet sounds like and what it looks like to play that instrument, and the same understanding applies to a trumpet or a violin. An audience that is not as musically informed might not be able to specifically identify each instrument, but they can understand brass vs woodwind vs strings, as there is more of a common knowledge surrounding the differences between these instrument families that can be dated back to a generic elementary music education that most of the public received. Often, when it comes to visual gestures and percussion instruments, there are areas of sound and movements to which audiences may need a connection. Percussionists use an implement to strike another object when playing a percussion instrument, and they have no control over how long this object can naturally sustain from a single point of attack². Playing this instrument is a two-step process that invites innovation in how a percussionist can strike their instrument. With this understanding, the way I define gesture (as a combined aural and visual phenomenon that conveys musical intent to the listener) has a significant role in the production and perception of sound in percussive music.

1.2 Review of Literature

Many scholars in different fields have addressed the concept of gesture and music. While much of this content focuses on gestures for musical expression, several of the dissertations on

² While pianos are a part of the “percussion family,” I am not including them into this argument due to it being out of the scope of the concept as piano is often separated from “percussion” and the musicians of these two instruments are almost never included in any joint performance practice concepts. Piano will not be considered a part of the percussion family for this document. As for resonant metallic instruments (vibraphones, glockenspiels, and chimes) I am still including them in the whole of this argument while we can control some of the sustain, many of these concepts still apply to approaching playing the instrument. This will be disclosed later in the document.

this topic have produced factual studies that tentatively explore how gestures can be used as functional musical elements. The primary dissertations that I will be examining are Frank Kumor's "Interpreting the relationship between movement and music in selected twentieth-century percussion music" (2002), Michael Gould's "Advanced multiple percussion techniques: An analysis with musical approaches to performance problems in the music of David Hollinden" (1999) and Kimberly Loeffert's, "Association and interpretation in recent chamber music: Gesture and dialogue in three compositions by Franco Donatoni." (2015) These dissertations each present a different aspect of my focus areas. They all contain sound conclusions and great suggestions for further study of both physical and musical gestures; they each provide essential details that provide groundwork for my research which will be discussed later in this chapter.

My definition of and argument for gesture in percussion performance is also informed by research in sound perception, and I specifically draw upon two different case studies by music educators that have been helpful for proving a correlation between gesture and perception. Both case studies involved children as subjects. This choice is significant because children's perception is still without bias compared to if these studies were done with adults. Adult perception would lean towards bias regarding culture and general knowledge of music, as both studies involved different pieces of classical music. The first study was by Wendy Sims (1986)³, a music educator. She tested to see what role 'active listening' played in children's ability to retain musical information, their attention span, whether they were interested in the music, and how long they could sit through the piece. She used piano pieces from Modest Mussorgsky and Georges Bizet and asked a group of children, the active listening group, to perform different hand motions while

³ Sims, W. (1986). "The effect of high versus low teacher affect and passive versus active student activity during music listening on preschool children's attention, piece preference, time spent listening, and piece recognition."

listening to the music. Then she asked the control group of children to listen to the music while sitting with their hands on their laps. This test included 79 children and concluded that the group of children who were a part of the active listening group was more attentive when listening to the music, maintained higher recognition, and was the most attentive throughout the entire piece.

The second study was conducted by Joyce Eastlund Gromko and Christine Russell (2002), both music educators. They were interested in determining if aural perception would be related to accurate map reading. The study was performed with 41 children between the 2nd and 3rd grades. For the active map reading, the children would listen to pieces represented by these graphic maps. The children were first tested "for their discrimination of tonal and rhythmic patterns using the tonal and rhythmic subtests of the Intermediate Measures of Music Audiation (IMMA)."⁴ The test "measures children's ability to aurally perceive and judge for similarity in short patterns consisting of three pitches played in uniform duration units (tonal subtest), and 3 to 12 sound bites arranged into a rhythmic motif played on a uniform pitch (rhythm subtest)".⁵ After this testing, the children were put into three separate groups, either passive, unstructured active or structured active. The researchers included three different pieces of classical music: "Long-Eared Animals" from *Carnival of Animals* by Camille Saint-Saëns, "March" from the *Nutcracker Suite* by Pyotr Ilyich Tchaikovsky, and "Minuet" from *Water Music* by George Fredrich Handel. Graphic maps representing each of the pieces were also provided. For the testing, each child would enter the enclosed space where each of the graphic maps was displayed on the wall; the children were guided through the maps by the testers without the music playing. When the testing began, the child would

⁴ Gromko, Joyce Eastlund, and Christine Russell. "Relationships among Young Children's Aural Perception, Listening Condition, and Accurate Reading of Graphic Listening Maps." 336

⁵ *ibid*

listen to the music and perform the action in which they were prompted. If the child was put into the passive group, they only listened. If the child was put into the unstructured active group, they were asked to "show how the music goes" by using their hands inside a 50 lb. tub of white sand while listening to the music. If they were in the structured active group, they were asked to perform choreographed hand movements that coincided with the music mimicked by one of the testers. The results showed the following:

Children who traced a graphic listening map performed better on the form perception task than those who merely listened intently. In turn, children who performed a choreographed dance reflecting the music's melodic contour and rhythmic patterns performed better than those who merely traced the listening map. Thus, the listening condition that included visual and kinesthetic elements and the aural component was most effective in "enhancing the children's aural perception of musical form."⁶

While these tests were not geared towards gestures in music, they show a correlation between a having greater understanding of the music when performing active listening, which we can conclude that how we look when we play not only affects what the audience hears and how they listen, but also how the performer can better communicate the musical intent. Whether that means that the performers try to instill an idea of movement in their performances, for any instrument, or that they pay greater attention to how they are using their movements to emulate timbral effects and musical communication more efficiently, so that both they and the listeners can walk away from the music with a better understanding and greater attention to being able to listen to the music.

Several studies have also been done that go in-depth into the perception of sound. First, beginning with a general approach through all types of musicians – (instrumental and vocal), as visual gesture does apply to all forms of performance. Only recently did additional studies become

⁶ Gromko, Joyce Eastlund, and Christine Russell. "Relationships among Young Children's Aural Perception, Listening Condition, and Accurate Reading of Graphic Listening Maps." 334.

focused solely on percussion. Most of these studies only focused on how it pertains to marimba performance, but it has still produced many valuable sources of reliable information from which to expand. I will also look at two studies done through music educators trying to find a link between aural listening and the perceptions the students gained from it. Because there has already been much groundwork laid through previous research, can this topic of the functionality of how gestures can emulate expression come to fruition?

The primary dissertations that I will be examining are Frank Kumor's "Interpreting the relationship between movement and music in selected twentieth-century percussion music" (2002), Michael Gould's "Advanced multiple percussion techniques: An analysis with musical approaches to performance problems in the music of David Hollinden" (1999) and Kimberly Loeffert's, "Association and interpretation in recent chamber music: Gesture and dialogue in three compositions by Franco Donatoni." (2015) These dissertations each present a different aspect of my focus areas. They all contain sound conclusions and great suggestions for further study of both physical and musical gestures. Nonetheless, they each provide essential details for me to continue my research. There are several other dissertations that I will be examining for supporting material.

Gesture and how it correlates to human perception has been introduced previously. Examining two different case studies through music educators has proven helpful for the correlation between gesture and perception, specifically when applied to music. Both case studies involved children as subjects. This choice is significant because their perception is still without bias compared to if these studies were done with adults. Their perception would lean towards bias regarding culture and general knowledge of music, as both studies involved different pieces of classical music. The first study was by Wendy Sims (1986), a music educator. She tested to see what role 'active listening' played in children's ability to retain musical information, their attention

span, whether they were interested in the music, and how long they could sit through the piece. She utilized piano pieces from Mussorgsky and Bizet and asked a group of children, the active listening group, to perform different hand motions while listening to the music. Then she asked the control group of children to listen to the music while sitting with their hands on their laps. This test utilized 79 children and concluded that the group of children who were a part of the active listening group was more attentive when listening to the music, maintained higher recognition, and was the most attentive throughout the entire piece.

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were prompted. If the child was put into the passive group, they only listened. If the child was put into the unstructured active group, they were asked to "show how the music goes" by utilizing their hands inside a 50 lb. tub of white sand while listening to the music. If they were in the structured active group, they were asked to perform choreographed hand movements that coincided with the music mimicked by one of the testers. The results showed that "Children who traced a graphic listening map performed better on the form perception task than those who merely listened intently. In turn, children who performed a choreographed dance reflecting the music's melodic contour and rhythmic patterns performed better than those who merely traced the listening map. Thus, the listening condition that included visual and kinesthetic elements and the aural component was most effective in "enhancing the children's aural perception of musical form."

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For the performance and percussion performance, I draw upon scholarship by Michael Schutz, Scott Lipscomb, Jane Davidson, Erick Saoud, Mary Broughton, and Catherine Stevens. Jane Davidson began her instrument-focused studies in 1993, specifically focusing on the concept

of “ancillary gesture.”⁷ Her work opened more opportunities for continued study, especially for percussion. 30 years later, Michael Schutz⁸ has been able to collect data from numerous sources and provided solid evidence for the use of gestures in percussion performance. Erick Saoud provided tangible evidence for if a stroke type does affect the length of sustain on marimba. With four students at the University of Arizona being the example, Saoud recorded them playing the same sequences of notes, but in a variety of strokes and gestures: specifically legato and staccato style strokes. He then analyzed the recorded acoustic profile of each chord and placed these lengths in a graphic chart that was divided between more staccato based strokes and legato based strokes. These findings did conclude that it does not affect the length of the sustain, but that is where the argument of perception and timbral effect plays a role in this concept. While the note length does not change, this method was not able to detect timbral differences, which I do believe plays a role in the perception of the note length. What I appreciate about the findings are that it is not only about the effective uses of gestures, but also the negatives or contrasting as well.

Regarding musical analysis and gesture, I rely upon several research articles based on Denis Smalley's work on spectromorphology (1997), which provide insight into how to approach Smalley's theoretical concepts. While I have found that spectromorphology can easily become dense and complicated when applied to graphic notation, it is more manageable to apply it in other forms of written music when taken in a simplified approach and, using his theory in its entirety would be too complex and overshadow several of the points presented in this document. There are

⁷ Jane W. Davidson, “Visual perception of performance manner in the movements of solo musicians,” *Psychology of Music* 21, no. 2 (April 1993): 106.

⁸ Michael Schutz and Scott Lipscomb, “Hearing gestures, seeing music: Vision influences perceived tone duration,” *Perception London* 36, no. 6 (2007).

significant elements, however, to be drawn from it and the research behind it. The theory can be a useful tool to understand all forms of written music so not all traditionally notated works would benefit from these concepts. By taking the elements that apply to the concept of gestures in musical analysis, we can find a method to allow this theory to represent its concept in a way that works for traditionally notated music.

1.3 Rationale for this study

Gesture, as a musical and visual element, expresses one of the many roles in our learning and performance of music. This element goes beyond the aspect of playing as it taps into both the performers and audience's perception of sound: where sound comes from, how it happened, and what will come next. Gesture itself has an enormous potential to be explored; this concept should be expanded into a more prominent role for musical analysis and allowed to create a new purpose in addition to its common association with pure musical expression. Specifically, in percussion music, gesture can be used for more than just an added element of flourish; it can also function to communicate the written music to the audience.

While the concepts of percussion articulations and musicality for percussionists may not be perceived as a problem by most percussionists, I would argue that there is a case to be made for this issue. Pedagogically speaking, percussionists have been told historically that articulations do not apply to them or that they have been left out of the conversation. I believe that the concept of articulations for percussionists ties directly into the concept of allowing gestures to have a musical function. By overlapping these ideas, we can begin to instill a new learning method for younger generations of percussionists. These students are more adaptable and understand what their instrument may achieve or may not achieve in terms of note length and variations in articulations.

With a new method being put in place for how percussionists can incorporate all the different tools they possess, specifically in terms of gestural elements, we can continue to advance an understanding of how percussive music can be conceived and performed. In terms of musicality, this will allow our students to be held to the same standard as wind, string, and vocal instruments.

While this research is not solely about the process of analyzing a given work, it is meant to show a unique way of approaching a new piece from an analytical point of view. The chapter on spectromorphology will begin by first presenting the theoretical concepts by Denis Smalley, then by examining a compilation of several types of works for marimba, ranging from traditionally noted to graphically notated works for marimba. By expanding Denis Smalley's concept of spectromorphology through a combination of standard performance practice techniques and the inclusion of gesture in our playing, I will demonstrate how gesture in percussive music can manipulate the way the sound can be perceived by the listener.

Much of the existing research regarding gestures has been focused solely on the marimba. Many of the researchers feel that while many of the conclusions have been helpful, further research should also be explored on the non-pitched instruments. There has been some focus on this even before those findings. Michael Gould (1999) discusses musical approaches to the performance of David Hollinden's music. One section of his dissertation is focused on gestures. I will take some of Gould's methods and explore them on non-pitched instruments such as snare drum along with his continued work with multi-percussion. What I propose is needed from this research is the creation of a new method book that percussionists of any generation/playing level can use. I intend to take my findings and put them into an actionable item. This book will contain a section outlining the notation of the gestural elements that I will be incorporating, which will be applied to basic exercises that can be played on varying instruments and ending with a section of etudes across

core instruments; snare drum, marimba, timpani, and multi-percussion, to accompany and expand the elements formulated in the beginning. The point is that this method book will become an innovative approach to applying the musical concepts that percussionists have been told to "figure it out" are finally clear. Gestures can become a form of functionality rather than just a means of expression.

1.4 Procedure

Within this project, I will begin by analyzing several studies that predate this document, in which gestures and how the audience perceived expression were the primary focus. I will use the methods from those studies and expand my own research strategies from them, each in a different area of music. Focusing on performative aspects, I will examine myself physically as a performer through my lecture recital and past performances of typical solo works for percussion. I will also survey these methods on my private lesson students and my beginner percussion class. This will serve as part of the study of how our bodies move and how this may affect how we perceive the aural interpretation of the music. The second part of the study will emphasize the exploration of the different articulations, with all my students. I want to determine if we, as educators, can have a more structured discussion on how to efficiently move across our instruments and employ specific physical gestures that correlate to specific musical markings. As a culmination of these findings, I have created a chart for each primary percussion area; marimba, timpani, and snare drum, that represents all standard articulations we come across in our music and how to "problem solve" each of them by changing how we approach each note or phrase with the exclusive use of our body. I will also utilize the melodic contour mapping by Michael Gould (1999) in his DMA research based on gestures in music and study how these students adapt to understanding their

music with his approach. I will explore this with the musical element of dynamics, specifically in snare drumming music, as students often need more comprehension of playing more musically on the snare drum being that it lacks the apparent melodic structure. With these students' varied ability levels, it will be interesting to see if this method can help them better understand how to be a musical percussionist through strategic gestures.

Chapter 5 will focus on Denis Smalley's theoretical research and how gestural elements apply to notated music. This will explore my interpretation of Smalley's concepts and how I apply them to percussion literature. In Denis's own words, he describes gesture as "A human agent produces spectromorphologies via the motion of gesture, using the same touch or an implement to apply energy to a sounding body. A *gesture* is an energy-motion trajectory that excites the sounding body, creating spectromorphological life. From the viewpoint of both agent and watching listener, the musical gesture process is tactile and visual as well as aural." This definition is close to my own and I believe his research will allow me to contribute a logical procedure that any musician can address gestures – in both the physical and musical sense. For this procedure, I will analyze several major percussive works through spectromorphology and utilize Smalley's techniques to create my interpretation of the graphics for addressing written articulations and where gestures can enhance what is written. Through continued research, I have also found an excellent dissertation discussing a distinctive style of analyzing gestures in music. This is a dissertation by Kimberly Goddard Loeffert (2015), as she explores methods that "incorporate dialogical gestural relationships resulting in more musically satisfying analyses." While much of this work does apply to the analytical portion of my research, it goes much further than the scope of this project. However, it has provided me with a few great insights into the topic and it is an excellent resource for this continued discussion on analyzing gestures in music.

1.5 The Concept of Perception

Most of what my current gestural research relies upon is the concept of perception. Often, perception can contain a negative connotation. We can associate perception with a false narrative in a sense. For example, most of us have heard this common phrase or one like it; "Although flying is perceived as dangerous, it is statistically safer than travel by car." In comparison, perception has a few different definitions. Much of the research is already done and the continued research in this document will be based on how psychologists use perception. They contend that our internal experience is used to comprehend and expand our external experiences within the world and our everyday functions. We will recognize that perception is a uniquely personal experience. While we may share a few experiences with others, our perceptions make us individuals and lead to how we perceive information. This concept is alive in the performing arts world. By having a visual focus, we can engage an audience in different areas of the same performance. Much of the research has capitalized on perceptual assumptions. Meaning that when you watch a performance, you can 'see' what is being played. Your brain automatically assumes where the sound originates from, or the instruments used. In percussion, we often have instruments employed that are not associated with a shared knowledge sound. This setting can become more thought-provoking, leading to the performers having to communicate these visual perceptions from the audience. This action is where the actual strike sound and the audience's perception of the sound starts to divide.

1.6 The Concept of Physical Gesture

Gestures have traditionally been divided into two distinct categories: *effective gestures* and *ancillary gestures*. Effective gestures are defined as "movements required

for sound production," while ancillary gestures are "movements not strictly required for sound creation..." (Wanderley, 2002). Furthermore, effective gestures would be considered stroke types, while ancillary gestures signify the 'lift' after playing a weighted chord in a solo work for marimba or 'releasing' a note from a work for snare drum or multi-percussion. While I understand the need to divide gestures in this manner, I will focus instead on how gestures for percussionists begin with the stroke types. To develop a way for gestures to be a functional method of performing, we must understand it from the first sign of motion, which for the percussionist, begins before we even make a sound on our instrument. For an expanded perspective on the use of gestures outside of the keyboard percussion perspective, I will not define any gestures as specifically "effective" or "ancillary." The gesture has two aspects: what happens before the strike and what follows the strike. Studies have shown that what happens after the stroke, known as the "release," is more effective from the audience's point of view, while the preparatory motion is not as important. Both motions are equally essential for both the audience and the performer. To fully appreciate the release, the actual strike must be set up appropriately from the performers' point of view.⁹ By defining *gestures* as "starting before the stroke's inception," we can effectively explore how to use gestures across all percussion instruments.

⁹ Significant work has transpired through the MAPLE Lab, (Music Acoustics Perception Learning organization) dedicated to researching this information. However, many studies have discussed how this could be effective on non-melodic percussion instruments.

CHAPTER 2

Opposition and Problems with Gesture

2.1 The Opposition

The concepts discussed in this research are agreed upon by many percussionists and musicians alike, but that is only the case for some. As artists, we have all gone through rigorous training with educators and performers that we admire, and there is a reason that we have a variety of professionals across the country and around the world that we go to for inspiration and development as percussionists. Not everyone plays or teaches in the same manner, so we should expect opposition to a concept, even to components like technique. As Western percussionists, we will still find a few slight differences in approach and performance, each of which is a valid interpretation. These concepts of gesture are no different. This is a topic that I have been continually researching for many years and something I often talk about with peers with whom I have attended school, and not everyone agrees. While I held firm to my opinion, I always wanted to hear their interpretations. Leigh Howard Stevens, a remarkably successful percussionist, composer, and educator, also the owner of Malletech, a prominent keyboard and mallet manufacturer, adamantly disagrees with many of the concepts presented in this research. In a conversation with Michael Schutz, Stevens stated that "gesture has no more to do with [the] duration of bar ring than the sound of a car crashing is dependent on how long a road trip was taken before the accident." I do not necessarily disagree with his stance, and the studies on bar resonance show that it does not matter how we strike the instrument. It does not change the resonance length, and he is not wrong. Due to this type of opposition, I am not arguing that specific point either. Oppositions like these are why my research has taken its path. Trying to find a way to understand a concept more commonly based on supernatural explanations and adding tangible

qualities could have only been possible due to the opposition. The opposition in this research has been necessary to continue to push these concepts into more sound arguments. I will continue to welcome the opposition into this work as it is one of the many factors that keep developing new concepts for us as musicians to keep growing.

2.2 Negatives of Gesture

Gesture as a concept for performing adds many great necessities and can disrupt a piece's musical intent and visual performance. We can all share the experience of being audience members at many great performances, but sometimes great musicians can have bad visual performances that detract from the music. (Wapnick, Mazza, and Darrow, 1998) Music, for many, is still an auditory focus, so when the visual does not support it, it can confuse that auditory focus. One of the issues I have found with adding too much gesture or "expression" is that it takes away from the musical intent. I passionately believe gestures should never do. The music and its intent should invite the gesture, not the reverse, while gestures can help guide the musical intent, they should be used to visually communicate that to the audience on instruments that cannot always allow for the resonance implied. A popular social media page, "Pretentious Upstrokes," exemplifies these negative aspects very well. While it is meant as a parody, it is not always such for the percussionists performing in that manner. Again, we will always have interpretations and opinions on the practical uses of these techniques. However, we should still evaluate whether performances are musically and visually compelling. Other instances of that gesture can be seen in the marching arts. This is a setting designed to be unified, and when we allow the performers to play as individuals, not only will it be visually unclear, but it will also translate to a lack of audible

clarity. A part of capitalizing on using gestures is knowing when it is effective and when it is not. Keeping the integrity of the music should always come first. If gestures can allow this to be amplified, then we should use all our tools at our disposal.

CHAPTER 3

Gesture in the Marching Arts

The marching arts have been a pivotal influence in developing concert percussionists. Participation in marching band is often the motivating factor for percussionists enrolling and continuing in band programs. The opportunity for fundamentals* to be taught in this setting is often the most instruction they may receive for the whole school year as programs across the country often do not have a percussion instructor in employment year-round. With the marching band being one of the more intensive activities for percussionists, these students are also much more eager to be engaged in this setting when it comes to understanding fundamentals, stroke types, and varying articulations. This intense focus should be carried into the concert season to continue to develop more musical percussionists.

Marching season often begins with a few weeks of learning basics. Everyone utilizes this time to unify their specific approach to their fundamentals – from playing and marching techniques to how the band places their instruments on the ground or organizes their water jugs in a synchronized manner along the sidelines. While these facets are occurring and relate to one another, I will only focus on the unification of technique.

The marching percussion section comprises a Battery and a Front Ensemble; there can be an endless combination of instrumentation and field placement. However, for this research, we will only discuss the most common variation, a Battery, and Front Ensemble. While each section has a different role, most programs will operate by unifying their technique within the individual sections and as an entire percussion section. This applies to decisions they make and how they will operate as a section, their approach to arm-to-wrist ratio, and playing touch and sound production. A percussion section that moves together will play together, and that all starts from a unified

approach. For this section of this project, the techniques and fundamentals discussed will be based on my teachings from a variety of high schools across the nation and my time as the Drumline Teaching Assistant at the University of Kentucky.

3.1 Front Ensemble

The Front Ensemble is the part of the percussion section designated at the front of the entire ensemble. It primarily contains melodic instruments, marimbas, vibraphones, a xylophone, glockenspiel, and synthesizers. It can also contain timpani and auxiliary percussion, which can include anything from bass drum, gong, toms, concert snare drum, tambourine, triangle, cymbals, and many other accessory instruments. Most keyboard players are also given suspended and crash cymbals. The front ensemble can range in size from one multi-instrumentalist to almost 30 students in the section. Regardless of the size or number of instruments, the opportunity to create an effective ensemble is accessible to all programs. While this section does not march like the rest of the band, the front ensemble provides unique musical elements to the show. The music for the front ensemble is often more intricate, as they do not have to worry about being on the move. However, they also provide many assorted colors to the band using accessories and harmonic language. The book *Up Front* by Jim Casella and James Ancona* is a great resource to continue further education of the function and education of the front ensemble.

When starting with the technique, I like to approach the members from the perspective of their roles and how they function. Leading them to understand that they are their own smaller ensemble that is a part of the larger band is vital to realizing their function. We begin by discussing how we hold our bodies as an ensemble and approach the instrument together. Understanding what

this means will help carry the sense of unification into technique and how we move and function together as an ensemble. Once we gain that understanding of having the same approach, we can move into playing technique. In the comparison of marching vs. concert technique, the fundamentals of how to hold sticks and mallets are the same, and the understanding of stroke types is also the same, including the *piston stroke*. This stroke is similar in function to the full stroke but on the quicker, more staccato side of the movement. For the front ensemble, we will refer to the piston stroke when discussing the 2-mallet technique. Where the technique differs from concert season is the uniformity among players, which is more apparent within the marching arts. One of the significant components of being in a marching band is uniformity, including technique, precision, and how we move across our instruments together – as an ensemble. As a front ensemble, we want to provide a unified approach. For the programs, I have been a part of, we believe that they start with a unified sound, which derives from their visual element. “If we do not look the same, we probably will not sound the same.” This has been a mantra that I heard during my early years in Drum Corps from my instructors, and I have since passed it on to my students. The approach within my current position is very technique oriented. If we can incorporate the fundamentals into various development exercises, we can begin to realize our musical contribution as an ensemble. We can begin to hear who is balanced with other members of the group. It all comes back to technique – are we all utilizing the same approach?

Another thing I will often tell my students is that “I can see that they will make a mistake before they do”. 95% of the time, that is an accurate statement. For clarification, a “mistake” within this setting includes balance, touch, rhythmic alignment, wrong notes, or entering too early or late. This area is where the visual element can be a handy tool. If we have all achieved a consistent technique, we, as instructors, (even the advanced ensembles) can visually see when something

does not look the same. As an instructor this can provide me with an area to look at for additional instruction. As an ensemble member, they can see where more visual clarity might need to be the focus.

In a symphony orchestra, the concertmaster will often act as the leader for the string section. In the set-up of the front ensemble, you will typically have a member in the center of the ensemble that acts as the guide for the rest of the ensemble in all parts that are unison, often referred to as the “center marimba.” They are the example of how to move, what implement heights they should be at, and the tone quality required for the ensemble at each moment. Since there are moments that the marimba / xylo, (typically referred to as the “woods”) and vibraphone / glock, (referred to as “metals,”) have that are not the same, we will also have a designated player for the “metals.” However, in moments of unison, everyone will default to the “center marimba” for leadership. The idea behind having a designated person for everyone to look to is to make sure that we are all communicating, and that we all look the same. Without having a designated person for everyone to follow, we begin to have varying interpretations of how to perform specific passages. While that is not necessarily always a negative thing, it is not our ultimate goal in this setting. With more individual interpretations of how to perform specific passages inevitably come variations in sound quality which affects the rhythmic quality and balance. These aspects are important in a musical environment that requires rhythmic clarity and precision. When we lose that visual guide, we eventually lose that clarity and understanding.

Just going off the visual, there needs to be more clarity. For example, look at figure 1 below. We can see that all three of the vibraphone players have different approaches of how to play this chord. The member on the left has their right hand much higher than the left, the member in the middle is close to even with their hand-to-hand heights but much higher compared to the

other two players - the third player on the right is also even with their height, but much lower than everyone else. If you expected these players to execute this chord simultaneously, what is your perception of the sound that would be present at this moment? Looking at the image, I expect the member on the left to be out of sync; the member in the middle to play louder and harsher than everyone else; and the player on the right to produce a softer and less articulate tone quality. With three different interpretations for the same chord, how can we expect this to be balanced and have rhythmic clarity? It should be no surprise that there needed to be more balanced and rhythmic clarity. This example is just one way I define a lack of visual clarity that influences my aural perception and leads to the sound you visually see.



Figure 4.1

While figure 1 was meant to illustrate a lack of visual clarity, figure 2 represents a more cohesive idea of visual clarity. We can see that while it is not perfect, each vibraphonist is following the same interpretation, visually uniform in implement height. This leads to the dynamic level wrist bend, the type of articulation, and the same body position. The players in this image are more uniform in appearance. When you look at this image, you would expect better balance and rhythmic clarity, which is exactly what happened at this moment.



Figure 4.2

The last element of the visual aspect in the marching arts is the nuance of expression, logically where the concept of “gesture” can lead us. Within the realm of the marching arts, expression is not an exclusively gestured idea. In the marching arts setting, expression is commonly used as an element to connect with your audience and help them understand the feeling of the music. Typically, this expression element comes from the visual ensemble (color guard or dance element) and the front ensemble, as they are staged to provide a visual focus. We need this element to help “sell the show”. While there is no doubt about that, there is usually a question of how to make it obvious within the front ensemble. In my experience, I have seen three different ideas of how to express this. The first is “stoic” - as some groups focused solely on the music and let that lead the expression. The second and third are variations of visual expression. One variation allows the individual to make whatever choice they feel, at the moment, to express an emotion. That can include individual facial movements, visual movements with their body, and playing gestures. The other variation is similar in concept, utilizing facial expressions, some movements, and playing expressions, but are expressed as an ensemble rather than individually. While I tend to champion the last variation, an issue that can arise from this approach is that the ensemble may look too robotic or mechanical. My personal perspective to counter this argument about it is simply the “nature of the activity”. I choose not to let the expression affect the visual clarity. Regarding facial expressions, the members can choose to do whatever they feel. However, in terms of moving

off the instrument, moving to cymbals, and playing articulations, those elements will be done as a group to maintain a consistent tone quality and visual appearance. As I believe that in this musical setting, that is what we are after, uniformity rather than the individual perspective.

Within this section, the subject of gesture has yet to be heavily discussed in terms of expression, typically where gestures are associated. Everything we do as musicians and percussionists is all related, but gestures can help navigate how each musical setting functions from a visual perspective. For continuing my interpretation of using gesture as a musical and visual function rather than only for expression, the marching arts setting is a fitting example of displaying just that and how gesture can vary in its function. Because using a uniform ensemble technique is so fundamental to this musical setting, a gesture is used less in the individual expression we might find in solo literature but more in providing a cohesive visual element. A gesture is not always used to make your music individualistic but can also be used to find a unified approach within an ensemble. If members use more movements from the arm than the wrist, their motion not only looks different, but they will also sound different. This goes back to technique and properly utilizing the different arm, wrist, and finger ratios.

CHAPTER 4

Gesture in Articulations

Articulations are musical elements that can help define the attack and length of any note or phrase. Articulations are further nuanced by enhancing the music's timbre and dynamic. There are many forms of articulations, from individual note markings to types of slurs. While they were not present during the baroque and classical eras, composers have since expanded upon their use in the solo, chamber, and large ensemble works. Articulations have become an integral part of highlighting the contrast and expression of a given musical instrument.

While there are many distinct articulations, we will focus on four individual note articulations: Accent, Marcato, Staccato, and Tenuto, in conjunction with legato slurs, use of fermatas, breath marks and how it all pertains to musical phrasing. As these are the most common types of articulations seen in most percussive music, they are the articulations that we will focus on for this research. *Accents* are notes that are emphasized within a phrase. They should be stressed more than the unaccented notes. The purpose of an accent is to create contrasting layers within the music. *Staccato* is a type of articulation that is meant to detach the note's length and add space between a sequence of notes written. This specific articulation deals with note length rather than dynamic. What I find can be difficult with staccato is having performers wonder why the composer did not write the note length to be shorter – an eighth note rather than the written quarter note. The utilization of the staccato articulation adds to the character of the note. This note is still trying to be highlighted or emphasized, but not by being louder than the notes around it, but by adding a different timbre that is not always achieved by just writing the note at a shorter duration. The subsequent articulation, *Marcato*, is typically considered the combination of an accent and a

staccato note – it should have the length of the staccato but the dynamic weight of the accent. This articulation typically comes off as more forceful and is used sparingly compared to the accent and staccato articulation. The last individual articulation is the *tenuto* note, typically considered counter to the staccato note. Tenuto is either playing the entire length of the note or creating a slight length to the sustain after the attack, where a group of successive tenuto notes should all ‘touch’. If you were to attach a syllable to this articulation, one would use 'dah,' as they all stay connected to each other as you repeat the syllable. Again, tenuto, while it can appear to lengthen the note, is not about having a quarter note value vs. a dotted quarter note value but about adding a type of weighted emphasis without changing the written music. The last type of articulation discussed is *legato markings* or *slurs*. This articulation indicates that the passage or collection of notes is performed smoothly and is often associated with tenuto markings. This type of articulation is more connected to a phrase or group of notes rather than a single note, but it still can be applied to a single note.

Through these simple definitions, we have already come across ideas of note separation in terms of duration or timbre, or a combination, or making a phrase smooth and connected rather than disconnected and articulate. On the wind, strings, and vocal instruments, these ideas do not present any issues; instead, it is a matter of tongue, air, or stopping the airflow or bow strokes required to make these articulations happen. When we interpret this notation on percussion instruments, fundamentally, it is more complex. Since we must strike the surface of our instruments with an implement and the actual duration of the note after a single strike can vary with its natural decay, percussionists must explore different ideas of how to interpret these articulations to make them happen. This moment is when we should turn to the idea of how we can functionally utilize gestures to not only help realize the perception of these articulations but

also to keep us as performers accountable for the notation markings on the pages that can very easily be ignored beyond playing everything as an accent because "there is not anything we can do about it."

Before we let physical gestures occur in the place of the technical side of playing, we need to keep in mind the basics of playing and reexamine how we are approaching stroke types to fully realize where we can effectively incorporate gestures. Imagine gestures as a method alongside a comprehensive technique base that can help navigate through an area of timbre and dynamic range that our instruments do allow. We must utilize the tools we have and allow them to work for us.

4.1 Stroke Types

Playing percussion music relies heavily upon creating gestures to help the audience 'hear' what is on the page when our instruments might be unable to produce the requested articulation or duration. As discussed earlier, a gesture is a widely regarded term used across all instruments. However, this project will specifically be applied to performing and analyzing standard practiced percussion music. One of the most significant components of playing percussion is the multiple-step process to make a sound on this family of instruments. Commonly, we think of the process as a two-step process, but for my research, I will argue that it is a three-step process. For this project, the multi-step process will be defined as 'step 1 - preparation, step 2 – strike/attack, step 3 - release'. Most percussionists are familiar with the first two steps, but we commonly do not consider step 3 an integral part of the process. When a vocalist initiates a passage, they are always thinking about the preparation and release of the note and how it affects the entirety of the phrase, as breathwork is vital to their ability to sustain a single attack or a passage. However, the preparation and release is always a considerable part of that process. It is no different for winds or strings - which we can

argue to have the most similar playing experience to percussionists, but still acknowledging the release as part of playing a particular note or phrase. I believe that because our instrument is so attack-driven, it is easy to forget about the end of each of those attacks. This concept is the key to elevating our use of gestures from typical uses of expression into a function that can lead to better uses of articulations combined with the illusion of perception that can be achieved while playing.

In terms of the technical side of playing, we begin with learning about utilizing our critical components of the anatomical structure – the arm. Most of our strokes will come from the utilization of the wrist, followed by the forearm, the fingers, and the shoulder (in a few instances). For this document, we will only be discussing the technical side of performing on instruments that require implements to create sound. There are several instruments within the percussion family that do employ the use of the shoulder, such as hand cymbals and tambourine, but they do not fall within the confines of this discussion, so they will not be considered. With the arm breakdown, we find that the wrist has the best combination of flexion, control, speed, and strength; while the forearm provides more strength or weight than speed, and the fingers provide more speed than strength. The shoulder, or a combination of all points, is used to facilitate the *Moller stroke* and is a more advanced technique that we typically do not learn for playing core instruments until we have mastered the main three muscle groups. This playing style is a combination stroke that will not be discussed in length beyond this as it is not needed for continued study. The wrist will be the focus for most of our beginning learning as it is considered the more reliable source of consistency and fluidity when playing. We all begin with understanding how the wrist can move across different planes – flat, fully extended upward, and fully downward. Once we learn the proper implement grip, we go through a series of progressions that help develop the use of the wrist, such as *Stick Control* and other similar exercises. After working through some of these progressions, a

fun exercise to utilize with beginner students is what I like to call "Human or Zombie." I have the students stick their arms out in front of them, fingers and wrists aligned with the arms, then go through a series of movements through these different planes. "Zombie" is when the wrist is fully extended downward, "Human" is when the wrist is fully extended upward, and "Neutral" is the wrist in a parallel or horizontal position. I have the class start in Neutral, and then I will call out either Zombie, Neutral, or Human and have the class shift their wrist position. As the students gain more control throughout this exercise, you can move through the various positions faster to mimic the control that will be echoed later once stroke types are introduced. This is a fun and interactive way for beginners to be engaged with the degrees their wrists can move and helps isolate where any restrictions may arise. I have found success with this exercise, helping students that did not naturally gravitate to using their wrists while having an implement in their hands. Once we understand this control, we can begin incorporating stroke types into the curriculum.

Percussionists are commonly taught four distinct types of strokes; full, down, tap, and up. While we are taught four, I will also argue to include a fifth – the prep stroke. For defining purposes, this stroke type will be considered a sub-stroke type rather than a primary stroke type that the other four are considered. This "stroke type" does not function to create a sound but instead functions as a present motion for the four main stroke types. So, this stroke, I believe, does not hold as much focus as the four traditional ones but is still essential to be listed and taught. Each of the four main stroke types has the ability and function to produce the same type of sound; typically, both full and down strokes are used in the louder dynamic range, while tap and upstrokes are at the softer end. What makes each stroke different is their function of them and how they can be applied gesturally to the before-and-after of the initial stroke that is played. When we deconstruct the four different stroke types, we find that they all stem from either an upward starting place (up

position) or a neutral starting place (down position). We will not find a stroke initiated or finished in any other position than up or down. We must begin in a set position when learning about the four main stroke types. As previously mentioned, that would be either the up or the down position. This setup allows for starting in a visually agreed-upon approach and ensuring our movements are all consistent. The up position is defined as a full extension of the wrist without using any arm addition to strike the instrument. This position is where both a full stroke and a downstroke are initiated. The down position is defined as parallel to the instrument without setting the playing implement on the instrument, but about 1-3 inches from the surface, typically equating to the parallel position. There should be no bend in the wrist in this setting, nor the need to utilize the arm.

Beginner students start on a practice pad, which is meant to emulate a snare drum but is also the most standard approach to learning how to facilitate the basic notations required for playing percussion. Much of the language that will continue to be used in this document will refer to the basics of learning on a practice pad. Several concepts will translate over to different percussion instruments, as most things cross over, but there will be a few distinctions as we move through the details. As stated above, the four main stroke types are Full, Down, Tap, and Up. Listed below is an example of each of the four-stroke types. We all start by learning the *full stroke*, commonly referred to as the "Rebound" stroke, as it is meant to utilize the natural rebound of the instrument we are playing – practice pads in most cases. The full stroke begins in the up position and ends in the up position. We begin with both wrists fully extended, initiate the stroke from that position, strike the pad, and then allow the natural rebound of the stick to float back to the original starting point, where we add a slight bit of control to stop the stick in that specific position. This stroke is commonly used to get younger students to begin utilizing the entire stretch of playing and

they are encouraged to play through the entire range of motion that their extension allows in helping develop that. Once we introduce the control concept, we expand into the following three stroke types. After the full stroke, we have the *down stroke*. This stroke begins in the up position like the full stroke but ends in the down position. Again, we initiate from the up position, strike the surface, and then instead of letting the stick naturally rebound back up, we add enough control to keep the stick from floating back up and remaining in the down position. This stroke type is the first step to learning accents and is a crucial step in the process of articulation. After the down stroke, we have the *tap stroke*, which is similar in concept to the full stroke, but the reverse. This stroke begins in the down position and ends in the down position. Initiating from a parallel position, we drop the wrist, strike the surface, and again add the control to keep the stick from floating above the parallel position. This stroke type is best used for softer passages and can often invite a little arm since there can be little ‘wobble room’ to initiate the stroke in the down position. Allowing the use of a slight bit of arm also allows for a slight weight to be added to the stroke to make sure the stroke is still heard and not anemic in value but also matching in sound quality as compared to the full and down strokes. This stroke is great for navigating between accents. The last stroke type is the *upstroke*. This stroke has proven controversial, even considered a stroke type. It provides the same type of contrast that full and tap have to the down stroke – because we have a down stroke, we need to have the upstroke in contrast. This stroke starts in the down position and ends in the up position. The stroke is initiated from the parallel position by the drop of the wrist, striking the surface, and then uses a second kind of initiation to come back to the up position at full extension. Because the stroke was initiated in the downward position, there is not as much natural rebound to help the stick come back up on its own, so we must add an extra form of initiation to complete this stroke. The tap and upstroke are typically used at softer dynamic ranges due to the strokes' starting

position and transitional nature. Because of the nature of the upstroke, I count it as a tap stroke with an added prep stroke at the end. The *prep stroke* will be the last type of stroke discussed. This stroke, again, produces no sound but allows us to transition from starting everything in the up position to the down position. This stroke is used as preparation when needed and will be utilized on the count before we need to strike.

After each stroke type is learned and practiced individually, we can put all of them together to form a sequence to practice; PREP, Full, Down, Tap, Up. Gaining control over this sequence allows us to expand these foundational basics to explore more complex patterns presented in percussion literature. From here, I have my students move into accent patterns, which is also their first introduction to playing at various implement heights within a single phrase, accompanied by an understanding of dynamic levels, as they coincide with one another within the technical aspects of percussion basics. We first introduce the accent on the first beat of each 4/4 bar as 8th notes with alternating sticking (RLRLRLRL). The accents are defined at a *forte* dynamic, and all unaccented notes are defined at a *piano* dynamic. The "forte" and "piano" dynamics also align with the Up and Down positions they were already doing. We are now defining musical elements in a system they are already familiar with. Then we define the stroke types that will be utilized in the presented bar of music. We mark the stroke types with the first letter of each type; F (full), D (down), U (up), T (tap), and P (prep), and then slowly execute the first example together. You will end up with the pattern; (P) D T T T T U T, D T T T T U T, and so forth, as you repeat the pattern. You can see from the example below the process and results of what this should look like.

ACCENT PATTERNS

The following exercises should be practiced first at a steady tempo. Then after mental and physical relaxation are achieved, they should be practiced starting slowly - gradually speeding up - then slowing down to the original speed. Each exercise should be practiced using strict alternation, first starting with the right hand (rlrlrl etc.), then starting with the left hand (lrlrlr etc.).



Figure 2.1, example of utilizing stroke types for accent patterns from Mitchell Peter's book *Dexterity*, pg. 16

While this process may seem daunting, especially for beginner percussionists, this is the process of having students understand the facility needed to incorporate gestures into their playing.

While this section mainly focuses on stroke types, their introduction, and their use, the question remains for their relativity to the topic of gesture as a musical function. Suppose we want the gesture to have a musical function outside of just expression as a blanket term. In that case, we must look at the basics and foundations of playing, which for percussion returns to stroke types as the first form of organized or patterned movement. As an educator, I aim to facilitate musically functional percussionists who can find solutions to articulations and note durations that are not always obvious for our instruments. For me, that will always lead back to fully understanding stroke types and how they can be utilized, exaggerated, and expanded to embrace this idea fully. When looking ahead to the actual performance of a work, it is essential to keep in mind the visual aspect that comes with a live and even recorded performance. We can start by thinking of ways to musically engage our audiences, and then we can refine how to practice and prepare a piece, not

just for the notes but for the visual aspect. Going back to stroke types, if one were to only listen to each stroke played, ideally, they would hear a consistent tone quality and attack. As soon as the listener adds the visual element of observing the stroke played, there is a perception that each of them now has different sound qualities. When watching the full stroke, there is a more legato aspect of that stroke as it is a continuous motion. While the stick repeatedly strikes, a more fluid sound becomes perceived. The down stroke invites the perception of either a finished sound or a shorter tone quality as the stick either stops motion completely or changes to a different stroke type. Tap strokes can be perceived as another form of legato, or transitionally, moving through a passage. Then Up strokes can perceive lengthening from the note playing as it bounces up from its original position. Again, it is essential to note that these are just perceptions. While a study done by Erick Saoud¹⁰ has proven that different stroke types do not acoustically elongate a stroke, most viewers can still perceive a change in duration and articulation based on how we utilize physical gestures in the performance of our music.

¹⁰ Erick Saoud, "The Effect of Stroke Type on the Tone Production of the Marimba," *Percussive Notes*, 41, no. 3 (June 2003):

CHAPTER 5

Spectromorphology

5.1 Background on Spectromorphology

With our current harmonic language and analytical tools for analyzing western music, I believe that there can be an additional emphasis to theoretical methods for highlighting how musical gestures can be analyzed. This can be supplemented with the concept of spectromorphology. Spectromorphology is a concept from Denis Smalley, defined as a tool for describing and analyzing a listening experience. The two parts of the term refer to the interactions between sound (spectra) and the way they change and are shaped through time (morph).¹¹ Spectromorphology is not a theory, but another way to analyze a single element, in this case, gesture. This method allows us to discover how gestures can create structure and sound within music and how it all adds to the 'big picture' of the piece. While this concept is mainly analyzed through electroacoustic music, it can also be applied to acoustic instruments in Smalley's research. Smalley defines *gesture* as "A human agent produces Spectromorphologies via the motion of gesture, using the same touch or an implement to apply energy to a sounding body. A gesture is, therefore, an energy-motion trajectory that excites the sounding body, creating Spectromorphological life. From the viewpoint of both agent and watching listener, the musical gesture process is tactile and visual as well as aural."¹² For Smalley, the use of gesture is about an experience of the "watching listener." A massive part of that is psychological, meaning that the sound produced is not being changed. However, when the performer manipulates their gestures,

¹¹ (Smalley, *Spectromorphology: explaining sound-shapes* 1997)

¹² *ibid*

psychologically, the listener perceives the sound as something else, therefore, manipulated. How does this lead to being able to analyze gestures within music?

Smalley combined our psychological and musical understanding into three categories: onsets, continuants, and terminations. For each of these categories, Smalley has listed several diverse types of terms to describe the expectation one would have when one hears a phrase in the music related to the three distinct categories. For example, when analyzing, at the start of a given piece or phrase, one would hear/analyze an attack, (an onset). The music would continue into what can be seen as a statement, (a continuant). Then, that statement can be maintained as (another continuant). Next, it could transition, (a final continuant), into a release, closure, (and termination). This music section could be anywhere from a phrase to a whole movement, but the purpose is that we are given a piece of music that fits outside the conventional analysis. Harmonically means that it does not function in the system that we currently have as well as structurally, it may not fit a standard form. But we still want to be able to analyze this piece. By doing this type of analysis, we have created either a form of structure or a harmonic basis to proceed, and we can continue analyzing the music in a direction that this concept has led us to see. Since this concept is not rigid, in the same manner, that the individual notes c, e flat, and g make up a minor chord, analyzation may not always derive the same outcome. This realization can be both expanding and proving a hindrance. It allows the analyzer to seek new options, but it can also be challenging to pursue

others to see the pattern that the original analyzer may see. I see the positive in this type of analysis while still acknowledging the flaw of this concept.

<u>onsets</u>	<u>continuants</u>	<u>terminations</u>
departure	passage	arrival
emergence	transition	disappearance
anacrusis	prolongation	closure
attack	maintenance	release
upbeat	statement	resolution
downbeat		plane

Figure 3.1 This chart comes from Smalley’s article, Spectromorphology: explaining sound-shapes.¹³

Smalley continues to expand the concept beyond this chart, but for the analysis for this research, we will stick to the basics of this concept and stay with this chart to help analyze *Midare* (1972) by Ton de Leeuw. Understanding that different gestures can have different impacts is crucial to understanding this concept. This way of organizing different gestures helps the performer understand how they can navigate through the music, both in a visual and musical direction, and then how that can translate to the audience. The following examples will be examined through my interpretation of how to utilize Smalley’s theoretical concepts for analyzing traditionally notated music. All analysis will be my own and will interpret the concepts of spectromorphology and several possibilities of functional ways to use this theory. From these

¹³ *ibid*

analyzes, I will discuss how the musical gestures can help inform the physical gestures for the practice and performance of these works.

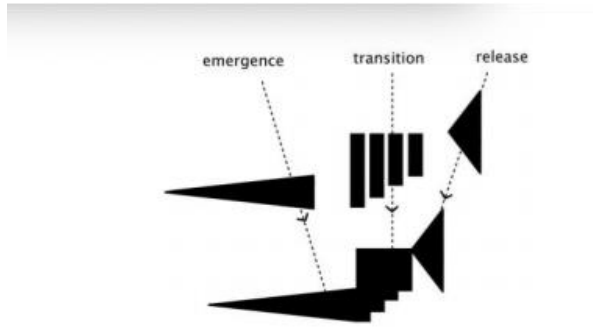


Figure 3. Sound unit – emergence, transition, release.

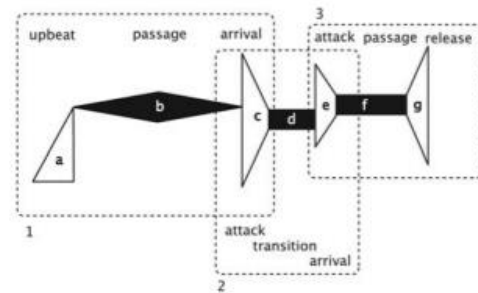


Figure 5. Dual functionality in a morphological string.

Figure 3.2 (Blackburn, *The Visual Sound-Shapes of Spectromorphology: an illustrative guide to composition* 2011) This chart is from an article by Manuella Blackburn. She has taken the concept of Spectromorphology and added visuals to the words, helping guide the readers to visualize the concept from Smalley.¹⁴

5.2 Analysis of *Midare*

Moving onto the analysis, we will start with the marimba solo *Midare* (1972) by Ton de Leeuw. This solo is inspired by Japanese traditions and uses a mix of traditionally notated music and some graphical elements. We will be looking closely at how different stroke types (full, down,

¹⁴ (Blackburn, *The Visual Sound-Shapes of Spectromorphology: an illustrative guide to composition* 2011)

tap, up) can help elevate and allow the performer to display to the audience not only what is happening on the page but what it looks like.

The image shows a handwritten musical score for 'Midare' by Ton de Leeuw, annotated with performance instructions and stroke markings. The score is written on a single staff and is enclosed in a large, hand-drawn inverted triangle. The annotations include:

- arpeggios** (written in blue) with **Down** (written in blue) below it.
- up** (written in blue) below a group of notes.
- gliss.** (written in black) above several slanted lines.
- Down** (written in blue) below a group of notes.
- Tap** (written in blue) below a group of notes.
- up** (written in blue) below a group of notes.
- Down** (written in blue) below a group of notes.
- PS.: no glissando, but free intervals, e.g.** (written in black) at the bottom right.
- Don 0050** (written in black) at the bottom right.

The score itself features various musical notations, including notes, rests, and slanted lines, with some notes circled in red and others in green. The overall style is that of a personal performance analysis or rehearsal score.

Figure 3.3, self-analysis of *Midare* by Ton de Leeuw

At this point, these stroke types will always be utilized in a percussionist's area of playing as they make up the essential elements of our technique and how we play our instrument—understanding that these strokes in these specific moments should be emphasized for this type of analysis to create more of a visual moment. While movements do not separate the solo, each page has a different theme and displays a new concept that the composer tries to convey. Looking at

example 1, I decided to focus on not only the shape, (as it does get smaller towards the bottom, which should be a clue to the performer for a gesture), but as well as how the chords are indicated; either you 'ripple' the notes from high to low or low to high depending upon the arrow in place before the given chord. Between each cell of notes, a suggestion is given to the performer with instruments to move to the next cell. This moment is an excellent opportunity to utilize the stroke types for these in-between moments already notated, meaning the performer would utilize the stroke type requested in the ripple of the chord. If the chord indicates to play from low to high, they will utilize an upstroke, and if from high to low, they will utilize a downstroke. Not only does this help the performer with the direction of their momentum, but it also leads the audience to visualize the mobility present on this page. Each line ends with a comma, and as noted, the performer should pause after each comma. This would also be a suitable time to utilize the stroke types as more of an exaggeration to allow these phrases to have forward momentum even though the performer is pausing after each. By adding in this additional movement and stopping in whichever position they choose to utilize, (what I have added in terms of strokes can be used as a guide, but it would be up to the performer for how they would want each line done), allows the listener to hear a separation but also expect a continuation until the last line where I do believe they should utilize a solid downbeat, which would symbolize the momentum ending. In the next part of the solo, we will utilize both stroke types and spectromorphology, but this time, basing the stroke types on the methods of spectromorphology.

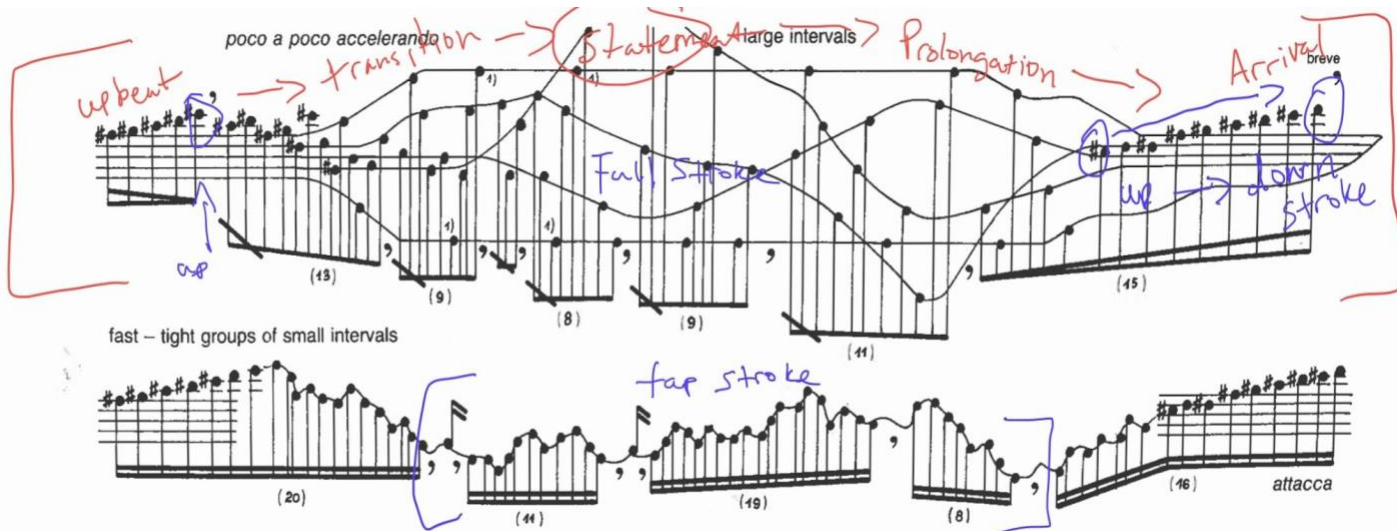


Figure 3.4, self-analysis on *Midare*

In this example, Leeuw has again mixed traditional notation with graphical elements, giving the performer a guided start, an interpretive middle, and a conclusive end. Therefore, the performer can expect to know how it begins and ends, but they must decide how the middle section connects the other parts. This is the process for both lines of the music, and in this case, we will only discuss the first line. For this selection, we will first look at how spectromorphology can divide this music into sections based on the visual aspect, which can help guide the performer to phrasing and mobility in performance. For me, the first gesture of music is an upbeat phrase that leads into a transition from the notated to the graphical. Visually, my eye is drawn to the middle of the line, where there is a stem at the highest point with no notehead. This point is where I section this part off as the statement, which then moves into a prolongation of both the 'statement,' which morphs back into the transition section from before, into an arrival point that mimics the beginning. Now that I have divided this line of music into sections, I go in with the stroke types and see where I can place them appropriately and where I need an extra visual element. After the upbeat into the comma, the player should stop on an upbeat to emphasize the break and the continuation into the line of music. From there, they should return to a normal playing position, but start to open visually

into very visually active full strokes at the peak of the statement. Then reign it back in, moving towards an upstroke to mimic the beginning; but since it is the end, ending on a downstroke. By utilizing these two analytical tools for this piece, the performer can better understand how they want the piece to sound and how to present it to their audience and give them a more active experience with the music as it unfolds.

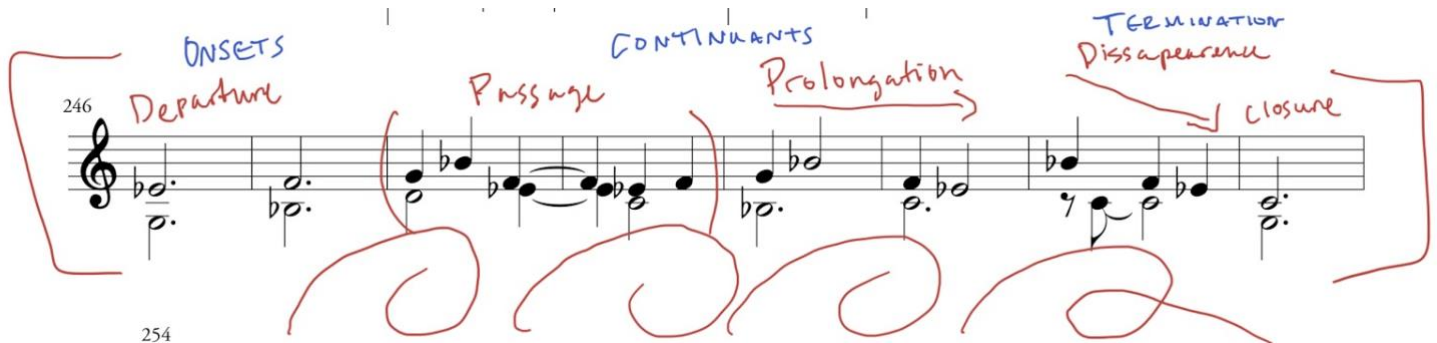
5.3 Analysis of *Bloom Suite*

For our analysis, we will start with *Bloom Suite* (2014), Movement 3, a marimba solo by Eliot Cole. For this piece, we will use some of the concepts of spectromorphology as one way to analyze this piece. I am interested in the idea of gesture through duration and how that also plays a role. We will look at one line from the movement as it sums up the details needed for both concepts to be discussed. We will start by utilizing spectromorphology as a means of analysis. Below showcases how I have self-analyzed a singular line employing onsets, continuants, and terminations as seen in Figure 3[1]. I have also added a visual element to go along with that to help aid the words associated with the notes. In measures 246 and 247, I have those as the beginning of my onset and have them described as my departure moment as they make a singular attack and move into the following phrase. The subsequent four measures are notated as the continuant section. The first two bars of that section are described as the passage, and the two measures after that are a prolongation. The section marked ‘passage’ is where the gesture starts to pick up, as we get a moving line that directs the listener's ear into a cyclical motion. The visual I have inserted underneath that passage represents this motion. The movement of that line then ‘echoes’ into the section I have marked as ‘prolongation’ but with a slightly different rhythm and diminution. The prolongation then moves into the ‘termination’ section, with one bar as the

disappearance and the next as the closure. For the measure labeled as ‘disappearance’, the same B flat, F, and E-Flat lines are echoed one more time. This is falling away into the resolution of the line, landing on the C and G chord, which has the most ‘secure’ sound of the line. This is something the listener would be able to hear and recognize that the line has ended. This type of analysis leads the performer to play with more intention and, therefore, more gestures. By creating an intentional connection through physical movement to the motion in the music, a less effective sound would be portrayed if none of this information was apparent.

The next area of gesture I would like to analyze is where duration and gesture collide. This piece asks the player to produce a duration they cannot control (playing static chords on a marimba), so the performer must use physical gestures to portray an illusion of duration to the audience. I want to use the performance practice of the different stroke types from earlier in this paper. We will utilize the same line in the music for this analysis. Below, I have utilized the four different stroke types and labeled each section with a particular stroke as seen in figure 4. When it comes to performing, the stroke becomes much more than a movement of the wrist but a notion throughout the whole body. This player has been given the challenge of being able to "control" the different durations of each chord on an instrument that does not allow the player to do so without the use of tremolos. The best solution is to make the audience experience the duration through the gesture of the mallet. This gesture is like how a string player moves their bow in different directions and plays with the listeners' eyes for how they hear that motion occurring. In the first measure, we start with an upstroke. This gesture initiates the motion and allows the performer to utilize all three beats from attack to fulfill the stroke to the next beat, which is a down stroke. The same idea applies here; the player should attack and use the remainder of the measure for a motion to make the audience feel as if the sound is still moving. The following two measures are marked as full

strokes. There is more motion in these measures, so it is less about duration and more about movement. The player can utilize the full movement to move the shape of the lines then and address the duration when needed. The last four measures are marked in a way that shows a decaying effect on the final line. By keeping the motion active, the sound is still alive to the listener, but the melodic line is now highlighted and can be seen and heard by the listener.



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Figure 3.5, self-analysis with Spectromorphology of *Bloom Suite*, Movement 3, Eliot Cole

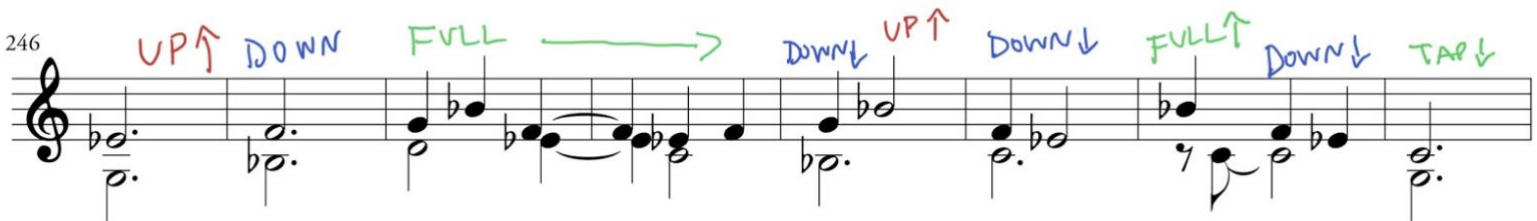


Figure 3.6, self-analysis with stroke types of *Bloom Suite*, Movement 3, Eliot Cole

5.4 Analysis of *Boomslang*

For the following analysis, I will use *Boomslang* (2007), a marimba solo by Roshanne Etezady, to portray gestures through imagery, which means that certain gestures within the music can lead the audience to create specific imagery while listening and or watching the piece. The

opposite is also true; when an audience member reads about a particular piece, their imagination can start to perceive the music. Does their perception change when they discover what a piece may be about? This solo can elicit both responses for the listeners. Listening to the piece without preconceived notions allows the listener to hear the repetitive gestures occurring in the music and they can get a sense of the image associated with the piece. Then, if the listener did understand what the piece was about, they would quickly see that image when watching and listening to the performance of it. For this piece, the image is in the title, *Boomslang*, a type of snake, a powerful and deadly snake with an unforgivable bite. Looking at the excerpt of music, see figure 6 below, it is marked “insidious”, while the performer is told to play the passage smoothly and uninflected. When learning the piece, if you think about how a snake moves, it moves very smoothly, and it does not have much inflection but instead goes in its path winding its body to move. This direction from the composer invites the performer to see the image they need to portray. I have analyzed the music using three distinct types of musical gestures. The notes circled in red are of a five-note grouping, the notes circled in blue are of a six-note grouping, and the notes circled in green are a seven-note grouping. However, the seventh note indicates a different type of gesture that the performer could explore. These three gestures are a part of the components that make up the entire piece. In figure 5, you can see how this gesture returns by transitioning through different keys. You can also notice that it is not an exact match of the beginning, but rather in a different order and without the third gesture until the first measure of the last line. The green section's image shows the possibility of an "attack,". But figure 5 is so important because it shows the final "attack," and then the piece wraps up quickly. The red and blue circled notes are the implied movements made from the idea of this snake. Every time they occur, the listener should get back to the feeling of smooth and uninflected, as they did from the beginning. If the performer

understands this gesture, it can be communicated to the audience, and give them an enhanced experience with the piece. While I have analyzed this piece through the image of a snake, it does not mean that every audience member will experience that image. The point is for them to create one, and that is where the importance of analyzing gestures is realized.

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The image displays three systems of musical notation for the piece 'Boomslang'. The first system, starting at measure 176, features a treble clef and a bass clef. The bass clef part contains a complex rhythmic pattern of eighth and sixteenth notes, which is annotated with red and blue curved lines. The second system, starting at measure 180, continues this pattern with similar annotations. The third system, starting at measure 183, includes the instruction 'poco accel.' followed by a dashed line and the text 'Yet faster'. The bass clef part in this system is annotated with red and blue curved lines, and the dynamic marking 'f' is present. The piece concludes with a final measure marked with a double bar line and the number 16.

Figure 3.7, self-analysis of *Boomslang*

Insidious

♩ = 90-100

Marimba

Figure 3.8, self-analysis of *Boomslang*

CHAPTER 6

Application of Physical Gesture

This chapter will explore how to use gestures as a functional musical element. I will start by outlining each standard articulation we most come across in percussive music and how we can accommodate each articulation with a gesture. As we have four principal playing areas, I will divide this chapter into a focus on marimba/keyboards, timpani, and a combination of snare drum and multi-percussion, as there is a small amount of crossover between the two areas. While there will be some crossover due to techniques being the same across most of these instruments, there needs to be a separate discussion for each instrument group for clarity. There will be a chart that condenses the explanations into a singular table for a more concise overview. When discussing these articulations, they will draw from earlier discussions about the different stroke types, which will remain the basis for both marimba and snare / multi. Timpani will cover a different area, which will be discussed in the specific Timpani section.

As gesture starts from the stroke types and physical movement of getting in and out of a phrase, these descriptions will not always be expression minded, but sometimes just a reminder of how the anatomy of our body can assist us along with gestural elements in creating a variety of tones across these instruments. For the performers, it is essential to remember that the preparation of the attack is for us to experience, while the release is for the audience to experience. Mallet choice will also play a factor in articulations, but as this is a focus on how the visual aspect helps distinguish these notes, I will not be going into depth on this topic. Mallet choice is a separate tool to achieve the desired sound quality, but we must make good sounds first, which comes from the gestural aspect before mallet choice considerations. These gestural elements combine what I have

utilized in my performance and what I have found to be effective when teaching. My students and I have experienced remarkable success from utilizing these methods, but they are still only a suggestion to one approach of playing and teaching. While this suggests specific movement patterns for specific articulations and phrasing, the goal is not to make everyone move in the same manner or have the same kind of expression. Allowing musicians to gain control and confidence in making more conscious efforts to provide a variety of articulation and timbral elements when performing is the goal. There will be musical moments that elevate from these concepts, but there may also be times when this does not always apply to a specific piece. However, the point is that we have a process to continue to make us more musical percussionists.

6.1 Marimba and Keyboard Percussion

The marimba has been a standard instrument for percussionists since the early 20th century, and it is often thought of as the larger version of a xylophone. While they are often made of the same material, their sounds are distinct. The marimba has resonance properties, but with its wooden bars, only so much can naturally resonate. Some of the more popular marimba manufacturers are trying to develop a marimba with a rich resonance, but with the roots of the marimba evolving from a wooden instrument from African countries, the abundance of resonance on this instrument detracts from its initially intended sound. Other manufacturers, such as Yamaha and Mallettech, celebrate the marimba and the resonance it was intended to have. The marimba's popularity rose with virtuoso performers such as Keiko Abe, Gordon Stout, Leigh Howard Stevens, Michael Burritt, and Nancy Zeltzman and their push to expand the repertoire and range of the instrument. The repertoire that was available in the 1980s was not serving the instrument or

performers on a path towards growth, and with the range restriction of the marimba at that time; typically, just a 4-octave or a 4.3 octave, we were not able to achieve a more significant depth of sound that we now have access to with the more common 5-octave marimba that has become a standard across all universities and beginning to make its headway into the high schools across the country. This increase in range was led by marimbaist and composer Keiko Abe, along with the help of Yamaha, through workshopping new variations on how to achieve that extended range that is now a standard for the instrument. We also witnessed a rise in percussionists writing music for the instrument to help increase the amount of repertoire available to emerging percussionists. With this inclusion, we also started seeing separate ways to notate music. Some composers added a plethora of articulations, while some left them out or were scarce with them. This contrast in writing started the mindset of not worrying as much about articulations, leading us to use gestures for clarity among these pieces.

Marimba is one of many melodic instruments that we have. However, being that it is one of the more popular instruments, with collegiate degrees dedicated to its performance, it provides a great musical source to connect to regarding gestures and articulations. The vibraphone (“vibes”) is another keyboard instrument, but the significant difference is that we have more control over the resonance of this instrument. It is made of metal bars and has a dampener pedal controlled with our feet to give us the option of sustaining. Traditionally, vibes can be heard in many jazz settings, but recently it has become more of its own voice, with composers creating different extended techniques to be used on vibraphone. While this instrument allows more control over the resonance, many of the gestural ideas presented apply just as much to this instrument. Pitch bending, using tin foil, and playing on the various parts of the instruments are just a few things that have become more common with more modern vibraphone solos.

Xylophone is another popular instrument for the percussion family but is the most well-known to the public. This instrument has the least amount of resonance compared to marimba and Vibraphone. However, it appears commonly in the orchestral and band setting to accompany more articulated lines in the upper winds and strings. It rose as a popular solo instrument in the 1920s with ragtime and radio talk shows featuring xylophonists such as Teddy Brown, performing with extreme precision and impressive abilities. Percussionists today mainly recognize xylophone for its audition requirements with orchestral excerpts such as *Porgy and Bess*, *Appalachian Springs*, and *Exotic Birds*, which still emphasize extreme precision and, at times, impressive abilities.

The last primary keyboard instrument in the percussion family that I will discuss is the glockenspiel, which descends from roots in European settings but can be traced back to too many versions of tuned metal bars in different Asianic settings. This keyboard is much like the vibraphone with the exclusion of the pedal, which can present some challenges of its own. This instrument naturally has resonance, but without a pedal to control it, we are often left with decisions on damping the instrument when needed. More recent models from Yamaha and Adams that are often used in the marching band setting have now included the addition of the pedal, which in that setting is especially useful. The pedal can carry over to the ensemble setting. This instrument is primarily seen in the orchestral and band setting, like the xylophone. However, it has recently begun to have solo literature written for it, such as *Spiel* by Andy Akiho, which features playing on the instrument with wooden dowels while doubling on each note. In terms of the select solo literature that has been written for this instrument, it is centered on the display of extended techniques, much like modern vibraphone literature.

Each of these percussion keyboards presents its advantages and challenges, but we can all benefit from taking the extra step of being intentional with how we approach and leave any note

or phrase. This expansion of these more common articulations with how to approach them is meant to act as a guide to help each performer and teacher better translate the musical intent of any given piece they are working towards. This concept is not only about adding more expressivity with our gestures but, a gaining functionality that can provide greater musical intent.

Accent

The *accent* is an emphasis, stress, or more vigorous attack placed on a particular note, set of notes, or chord because of its context or specifically indicated by an accent mark. The result of context is about *agogic accents*, but for this topic, we will only be focusing on the specifically indicated accents. The accent is a simple articulation that requires more emphasis within the grouping to help the indicated notes to emerge. Accents are prevalent in many musical contexts and are no exception in marimba literature. Performing them on marimba and other keyboard percussions should be initiated from the wrist with more force on the downward motion to get a more pointed attack. We want to ensure that we are not adding any extra weight or heaviness to the stroke, so we need to be mindful of not using the arm as that adds extra weight to each stroke. Accents on keyboard percussion can end with a downstroke and a full stroke. If we are getting a slight emphasis and the gesture from the motion of the wrist is utilized, the sound and perception should align, creating not only an auditory emphasis but a visual one as well.

Staccato

When asking students about their definition of staccato, they often do not agree with the definition of the term. For this research, we will define *staccato* as "A style of playing notes in a detached, separated, distinct manner, as opposed to legato." There can be a few variations to approaching this articulation type on keyboard percussion. The first is the approach that is more common among students and performers. By taking the same approach as the accent but making

sure to stay at the indicated dynamic level. Staccato is about the length of the note, not adding stress or dynamic emphasis. Staccato notes in this manner should be performed with a quicker upstroke, which allows for a brief pause at the top of the stroke that can emulate the stopping of the note itself from the visual perspective. This articulation can be possible with more emphasis on the front of the fulcrum grip, which causes more pressure and can help aid in a more pointed attack without adding more weight or force to cause a dynamic shift. Another alternative approach to interpreting staccato notes on keyboard percussion is through dampening. This technique is standard vocabulary in the vibraphone note-dampening. Visually, this has a similar effect to the stop motion at the top of the quicker upstroke, but this time at the bottom of the stroke with stopping the mallet's motion. Dampening on marimba in this manner is called a "dead stroke," so this is not a new idea, but pairing it with the staccato articulation could be an innovative approach for some. One of the more confusing issues with the "dead stroke" vs. staccato articulation is that in the past, they have been written utilizing the same notation; both have a singular dot above the note. One alternative I advocate for is to place an 'x' over the stem that is being 'deadened'. We can see this in the example below. This allows for a distinction between the two styles and eliminates any confusion with the other.



Figure 6.1, "dead-stroke"

With the use of dampening on the marimba, we can achieve a few options for the sound we desire. Dampening the marimba is done by pressing the mallet head directly into the bar,

eliminating any rebound we would typically get with a standard stroke. Through this technique, we can have varying degrees of how hard we press into the bar. The first variation is achieved by gently pressing the mallets into the bar. This motion allows the sound to stop without adding any unwanted extra articulation, such as an accent. This variation would be appropriate in the mezzo-to-piano range as it gets more challenging to control the unwanted articulations from a higher velocity, which is found in louder dynamics. This method is best for the medium to slower tempo ranges, as the mallet control can be more challenging at faster tempos. By using the whole mallet head, you are still getting complete contact with the bar and maintaining a fuller sound quality as you are manipulating the length of the note.

The following method is meant for when you need either a shorter note than the first method can produce or a more pointed and accented note. This method is done by quickly pressing the top half of the mallet firmly into the bars, which can also be done at a slight angle to eliminate more of the mallet's surface. This method of dampening is closer to the "deadened" sound that is asked for in a dead stroke but is also great for when you need to add more force to the note or chord. By removing part of the mallet surface area, you are also decreasing the amount of the mallet contacting the bar, which also helps to shorten the sound of the note and produces a drier tone quality. Due to the faster-paced nature of this method, it can be achieved in various dynamic and tempo ranges. The last method is the marimba equivalent of using a dampener pedal on vibraphone, but instead of using a pedal to dampen the sound, we use our mallets. This method is to get a full sound quality and adjust the length of notes at the same time. This variation is more of a two-step process. The first step is to play the note or chord as a normal rebounded stroke, but keeping the mallets lower to the instrument, and then at whichever dictated time, to dampen all notes very gently without it being audible. By nature, this method is much more sensitive. With

the two-step process, it is more successful in a slower-paced setting at the softer range where we want to play around with note duration without having to add anything extra such as a roll. But this also allows us to have a variety of shortened note lengths in any passage. Visually, each of these methods portrays the visual communication of shortening the note; we can add more emphasis with the help of our upper body and give ourselves the time to move in the duration of the note being played. This significantly helps to align the visual with the audio since this method does change the sound rather than just relying on perception.

When performing staccato notes on Xylophone, Vibraphone, and Glockenspiel, we can utilize the methods listed above. However, there can also be other considerations for these instruments and their specific sound qualities. The xylophone already has a shortened and brighter tone quality, helping this articulation. However, we should still be mindful of approaching staccato phrases with quicker upstrokes to continue to emulate the shorter note length. Dampening on the xylophone is less recommended due to the combination of the hardness of the xylophone mallets and the natural articulation of the bars, making it easier to produce a buzzing sound. Sometimes, dead strokes are written on the xylophone and should be performed as such, but I consider the more pointed attack rather than attempting to dampen the xylophone. The use of dampening technique is common on vibraphone, so that should be maintained. However, for the clarity of the note, we should equivalently treat vibraphone as the same as a xylophone and opt for the quicker upstroke rather than a dead stroke or dampened note. While if appropriate and the sound quality matches the composer's intent, then mallet dampening could effectively achieve this articulation. Within the vibraphone technique, mallet dampening can be used to elongate notes by adding grace notes, so we must understand the two distinct concepts. We can also utilize the dampener pedal to assist in shortening the notes to the desired note length, along with the quicker upstroke to tie in

the visual aspect. With the pedal, we need to be mindful to pedal with careful intention and not to add any extra noise or visual confusion. With glockenspiel, this will also be like a xylophone in that dampening on this instrument can cause an unwanted buzz from dampening if we are not careful. Another option is to dampen with one hand if the passage is playable with only one hand. This can give us our desired note length.

I will also add that dampening and dead-strokes should remain separate tools. When working through articulations, they can be a means employed by the composer to try to emulate the idea they had in mind. Articulations can also add variety and complexity to these works. Our jobs as performers are to honor their intention and portray them as best as possible. With articulated staccato notes, dampening can allow for an option to alter the note length. While with written dead-strokes, that is the notated intent of the composer and should be treated as such.

Tenuto

Tenuto notes indicate that the given note should maintain its total value or slightly longer if there is added rubato. These notes should be connected and smooth in inflection with more of a rounded and weighted sound. This articulation will rely more on the gestural aspect considering a singular stroke on the marimba since we cannot physically elongate the resonance of that sound. Movements should focus on the arm motion when approaching these articulations, as that provides the necessary weight to carry the note for the sound quality. Visually, leading with the arm is a heavier motion than a wrist-based stroke. While this stroke is still initiated by the wrist, utilizing the motion of the arm from the head of the mallet should lead the wrist to and from the attack. When producing tenuto, we want to avoid any pointed and overly articulated sounds to maintain the smooth and rounded quality of the note. Starting from the attack of the note, we want to keep in mind how we move after the attack, as this leads to the visual perception of the note from the

audience's perspective. We should move during the note's duration to maintain the visual focus on connecting to the sound with our body emphasizing the length. This can be done at various tempos and dynamics, but keep in mind that the faster the tempo gets, the more condensed we will want to make our movements so as not to interfere with the timing of the music. The visual should never interfere with the written music and intent of phrasing but should elevate what is trying to be conveyed.

This technique applies directly to the vibraphone, with the addition of the pedal, this should and must be utilized as written. While the glockenspiels' natural resonance helps with the connection, there is still an articulated brilliance that comes from the upper range that this instrument is set in. We should be aware of this and approach the tenuto strokes from a more weighted stroke to eliminate the pointed attacks naturally present on this instrument. Xylophone is the most complicated instrument for this articulation. However, as with glockenspiel, we need to maintain a heavier, weighted stroke to provide a fuller and more rounded sound quality that will also match visually.

Marcato

Marcato is similar in style to the accent but with an added heaviness. This articulation is a more accessible articulation for percussionists as it deals with an elevated dynamic verbose, along with an added weight. This stroke should be articulated the same as the accent, with an emphasis on the wrist and more added velocity to the stroke, but instead, if it is only coming from the wrist, we should add the addition of the arm at the end of the stroke for the needed weight. This is a stroke that we should feel in the entirety of the hand. Gesturally, this should be a heavier motion than the accent due to the addition of the arm. The rebound should emulate a slight pause at the bottom of the stroke to visually represent a more weighted stroke. The stroke can then can either

fully rebound or stay at the lower end depending on what comes next dynamically. This should also be maintained for the other keyboard percussion instruments, as they do not require specific alterations for this articulation.

Legato / Slur

Because they are similar in concept, the legato articulation and tenuto articulation are often combined, but there are a few differences between the two. Legato focuses more on smooth and connected phrases rather than individual notes. With this articulation, we must think of it as a group of connected notes, and the motion of playing them should emulate that concept. These strokes are also slightly lighter than the tenuto strokes. Keep the stroke focused on the back of the fulcrum to eliminate any pointed articulation. This stroke will still be initiated from the wrist but should be controlled from the arm. Every phrase of legato notes should be achieved with a fluid motion from the arm, while the wrist helps maintain the lightness that comes from the desired tone quality. There should be no limitations with dynamics or tempo ranges with this articulation. Visually, we are focusing on the smooth and connected movements from the arm, and it should look as if the notes in these phrases all move together. For xylophone and glockenspiel, the same approach applies. For vibraphone, the same approach is used for the playing and visual aspect but remember that the pedal can help tremendously by pedaling through the marked slurs, which indicate legato articulation. In vibraphone music that does not have the pedaling at the bottom of the staff, it can also be indicated through slur markings when applicable.

Fermata

Fermata is a standard notation marking indicating that any note or chord should be held or extended, at the performer's discretion. To perform a fermata while striking a single note or chord on the marimba, we should strike and hold the position that we just struck, as if we are

emulating, holding down the pedal on a piano for a sustained moment. This is a method that a former teacher of mine, Nancy Zeltsman, often discussed when approaching moments that needed to be held visually. This method applies very well to fermatas and can be combined with any desired tone quality. This motion of sustain should be held from the upper body emphasizing the weight of the arms. The idea is that visually, we are holding the moment as if we are still in the phrase we just performed. The release of that phrase indicates that we are moving on musically and that the held moment has ended. This articulation relies heavily on the visual aspect to communicate the musical intent. This technique still applies to xylophone, glockenspiel, and vibraphone. It should keep in mind the ability to utilize the pedal for the vibraphone and how it affects the sustain. A good rule of thumb is to hold visually if the bars are sustained to coincide what we hear aurally with what the audience sees visually happening as we are on an instrument with more control in the sustain compared to the other three instruments.

Breath Mark

The Break Mark, another variation of a pause in the music, should be distinct from the fermata. This notation marking is not concerned with holding the length of the note but instead adding a pause or break in the phrase. As this is a break in the phrase, we should think about taking a physical breath and lifting away from the last motion. This motion should come from a combination of the wrist and arm to portray the movement and feeling of taking a breath. Again, the articulation that the last note or chord was played with does not have to be affected to portray the lifting and breath-like feel that comes from visually coming off the instrument. This applies to xylophone, glockenspiel, and vibraphone, but you should note that utilizing the pedal will also lift to match the gestural aspect.

While many of these articulations are susceptible to change within the context of the music, these explanations should guide how to manipulate the sound qualities we can produce on keyboard instruments from a gestural standpoint. Accessing the anatomical tools, we have to work with, can help the audience perceive a different sound visually and audibly as well.



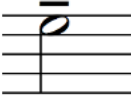
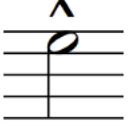


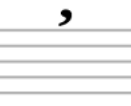
Marimba				
Articulation	Image	Definition	Area of Body	How to Achieve
Accent		A stress or special emphasis on a beat to mark its position in the measure	Wrist	The accent should come from an emphasis on the wrist stroke, a quicker motion compared to a normal stroke. Front Fulcrom emphasis.
Staccato		A style of playing notes in a detached, separated, distinct manner, as opposed to legato.	Wrist / Front Grip Pressure	Staccato on marimba has two options depending on the music, first is similar to the accent approach, but even quicker on the up stroke, or to fully dampening the note with a "dead-stroke". This should be done by pressing the mallet into the bar, but being careful to not smudge the note, but to fully stop the sound.
Tenuto		A directive to perform the indicated note or chord of a composition in a sustained manner for its full duration, or slightly longer with rubato.	Arm	More emphasis on the arm for this stroke to eliminate the pointed articulation from the wrist, mallet should lead the stroke and should emulate the length of duration.
Marcato		Indicates a short note, long chord, or medium passage to be played louder or more forcefully than surrounding music, more than an accent.	Wrist with weight from Arm	Similar to the accent, but adding a bit more weight from the arms for a heavier sound and feel. Should feel this in the whole hand.
Legato / Slur		A directive to perform the indicated passage in a smooth, graceful, connected style, as opposed to staccato. It is often indicated by a slur over the effected notes.	Arm with support from Wrist	This stroke still comes from the wrist, but is much more relaxed and focused on a smooth an connected motion, which comes from the arm. More emphasis on the back fulcrom.
Fermata		A notation marking directing the performer to sustain the note of a composition affecting all parts and lasting as long as the artistic interpretation allows.	Arm and Shoulder	This stroke should be held as if you were holding down piano keys. Keep it low to the instrument to emulate that the music is still happening. Should be a heavier stroke with weight from the whole upper body.
Breath Mark		A directive to the performer to break the phrase at that point in the composition and breathe, thus assisting in the production of a smooth phrase.	Wrist and Arm	This stroke is a lighter break compared to the fermata. This should have lift from the arm rather than a heaviness. The wrist will still provide articulation while the arm provides movement.

Table 6.1, Marimba articulation chart

6.2 Timpani

Historically, the origin of timpani is found in Western Europe during the fifteenth century. The drums were used on horseback as "calvary instruments by the Muslims, Ottoman Turks and Mongols." (BECK) Through this exposure, the drums eventually made their way around Europe and into the courts of many royal families. Earlier composers often paired them with trumpets, and they often became an exclusive group of performers for kings and other high-ranking royalty of the time. Eventually, they moved indoors and onto the orchestral stage as they rose in prominence. The move indoors and improvements in design and manufacturing allowed them to be permanently stationed on the floor while increasing their size, range, and ability to achieve multiple notes per drum. Timpani continued its development with upgrades in tuning mechanisms, pedal varieties, types of material for the heads, and mallet choices, all leading to improving the overall tone.

Timpani is melodic and resonant, unlike most other drums in the percussion family. The way to achieve a characteristic tone on these drums is unlike any other instruments we perform on. However, making great tones across timpani only helps develop our ability to achieve a high-quality tone across the rest of the percussion instrument family. While most of the literature for timpani has been focused on the band and orchestral setting, there has also been great popularity with etude and solo literature for timpani. While the etude literature provides excellent focus on technique and skills required to develop performance standards on the instrument, the solo literature is divided into two types; the first is focused less on the expressive quality of the drums and more on exploring fast and exciting passages across the drums. While many skills are needed to perform these works, they are often performed too fast and overplayed due to a lack of understanding of the proper tone production on timpani. The second type of solo literature

followed a similar path as vibraphone and glockenspiel literature. It focused primarily on extended techniques for timpani, often playing in the center of the drums, playing on the bowls, using rattan rods on the rims, and other techniques. Some may argue that this style of etude also lacks a focus on the quality of expression of tone on the drums. However, it allows the student to explore new sound concepts that are unique to the timpani, leading to a great appreciation of the diverse qualities the drum can provide. One of the more infamous works for timpani and still a standard in the literature is Elliott Carter's *8 pieces for timpani*, which explore metric modulations and different tone colors. At the same time, it still requires excellent technique to truly elevate these works. Timpani will always serve a vital role in the ensemble setting. However, as more works for solo literature flourish, we will find more opportunities for timpani outside of the ensemble.

While with keyboard percussion, snare drum, and multi-percussion, share a common technical approach, timpani enlist a different approach to tone production. The grip for timpani can be the first divisive element in the discussion. There are three common approaches to timpani grips: German, French, and American. The German grip is designed to transfer the skills from snare drum and 2-mallet playing to timpani. This grip is held with palms facing flat to the floor and utilizes the wrist in a "door knocking" manner. While a few great timpanists utilize this grip and make a professional sound, as well as being able to make an excellent argument for easy transfer for younger students, percussionists, and educator Mitchell Peters makes a statement regarding German vs. French grip, "It must be pointed out that the entire concept of touch and tone on the timpani is quite different from either snare drum or mallet instrument. The snare drum is a staccato and smaller instrument, whereas the timpani is a resonant and much larger instrument." (PETERS) I agree with Peters on this concept. For the French grip, the fulcrum is still the same with the first joint on the index finger and thumb, but the thumb should be faced upward, and the

stick's motion should be an up-and-down rotation from the wrist. With the French grip, the fingers are loosely placed around the stick and aid in facilitating many of the intricacies of the motion as you develop the basic approach to the grip. American grip is considered the amalgamation of German and French but still comes from a "relaxed" version of either grip. For this research, we will focus on the French grip and the different stroke types that result from this grip. As an educator, I understand the ease behind German grip being able to transfer over more efficiently for many students. However, when the grip is only framed from that point of view, many qualities that are attractive about the German grip are often lost. Framing technical performance on timpani in the same context as the other standard percussion instruments is when we lose sight of the different technical demands needed from the timpani. Timpani requires a complete understanding of producing a tone quality with touch and sensitivity that many beginner percussionists need to comprehend. My other issue with the German grip is that it facilitates downstrokes and the added tension that comes with downstroke production, rather than lift, and the relaxed nature of the French grip, a crucial element needed to produce quality tone production on timpani.

The stroke types on timpani with French grip are based on the lift. When performing on timpani, we want to think about "drawing the sound out of the drums" with each stroke. The reason for lifting is to not interfere with the resonance and "allows the head to vibrate freely and produces the best tone." (BECK). These concepts of the stroke types will come from the methods of John Beck, Mitchell Peters, and Raynor Carroll. While Peters and Carroll simplify the stroke types with just *Legato Stoke* and the *Staccato Stroke*, I prefer teaching John Beck's concepts on *Slow*, *Medium*, and *Fast* lift. I like to utilize the concepts of the Legato and Staccato strokes and the three-stroke types for a well-rounded approach to understanding distinct types of responses to the drums. When striking the drums, we must immediately rebound from the drum; the required tone

and articulation determine the rebound rate. John Beck describes his three degrees of lift as such, "*Slow Lift* is achieved by using an arm motion which starts at the shoulder using upper arm, forearm, and little wrist. The mallet is then lifted from the head as if in slow motion. The results are a full, rich tone with little contact sound. The *medium lift* is achieved by using a motion that starts at the elbow and uses the forearm and some wrist motions. The mallet is lifted from the head quickly. The results are a quality tone with the appropriate amount of articulation. This is the most common *lift* and is used for most timpani parts. The *fast lift* is achieved using a motion that starts at the wrist. The mallet is lifted quickly from the head. The results are a staccato tone appropriate when a short percussive tone is required." (BECK).

Slow lift is best for long tones, such as whole and half notes. *Medium lift* is the most common stroke, best used with quarters, eighth, and triplets. A *fast lift* is best for when we need more articulation and best for sixteenth notes and beyond. As tempos shift, so should the stroke types. Legato and staccato strokes are built on the idea of the fast, medium, and slow lift but will focus on emphasizing the pressure from the fingers and fulcrum. While the focus has been on the stroke types, gesture still plays a role in performing on timpani. When performing timpani in the ensemble setting, much of what the conductor "hears" comes from how we approach and release the stroke. Whether the conductor is asking for a "drier" sound or something fuller and more resonant, we should make sure that we are also visually communicating the intent of the stroke. With our position being in the back of the ensemble, the perception of the sound will go a long way, but this will always be in addition to ensuring we are still achieving the fundamental tone qualities we are after.

Accent

Accents to be performed on timpani should start with the base of the fast stroke type. With the emphasis needed on the note, we will need to add some force onto the front of the stroke. This will be done by adding a small amount of pressure to the front fulcrum and a slightly quicker rebound than is natural from the drum. The accent should only slightly increase to the already established dynamic of the section. Gesturally, the upper body can aid in emphasizing the stroke. This will also help with the added force needed to change the tone production of the stroke.

Staccato

Performing staccato on timpani is similar in concept to performing an accent. However, like with marimba, we do not want to add any extra dynamic level with this articulation, so we want to avoid that added force from the forearms that came with the accent. This will be performed within the fast lift; we want a more pointed articulation with less resonance and can achieve that by tightening the fulcrum, which can reduce the amount of resonance that comes from the head. Because we are not letting the mallet fall into the head that would come from a medium or slow lift, this provides more of a harsher contact sound rather than a full resonant attack. Another solution to staccato notes on timpani is adding a muting element. As with keyboard percussion, we have the ability of muting on timpani. We should be mindful of distinguishing between the written notation and the intended effect of utilizing this for a staccato articulation. If one has a free hand, adding light pressure to the drum with that hand can also help remove the resonance, condensing the note length, or we can always add varying degrees of mutes to achieve the often requested "drier" tone that can come from staccato notes. Gesturally, performing staccato notes becomes effective on the quicker upstroke, allowing the mallet to pause visually and leading the sound perception to a shortened note length. Visually, we should also be mindful not to add extra motions or prep strokes when portraying shortened articulation. It clouds the visual perception and

can lead to a less pointed attack than simply dropping the mallet down and quickly bringing it back up. On an instrument that lift is significant for tone production, the visual representation of stopping the note can be tricky as we want to avoid adding unnecessary tension to our playing. However, there are moments when we can use that to our advantage to help communicate to the conductor and audience what we are trying to achieve musically, even if we cannot permanently alter the note length.

Tenuto

In contrast, tenuto on timpani is much more inviting of an articulation. With tenuto needing the total value of the sustain, not only can timpani more easily produce the required length, but visually, this works in our favor. To perform a note with a tenuto articulation, we base it from a slow lift, or in some cases, a medium lift would also work if slow enough a tempo. Let the mallet naturally drop into the head and follow the rebound off of the drum, ideally during the articulated note's duration. Allowing the mallet head to guide the attack of the note will add a slight front to the note, but in a complete and round manner that is desired from the tenuto articulation. Whether moving across drums or staying on a singular drum, we should still rebound in the space of the note length. This will cue the listener or conductor on that fluid and connected tone quality we are after.

Marcato

Marcato on timpani will come from a combination of an accent with some added weight from the forearms. This articulation should be performed with a medium to fast list, somewhere between the two styles, not to shorten the note length with the staccato stroke but to get the quicker rebound required for the slightly pointed attack. The forearms and the mallet head will guide the stroke, adding the extra heaviness required for the emphasized type of accent. The quickness of

the rebound will help shape the note more articulately. Visually, this will be like the accent, with added forearm heaviness.

Legato / Slur

Performing legato on timpani, we can point to Peter's definition; "Use a full, relaxed motion, and let the stick produce the sound. The greatest resonance is attained through relaxation of grip and motion." (PETERS). Legato will be similar in style to tenuto but in a lighter manner. We can achieve this through a medium-based stroke and should visually move with the phrase rather than the individual note. Emulating a fluid motion in the body will help portray the connection through the phrase of notes. This style of articulation should be the most relaxed and natural feeling articulation across timpani. We still want to hear the attack of the note, but it should fit right into the resonance of the drum rather than trying to achieve something outside of the natural resonance that the drum allows.

Fermata

Performing fermatas on the timpani involves elongating the sound by holding the musical moment. In the ensemble, this is controlled by the conductor, or by the timpanist in the solo setting. It is their job to understand how long to hold and how to represent that, especially for percussion through gestural means. On timpani, the preparation of the stroke is determined by the articulation of the passage, but for the fermata, how we treat the post-stroke is essential. This should come from a slow lift; in both scenarios of being under a conductor or as a soloist, we want to visually hold onto that moment until we are ready to release and move onto the following phrase. While lifting out of the drum gives the resonance and tone production that we are after, we can add a pause towards the bottom of the stroke and move more slowly to communicate the pause visually. If in a solo setting, consider the drum's natural resonance and respond accordingly. Sometimes, it

is practical to continue to hold the fermata past the point of natural resonance if it fits the musical moment. However, because we are visually capturing that hold, this will play into the audio perception of the time being frozen and subsequently add visual anticipation until we breathe back into the following phrase. Gesture in this setting is significant for effectively communicating the musical intention.

Breath Mark

While with the fermata, we wanted to elongate the note; on the contrary, the breath mark will break the phrase. This articulation is another moment where gestural movements can help visually clarify the musical intentions. We will want to focus the stroke around a medium to fast lift for breath marks. If the lift is too fast, the break could feel tense and incomplete – unless that is the desired effect from this musical moment. We do not find breath marks too often in ensemble literature, but it is more common in solo literature. With the nature of lifting on timpani, this visually helps with the breath mark, but we should aim to make this lift feel separate from the standard lift needed for tone production. Like the fermata, this is also an articulation portrayed after the initiated stroke, so we need to be more considerate of how we are lifting out of this phrase; we should also breathe with the moment. I find that, especially when playing with ensembles that contain winds, percussion should always breathe with them; otherwise, we will always be early to their attack and release. The breath mark is the perfect moment to check back in with the ensemble and move into the following phrase together, and visually this draws in the audience and helps them perceive the music and intention.

With resonance being so crucial to the tone production on timpani, we must be mindful of making a difference in articulations dealing with resonance and being careful not to over-articulate

to achieve the more pointed attacks. We should approach each of these articulations with a sound basis of tone production before relying on visual clues to make these articulations work for us.



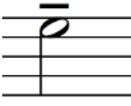
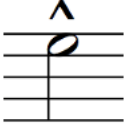


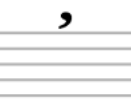
<i>Timpani</i>				
Articulation	Image	Definition	F / M / S Lift	How to Achieve
Accent		A stress or special emphasis on a beat to mark its position in the measure	Fast Lift	Accents on Timpani should be performed with a fast stroke with more emphasis on playing into the drum and a quick rebound out of the drum.
Staccato		A style of playing notes in a detached, separated, distinct manner, as opposed to legato.	Fast Lift	Staccato on Timpani should be performed with a fast stroke and a quick rebound out of the drum, quicker than an accent. If available or an option, you can place mutes on the drum or use your other hand if available. Staccato should not be as emphasized as an accent or marcato.
Tenuto		A directive to perform the indicated note or chord of a composition in a sustained manner for its full duration, or slightly longer with rubato.	Slow Lift	Tenuto on Timpani should be performed as a heavier stroke with slow lift. Connecting each note by having each stroke match the duration of the note length.
Marcato		Indicates a short note, long chord, or medium passage to be played louder or more forcefully than surrounding music, more than an accent.	Medium - Fast Lift	Marcato on Timpani should be a heavier stroke, but with a medium to fast lift in order to achieve the accented note. Utilized the forearms to achieve the heaviness and the faster lift to create the accented contrast.
Legato / Slur		A directive to perform the indicated passage in a smooth, graceful, connected style, as opposed to staccato. It is often indicated by a slur over the effected notes.	Medium Lift	Legato on Timpani is achieved by the connectedness of tenuto, but with a lighter touch that comes from the medium lift.
Fermata		A notation marking directing the performer to sustain the note of a composition affecting all parts and lasting as long as the artistic interpretation allows.	Slow Lift	Fermatas on Timpani should be treated as a held note and can default to the slow lift. The lift can change if needed for the piece, but approaching the note from a point of duration should be replicated in the body.
Breath Mark		A directive to the performer to break the phrase at that point in the composition and breathe, thus assisting in the production of a smooth phrase.	Medium - Fast Lift	Breath Marks on Timpani should be performed in a similar manner to a general medium lift, but with a faster emphasis, focusing on the breath. These are not as common in Timpani repertoire, but should still be defined.

Table 6.2, Timpani Articulation Chart

6.3 Snare Drum / Multi-Percussion

The last classification of instruments discussed in this section belongs to the non-pitched percussion family, focusing on Snare Drum and Multi-Percussion. The snare drum is traditionally the first instrument we are introduced to as beginner percussionists. We all start on a practice pad with a pair of sticks in hand. Many foundational techniques developed on snare drum became the standard across much percussion learning. The breakdown of the snare drum technique allows us to develop our touch and tone across the family of percussion instruments. Even the best keyboard percussionists were still trained in the basics of snare drum technique. A good comprehension of the stroke types with a combination of the breakdown of the anatomical structure that our upper body provides allows us to unlock many of the tools that allow us even to begin to think about how gesture can impact our playing.

With snare drum literature originating from diverse stylistic influence, the simplicity of the technique unites much of the music. From rudimental drumming to modern snare drum solos, these works require a comprehensive exercise in technique, which can be derived from gestures in its most basic form. Taking the breakdown of stroke types from Chapter 2, we will continue the comprehensive discussion of how these basic techniques allow us to employ various levels of gesture to facilitate better the many articulations required to play much of the music we have today.

I will discuss these techniques from the snare drum point of view to prevent redundancy. In the case of multi-percussion specifics, those will be addressed separately. Due to the amount of transfer between the two genres, many of the concepts will all apply to both groups.

Accent

As percussionists, accents on snare drum are among the first articulations we encounter. This articulation is first introduced through a system of levels in height. When discussing the "up" and "down" position in chapter 2, this is vital to comprehending the beginning levels of performing accents. In snare drumming, when first learning accents, we start with our hands in the down position and will initiate with either a prep stroke or an upstroke to facilitate the accent being performed from the up position. In the initial stages, we are not concerned with dynamics for performing this, but rather the contrast from playing in a higher and lower position. We focus on this to train the hands for added control that will later be needed as the music gets more complex and demanding. While in this context, all accented notes are referred to as such, and the unaccented notes are referred to as 'taps'. As we develop musically, this contrast does begin to shift. The accent should originate from the wrist and is often performed as a downstroke unless a full stroke is required for consecutive accents. The accent should be at least one dynamic level higher than the notes around the accent to add the necessary emphasis, but we should also be mindful not to add any extra weight from the arm for this stroke. We should add a slight increase in velocity to add a slight timbre change; visually, this should communicate an elevated and more pointed sound. When performing the down stroke, we should not over-squeeze the grip to add unwanted tension, but just enough to stop the stick from rebounding back up. Gesturally, we will be able to communicate a bump in the dynamic. The added velocity on the stroke's down portion will give a visual indication of performing with a more pointed tone.

Staccato

Staccato on the snare drum will function in a slightly opposite manner as an accent. In my playing history, this was one of the first articulations that were ignored, especially on the

drumming side. The gesture will be crucial to communicating the lighter and detached nature of the staccato articulation. First, we need a solid technical foundation before considering the added gestural component. This stroke should act equivalently as on keyboard and timpani, but with the already staccato nature of the snare drum, we need to be mindful of not adding any extra weight to this stroke. This should focus on the wrist, with a quick full stroke. Adding the extra emphasis on the quickness of the upstroke also allows the stick to have less surface contact with the drum, which will shorten the note. While we want to visually maintain this articulation by ending with the upstroke, this cannot be guaranteed with every written piece. This can be just as effective when ending with a down stroke, but visually, we want to see the pause of the stick in either position. This helps the perception of the sound stopping with how the motion ends.

While much of this applies to many multi-percussions works, when we encounter solos that cover a variety of instruments, we will have to be mindful of how to apply these methods of unified articulation to a variety of surfaces that each have their type of clarity or resonance. We can take keyboard percussion and timpani methods and apply those as necessary to achieve an approach to these articulations consistent with their inherent sounds.

Tenuto

Tenuto on the snare drum is a heavier style stroke. Due to the staccato nature of the snare drum, we need to combat the already pointed and natural articulation that can come from the drum by using the weight from our arm. The arm should guide the stroke while the wrist still initiates but from a very relaxed setting. We should feel this stroke in the whole hand, with slightly more emphasis on the back of the fulcrum. We need the relaxed wrist approach to avoid adding any pointed articulation. With how relaxed the hands should be in this articulation, we should be mindful of still having a proper down stroke and not letting the stick bounce, so there will need to

be a slight amount of pressure added at the end of the stroke to hold the stroke, but not as still as we would with the staccato articulation. Because we want the added weight, the actual downstroke should be slightly more relaxed. Visually, this will be a larger motion and contribute to perceiving a more weighted sound.

Marcato

Marcato on the snare drum should be treated very close to the accent but with an added weight from the arm. We still want the pointed articulation that comes from the drum, so we will emphasize the wrist and have the stroke start from there, but right at the end on the downward portion, the arm should be added for a fuller sound to accompany the pointed articulation that we get from the quickness of the wrist. Ending with a down stroke is preferred gesturally, as we will audibly hear the pointed attack; we need to see the added weight from the arm.

Legato / Slur

Legato on the snare drum should be treated like performing a full stroke but more relaxed. A few percussionists often call the full stroke a legato stroke. While I see the reasoning, they should be kept separate as I teach that the full stroke is the beginning basis to build from, which comes with a certain amount of tension. When teaching legato strokes, I take the concept of the full stroke and slowly add the addition of the arm to meet the musical needs. Depending on the tempo and dynamic range, we can adjust this stroke to match the music visually. The faster the tempo, the less arm we can add; the slower the tempo, the more arm should be added. This style of articulation is going for a smooth and connected phrase, and we must set up the anatomical approach to align with the visual. This is especially important when moving around instruments for a multi-set-up. In a legato section for a multi-solo, one should consider the movement patterns

and if they work efficiently and fluidly. Gesturally, this will provide phrasing and structures on instruments not considered musical.

Fermata

This approach will be the same as keyboard percussion and timpani when handling a fermata on the snare drum. We want to visually hold the musical moment and engage this musical intent with the audience. The focal point here is on the release with the arm, and we should aim for a downstroke. If the moment calls for some rebound out of the stroke, the rebound should not be excessive and should be controlled to align with the pause. I prefer to keep moments where I entirely lift out of the release for the ending of the piece or a significant break in the phrase as that is a visual cue to the audience that the piece may be over, whereas pausing and holding the moment closer to the instrument, visually communicates that the piece is not over.

Breath Mark

It is vital to properly incorporate the gestural aspects to convey this intent to the audience. The breath mark for the snare drum should be approached light and lifted. Like keyboard percussion and timpani, the break mark is a pause that breaks the musical phrase and should not be held long. The motion will be led from the wrist with the arm facilitating the movement pattern that the stick will follow, leading into the next phrase. This is a quick gesture and should last as long as a breath.



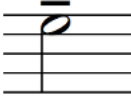
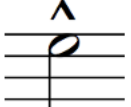


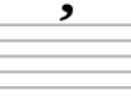
Snare Drum and Multi - Percussion					
Articulation	Image	Definition	Stroke Type	Area of Body	How to Achieve
Accent		A stress or special emphasis on a beat to mark its position in the measure	Down Stroke	Wrist	Accents on Snare Drum should be performed as a dynamic level higher, coming mostly from the wrist and ending with a downstroke.
Staccato		A style of playing notes in a detached, separated, distinct manner, as opposed to legato.	Full Stroke / Down Stroke	Wrist	Staccato on Snare Drum should be performed with a quick and detached stroke and should generally default to an upstroke unless a dynamic change is needed. This should be focused on the wrist and very little from the arm.
Tenuto		A directive to perform the indicated note or chord of a composition in a sustained manner for its full duration, or slightly longer with rubato.	Down Stroke	Arm then Wrist	Tenuto on Snare Drum is a heavier stroke so there will be an initiation from the arm, the wrist will still perform the stroke, but the arm provides the weight needed and should result in a Down Stroke.
Marcato		Indicates a short note, long chord, or medium passage to be played louder or more forcefully than surrounding music, more than an accent.	Full Stroke / Down Stroke	Wrist with Arm	Marcato on Snare Drum is similar to the Accent, but with inclusion of arm to give it more weight. This can be seen with a Full Stroke, but Down Stroke is preferred.
Legato / Slur		A directive to perform the indicated passage in a smooth, graceful, connected style, as opposed to staccato. It is often indicated by a slur over the effected notes.	Legato Stroke (Full Stroke)	Wrist and Arm	Legato on Snare Drum should be treated as connected full strokes, a more relaxed approach to the standard full stroke and should be an distribution of 60/40 wrist to arm ratio.
Fermata		A notation marking directing the performer to sustain the note of a composition affecting all parts and lasting as long as the artistic interpretation allows.	Down Stroke / Full Stroke	Arm	Fermatas on Snare Drum should be treated as a pause from the whole body, visually ending with a Down Stroke can help emulate the sustain and pause, but a Full Stroke could also have the same effect depending on the piece. More emphasis on the arm for the weight of the stroke.
Breath Mark		A directive to the performer to break the phrase at that point in the composition and breathe, thus assisting in the production of a smooth phrase.	Up Stroke or Full Stroke	Wrist	Breath Marks on Snare Drum should be combined with a stroke that is continuing motion, so either an Up or Full Stroke, but allows for a slight pause.

Table 6.3, Snare Drum / Multi-Percussion Articulation Chart

With the contrast in natural resonance that keyboard percussion and timpani have with the staccato nature of snare drum and multi-percussion, finding practical methods based on a technique to work around these articulations can provide many challenges. The intention of providing these in-depth approaches to performance considerations on articulations comes from being able to focus on many aspects of playing we already comprehend. However, by allowing gestural elements to elevate these techniques, we can position ourselves as performers and educators to confidently approach the timbre changes often required for becoming more musical percussionists. As stated at the beginning of this chapter, this is not meant for us to become ‘carbon-copy’ type of performers, but to enhance what we are already doing by adding more tools. There may be many moments when these methods are helpful to you and your students. Through their implementation, we can become better communicators of musical intent to ourselves, our conductors, and our audiences.

CHAPTER 7

Application of Gesture in the Percussion Literature

While the acceptance of percussion as a more respected instrument within Western music literature has been much later than most other instruments. The repertoire for percussion has been a consistently evolving and expanding area of music, especially in this most recent century. Western Percussion appeared through the orchestral setting with revolutionary composers such as Mozart and Beethoven, often employing just timpani or the standard set of Janissary instruments. As we moved into the Romantic era, we saw composers such as Mahler and Berlioz start to expand the use of percussion instruments that could be utilized in the orchestra. These composers set a path to continue this process into the 1900s where we saw composers such as Stravinsky and Varese begin to write for percussion in a more soloistic role.

Around the 1950s, we witnessed the birth of solo literature being written for percussion. Compared to every other standard Western instrument, percussion composition was only beginning and has still not hit the 100-year mark. *Zyklus*, written by Stockhausen in 1959, is one of the earlier solos written for percussion based on a cyclic element where the instruments surround the percussionist. This is still an influential piece in the percussion canon and is often considered a benchmark work for many performers. With the solo literature being relatively newer when it was being written, combined with the many nuances that are present with percussion, these factors created many discussions about how to write for instruments that do not always have a pitch. There have been many discussions on how to notate durations for our instruments, whether to write articulations, or notate phrasing. While percussion instruments were getting more recognition, in many regards, they still needed to be considered on the same artistic level as the wind and string

instruments. Percussion was stereotypically viewed as the “timekeeping section” that sometimes plays the melody on the xylophone. Composers such as John Cage, Steve Reich, Joan Tower, and several other composers of the late 1950s through the 80s pushed the perception of what percussion could musically achieve. They asked for more than we were used to while filling the music with diverse types of articulations. These not only suited the natural timbres of our instruments but when paired with other concert ensembles, meshed as a full ensemble as well. With Steve Reich, we saw an exploration of rhythm. Influenced from his residency in Ghana, he brought back West-African music and westernized it, allowing rhythms to have melodic features; he pushed the boundary of percussion ensemble instrumentation and solidified the use of Mallet Quartets. *I want to acknowledge the cultural appropriation issue with the music that Reich learned and took from his time in Ghana. However, I believe that in this specific setting, we can still discuss his works from a learning perspective on how they provided an avenue that progressed percussion ensemble music into what we have today.* In John Cage's music, he pushed the boundary for what music and percussion could be. He revolutionized the use of so many diverse types of "percussion" instruments, from tin cans to conch shells, to sounds considered "junk" instruments but placed into settings that all work cohesively. His three *Constructions* set the new standard for how a percussion ensemble could produce sound and function effectively.

While these were not the only composers writing for percussion at the time, they presented music that went beyond the traditional "boom, chuck, boom, chuck" literature we had had for so long. They allowed percussion to be considered an actual instrument family with important performance literature that has stood the test of time.

This last chapter will focus on examining the current percussion literature and finding ways to incorporate the concepts from Chapter 7 into written works for percussion in both large

ensemble and solo settings across multiple types of percussion instruments. This chapter will provide a unique perspective on addressing many levels of timbres and how we can identify gestural methods to apply to these works for percussion.

7.1 Ensemble Literature

Ensemble literature for percussion has provided many distinct challenges to the performers through a lack of idiomatically written parts. Composers have not always known the best methods for writing for our instruments in a manner that best communicates their intent. While the music written for us have not always been the most involved technically, ensemble literature has provided many avenues to understand how to become more musically focused percussionists. What I mean by this is that often composers have no issues notating the same articulations into the mallet parts that are doubling the upper winds and strings, or styles presented in low brass that are translated to timpani and non-pitched percussion. This environment requires that we have a deeper understanding of the role that our specific parts play in the ensemble, and often that means having to find the wind or string colleague that we share roles with. We must listen for their interpretation of the articulations and performance style and match them on our own instrument. In the ensemble setting, we often have the least amount of music to perform but with a maximum number of articulations, per note percentage, when compared to our own solo literature. Understanding this will only make our solo playing more musical and communicative with audiences.

I will be examining a few standard excerpts from orchestral works that are often in our current repertoire. I will start with Aaron Copland's *Appalachian Spring* (1944), the xylophone excerpts from numbers 48 to 50.

42 10 43 2

44 (strings) 45 46 2 (piccolo)

47 48 (violins)

Relax Left Hand
*) secco ff

Hans ff

49 f

50 Tacet to the end

*) secco = dry, short.

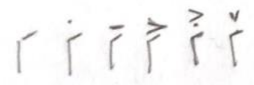


Figure 7.1, Xylophone excerpt from *Appalachian Springs* by Aaron Copland

As we can see in this specific excerpt, Copland was not shy in notating articulations. We see a variety of accents, staccato, marcato, and tenuto, and I have added the slur lines that match the phrasing of the rest of the ensemble from my performances of this piece. Typically, when focusing on excerpts in general, we are told to worry about playing in time, playing the right rhythms, playing the right notes, and understanding how a particular excerpt fits into the ensemble. This excerpt tends to be dreaded by many for its consecutive use of double stops in the intervals of fourths and fifths, along the lower keyboard manual – which is notoriously difficult to maintain accuracy with. It is also in “cut time” and often on the upbeat and requires the ability to play quicker double stops without distorting the uniformity. Adding all these variations of articulations on top of those factors requires a lot of information to process in such a short musical excerpt. By working through this excerpt with my form teacher and member of the Boston Symphony Orchestra, I have found that the articulations help us perform this excerpt well. We started our interpretation study by singing through the excerpt, seeing if we could replicate the articulations through various vocal sounds. This allowed me to better understand the style that Copland was intending. From here, I tried to “copy and paste” this interpretation into a tangible concept to my hands. This realization with the variation in the articulations increased my accuracy with playing the consecutive double stops because I was no longer focused on trying to play the fourths perfectly; I was focusing on making the appropriate sounds while I trusted my hands to do the proper technique. From my teacher, I learned that the trick to playing this excerpt is all about when we are lifting out of the phrase and when we are playing into the phrase. Gesturally speaking, when marcato is present, such as the first four quarter notes, those are lifted with an added heaviness and will set your hands for the rest of the phrase. When we have the slurs with staccato, those should be played in one motion through the arms with quick flicks of the wrist. This helps move through

the phrase without overthinking the double stops while making less surface contact with the bar to better achieve the staccato length. The tenuto markings should be more arm-focused; this helps create a fuller sound and not rush the tempo while playing on the off beats. The accents should be played with slightly added force and lifted when possible. Breaking down the excerpt by the articulations allows us breathing room within such a small span of music that has earned a daunting reputation. Gesturally, these motions should not be exuberant in motion. We want to maintain efficiency but changing the lifting and weight structure helps us communicate our intention regarding our markings, thus allowing our part to fit into the ensemble.

The next piece will be a timpani excerpt from Brahms's Symphony No. 4, the third movement, measuring 272 to the end.

The image shows a musical score for the timpani part of Brahms's Symphony No. 4, Movement three, measures 272 to 353. The score is written in bass clef and consists of eight staves. The first staff (measures 272-283) features a melodic line with triplets and a dynamic marking of *f* to *ff*. The second staff (measures 283-294) is a rhythmic accompaniment of eighth notes, numbered 1 through 6. The third staff (measures 294-305) continues the rhythmic accompaniment, numbered 7 through 12. The fourth staff (measures 305-316) continues the rhythmic accompaniment, numbered 13 through 18. The fifth staff (measures 316-327) continues the rhythmic accompaniment, numbered 19 through 24, with a *cresc.* marking. The sixth staff (measures 327-338) features a melodic line with triplets and a dynamic marking of *f* to *ff*, with a *tr* marking. The seventh staff (measures 338-349) features a melodic line with triplets and a dynamic marking of *ff*, with a *tr* marking. The eighth staff (measures 349-353) features a melodic line with triplets and a dynamic marking of *f*, with a *tr* marking. The score includes various dynamic markings (*f*, *ff*, *ff sempre*, *cresc.*), articulation markings (*tr*), and performance instructions (*Trgl.*, *tr*). The score is marked with a box 'H' at measure 283 and a box 'I' at measure 327. The score is numbered 1 through 353.

Figure 7.2, Timpani excerpt from Brahms Symphony No. 4, Movement three

This timpani excerpt comes from the third movement of Brahms's 4th symphony (1885). This vivacious and fast movement requires precise rhythmic clarity on the lower ends of the drums, along with a very consistent staccato stroke at the soft end of the dynamic spectrum. The timpani

are often in unison with the lower strings and low brass for the front of the notes. However, the timpani should provide a drier and more pointed attack during the faster rhythmic passage at letter H. Starting from measure 272; these triplets should be performed with a medium lift that provides rhythmic clarity without any added articulation so, that when we get to the staccato articulation, we hear an audible difference. The eight bars leading into letter H are in rhythmic unison with the orchestra. The timpanist should match the note length of the ensemble, allowing for a quickly rebounded stroke with the non-playing hand muting between the quarter notes. At letter H, timing and rhythmic clarity are essential in this section as the rest of the ensemble drops out, and H is a moment for solo timpani. This is a crucial gestural moment for the timpanist to portray to the conductor and provide the rhythmic clarity for the ensemble to fit into. These strokes should be performed low to the drum with a quick rebound to lessen the surface area of the mallet to the drum. From letter K to the end of the movement, the timpanist should match the ensemble's interpretation of the staccato articulations while maintaining the quicker and lifted stroke type.

The image shows a musical score for a snare drum part, measures 14-15. The score is written on a single staff in 4/4 time, marked "Più mosso". The first measure (14) starts with a mezzo-forte (mf) dynamic and contains a quarter note with an accent (>). The following measures (15-18) consist of a sequence of staccato quarter notes, each with an accent (>) and a mezzo-piano (mp) dynamic. The notes are marked with a "1" above them, indicating a specific articulation. The score is divided into four systems, with measure numbers 14, 15, 12, 13, and 14 indicated below the staves. A "segue" marking is placed above measure 10. The notation includes various articulation marks such as accents (>) and dynamic markings (mf, mp).

Figure 7.3, Snare Drum excerpt 14-15 from Nielsen Clarinet Concerto

The last example we will look at in the ensemble section will be the snare drum excerpt from Nielsen's *Clarinet Concerto* (1928). We will look at two sections, the first being numbers 14-15 and the second being numbers 33-35. In contrast to many other orchestral excerpts where our playing time is more limited, this work is often considered a duet between the clarinet and the snare drum. It is filled with soft, delicate passages, as well as intense and punctuated passages. Rhythmically, many challenging syncopated sections contain several types of articulations. Because the snare drum pairs with the clarinet, this piece is a splendid work to study to understand how snare drumming can achieve melodic qualities.

This section focuses on accents in combination with a decrescendo for each note grouping. The difficulties of this section are in trying to avoid overplaying the accent and in performing an even decrescendo for each of the groupings. We should perform the accent as a down stroke, keeping the gesture more confined to better align with the mezzo-piano dynamic. The second component to performing this section is to ensure the second note of each grouping is slightly louder than the last note by downstroking the accented note. This allows the third note to be prepositioned at a lower height. The feeling of this section emphasizes the downbeat, so visually, we want to match that by adding a slight pause at the bottom of each grouping. We should be mindful not to add too much of a pause at the bottom so that we are not affecting the timing of this section.

4

Tamburo piccolo

33 *rall. a tempo rall. Allegro vivace solo*

34 *p* *mp* *ff* *f*

35 *marc.* *mp* *p* *segue*

Figure 7.4, Snare Drum excerpt 33-35 from Nielsen Clarinet Concerto

This second section, 33-35, has more articulations and dynamics. Starting with the 2/4 after the fermata, we have eighth notes, with the first four having a staccato articulation. The snare drum in this section sets the new tempo, so the markings ensure absolute clarity coming from the drum, and as the tempo accelerates, the eighth notes should relax in length. It is suggested that the performer play all eighth notes with the right hand only, using a quick wrist stroke at the tap height level for the first four eighth notes, then relaxing on the rebound for the rest of the phrase to round out the sound and visually indicate a change in tone. For the release of the roll after 34, this should be a quick and snappy full stroke while visually pausing at the top of the stroke on the release. This will add a visual stopping point for the note while preparing to play the upcoming sixteenth note at forte. These notes should be played slightly relaxed, not adding any articulations until the marked accents, where a more pointed attack is needed. The marking indicates "marc." Which should be interpreted as marcato, so the performer should add some weight from the arm. Once they transition to 35, they should return to the quickly rebounded stroke while decrescendoing into

the next section. In these few measures of music, there are many pressure and stroke-type changes. Focusing on these will allow the performer to achieve the desired tone that matches the clarinet while gesturing the musical intent to the conductor.

What I have found while interpreting these excerpts is a more significant emphasis on the gestural component of technique and how that will guide the intended tone production across each percussion area. While this area is less focused on expressive gestural qualities, the technique and emphasis on gestures accompanying those components will allow these small moments of densely articulated music to vary in timbre and tone production.

7.2 Solo Literature

Solo literature in percussion has seen a tremendous increase in production over the last 20 years. We have also seen more percussionists writing music for other percussionists. This rise has invited different interpretations of how to compose for percussion. This also raised the question of whether to allow for a duration in note length when that is not always acoustically possible or to try to be as precise as possible. At a summer percussion festival, Pedro Carneiro once stated, "musical composition is the shared language between composer and performer, and their choice of notation is the compromise between what they hear and how to put it down on paper for the performers to understand..." Hearing this only furthered my opinion that composers should write what they hear and not worry about how the musician will interpret it – within reason. However, as percussionists, we should be able to read and perform anything written for us, but also some things that are not, such as interpreting Bach transcriptions. We can develop methods and

techniques that help portray the musical intent. Allowing gestures to amplify the function of our techniques and expression continues to advance us as musical percussionists.

The first solo we will be looking at is *Boomslang* (2007) by Roshanne Etezady. While we have examined this solo from the perspective of Spectromorphology, this solo will now be discussed in terms of performance practice techniques and how physical gesture plays a role in facilitating these techniques. First, focusing on a three-measure phrase, I will be discussing how I approach this grouping of articulations and how it will transfer to a different section.

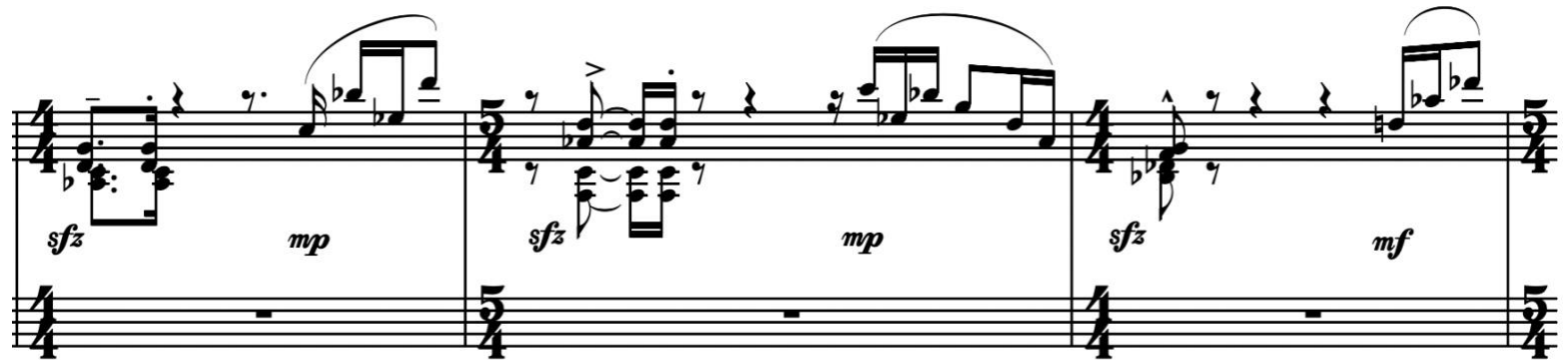


Figure 7.5, *Boomslang* excerpt without markings

Looking at these three measures, there is a combination of tenuto, staccato, legato slurs, accents, and marcato articulations. With the dynamics, we can group the musical gestures into two contrasting ideas, one at the sforzando dynamic and the other at the mezzo dynamic. The first figure begins with a tenuto, then followed by a staccato. The second version of this figure begins with an accent but is also followed by a staccato, and the last figure is a particular chord with a marcato marking. In contrast, the mezzo figures are all marked with a group of sixteenth notes with legato slurs. To distinguish between the figures, I added the following techniques in the figure below.

Figure 7.5a, *Boomslang* excerpt with gestural markings

Each of the sforzando figures has a long – short rhythmic element, and to further emphasize the short element, I have made the staccato shortened, dampened through a dead-stroke. While this emphasizes the tenuto and accented articulation, it also helps to bring out the legato phrasing in the second figure. The second figure should be played smoothly and connected, not adding an articulation so that the written articulations pop out. The tenuto should be performed with an arm forward gesture, followed by the shorted dead-stroke, and pausing until we play the contrasting phrase. The accented figure should be performed with the wrist-then again followed by the dead-stroke-and pause into the contrasting legato line. Then for the marcato chord-this should be wrist forward-followed by the weight of the arm-with a slow rebound on the release to keep the integrity of the eighth note chord being performed. While these are only three measures, these gestures can be transferred into another section of this piece.

44

mp

p

p

mp

5

50

pp

pp

mp

pp

mp

Figure 7.6, *Boomslang* excerpt without markings

Again, we see a combination of the long-short rhythm, ending with a staccato marking, and instead of legato sixteenths, there are rolls placed in between. I follow the same pattern of adding dead-strokes to all staccato notes in this section to contrast the resonance asked from the rolls and slurred phrases. The dead-stroked chords starting in the third measure of this figure should be treated as a gentle dead stroke to retain the value of the eighth note but to still allow audible space after each chord. This will also contrast nicely and help bring out the tenuto line that is later presented. This gesture should focus on the arm to maintain the needed weight and visually look

heavier. Overall, this is an excellent solo filled with various articulations and textural changes that invite the performer to experiment with tone production and gesture across the marimba.

The image shows a musical score for a marimba solo. It consists of two systems of music, each with a treble and bass staff. The first system covers measures 44 to 49. Measure 44 has a treble staff with notes and a bass staff with rests. Red handwritten markings 'L S' are under the treble staff. Measure 45 has a treble staff with notes and a bass staff with notes. Red handwritten markings 'no attack' and 'mp sim...' are present. Measure 46 has a treble staff with notes and a bass staff with notes. Red handwritten markings 'mp sim...' and 'p' are present. Measure 47 has a treble staff with notes and a bass staff with notes. Red handwritten markings 'p' and 'mp' are present. Measure 48 has a treble staff with notes and a bass staff with notes. Red handwritten markings 'p' and 'mp' are present. Measure 49 has a treble staff with notes and a bass staff with notes. Red handwritten markings 'p' and 'mp' are present. The second system covers measures 50 to 54. Measure 50 has a treble staff with notes and a bass staff with notes. Red handwritten markings 'pp' and 'mp' are present. Measure 51 has a treble staff with notes and a bass staff with notes. Red handwritten markings 'pp' and 'mp' are present. Measure 52 has a treble staff with notes and a bass staff with notes. Red handwritten markings 'mp' and 'pp' are present. Measure 53 has a treble staff with notes and a bass staff with notes. Red handwritten markings 'mp' and 'pp' are present. Measure 54 has a treble staff with notes and a bass staff with notes. Red handwritten markings 'mp' and 'pp' are present.

Figure 7.6a, *Boomslang* excerpt with gestural markings

While *Boomslang* invited a variety of textural changes, the next solo focuses on elongating the marimba's tone with singular attacks. *Bloom Suite* (2014) by Elliot Cole is a marimba work in four movements. We will look at the third movement, which is simple in the harmonic structure. However, the challenge is finding an approach to indicate the musical intent of long tones written across this movement. In an email correspondence with Elliot regarding his intention to write the movement in this manner, he states, "the note lengths represent the idea of the music: the notes form a connected line. This should inform how a player approaches performance even if it is on an instrument that cannot sustain." (COLE, 2023). As performers, it is our job to do just that.

III.

$\text{♩} = 33$

233

239

246

254

260

Figure 7.7, *Bloom Suite*, Mvt. III

When first approaching this movement, I read through it and tried to listen to how it sounded at face value. Since this movement has no written articulations or dynamics, I needed to find what made this movement unique. Filled with quartal and quintal chords, accompanied by intervals of seconds and sixths, it did not necessarily follow a typical Western harmonic structure, but that is one of the qualities that made this movement enjoyable. After playing through the movement and understanding that I needed to find resonance in these moments, the first challenge I encountered was the range that this was written. This range on the marimba is right in the middle of the keyboard; when selecting mallets for this movement, I am thinking of the resonance, so I did not want a mallet that emphasized attack, but I also could not use a mallet that was too soft because there would be a lack on tone quality with the range. After finding a set of mallets that I felt met these requirements, I was still left with needing the ability to control the resonance. Gesture in this setting becomes vital in portraying the note duration, phrase lengths, and legato slur markings. Due to the tied notes over the bar line, while simultaneously introducing occasional melodic figures with the quarter note lines, the challenge is to keep the motion after the initial strikes moving. It would be practical to think about the bass line harmony (stemmed notes down) as a constant motion from the left hand, while the right hand adds a different stroke approach to portray the changing length variations. The strokes used in this movement should stem from a fluidity from the arm. In moments of melodic movement in the upper voice, utilizing the wrist in the right hand to allow for a slight textural difference. This movement is great to develop a sense of fluidity when performing. The intent of gesture in this movement is purely to help inform the audience of the flowing and gentle nature of the music and should never detract from the simple harmonic lines.

The last work discussed is *Prim* (1984) by Aspell Masson for solo snare drum. Masson wrote three major works for snare drum (*Prim*, *Kim*, *Konzertstück*) that have become standards in the percussion repertoire. Utilizing musical motifs, Masson invited the idea of musical expression on an instrument that has traditionally not been thought to evoke that. For this approach to gesture, I will be focusing on Michael Gould's method of “musical mapping.” Instead of focusing on a moving line, I have mapped out the dynamic structure of the first ten lines of this solo. Being that the solo itself is written as a rhythmic inversion, I wanted to see if we could identify that through the dynamics and how that could influence the gestural approach to this solo. I will include the first page and the mapped-out diagram of the dynamic structure.

PROPERTY OF
JAMES B. CAMPBELL

for Gert Mortensen

PRÍM

for snare drum solo (1984 - 7')

(original $\text{♩} = \text{ca. } 120$)

$\text{♩} = \text{ca. } 80 - 100$ **THEME** Áskell MÁSSON (*1958)

ff p f mf mf f p mf f

mf pp p < f mf < f dim.

p mf p < f

mf pp p cresc. mf <

ff f mf p f mf mf f p

p cresc. f mf < f p pp mf

f p mf p cresc.

f p p

pp < mf < f dim. p

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1

Figure 7.8, first page of *Prim* by Áskell Másson

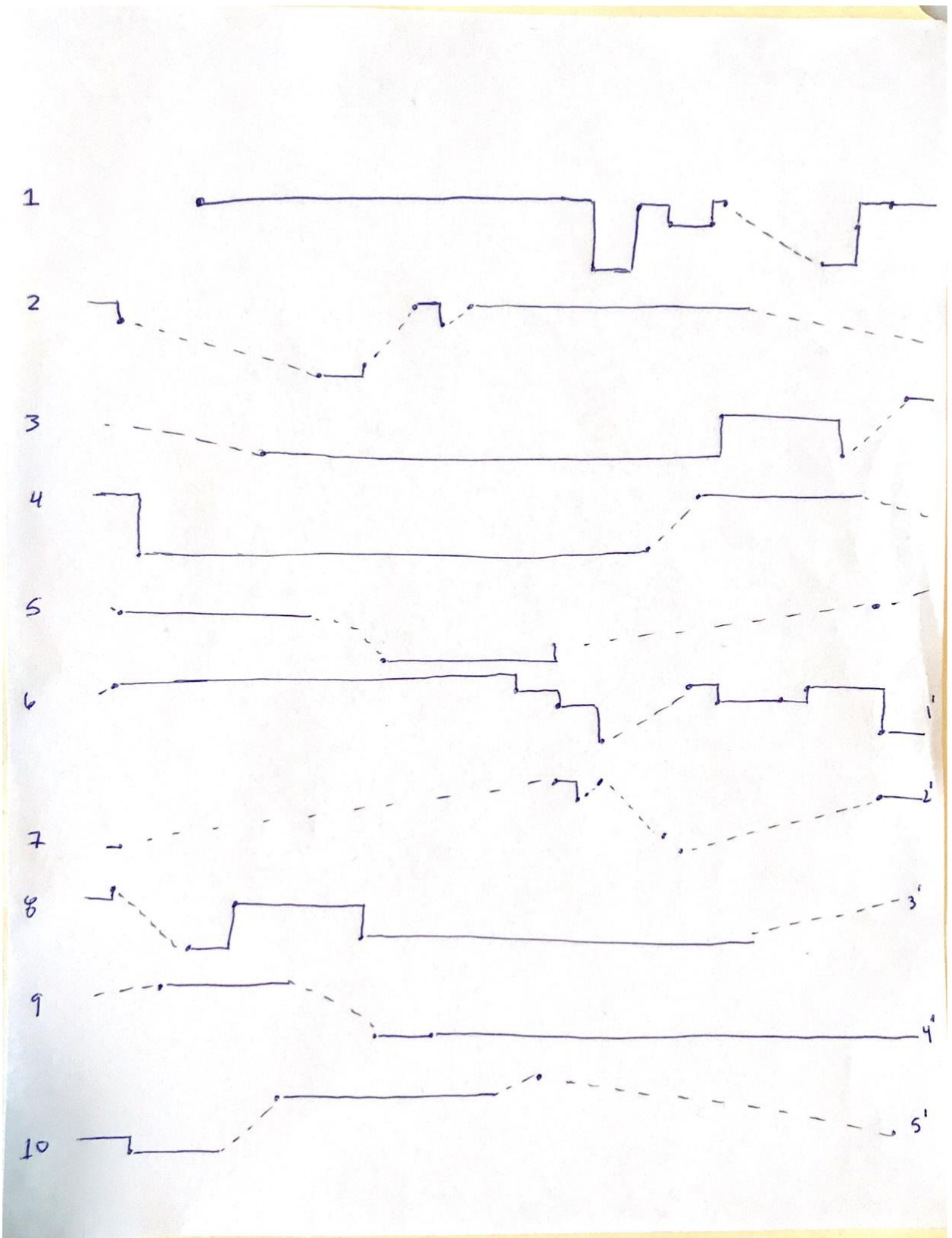


Figure 7.9, dynamic – mapping of the first page of *Prim*

When first looking at the mapped-out dynamic structure, it was not easy to find any similarities. However, knowing that the piece is based on the inverse, when you look at the last five lines from right to left, you can see that they match up with the first five lines from left to right. The next part is working on how this relates to finding musical expressions in this work. As I have played this before and am familiar with the work, going back and looking at it from the perspective of the dynamics adds an element of expression. We often look at dynamics on the snare drum from a very contrasting point of view while also relying on our stroke types to dictate the varying levels that we play at. A way to analyze the dynamic structure and find the gestural elements of this piece would be to reference this map, take a singular rhythm, and go through the dynamic range. This can help shape one of the methods of musical expression that we may need to listen for in the mix of the rhythmic complexity of the solo. From this point, we can take the dynamics and allow that to influence the gestural components to better correspond to the articulations, ornaments, and other musical elements present in this work.

Each of the works presents different challenges that, when presented with gestural components, whether through dynamics, tone production, or expressive motion, are given a functional and tangible approach to better communicate with the audience the musical intent of the work. While these are only a few examples, this method can be utilized across many works found in percussion repertoire.

CONCLUSION

Through this research, I have taken concepts that have been examined for the past 30 years and have begun to find ways to apply them both functionally and tangibly. From redefining the stroke types to exploring new ways to express standard articulations, this research explores how the current research regarding gestures can move beyond keyboard percussion and be applied to all percussion instruments. While these approaches come from basic structures and techniques that many of us are familiar with, allowing gestures to become relevant to the interpretation will continue to advance percussion as a musical art form.

Most of this research has been focused on the performative aspect of gestures, but I still wanted there to be an analytical point of view. Spectromorphology could be a new avenue for theory that can advance this concept of gestural ideas in music. With the percussion family being an instrument that was never considered in the initial stages of developing Western theory, I believe that theory and methods of analyzing should continue to evolve as does the music. From the methods discussed in this research, along with methods analyzed by Dr. Kimberly Loeffert, I believe that gestural elements in musical theory can continue to expand from an analytical point of view and become a more focused area in our learning. For further continuation of these methods, this work can also continue with more analysis of Dora Hanninen's associative orientation methods.

Gestures do not always have to belong to expressive qualities, and hopefully, by the end of this research, educators and performers can begin to appreciate this idea. Creating gestures into a functional musical element will help to continue developing the performing and educating

percussionists, while improving our ability to communicate the perception of sound our instruments can effectively offer, and one that the audience desires.

PART TWO

UNIVERSITY OF KENTUCKY
SCHOOL OF MUSIC
PRESENTS

Emily Durocher

In a DMA Percussion Solo Recital

(Joined by Luciano Medina and Christian Swafford)

April 17th, 2021

Recital Hall, SCFA

8:00pm

Program Notes

An Economy of Means

An Economy of Means is a kind of companion piece to my trio *An Index of Possibility*. In *Index* I used a wide range of materials—glass, metal, wood, ceramic, drums, toys, found objects—to create a large form that moved between distinctive worlds within a broad sonic palette. With *An Economy of Means* I've done the opposite, deliberately using one instrument, the vibraphone, and forcing myself to make the most out of limited resources. With a few simple preparations—tin foil, a manilla folder—and judicious usage of the vibraphone's natural properties, I tried to build something vast and varied, as broad and ambitious as the trio but in a narrower, more focused context. Set in six movements, the nearly thirty-minute piece doesn't have a specific narrative.

Even so, I think there is always a sense of motion, of drifting from space to space, with little dramas unfolding along the way. – Robert Honstein

An Economy of Means was commissioned by Doug Perkins and a consortium of Alumni of The Center for Advanced Musical Studies at Chosen Vale Percussion Seminar, including: Matthew Bimstein, Robby Bowen, Aaron Butler, Heather Church, Sean Harvey, Brandon Ilaw, David Irving, Niek Kleinjan, Aaron Levy, Michael Mazzullo, Ian McCollum, Taylor Mosher-Davis, Stephen Seymour, Melanie Voytovich, Amy Garapic, Ben Fraley, Evan Laybourn, David Abraham, Peter Ferry, Jeff Stern, Dustin Patrick, Kyle Flens, Pedro Carneiro, Adam Lion, Tyler Tolles, Doug Perkins, Michael Hardin, Makayla Phillips, Scott Strickland, Matthew Duvall, Rose Martin, Danielle Moreau, Nick Bolchoz, Neil Rao, Cameron Leach, Garrett Mendelow, Shelly Purdy, James Deluca, Jake Harpster, and Glenn Kotche. It was Premiered July 8, 2016 by Amy Garapic at the Chosen Vale Percussion Seminar, Enfield, NH.

Rebonds a/b

Iannis Xenakis (1922-2001) was born to Greek parents living in Romania, and his early interests included music and mathematics. While enrolled at Athens Polytechnic to study engineering, Xenakis began to pursue music in earnest. These complementary interests – engineering and music – led to an encounter (and later employment) in Paris with the architect Le Corbusier, who introduced him to two leading members of the musical avant-garde, Varèse and Messaien. In Xenakis' break-through work, *Metastaseis*, the composer unified architectural space (itself a manifestation of mathematics) and music. His music also reflects an interest in both electronic music and in Greek culture, especially folk culture and ancient Greek drama. Xenakis composed the solo percussion work *Rebonds* in 1987-89, and dedicated it to percussionist Sylvio Gualda. The composer has written the following note:

“*Rebonds* is in two parts, **a** and **b**. The order of play is not fixed: either **ab** or **ba**, without a break. The metronomic indications are approximate. Part **a** only uses skins: two bongos, three tom-toms, two bass drums. Part **b** uses two bongos, one tumba, one tom-tom, bass drums, and a set of five wood blocks. The tuning of the skins and the wood blocks should extend over a very wide range.”

Bloom Suite

Bloom Trio was a double breakthrough in my writing. First, in technique: it's my first good piece to come out of my computer programming project, a personal composition environment two years in the making called Blooms. It's also a breakthrough in feeling. My musical proclivities (dark) have always been at odds with my temperament (bright), but when I push myself toward an optimistic tone, I often feel I lose something personal in the process ("Happy families are all alike..." etc.). Not this time: this exuberance is exactly my own. – Elliot Cole

Pulsar

Named after the rhythmically static astronomical entity, ***Pulsar*** is the result my exploitation of a reoccurring rhythmic and melodic motif. Sonically mimicking the massive density of the neutron star, the active interplay between the live performer and playback is notably inspired by the electronic music of Moderat and the rudimental style of Mike McIntosh.

Pulsar was commissioned by a consortium of percussionists in the summer of 2016: Logan Ball, Nick Bolchoz, Ben Cato, Korry Friend (organizer), Eliot Johnson, Dr. Lamorn Lawhorn, Joseph MacMorran, Dr. Bradley Meyer, & Russell Wharton. – Francisco Perez

The Anvil Chorus

The Anvil Chorus, for solo multi-percussion, was written in 1991 for percussionist Steve Schick to be performed at Bang on a Can in New York. Lang's inspiration for this piece was having the performer use instruments that were connected to their daily life, he did not want them using something that was meant to be played with any other instrument, thus the idea of anvils and blacksmiths became Lang's ultimate inspiration.

Lang was inspired with the history of blacksmithing and how the use of song helped create seamless work when there were multiple blacksmiths on one metal. Instrumentation for this piece calls for 13 idiophones and one membrane, but they are ultimately up to the performer for the sounds they choose as long as they belong in the three presented categories described in the instructions of the piece. The resonant metals, which each contain a different pitch, portray the melodic structure taken from the inspiration of these working songs used by the blacksmiths. The nonresonant metals, which are unpitched, played with the hands and the feet represent the different rhythmic cells; these can be viewed as an inspiration from the compositional technique of Olivier Messiaen, that act as a counter subject to the melodic structure. The wood blocks and bass drum represent the disruption of the melody, signaling a change. If one were to "take this piece apart," to again quote Lang, they would find at the center, cycles of rhythmic patterns in the nonresonant metals and the melodies of the resonant metals. This work is about hearing these rhythmic patterns, listening to how they cycle throughout the work and function around the singular melody that is stated at the beginning of the work.

This solo is a blend of mathematical function with simple melody that creates something that values the quality of the sound rather than the quantity. The addition of this work to the

percussion repertoire created an exciting momentum for more works to be inspired by the idea that less can be more. – Emily Durocher

Relative Riffs

A rock or jazz riff is supposed to be a short melodic/rhythmic phrase that repeats unchanged, becoming more powerful with each repetition. By contrast, I have treated the riffs in this work as themes that develop and transform in time. This approach may seem to undermine the very nature of a riff. Yet, I was interested in exploring the possibility of retaining the dance-like power of the riff while subjecting it to processes that follow paths quite different from that of popular music. In this way, the function of the riff in this composition is no longer fixed as it is in a rock song but becomes 'relative' to the changing context as the music unfolds. – Alejandro Viñao

3. 'Tristano Toccata'

This movement is based on a riff by Lennie Tristano. It pays homage to this innovative and influential jazz musician whom his tory has neglected to some extent. Tristano's riff is longer and melodically and harmonically more complex than a typical rock riff. For that reason I have chosen to repeat it more or less consistently throughout the movement. In this way, at any give moment the listener may latch on to it while other new complex phrases are being introduced. The music is less about 'what' happens to the riff than about what happens 'with' the riff at any point in time. The term 'toccata' in the title refers to the fast-moving rhythmic figures that feature in the many virtuosic passages that require a dexterous 'touch'.

UNIVERSITY OF KENTUCKY
SCHOOL OF MUSIC
PRESENTS

AMID THE SILENCE

A DMA Chamber Percussion Recital

Presented by Emily Durocher

With members of the UK Percussion Studio

April 27th, 2022

Recital Hall, SCFA

8:00pm



finearts.uky.edu/music

SCHOOL of
MUSIC

Program

<i>II</i> (2020)	Ted Babcock (b. 1993)
<i>Popet</i> (2018)	Carl Schimmel (b.1975)
<i>Springs</i> (2016)	Paul Lansky (b. 1944)
<i>White Ranger</i> (2019)	Andrea Venet (b. 1983)
<i>Green Ranger</i> (2018)	Andrea Venet (b. 1983)
<i>Peaux</i> (1978)	Iannias Xenakis (1922– 2001)
<i>Crossroads</i> (2018)	Ivan Trevino (b.1983)
<i>Amid the Noise</i> (2006)	Jason Treuting (b. 1977)
<i>I. June</i>	
<i>XI. March</i>	

Program Notes

II for Vibraphone duo and electronics expands the range of the vibraphone while exploring the sonic landscape with clustered chords and dense polyrhythmic figures. (ELD)

Popet When the medievalist and theater historian John Robinson discovered the text to *Popet* in a Derbyshire church library in 1972, it was a breakthrough in our understanding of the history of puppetry in the British Isles. *Popet*, which is believed to have been written in the late 14th c. by the author of *Sir Gawain and the Green Knight* (“*Sir Gawayn and pe Grene Knyet*”), *eschews the alliterative verse of the latter for a more flexible narrative style*. For this reason, it is not generally considered a masterpiece of Middle English poetry, but it is nevertheless an entertaining and fanciful story which seems to derive more directly from folktale than other texts of that time and pace, which are largely religious or historical in nature. The phrase “few ouer pe flod” (“far across the sea”) even suggests that the folktale is not Celtic but rather European in origin. In my work *Popet*, I selected some important excerpts from the text and portrayed the remaining plot elements visually and musically. (CS)

Springs for percussion quartet exercises the ability of percussion to work up kinetic energy through pattern repetition and to “spring” into action. The instruments required are two drums and three “toys” per player. The drums are bongos, congas, higher toms, lower toms. The choice of “toys” is up to the performers. They should, however, be balanced in terms of loudness and ring-time. Each set of three should also be low to high, within a relatively modest frequency range. The results should be a relatively harmonious cacophony. They are played consistently throughout the piece, so it is important to take care in choosing a set of twelve that will work well together. (PL)

White Ranger is written for solo vibraphone and percussion quartet. The percussion parts are scored for recycled materials which include glass bottles, scrap metal, brake drums, trash cans, an empty beer keg, and a brand-new instrument I have created for this piece named the 'Lagerine'. Finding sounds and assembling the necessary instrumentation should provide a creative and fun project for performers. (AV)

Green Ranger is a fun and energetic piece for solo vibraphone and ensemble, and named after my vibraphone, Green Ranger employs rhythmic complexity making it unpredictable at times, while always maintaining groove and character. If you are a fan of the hit 1990s show 'The Mighty Morphin Power Rangers', you may appreciate the fun, heroic quality of this tune. (AV)

Pléiades is a composition for six percussionists composed in 1978 by Greek composer Iannis Xenakis, originally commissioned by the percussion ensemble Les Percussions de Strasbourg. Written into four movements, each movement represents a specific collection of instruments that each performer utilizes within the movements. Each movement can be played separately or as a collection, with two different orders proposed by Xenakis himself. **Peaux**, which translates to “skins” dictates that only percussion instruments with skins are to be played for this movement. Each performer has the same set of drums; bongos, tom-toms, a tumba, timpani (each performer with a specific range) and a bass drum. This movement begins a rhythmic motif that is first heard with one performer which will eventually be played across each of the six performers throughout the entire movement. Continuing with different solo sections for each performer, this movement

starts breaking down the motif. This leads into a dense polyrhythmic section that opens into moving timpani glissandos and unison lines up and down the drums, eventually landing on an ensemble unison that fades into nothing. (ELD)

Crossroads is a marimba and cajón duo composed for an award-winning percussionist, Bryce Turner. At times, the cajón player is asked to simultaneously play desk bells with feet. The piece is an intersection of rhythmic complexity and melodic simplicity. Throughout the piece, the two players share complex unison rhythms, requiring focused attention to groove and time. This is underscored by the addition of simple melodic figures, adding another element for the players to navigate. The goal is to create a blitz of tight rhythms and grooves while also bringing clarity to the simple, often singable, melodic ideas. This juxtaposition makes *Crossroads* one of the most technically and musically demanding pieces I've written. Coincidentally, Bryce and I were both born in the small Texas town of Victoria, known as "The Crossroads" of South Texas. (IT)

The musical ideas in *Amid the Noise* are abstract: drones, melodies, rhythms, textures, and patterns. Originally, So Percussion orchestrated them on the instruments we had in our studio, but we've since discovered that accordion, organ, or tuba might play a satisfying drone as well as bowed vibraphone! Like Terry Riley's *In C*, this work maintains its identity and integrity even though wildly different realizations.

This score contains instructions and notated music for realizing unique performances of *Amid the Noise*. (JT)

**Please hold applause until the end of the program*

Ensemble Personnel

James Beckner	Richmond, KY
Jacob Davidson	Naperville, IL
Emily Durocher	Magnolia, TX
Tyler Gash	Lexington, KY
Emi Jones	Glasgow, KY
Chris Lucero	Lexington, KY
Luciano Medina	Munster, IN
Mitchell Pieper	Fort Thomas, KY
Ford Smith	Louisville, KY
Christian Swafford	Knoxville, TN
Gavin Waggoner	Terre Haute, IN

This recital is presented in partial fulfillment of the requirements of the Doctorate of the Musical Arts in Percussion Performance.
Emily Durocher is a student of
James B. Campbell.

UNIVERSITY OF KENTUCKY
SCHOOL OF MUSIC
PRESENTS

GESTURE AND PERCUSSION
*A guide to the functional use of gestures in percussion
performance and pedagogy*

A DMA Lecture Recital
Presented by Emily Durocher

April 19th, 2023
Room 22, College of Fine Arts
6:30pm

This recital is presented in partial fulfillment of the requirements of the Doctorate of the Musical Arts in Percussion Performance.
Emily Durocher is a student of
James B. Campbell

Program

<i>Advanced Studies for Snare Drum (1971)</i>	Mitchell Peters	(1935 – 2017)
9		
<i>Etudes for Timpani (2000)</i>	Richard Hochrainer	(1904 – 1986)
42, 50		
<i>Appalachian Springs (1944) *</i>	Aaron Copland	(1900 – 1990)
Xylophone Excerpt, 48-50		
<i>Bloom Suite (2014) *</i>	Elliot Cole	(1984)
Mvt. III		
<i>Boomslang (2007) *</i>	Roshanne Etezady	(1973)

*Denotes excerpts from works, not played in entirety

For recording purposes, please hold applause until after each set/piece and have cell phones on silent. As a courtesy to performers and other audience members, please turn off and put away all electronic devices. The use of recording and photographic equipment is permitted only by approved University personnel. No food or drink is permitted in this performance venue. We ask that you remain seated throughout the performance and, if you must exit, that you wait until applause.

This recital is presented in partial fulfillment of the requirements of the Doctorate in the Musical Arts in Percussion Performance. Emily Durocher is a student of James B. Campbell.

Topics Discussed

Part I – Background Information

- Discussion of gestures
- “What does it mean to functionally utilize gestures in your performance and teaching?”

Part II – Application to Basic Technique and Snare Drum Performance

- Discussion of “stroke types”
 - Perform “Accents” from *Dexterity* by Mitchell Peters
- Discussion of articulations and how it relates to stroke types
 - Perform *Etude 9* by Mitchell Peters from “Advanced Studies for Snare Drum”

Part III – Applications to Gestural Technique on Timpani Tone Production

- Discussion of French vs German grip
- Demonstration of types of “lift”
 - Fast, Medium, Slow
- Clarity in the hands for clarity in the sound
 - Performance of *Etudes for Timpani 42,50*

Part IV – Application to Keyboard Performance

- Discussion of sustain on keyboard percussion
 - Vibraphone vs Marimba vs Xylophone vs Glockenspiel
- Study of sustain on marimba by Erik Saoud
- Demonstration of stroke types on Keyboard Percussion
 - Performance of Appalachian Spring
 - Performance of *Bloom Suite Mvt. III*
 - Performance on excerpts from *Boomslang*

Part V – Conclusion, questions, acknowledgements

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VITA

Emily Lane Durocher

EDUCATION

Boston Conservatory at Berklee; Boston, MA May 2020
Master of Music – Percussion Performance
Primary Instructors – Doug Perkins, Nancy Zeltzman, Kyle Brightwell, Sam Soloman

University of Kentucky, Lexington; KY May 2018
Bachelor of Music – Percussion Performance
Primary Instructors – James B. Campbell

TEACHING

Rouse High School; Leander, TX Jul. 2022 – Present
Assistant Percussion Director

Kealing Middle School; Austin, TX Aug. 2022 – Present
Percussion Instructor

Private Lesson Instructor; Austin, TX Aug. 2022 – Present
Leander ISD / Austin ISD

University of Kentucky; Lexington, KY Aug. 2020 – May 2022
Graduate Percussion Teaching Assistant

Dunbar High School; Lexington, KY Apr. 2022 – July 2022
Percussion Coordinator

Boston Conservatory at Berklee; Boston, MA Aug. 2019 – May 2020
Percussion Ensemble Coach

Dobins Bennet High School; Kingsport, TN Jul. 2019
Percussion Technician

Franklin County High School; Rocky Mount, VA Jul. 2019
Percussion Technician

Currituck County High School; Currituck, NC
Percussion Technician

Jul. 2019

Dunbar High School; Lexington, KY
Percussion Technician

Jul. 2016 – Nov. 2017

PUBLICATIONS

Switch
Blue Book Vol. 3, TapSPACE Publications

Nov. 2021

M.C.
Blue Book Vol. 2, TapSPACE Publications

Nov. 2018

AWARDS AND SCHOLARSHIPS

Sigma Alpha Iota Graduate Performance Award
Awarded by Sigma Alpha Iota Fraternity

2022

Graduate Teaching Assistant
Awarded by College of Fine Arts

2020-2022

Boston Conservatory Honors Ensemble
Awarded through audition

2019-2020

Percussive Arts Society Diversity Committee
Focusing in LGBTQ+ and Women within the field

2018 - P

Collegiate Sword of Honor, Sigma Alpha Iota
Awarded by Delta Omega Chapter

2018

Ruby Sword of Honor, Sigma Alpha Iota
Awarded by Province Officer

2018

James B Campbell Percussion Award
Awarded by Professor James Campbell

2016,2017,2018

Elaine Gould Percussion Award
Awarded by Professor James Campbell

2015

Sigma Alpha Iota Award

2017,2018

Awarded by the School of Music

Sigma Alpha Iota Undergraduate Scholarship

2018

Awarded by Sigma Alpha Iota Fraternity

Sigma Alpha Iota Fraternity

President, Lexington Alumnae, 2022-2023

Alumnae, 2018 - Present

Treasurer, 2017-2018

Secretary (Recording and Correspondent) 2017-2018

Secretary (Recording and Correspondent) 2016-2017