

ABSTRACT

Title of Dissertation: THE RENAISSANCE REPERTOIRE CHALLENGE:
ACHIEVING AUTHENTIC CHORAL
PERFORMANCES THROUGH THE APPLICATION OF
DALCROZE TECHNIQUES

Kathryn Hylton
Doctor of Musical Arts, 2020

Dissertation Directed by: Dr. Edward Maclary
Professor, University of Maryland School of Music

It is challenging for modern choirs to present aesthetically pleasing and historically authentic performances of Renaissance vocal repertoire due to its complex musical language and interpretive demands. Overcoming these obstacles requires thorough research, score study, and most importantly, a rehearsal approach that elicits engaged, confident, and nuanced responses from the choir. The Jaques-Dalcroze Method, an approach to music education developed by Émile Jaques-Dalcroze (1865-1950), emphasizes the harmony of mental and physical processes in the learner. Through an applied research study with fifteen university students and a conductor (participant-researcher), this study examines the effectiveness and suitability of the Dalcroze approach to the singing of music from the Renaissance era within a choral context. Over the course of nine sessions, participants performed physical exercises to embody the musical language of the Renaissance and integrated their discoveries into the singing of Josquin des Prez' *Ave Maria...virgo serena*. They recorded journal entries after each session and completed exit interviews at the conclusion of the study. Findings suggest that exercises rooted in Dalcroze principles not only improve choir members' overall rhythmic acuity, aural perception, individual and cooperative interpretive decision-making, and musical unity, but also awaken curiosity,

enhance enjoyment, and establish grounding in the musical language of Renaissance repertoire.

The goal of this project is to provide conductors with a practical “toolkit” and a pedagogical method that empowers their ensembles to produce thoughtful, imaginative, and engaging performances of Renaissance vocal music rooted in historical practice.

*For my family:
Mom, Dad, Yvonne, Kevin, and Bekah*

ACKNOWLEDGEMENTS

I am grateful to have had tremendous support from family, friends, mentors, and colleagues throughout my graduate studies. To my dissertation advisor and conducting teacher, Dr. Maclary, thank you for sharing your passion for choral music with me. Your knowledge and conviction have led me to strengthen my skills in analysis and interpretation, and to find what truly inspires me about this craft. To my committee, thank you for being willing to dedicate your time to this project and to share your perspectives with me. I deeply respect, admire, and appreciate each one of you. To my undergraduate choir director and conducting teacher Dave Fryling, thank you for your friendship, guidance, and unending support. You have profoundly impacted my life and I am forever grateful for your mentorship throughout the years. Dr. Weinert, you helped turn a young composer into a choral conductor at Eastman, and for that I am truly thankful. To my Dalcroze instructors, thank you for opening my eyes to this creative and effective approach to teaching and for giving me the tools needed to take on this project.

To my conducting colleagues and friends at the University of Maryland, you have surrounded me with love, laughter, and enthusiasm since the moment we met. Steve, Aaron, Luke, Tim, Jon, Minji, and Matt, I have learned so much from each of you and feel truly blessed to have shared the graduate school experience with you. My dear friend Shari, your willingness to participate in my creative process, share your thoughts, and demonstrate your impeccable vocabulary when I needed “a better word for...” was selfless, kind, and very much appreciated. Thank you for your friendship, patience, and support.

To my family, thank you for who you are and who you have always encouraged me to be. Dad and Yvonne, thank you for continually asking, “How’s the dissertation coming?” and accepting my cheeky response, “How’s the basement coming?” I just want you both to know, it is finished! Kevin and Bekah, thank you for checking in on me and encouraging me with your prayers. Mom, you are my inspiration, my biggest fan, and my best friend. My confidence in teaching, joy in creating, and love of music is because of you. Thank you for your daily encouragement and unconditional love.

Finally, this project would not have been possible without the University of Maryland students who dedicated their time and energy to this research study. My sincere thanks to each of you.

TABLE OF CONTENTS

DEDICATION.....	iii
ACKNOWLEDGEMENTS.....	iv
TABLE OF CONTENTS.....	v
LIST OF FIGURES	vii
CHAPTER ONE: INTRODUCTION.....	1
1.1 Description, Organization, and Purpose of the Study	1
1.2 The Jaques-Dalcroze Method	2
1.3 The Application of Dalcroze Techniques to the Study of Renaissance Music	3
1.4 Discussion of Sources and Recent Studies	6
1.5 Description of the Research Study	10
1.6 Terminology and Definitions	12
CHAPTER TWO: OVERCOMING MUSICAL CHALLENGES WITH MOVEMENT.....	15
2.1 Rhythm and Meter	15
2.2 Tempo	25
2.3 Quality of Sound	31
2.4 Text Expression	38
2.5 Tension and Release	40
2.6 Canon and Improvisation	48
CHAPTER THREE: SCORE STUDY, REHEARSAL PREPARATION, AND CONDUCTING	56
3.1 Score Study and Rehearsal Preparation	56
3.2 Conducting Gesture	60
CHAPTER FOUR: RESEARCH STUDY.....	64
4.1 Description of the Study and Ensemble Profile	64
4.2 Methodology	69
4.3 Presentation of Findings	73
4.4 Self-Reported Data	74
4.5 Observational Data	83
CHAPTER FIVE: CONCLUSIONS AND TOOLKIT.....	89
5.1 Conclusions	89
5.2 Further Research	91
5.3 Contributions to the Field and Conductor “Toolkit”	93

APPENDICES..... **102**

 Appendix A: Score of *Ave Maria... virgo serena* by Josquin des Prez **102**

 Appendix B: Preliminary Questionnaire and exit interview questions **108**

 Appendix C: Detailed account of nine research study sessions **112**

BIBLIOGRAPHY..... **130**

LIST OF FIGURES

Figure A: Josquin des Prez’ <i>Ave Maria... virgo serena</i> , mm. 84-100.....	18
Figure B: Table of Medieval rhythmic modes and conversion to duple meter.....	19
Figure C: Sample eurhythmic exercises and variations	21
Figure D: Johannes Ockeghem’s <i>Missa Mi-Mi</i> (c. 1450-1480) II. <i>Gloria</i> , mm. 64-70 Identification of rhythmic patterns (in triple and duple meter) in top two parts.....	22
Figure E: Rhythm and complement	24
Figure F: Full score & composite rhythm reduction (<i>Missa Mi-Mi</i> , Ockeghem).....	25
Figure G: Tempo comparison of Josquin des Prez’ <i>Ave Maria... virgo serena</i> across six period ensemble recordings.....	26
Figure H: <i>Missa Fortuna desperata a 4</i> (mm. 1-12) by Jacob Obrecht (c. 1457-1505).....	28
Figure I: Table of Laban Effort Movements.....	32
Figure J: Refrain from <i>El grillo è bon cantore</i> (1500) by Josquin des Prez.....	35
Figure K: Suspensions and sustained tones in Palestrina’s <i>Ego sum panis vivus</i> (1597) mm.1-12.....	46
Figure L: <i>Mass for Five Voices</i> (1592-3) by William Byrd, <i>Benedictus</i> , mm. 48-59	51
Figure M: Anonymous thirteenth century <i>rota</i> , “ <i>Sumer is icumen in</i> ”.....	54
Figure N: Dalcroze’ conducting gestures, two students.....	62
Figure O: Research Study venues.....	64
Figure P: Attendance in Research Study sessions.....	66
Figure Q: Preliminary Questionnaire responses with mean, median, and range	67
Figure R: Common and prevailing themes from participants’ journal entries.....	75
Figure S: Most prevalent themes from journal entries across entirety of study.....	77
Figure T: Common and prevailing themes from exit interviews	78
Figure U: All descriptors used in response to exit interview question number one.....	79
Figure V: Common themes across study recorded as observational data.....	84

All scores presented in these figures are in the public domain and may be found on CPDL or IMSLP. Figure J’s excerpt, while in the public domain, was borrowed from Roden, Timothy James., Craig M. Wright, and Bryan R. Simms. *Anthology for Music in Western Civilization*. Vol. A. Belmont, CA: Thomson/Schirmer, 2006., 189-190.

Chapter One: Introduction

1.1 Description, Organization, and Purpose of the Study

It is challenging for modern choirs to present aesthetically pleasing and historically authentic performances of Renaissance vocal repertoire due to its complex musical language and interpretive demands. For some conductors, performance practice considerations and pedagogical challenges can be overwhelming to the point of avoidance of this era's repertoire altogether. If ensemble directors feel ill-equipped to make the necessary interpretive decisions or find themselves unable to communicate these choices to the choristers effectively, they may be less likely to approach early music with their ensembles. Given the contributions Renaissance composers have made to the development of Western music, the variety and breadth of repertoire from this era, and the opportunity for musical growth inherent in Renaissance compositions, I believe it is the responsibility of choral conductors, particularly those in academic environments, to teach and program these works. Overcoming the many musical and pedagogical obstacles to this objective requires thorough research, score study, and most importantly, a rehearsal approach that elicits engaged, confident, and nuanced responses from the choir. An exploration of a more comprehensive approach to score study and rehearsal technique, therefore, is warranted.

This study posits that the Jaques-Dalcroze Method, an educational approach that emphasizes the harmony of mental and physical processes, can enhance both the experience and the outcome of learning Renaissance repertoire in the choral context. The study is organized into four parts: (1) fundamental research and analysis of the Dalcroze Method, historical practice

considerations, and the application of movement-based techniques to the study and rehearsal of Renaissance repertoire in the choral context, (2) development of a Dalcroze-influenced curriculum to address the elements of Renaissance musical language in the choral rehearsal, (3) implementation of the curriculum through a nine session rehearsal project with fifteen students from the University of Maryland, and (4) evaluation of the method and its impact on singers through qualitative analysis. This dissertation contributes to the field by providing conductors with a pedagogical approach and a practical “toolkit” aimed at empowering singers to produce thoughtful, imaginative, and engaging performances of Renaissance vocal music rooted in historical practice.

1.2 The Jaques-Dalcroze Method

Émile Jaques-Dalcroze (1865-1950) was a Swiss composer and music educator who began his career at the Geneva conservatory in 1892. As a young teacher, he perceived a poor rhythmic sensibility in his students, attributing their deficiencies to a “lack of balance between the mental and physical powers.”¹ He concluded that the Western music education system had lost sight of the human qualities needed for expressive performance in favor of strict technical proficiency. Jaques-Dalcroze desired to create an effective approach to rhythmic training which would offer students “musical experiences instead of musical knowledge”² and enable them to discover their personal imagination, individuality, nuanced expression, and joy. His method was informed by his experiences working with young children, as evidenced by his emphasis on

¹ Jaques-Dalcroze, Émile. *The Eurhythmics of Jaques-Dalcroze*. Boston: Small Maynard and Company, 1915, 28.

² *Ibid.*, 27.

games, creativity, and amusement, but he believed in the *universal* power of joy to create “useful and lasting work.”³

The Dalcroze Method is divided into three primary educational areas: (1) eurhythmics, which teaches rhythmic movement in the body in response to aural prompts, (2) solfège, which helps develop the ear in regard to the perception of melody, harmony, and nuance, and (3) improvisation, which aims to enliven the creative spirit. While the method was initially developed to improve children’s rhythmic acuity and overall musicianship, today it is used in classroom and rehearsal contexts with students of all ages. Jaques-Dalcroze encouraged his colleagues and future educators not only to employ his method but to build upon it by creating their own exercises based on the needs and experience levels of their students. Music educators and conductors have since trained⁴ in the Dalcroze Method and have used it to varying degrees in their teaching and ensemble leadership. To date, little choral pedagogical research has applied Dalcroze techniques to the practice of Renaissance music. The present study seeks to address this gap in the literature.

1.3 The Application of Dalcroze Techniques to the Study of Renaissance Music

Musicians often use the word “authentic” to describe performances of Renaissance repertoire that are guided by musicological research into historical performance practices. In an effort to achieve “authenticity,” contemporary performers might use period instruments, employ

³ Ibid., 30.

⁴ There are three levels of credentials required for teaching Dalcroze classes: (1) Certificate (for those teaching introductory classes), (2) License (for those teaching advanced classes and pedagogy; this is the highest degree available in the United States), and (3) Diplôme Supérieur (for those directing Dalcroze teacher-training programs; this credential is only attainable through training in Geneva, Switzerland). All music educators, however, are encouraged to use Dalcroze-influenced techniques in their classrooms and rehearsals.

early ornamentation practices, manipulate tuning and key, observe *musica ficta*, or phrase musical lines outside of imposed modern barlines. In 1978, musicologist Howard Mayer Brown remarked, “there are still many things we need to know about choirs in the Renaissance and how they sounded before we can claim with any assurance that we can judge the authenticity of a performance.”⁵ Since then, several musicologists, music theorists, and conductors have written extensively on the subject of Renaissance authenticity (i.e. Phillips 2014, Kreitner 2011, Epp/Power 2009, Kite-Powell 2007 & 1994, Bent 2001, Fabian 2001, Alessandrini 1999, Greig 1995, Dixon 1994, Marvin 1994, Poe 1994 & 1978, Sherr 1987, Fallows 1985), providing guidelines and practical suggestions for interpretation and execution in order to come closer to reaching this rather mystifying goal. Some of these writers claim that authenticity is rooted in performers’ emotional connection with the music and the expressive communication thereof.⁶ Taken further, it seems likely that another layer of authenticity can be gained if the performer places him/herself in the mind and body of the Renaissance musician, steeped in the *philosophical* musical principles of the age. In the present study, I aim to establish this foundation and demonstrate a rehearsal approach that enables singers to deepen their connection with Renaissance music, producing more expressive performances.

The common notion that the Renaissance era was a “rebirth” of Ancient Greek philosophy and humanistic ideals is both accurate and helpful in understanding the Dalcroze Method’s application to Renaissance music. As his contemporary M.E. Sadler (university administrator and educational pedagogue) commented in the introduction to Jaques-Dalcroze’s writings on eurhythmics, “He re-opened a door which has long been closed. He has rediscovered

⁵ Brown, Howard Mayer. “Choral Music in the Renaissance.” *Early Music* 6, no. 2 (1978): 168.

⁶ i.e. Jameson Marvin’s presentation for the National Collegiate Choral Organization *College Choirs Performing Renaissance Choral Music* (November 2009): “What is *authentic*, are *feelings*... When we reveal in performance these inherent *emotions*, we *become* authentic.”

one of the secrets of Greek education.”⁷ That secret was the fundamental connection of music to human expression through the physical body, mind, and spirit.

Though musical thought underwent significant changes from the fifteenth to the sixteenth century, the philosophical idea that rhythm was an expression of motion through time remained constant (as evidenced by substantial works of music theory published in the sixteenth and seventeenth centuries).⁸ The relationship of meter (and more broadly the division of time) to movement was ubiquitous in Classical antiquity as well. The extant theoretical writings of Aristotle’s student Aristoxenus of Tarentum (4th c. B.C.) make this apparent:

“Rhythm is a dynamic species of form, signifying the internal structure of a moving thing—ordered movement, movement in accordance with certain principles of structure... The basic meanings ‘flow’ and ‘pause’ have become mingled in its semantic development, representing both (1) the alternation of strong/weak, sound/silence, movement/rest that characterizes the experience of rhythm and (2) the constraints imposed upon the ‘flow’ of music by its internal organization.”⁹

In the same manuscript, Aristoxenus compares movement of the voice to that of the body:

“...just as the voice is moved both in speech and in singing, so is the body in marching, dancing, and other such types of motion.”¹⁰ Ancient Greek attitudes regarding the foundations of music, art, discourse, mathematics, and natural sciences profoundly shaped early European culture and

⁷ Jaques-Dalcroze, Émile. *The Eurhythmics of Jaques-Dalcroze*, 11.

⁸ Grant, Roger Mathew. *Beating Time and Measuring Music in Early Modern Era*. Cary: Oxford University Press US, 2014, 15.

⁹ Rowell, Lewis. “Aristoxenus on Rhythm.” *Journal of Music Theory* 23, no. 1 (1979): 68.

¹⁰ *Ibid.*, 72.

thought. Renaissance musicians and philosophers were particularly interested in and influenced by the attitudes concerning poetic structure and musical movement that saturated Classical antiquity. Case in point, Renaissance music theory texts often describe the “beat” as lowering and raising the hand (in some cases the foot or finger) and the beating of the heart. The movement described might have been either physically or mentally performed, but in either case, the beat and its motion were one—the motion of the beat *was* the beat.

Classical antiquity was also a time of empowerment of individual expression, which regained momentum in the Renaissance once the Medieval Church loosened its grip upon art and music. Likewise, a fundamental principle of Jaques-Dalcroze’ approach is the freedom to express one’s emotions and artistic personality. As he wrote in an address to the Dresden Teachers’ Association in May of 1912, “This condition of joy is brought about in us by the feeling of freedom and responsibility, by the clear perception of the creative power in us, by the balance of our natural powers, by the harmonious rhythm of intention and deed.”¹¹

The musical principles and philosophies that began in Ancient Greece and were resurrected in the Renaissance era are reflected clearly in the work of Émile Jaques-Dalcroze. These parallels in thought generate a strong case for the use of the Dalcroze Method in the study and performance of Renaissance music.

1.4 Discussion of Sources and Recent Studies

Several studies suggest that incorporating the Dalcroze Method into a rehearsal context not only enhances musicianship but also aids in the development of confidence, creativity,

¹¹ Jaques-Dalcroze, *The Eurhythmics of Jaques-Dalcroze*, 30.

mindfulness, and joy in the music-making process. Caron Daley's 2013 dissertation, "*Moved to Learn: Dalcroze Applications to Choral Pedagogy and Practice*," is perhaps the most comprehensive recent study of the effects of the Dalcroze Method on the philosophical, pedagogical, and musical aspects of choral pedagogy and practice. Her work discusses data gathered from interviews with several Dalcroze master-teachers and Dalcroze-trained choral conductors regarding their use of this approach in music analysis, score preparation, vocal technique, and rehearsal pedagogy. Her study uncovers that the primary reasons instructors use this method with their choirs are to develop choral and vocal skills, to prepare the body for accurate and expressive performance, and "to develop mental acuity, creativity, a contextualized view of self and others, self-confidence and risk taking, and enjoyment in music making."¹² Her research also indicates a high success rate in these endeavors.

In her 1994 dissertation, "The Use of Movement as an Instructional Technique in Choral Rehearsals," Therees Tkach Hibbard observed a single Dalcroze-trained choral conductor in rehearsal, classroom, and workshop situations and collected data from both the instructor and his students. Hibbard's observations and analysis of the participants' self-reported data indicate improved vocal production, reinforced musical concepts, increased musical expressiveness, and enhanced overall performance.¹³

Claire Wehr McCoy's 1986 study explores how a movement-based approach affects the performance and attitude of choral ensemble members. Her research narrows the focus to high school singers in two subsets (one more advanced than the other) and their use of exercises related to pulse, subdivision, meter, dynamics, and phrasing. Results suggest that movement can

¹² Daley, Caron. "*Moved to Learn: Dalcroze Applications to Choral Pedagogy and Practice*." DMA Dissertation. University of Toronto, 2013. ProQuest Dissertations Publishing (NR96066), iii.

¹³ Hibbard, Therees Tkach. "The Use of Movement as an Instructional Technique in Choral Rehearsals." University of Oregon, 1994. ProQuest Dissertations Publishing (9418994), 6.

improve higher level choirs' sense of tempo, balance, and blend, as well as positively influence the attitudes of choral singers across many levels of experience.¹⁴ Various similar studies (i.e. Benson 2011, Manganello 2011, Chagnon 2001, Wis 1993) and anecdotal evidence substantiate these benefits.

Several music educators and choral conductors (i.e. Hibbard 2013, Crosby 2008, Bachmann 1991, Apfelstadt 1985, Henke 1984, Gordon 1975) have written articles and books that provide useful suggestions for incorporating movement and solfège into the choral rehearsal. These publications describe Jaques-Dalcroze' philosophies according to his original writings and demonstrate their capacity to enhance today's choral experience through representative exercise modules, sketches, and discussions of desired outcomes.

Music educators have also explored the ways in which movement-based approaches such as Laban Movement Analysis and the Dalcroze Method might impact the *conductor's* experience of score study, rehearsal preparation, and conducting gesture. In her 2018 *Choral Journal* article, Caron Daley discusses techniques and benefits of utilizing movement in independent score study of choral music across time periods and genres. Kenneth Meints' 2014 dissertation explores the application of Dalcroze techniques to conductor preparation coursework. A 1992 article by John Dickson similarly investigates using kinesthetics to train conductors.

While a number of publications address the usefulness of Dalcroze techniques and other movement-based methods (such as Laban, Alexander, and Bartenieff) in the study and rehearsal of choral repertoire, few focus on the benefits of applying the Dalcroze Method to the study of specific genres of music or eras in music history, especially prior to the development of tonal

¹⁴ McCoy, Claire Wehr. "The Effects of Movement as a Rehearsal Technique on Performance, Meter Discrimination, Ability, and Attitude of Members of High School Choral Ensembles." Ph.D. Dissertation. The University of Iowa, 1986. ProQuest Dissertations Publishing (8628132), 54-55.

theory. A sole article by Angela Crosby published in the *Choral Journal* (2008) proposes that choirs can benefit from using a kinesthetic approach in order to learn a piece of music from the Renaissance era (Tomás Luis de Victoria's *O magnum mysterium*). This article was not a research study but rather a sharing of ideas of how Dalcroze-influenced exercises may be useful tools in the choral classroom.

Regarding the pedagogical challenges of rehearsing Renaissance music, several publications identify historical practices of Renaissance musicians and give practical suggestions for performing with authenticity in the present day (i.e. Kelly 2011, Kreitner 2011, Epp/Power 2009, Kite-Powell 2007 & 1994, Plank 2004, Poe 1994, Brown/Sadie 1990, Phillips 1986, Menerth 1966). That said, a discussion of *experiential* score study and rehearsal is limited (that is, study in which the conductor or choir fully embodies the music through movement and vocal production in preparatory stages). The present study aims to contribute to this area of choral research.

In his book, *Choral Performance: A Guide to Historical Practice*, Steven E. Plank discusses the inherent challenges of performing Renaissance repertoire with modern choirs. His comprehensive discussion addresses several historical practice considerations including the size and structure of the ensemble, instrumental doublings, tuning, *musica ficta*, rhythm, tempo, articulation, ornamentation, vocal quality, the conductor's gesture, nuance, and a host of other topics. Some of these issues are logistical or depend upon the limitations of each ensemble (i.e. available performing venues, funding, makeup of the ensemble, vocal ability of the singers, etc.). In the case of those elements which are interpretive (i.e. tempo, rhythm, phrasing, dynamic contrast, articulation, etc.), conductors may be better equipped to make informed, confident decisions through a physical exploration and discovery of the music.

The effects of body movement have been studied across many subfields of music including early childhood education, piano pedagogy, music therapy, vocal technique, conducting, and choral pedagogy and practice. That said, several areas of research, particularly those referencing specific genres and time periods of music literature, remain untouched. My research aims to augment the existing literature regarding the effects of Dalcroze-influenced techniques on the choral rehearsal as well as to supply choral conductors with a practical approach that diminishes the pedagogical challenges of Renaissance music and enhances choral performances thereof.

1.5 Description of the Research Study

In order to study the effects of the Dalcroze Method on both participant experiences and auditory musical outcomes, I developed and implemented a Dalcroze-influenced choral curriculum in January 2020. Over the course of nine one-hour sessions, participants ($N = 15$), all of whom were choral musicians of traditional college age, sang and performed physical exercises which I designed to facilitate an embodied experience of the musical language of the Renaissance. Among the musical elements explored were canon, augmentation/diminution, rhythmic modes, suspension, syncopation, paired duets, fauxbourdon, perfect intervals, sequences, duple and triple meters, patterns of two and three micro beats, hemiola, phrasing, and text stress. Movement exercises included those that were relatively stationary (i.e. swaying, tapping, gesturing with the hands or arms, tensing/relaxing parts of the body) and those that involved travel in the room (stepping, gliding, tiptoeing, and collaborating with partners in exercises that required a change in space or direction). Singers were first introduced to the

concepts through movement and listening. Only after successful execution of the activities were they provided with the corresponding terminology and musical notation. Singers were also introduced to Laban Movement Analysis (a system for analyzing the elements of movement in terms of space, time, weight, and flow) and Alexander Technique (a process meant to enhance body awareness and eliminate poor physical habits) to supplement the teachings of Jaques-Dalcroze. Finally, as a choral ensemble, participants integrated their musical-kinesthetic discoveries into the singing of Renaissance composer Josquin des Prez' (c.1450-1521) sacred motet, *Ave Maria...virgo serena*.

I chose Josquin's *Ave Maria...virgo serena* for the study because it incorporates the primary musical characteristics of the middle Renaissance. Additionally, it serves as a benchmark piece for works by later Renaissance composers, thus allowing the greatest potential for participants to apply the skills gained in this training to the study of other Renaissance pieces. I felt that the most useful and accurate data would be gained from using a piece with which both the singers and I had minimal prior contact. This would reduce the potential for other conductors' interpretive decisions to bias our process. Only one of the fifteen participants had any prior exposure to the piece. Likewise, my own experience with the piece was limited; I had neither sung nor conducted it, but rather had only seen it referenced in music survey courses.

Data from this study were obtained in the following ways: (1) participants completed a Preliminary Questionnaire (included in Appendix B) in which they rated their experience level with Renaissance music and movement-related activities, (2) participants wrote free-form journal entries after each rehearsal, (3) participants completed exit interviews at the conclusion of the rehearsal project (prompts from which are included in Appendix B), (4) I observed the nine rehearsals personally (as a participant-researcher taking the role of the conductor) and took notes

throughout the process, and (5) I reviewed video recordings that were taken at each rehearsal to confirm and add detail to data collected in person. A qualitative approach to data analysis was deemed most effective for this study because it aims to represent the lived experience of the participants.

1.6 Terminology and Definitions

Émile Jaques-Dalcroze developed terminology specific to his method which is likely unfamiliar to those who have not trained in it. These terms are used periodically throughout the presentation of my research and are defined below. Likewise, I have listed and defined vocabulary specific to Renaissance music and performance practice.

Anacrusis, Crusis, and Metacrusis: Characterization of beats by their location and purpose.

Anacrusis refers to an upbeat (or preparation of a musical gesture) while crusis indicates a downbeat (or the start of the gesture itself). Metacrusis (literally “middle beat”) denotes the gesture’s follow-through.

Arrhythmy: Jaques-Dalcroze’ term for a lack of rhythmic sensibility and musical expressivity.

Augmentation: The lengthening of note values in a musical passage in which the ratio among them remains the same (i.e. a pattern of half note – quarter note – quarter note might double in time, resulting in the pattern whole note – half note – half note). Like diminution, this is both a device used in Renaissance composition and a frequently used movement exercise in Dalcroze eurhythmics.

Diminution: The shortening of note values in a musical passage in which the ratio among them remains the same (i.e. a pattern of half note – quarter note – quarter note might be halved in time, resulting in the pattern quarter note – eighth note – eighth note). Like augmentation, diminution is both a device used in Renaissance composition and a frequently used movement exercise in Dalcroze eurhythmics.

Dissociation: Cognitive skill that enables the simultaneous perception and/or execution of competing musical ideas. Jaques-Dalcroze endeavored to teach his students to develop this skill through a set of eurhythmics games.

Eurhythmics: Though often used synonymously with the Dalcroze Method, eurhythmics is one of three core branches of a complete Jaques-Dalcroze education (alongside solfège and improvisation). Eurhythmics focuses on the use of movement (i.e. clapping, stepping, swaying, conducting, etc.) to embody musical concepts. Listening and responding physically to rhythmic sensations in music is central to this approach.

Fauxbourdon (Eng. faburden): A common technique in the late Medieval and early Renaissance eras in which a melody was harmonized by two other voices at the intervals of a fourth and a sixth below, producing the sound of parallel first inversion chords. This style of harmonization was sometimes improvised and other times notated, and was a popular method of enhancing a cantus firmus in church music singing.

Hopp: Jaques-Dalcroze' verbal command for indicating changes in eurhythmics exercises (i.e. change of direction, meter, location of the beat or subdivision in the body, etc.) “chosen for its clear incisiveness.”¹⁵

¹⁵ Jaques-Dalcroze, *The Eurhythmics of Jaques-Dalcroze*, 39.

Improvisation: One of three core branches of a complete Dalcroze education (alongside eurhythmics and solfège). Improvisation emphasizes spontaneous creativity using the body, voice, or other instrument as a vehicle.

Mensuration canon: Also called *prolation* canon, this procedure employs a strict form of imitation in which a primary melody or rhythmic motive is performed in at least one other voice at a different speed while maintaining rhythmic proportions. This was a popular compositional practice during the Renaissance era.

Musica ficta: A Renaissance practice in which the performer introduces sharps, flats, or naturals into a melody in order to avoid unacceptable dissonant intervals and produce ideal voice leading. Contemporary music editors often add accidentals above or in front of the written pitches in modern scores to indicate the intervallic changes that likely would have taken place historically.

Partbook: As opposed to a choirbook, a partbook contains printed music for a single instrumental or vocal part. This format was ubiquitous in the Renaissance.

Plastique animée: One of two applied branches of a Dalcroze education (alongside pedagogy), this technique uses physical movement to create a visual analysis of a piece of music.

Solfège: One of three core branches of a complete Dalcroze education (alongside eurhythmics and improvisation). Jaques-Dalcroze's system uses Fixed "Do" (syllables do not shift with the key as in Movable "Do") and focuses primarily on scales and scale fragments in order to develop sensitivity to function.

Chapter Two: Overcoming Musical Challenges with Movement

2.1 Rhythm and Meter

The rhythmic complexity of Renaissance music (especially the polyphonic works of the late fifteenth and early sixteenth-century Franco-Flemish composers) can make the rehearsal process slow and tedious for the modern-day amateur choral singer.¹⁶ Using a somatic educational approach that centers around the plasticity of rhythm provides an alternative means for students to internalize rhythmic concepts and constructs, identify and properly execute recurring rhythmic patterns, and develop flexibility in their interpretation and execution of rhythmic motives. In the introduction to the 1967 edition of Dalcroze's book, *Rhythm, Music & Education*, the Director of the Royal College of Music, Keith Falkner, wrote "[Jaques-Dalcroze] quickly realised that the musical element of primary appeal to children is rhythm; that the natural response to rhythm is physical, and that the body should be the child's first instrument through which to reflect and interpret the movement and nuances in music."¹⁷ I would argue that rhythm is equally appealing to adults and that individuals of all ages can benefit from working to strengthen their connection of mental and physical processes.

Jaques-Dalcroze developed several rhythmic exercises for the purpose of training the muscular and nervous systems to respond to the aural perception of music, thereby enabling musicians to physically and vocally express rhythmic nuance. The techniques are based on the premise that rhythm contains three properties: energy, space, and time. If one were to imagine, for example, a hand gesturing at a steady speed (*energy*) in a circular motion that maintains a

¹⁶ See research study participants' comments referencing rhythm on p. 80.

¹⁷ Jaques-Dalcroze., *Rhythm, Music & Education*, v.

certain circumference (*space*), it would reach the six o'clock position at the same *time* on each rotation. This example reflects the basic physics formula $time = distance \div speed$, which can be represented quite naturally by the physical motion of the human body. An anecdote that describes the genesis of Dalcroze's method illustrates this concept: Dalcroze once noticed a young student's lack of rhythmic sensibility (musical *arrhythmy*) during his music lessons. He took the student for a walk around the grounds and noticed that the young gentleman could quite easily maintain a steady pulse in his feet as he walked at a constant speed with his teacher. This simple observation caused Dalcroze to delve deeply into the relationships among aural perception, innate physical response, and conscious musical decision-making (as in playing an instrument or singing). He found that the physical experience of the body, when trained in tandem with the ear, enhanced musicians' ability to vocally produce their imagined sound from the score. *Imagination*, therefore, became an important skill for his students to develop. The Dalcroze Method includes exercises in which pupils halt an ongoing physical gesture in response to a pause in musical sound, but in which they internally hear (or *imagine*) the music continuing at the same tempo and with the same character. They resume the physical gesture when the music resumes and are encouraged to evaluate their mental adherence to these elements.

The twenty-two exercises in Dalcroze's book, *Rhythm, Music & Education*, frequently utilize stepping or marching to represent the beat (as demonstrated by his former student). He proposes a stomp of the foot and a gesture of the arm to add emphasis to downbeats, and the application of minimal muscular effort on weak beats. A clapping motion also makes frequent appearances in his writings. Dalcroze describes that the proper way to clap the beat is to maintain a circular motion of each hand (mirroring one another) with a meeting of the hands at the center, maintaining speed and size in order to maintain pulse. Divisions of the beat (and faster tempi) are

represented by smaller, faster-moving circles in the hands, and smaller, quicker steps in the feet. One can also represent combinations of long and short durations (rhythm) by combining these features in the hands or feet, or represent the beat and rhythm simultaneously by stepping one element and clapping the other.

In the case of Renaissance music where the tactus governs the beat, conductors may consider asking their singers to step the tactus with score in hand and speak the text in rhythm to maintain a connection with the pulse and provide direction to the line. This would be particularly useful if the conductor has chosen an edition that either omits editorial barlines or places them in between staves. Likewise, if the conductor has decided to employ partbooks, asking the ensemble to physically represent the tactus as a unit may help them maintain cohesiveness.

For meter changes, as with all new concepts, Dalcroze suggests that students *hear* and *physically experience* the change before vocally producing it or seeing it in a score. For example, with the conductor improvising at the piano, singers might step the beat and simultaneously perform a stomp and a hand gesture to signify each downbeat. Upon a change in meter, conductors may use the verbal cue “*hopp*” to prepare singers for the physical change. After a successful performance of this exercise, the verbal cue may be eliminated in order to increase the singers’ focus and develop skills in aural perception of meter changes.

A second exercise might be done in order to incorporate a visual element and to encourage ensemble awareness, coordination, and physical connection. For this activity, the instructor begins by improvising music in two at the piano while the singers step the beat in pairs around the room (they may hold hands, link arms, etc.). When the meter changes, singers re-group to match the new length of the bar (i.e. groups of three form for $\frac{3}{4}$ time, groups of four form for $\frac{4}{4}$ time). These exercises work best when the beat stays constant.

Jaques-Dalcroze has suggestions for dealing with metric modulations as well. In the case of a change from duple to triple meter where the length of the “measure” stays the same (which occurs frequently between the first and second sections of sixteenth-century motets), conductors can enable their choirs to produce mathematically appropriate shifts in meter by using the body. The choir may begin by slowly stepping or swaying the full “bar” while clapping a duple division, then on the conductor’s command and while maintaining speed in the lower body, clap the triple (this results in a 3:2 metric modulation, as desired in Josquin’s *Ave Maria... virgo serena*, shown in Figure A). This approach aims to solidify ensemble pulse, create an immediate












Figure A: Josquin des Prez’ *Ave Maria... virgo serena*, mm. 84-100

The figure displays a musical score for Josquin des Prez's *Ave Maria... virgo serena*, measures 84-100. The score is arranged in four staves: two vocal staves (Soprano and Alto) and two piano accompaniment staves (Right and Left Hand). The music begins in measure 84 with a 2/4 time signature. The lyrics are: "Cu - ius an - nun - ci - a - ti - o, No - stra fu - it sal - va - ti - o." The piano accompaniment features a steady eighth-note bass line. In measure 94, the time signature changes to 3/4, and the lyrics are: "A - ve ve - ra vir - gi - ni - tas, Im - mac - cu - la - ta cas - ti -". The piano accompaniment continues with eighth notes. Red annotations are present: in measure 89, "1 2" is written under the final two notes of the vocal line; in measure 94, "1 2 3" is written under the first two notes of the vocal line, and "1 2 3" is written under the first two notes of the piano accompaniment line.

and natural shift from duple to triple meter, physically demonstrate the mathematical relationship between sections, and give physical weight to the strong beats of each section, teaching the voice to follow suit. As Jaques-Dalcroze describes, this type of study of rhythmic movement helps students develop “the spontaneous and deliberate appreciation of sounds... [as well as] concentration and spontaneity in their analysis and *vocal* expression, enabling pupils to read, mark, and finally create sound rhythms (both mentally and physically).”¹⁸

Another feature of Dalcroze rhythmic training is the division of large rhythmic structures into their building blocks. Jaques-Dalcroze uses the terminology of Ancient Greek poetry (anapest, dactyl, iamb, trochee, and amphibrach) which coincide with the late Medieval rhythmic

Figure B: Table of Medieval rhythmic modes and conversion to duple meter

Mode	Pattern of Durations	Poetic Term	Modern Notation (Triple)	Modern Notation (Duple- Dalcroze Only)
Mode 1	Long-short	Trochee		
Mode 2	Short-long	Iamb		
Mode 3	Long-short-short	Dactyl		
Mode 4	Short-short-long	Anapest		
*Mode 5	Long-long-long	Spondee		--
*Mode 6	Short-short-short	Tribrach		--
**	Short-long-short	Amphibrach	--	

* Dalcroze does not refer to the fifth and sixth modes likely because they represent equal divisions of the beat rather than notes with varying lengths. Because the Dalcroze Method omits these two modes, I have not provided notation in duple meter (though an appropriate conversion might be straight quarter notes and straight eighth notes).

**Dalcroze employs Amphibrach, a term used in poetry for a long syllable between two short syllables (quantitative verse) or a stressed syllable in between two unstressed syllables (accentual verse). While it is not one of the six Medieval rhythmic modes because all divisions of triple meter have already been accounted for, the rhythmic pattern it represents in duple frequently appears in Renaissance music.

¹⁸ Jaques-Dalcroze, *Rhythm, Music and Education*, 64.

modes (see Figure B). While the Renaissance era was a time of increasing rhythmic freedom, these modes still served as foundational patterns in both poetry and music. Several Dalcroze teachers and choral conductors have confirmed that the embodiment of rhythmic ideas aids in memorization,¹⁹ so it stands to reason that the repeated physical production of the rhythmic modes may help singers memorize (and internalize) the patterns. This might enable singers to identify them more quickly in sight singing and free their minds to focus on other musical elements. Because physical embodiment of the rhythmic patterns typically incorporates what Dalcroze' student, Wilhelm Ehmann, categorizes as “mobile” movement²⁰, exercises of this type lend themselves particularly well to the choral warm-up sequence. They require acute focus, engage the full body, awaken the ears, and allow opportunities for partner/group work, which enhances trust and community building in the ensemble. Sample eurhythmics exercises (and their variations) incorporating these rhythmic patterns are provided in Figure C on the following page. Particularly useful in Renaissance music is the practice of these patterns in both duple and triple forms since the essence of Renaissance rhythmic flow is in its organization into twos and threes—a feature retained from Medieval monophonic chant.

The Solesmes Method, developed by Dom André Mocquereau (1849-1930) at the Benedictine monastery in Solesmes, France provides fundamental principles and practical rules of interpretation of Gregorian chant. If these guidelines are applied to Renaissance sacred music, they may help musicians retain its characteristic ebb and flow and alleviate the inclination for singers to be ruled by the editorial barline. Mocquereau designates that (1) rhythm is specifically a musical entity and does not necessarily coincide with the rhythm of speech, (2) there should be

¹⁹ Discussed in the works of Daley (2013) and Bachmann (1991) as well as in literature published by the Dalcroze Society of America.

²⁰ Ehmann, Wilhelm. *Choral directing*. Minneapolis, Minnesota: Augsburg Press, 1968, 83-90.

Figure C: Sample eurhythmics exercises and variations:
Rhythmic patterns and manipulation through augmentation and diminution

Exercise A:	The conductor plays a single pattern from the rhythmic modes in duple meter (i.e. ♩ ♪♪) and rests for the following two beats while choir members step that pattern (like a call and response). While observing the choir, the conductor introduces additional rhythmic patterns as appropriate.
Variation 1:	After hearing and identifying the pattern, choir members say the name of the pattern (with vocal rhythm) as they step it. i.e. ♩ ♪ ♪ ♩ ♪ ♪ amph - i - - brach an - a - pest
Variation 2:	The length of the “measure” is extended to four beats, allowing two patterns to be played successively (the same pattern may be played twice, or patterns can be mixed). Choir members remain still as they listen for four beats, then they step the patterns (with or without vocal recitation in rhythm).
Variation 3:	The conductor improvises an ongoing two-voice counterpoint at the piano incorporating one rhythmic mode in one hand (i.e. right hand, anapest) and a different mode in the other hand (i.e. left hand, dactyl). Singers are asked to clap the upper voice pattern and step the lower voice pattern. At the conductor’s verbal cue “ <i>hopp</i> ”* the singers switch the movement in their hands and feet (in response to the accompaniment, which does the same). The conductor may eliminate verbal cues if/when appropriate.
Exercise B:	The conductor plays a rhythmic pattern continuously while the ensemble steps it. At the conductor’s pianistic change and verbal cue “ <i>augment</i> ,” the ensemble steps the new version of the pattern in which note values are doubled (i.e. ♩ ♪ ♪ → ♩ ♪ ♪). At the cue “ <i>beat</i> ,” the ensemble hears and steps the original pattern. At “ <i>diminish</i> ,” the ensemble steps a pattern in which the original note values are halved (♩ ♪ ♪ → ♩ ♪ ♪). The conductor may change pattern levels at any interval of time and eliminate verbal cues when appropriate. Any pattern or combination thereof may be used.
Variation:	Singers form groups of three. The conductor selects a rhythmic pattern and each group member chooses a level to step (original, augmented, or diminished). The conductor incorporates all levels on the piano while the groups move together, stepping their individual patterns simultaneously. At the conductor’s cue “ <i>hopp</i> ,” members exchange levels (123 → 231 → 312).
	*Dalcroze uses the verbal cue “ <i>hopp</i> ” in quick reaction exercises to indicate a musical change that requires a physical adjustment. After practice, musical prompts alone may be sufficient.

a constant, unchanging primary beat or pulse, and (3) each of the primary beats may be combined into sets of twos and threes which may be further combined freely to make phrases.²¹ This unsystematic combination of twos and threes is called *soluta* (in contrast with *vincta* which refers to a regular combination of all twos or all threes).²² Mocquereau’s assistant at the monastery, Dom Joseph Gajard (1885-1972), championed Mocquereau’s method and helped define and make known an authentic style of chant singing through both writings and recordings. As he described, “[the] double principle of equality of single beats and inequality of compound beats... gives Gregorian rhythm its stateliness and nobility and a combination of steadiness and flexibility.”²³ As can be seen in Figure D, these units of twos and threes form the building blocks of Renaissance music as well. Within these sets, one can identify the duple or triple forms of the

Figure D: Johannes Ockeghem’s *Missa Mi-Mi* (c. 1450-1480) II. *Gloria*, mm. 64-70
 Identification of rhythmic patterns (in triple and duple meter) in top two parts

Qui tol-lis pec-ca-ta mun-di, mi-se-re-re no-bis. Qui tol-lis pec-ca-ta
 Qui tol-lis pec-ca-ta mun-di, mi-se-re-re no-bis. Qui tol-lis
 Qui tol-lis pec-ca-ta mun-di, mi-se-re-re no-bis. Qui tol-lis pec-ca-ta
 Qui tol-lis pec-ca-ta mun-di

Legend: ⌈ Duple ⌈ Triple

²¹ Gajard, Dom Joseph., *The Solesmes Method: Its fundamental Principles and Practical Rules of Interpretation*. Collegeville, Minnesota: The Liturgical Press, 1960, 15.

²² Ibid.

²³ Ibid.

Medieval rhythmic modes,²⁴ manipulated at times by diminution or augmentation. For choirs, these rhythmic patterns will likely be more easily recognized and executed once practiced through movement methods like those outlined in Figure C.

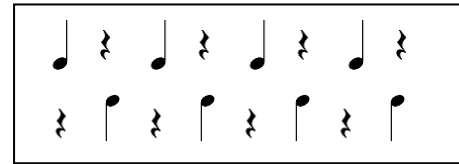
The exercises discussed thus far provide singers with tools to learn and execute their own rhythms with accuracy and flexibility. However, in polyphonic musical textures, it is important for singers to be keenly aware of the combined rhythmic texture (composite rhythm) of all voices. Singers must place equal focus on the linear quality of their own vocal line and its vertical context. Dalcroze' method recognizes the importance of both dissociation and association and helps teach musicians how to attend to individual clarity while being acutely mindful of the whole musical organism.

Building awareness of the vertical rhythmic texture begins with a physical experience of “positive space” (space which one’s own musical line occupies) and “negative space” (space unoccupied, or rests). Imagine your body taking up the positive space within a sphere that encompasses you. All the surrounding air within that sphere is the negative space. If another person stepped into your sphere, he or she would fill some of that negative space, turning it into positive space. Additional individuals added to the sphere would continue to fill the space until the entirety of the sphere were occupied, thus leaving no negative space (see Appendix C, exercise 6.1.b). In a rhythmic sense, this is a “measure” or length of space in music in which there is constant rhythmic motion at a designated subdivision (i.e. the minim or semi-minim). In order to teach this concept, Dalcroze suggests a partner activity in which students face one another and each hold a hand drum. One partner hits the drum someplace in the sphere and in

²⁴ The Medieval modes were strictly in triple meter at the time of their emergence in the late twelfth century. The number three was a holy number that represented the trinity (Father, Son, and Holy Spirit) in the Western Church. Strict adherence to the six modes went out of fashion in the mid-thirteenth century, but similar combinations of long and short tones remained popular in the Renaissance and still form the building blocks of today’s Western music.

response, the other partner fills the leftover physical and aural space with a beat of his or her drum. The sound becomes continuous as the duo keeps the beat (corresponding to the improvised piano music by the

Figure E: Rhythm & complement



instructor) by alternating hits of the drum, filling one another's negative space. Now, after physically and aurally experiencing this concept, students are taught that they have played a rhythm and its *complement* (Figure E), which together form a composite rhythm of straight quarter notes. There are several exercises one can formulate to practice rhythm and complement (see Appendix C, exercise 6.2). The “mobile” exercises, like those used in teaching the rhythmic modes, are likely best used during the warm-up sequence. In the working part of a rehearsal in which the choir is endeavoring to clarify a complex rhythmic structure, I suggest the reduction of all parts into a composite rhythm which can be clapped (in Dalcroze' circular fashion), vocalized on a neutral syllable, or stepped around the rehearsal room. This process has the capacity to help singers experience the music's overall rhythmic flow and become mindful of how their rhythmic motion interacts with that of the other vocal lines. Pairs, trios, and quartets of moving notes become significantly clearer, as do moments of homophony within a primarily polyphonic texture. Figure F on the following page shows both the full score and composite rhythm of the musical example used in Figure D. Rehearsing under performance tempo, choirs may be able to perform the composite rhythm while looking at the full score. For less experienced ensembles, I recommend that conductors provide their singers with a notated composite rhythm (like that shown on the lower part of Figure F) before using the full score.

Figure F: Full score & composite rhythm reduction (*Missa Mi-Mi*, Ockeghem)

The image displays a musical score for the 'Missa Mi-Mi' by Ockeghem. It features a full score with four staves (Soprano, Alto, Tenor, and Bass) and a composite rhythm reduction below. The lyrics are: 'Qui tol-lis pec-ca-ta mun-di, mi-se-re-re no-bis. Qui tol-lis pec-ca-ta ta mun-di, mi-se-re-re no-bis. Qui tol-lis pec-ca-ta'. The composite rhythm reduction shows a sequence of notes and rests, with vertical dashed lines indicating the alignment with the full score.

Rhythm is one of the most complex elements of music of the Renaissance and that which is often least practiced in the choral rehearsal. Rhythm is at the core of Dalcroze musical training. Utilizing Dalcroze-influenced exercises like those presented in this chapter as well as those demonstrated in the “toolkit” in Chapter Five and in Appendix C provide an optimal strategy to practice and improve rhythmic acuity in an enjoyable, team-driven environment.

2.2 Tempo

The familiar issue of tempo selection pervades music from the Renaissance perhaps more than any other era. Conductors frequently wrestle with choosing appropriate tempi without clear indications from the composer, resulting in significant ranges of speed and even affect across performances. A simple examination of tempi in the duple section of Josquin des Prez’ *Ave Maria... virgo serena* across six contemporary recordings from well-known period ensembles

demonstrates this point (see Figure G). While the Renaissance idea of *tempo giusto*²⁵ (not to be confused with this term’s use as a tempo marking in the late eighteenth century) suggests that a natural or “just” tempo can be determined from a piece’s mensuration sign, note values, and character, the practical outcome of that ideal can be as broad as the disparity shown in Figure G.

Figure G: Tempo comparison of Josquin des Prez’ *Ave Maria... virgo serena* across six period ensemble recordings

Ensemble	The Hilliard Ensemble	Alamire	Schola Antiqua of Chicago	Tallis Scholars	Vienna Vocal Consort	La Chapelle Royale
Average bpm of semibreve	50	62	66	68	70	90

What we do know is that Renaissance musicians were primarily concerned with the rate of the tactus, particularly in sacred music. Giovanni Maria Lanfranco (1582-1647) described the tactus, or governing beat of the music, in his 1533 treatise, *Scintille di musica*: “the beat... is a particular sign formed in imitation of the pulse of a healthy person by means of raising and lowering of the hand.”²⁶ The pulse was considered the heart of the music that should not waver too far from that of the same lifegiving element in the human body. While several Renaissance writings explore the link between the human body and the organization of time in music, procedures for determining exact tempo are far from clarified (as there was no means to calculate or measure tempo at the time). The importance of the hierarchy of rhythmic divisions, however, appears as a central theme in these writings. Steven E. Plank’s analogy to the hierarchical

²⁵A comprehensive discussion of issues of tempi in the Renaissance, including the system of *tempo giusto* can be found in Roger Mathew Grant’s *Beating Time & Measuring Music in the Early Modern Era*. Cary: Oxford University Press US, 2014.

²⁶ Quoted in: Blachly, Alexander. “Mensuration and Tempo in 15th-Century Music: Cut Signatures in Theory and Practice.” Columbia University, 1995, 209-210.

physical space of gothic cathedrals further conveys this idea and how it might be useful in determining tempo:

“Each layer is convincing in its own right, but the harmony of the layers is paramount. And for that harmony to emerge, the largest element, the arch of the pier arcade, *must be seen as a unit*, no less than the smaller ones. In musical terms, then, the *slowest* element must still assert a linear integrity, even the *fundamental* integrity, organizing the space of all the others. Yet we often encounter interpretations that are based on and organized by the faster levels to which the ear is easily drawn.”²⁷

Using physical movement as a means of enacting both the slowest and quickest moving parts of the music may help modern conductors determine appropriate tempi for Renaissance works. Consider the rate at which the body must move in order to maintain “linear integrity” for slow-moving lines like a tenor cantus firmus or a rhythmically augmented motive in a polyphonic work. The body must generate enough speed for continuous natural motion to take place. If one were to sing and step the musical line simultaneously, the tempo in question could be further guided by the elements of pitch and dynamic nuance. Now consider faster-moving musical lines such as those that are composed freely above slow-moving cantus firmi, motivic ideas that have been manipulated through diminution, or lines that gain rhythmic motion as they approach a cadence. A physical enactment in the upper body through clapping or tapping of the hands would be appropriate, as would a tiptoeing motion in the lower body. These motions not only demonstrate what is physically possible (considering size and speed) but also take into account

²⁷ Plank, *Choral Performance: A Guide to Historical Practice*, 66.

the Renaissance theories of music and movement. A challenging but worthwhile exercise would be performing two musical lines (the slowest and fastest) simultaneously. One could use the upper and lower body, the lower body and voice, or the upper body and voice. Likewise, one could set in motion a tactus in the lower body (by stepping) while singing the slowest-moving line and then, maintaining the tactus, singing the fastest-moving line. I experimented with this method using several pieces of music including Josquin's *Ave Maria... virgo serena* and the *Kyrie* from fifteenth century composer Jacob Obrecht's *Missa Fortuna desperata a 4* (an excerpt from which is shown in Figure H). Through this approach, I was able to narrow my options to tempi within an 10bpm range for both pieces. Further discussion on score preparation using movement-based methods to follow in Chapter Three.

Figure H: *Missa Fortuna desperata a 4* (mm. 1-12) by Jacob Obrecht (c. 1457-1505)

The image displays a musical score for the Kyrie section of the Missa Fortuna desperata a 4 by Jacob Obrecht. It consists of four vocal staves (numbered 1, 2, 3, and 4) and a basso continuo line. The music is in a 4-part setting with a complex rhythmic structure. The lyrics are: Ky - ri - e e - ley - son, Ky - ri - e e - ley - son, Ky - ri - e e - ley - son. The score includes various musical notations such as clefs, time signatures, and dynamic markings.

A movement-based approach alone is insufficient in making interpretive decisions, including that of tempo. One must first gather as much information as possible from the original manuscript (if one is available) and the context of the work's original performances. Regarding the manuscript, an understanding of mensuration signs and original note values is paramount. The tactus generally equates to a semibreve in white mensural notation, but modern editions often halve note values for easier reading. Additionally, an indication of diminution in the manuscript changes the value of the tactus to the breve—an essential detail if present. While choosing an edition that equates the tactus to the half note may initially feel more approachable for singers, it may inadvertently indicate a quicker tempo than desired and fail to communicate the rhythmic nature of the piece. Preserving the whole note tactus in modern notation may provide greater benefits overall. Regarding historical context, conductors must consider the purpose and location of original performances. In the case of sacred liturgical compositions, did the music accompany the celebrant's ritualistic tasks? Was it sung during the distribution of holy communion? Were pieces performed in vast, reverberant cathedrals? In the case of secular music, was it performed in the court? What were the acoustics like and how do they compare with the conductor's selected performing venue? Understanding historical framework provides context for the movement-based approach to tempo selection. A combination of these two methods of study will help conductors facilitate textural clarity and expressivity in their choirs' performances.

The execution of a steady tempo is perhaps equally challenging to choosing the "right" one. While tempo in the Renaissance was flexible for the purpose of expressively communicating the text, performers must modify tempo intentionally, not accidentally. With more control, one has more flexibility. Jaques-Dalcroze suggested several ways to utilize the

relationships among space, time, and speed to accurately and consistently maintain tempo. He encouraged circular clapping to maintain pulse as well as the use of props (such as balls and drums) for their visual, tactile, and auditory appeal. Bouncing props help the user to physically experience the preparation (anacrusis) to the downbeat (crusis) as well as the beat's follow-through (metacrusis). This sensation is particularly useful for singers because it parallels the intake of breath before the onset of pitch and the support needed to sustain a resonant sound. My research project choir played an introductory game using tennis balls in order to develop an inner sense of pulse and improve metric unity (see Appendix C, exercise 5.1). Through this exercise, singers were able to maintain a pulse of 84 bpm with almost imperceptible tempo fluctuation (further discussed in Chapter Four). Games such as these have the capacity to increase singers' awareness of instability with regard to tempo, as well as develop skills to maintain inner pulse and subdivision in an enjoyable and memorable way.

Once tempi are established and singers develop skills to better control its plasticity, Renaissance music can be performed with its intended metric flexibility. Rubato can now be applied to the tactus, which, though intended to provide constant forward motion and stability, should not impose limitations on expressivity. Remarkably, several sixteenth-century musicians and theorists had similar complaints about interpretation and performance as one might hear today. Nicola Vicentino, in his *L'antica musica ridotta alla moderna prattica* (1555), wrote:

“Sometimes a composition is performed according to a certain method that cannot be written down, such as uttering softly and loudly or fast and slow, or changing the measure in keeping with the words, so as to show the effects of the passions and the harmony. This technique of having all the singers at once change the measure will not

seem strange, provided the ensemble agrees on when the measure is to be changed, thus avoiding any errors. A composition sung with changes of measure is pleasing because of the variety, more so than one that continues on to the end without any variation of tempo.²⁸

Let us not aim to replicate the poor performances in our attempt to be authentic! Rather, let us find those expressive physical gestures which can invigorate our metric flexibility.

2.3 Quality of Sound

Musical “expressivity” has both discernable auditory qualities and those that are more abstract. While sensitivity to these qualities differs slightly from person to person depending on circumstance, listeners within a given context often experience similar emotional responses to expressivity. Often referred to as musical “nuances,” these qualities (volume, articulation, timbre, speed, intensity, and combinations of these elements) are not intrinsic to compositions themselves, but rather generate from the performer.²⁹ It is important, therefore, that the performer be capable of executing a wide range of expressive musical gestures. How might we as conductors help our singers uncover their expressive capabilities?

Jaques-Dalcroze’ contemporary Rudolf Laban (1879-1958) was a Hungarian dancer and movement theorist who spent much of his life analyzing and writing about the qualities of movement. Often termed a “Renaissance man,” he was formally trained in art and architecture

²⁸ Quoted in: Blackburn, Bonnie J. “Tramline Music.” *Early Music* 41, no. 1 (2013): 52.

²⁹ Fabian, Dorottya, Renee Timmers, and Emery Schubert. *Expressiveness in Music Performance: Empirical Approaches across Styles and Cultures*. Oxford: Oxford University Press, 2014, Introduction.

but was highly interested in the philosophies of music and dance. He chose to pursue dance more seriously as a young adult by performing, teaching, and choreographing. By his thirties, Laban turned his focus to the development of movement theories, systems of notation (i.e. Labanotation), and training methods that would enable identification and communication of all forms of movement. These ideas were arranged into a system called Laban Movement Analysis (LMA), which is well-known and used across many fields including music and acting in the present day.³⁰ Laban often equated movement to sound, using words like “harmony” to describe cooperative movement among forces in the body. When we consider the Renaissance (and Ancient Greek) philosophy of sound and its direct relationship to movement, we can recognize the potential benefits of using Laban’s theories to develop expressive singing.

Laban’s “Effort Movements,” a set of action words encompassing different groupings of physical qualities, are often taught alongside Dalcroze eurhythmics. Laban called these terms “efforts of action drive,” dividing them into four principle categories (or “motion factors”): weight, time, space, and flow. Each of these factors exist along a continuum with extreme levels on opposite ends (Figure I). Laban explains that these factors combine in various ways to create

Figure I: Table of Laban Effort Movements

Time	Sudden	Sustained
Space	Direct	Indirect
Weight	Heavy	Light
Flow	Bound	Free

³⁰ Laban’s theories were further developed and expanded upon by Lisa Ullmann (1907-1985) and Irmgard Bartenieff (1900-1981). The Laban/Bartenieff Institute of Movement Studies in Brooklyn, New York is one of the most active centers for study in the United States.

each of eight “Efforts”: float, dab, wring, thrust (sometimes called punch), press, flick, slash, and glide, which help delineate the qualities of human movement. Utilizing this terminology and applying the related movements to musical elements provides a unique way to explore musical nuance, especially since expressive markings in the score were yet to exist in the Renaissance era. Dalcroze speaks to this idea in his 1915 book, declaring, “All the nuances of time—allegro, andante, accelerando, ritenuto—all the nuances of energy—forte, piano, crescendo, diminuendo can be ‘realised’ by our bodies, and the acuteness of our bodily sensations.”³¹ I would add that mutual visual observation of this exploration during an ensemble rehearsal can help expand each singer’s repertoire of movement, providing a vehicle for increased vocal expression. Unity of interpretation and execution may likewise improve due to the combination of visual, aural, and kinesthetic cues.

The participants in my research study physicalized the Laban Effort Movements (as shown in Appendix C, Exercise 3.5) and applied them to the music in Josquin’s *Ave Maria... virgo serena*. While singing an excerpt with increasing harmonic tension, rising pitch, and syncopated rhythms, they enacted a “pushing” motion, and upon the resolution, performed a “floating” gesture. While more detailed outcomes are discussed in Chapter Four, the reactions from the subjects (during the session and reported in journal entries afterward), as well as the noticeable changes in dynamic contrast, color, articulation, and metric flexibility confirmed the projected benefits of this approach. Singers were united in thoughtfully expressing the musical lines and communicating the affect of the music and text.

Laban Effort Movements can be applied to any Renaissance work, and indeed any piece of music across genres and time periods. It is a particular advantage for music from the

³¹ Jaques-Dalcroze, *Rhythm, Movement & Education*, 60.

Renaissance due to the abundant need for interpretive decision-making without expressive markings from the composer. The conductor's choice of edition will impact the ensemble's approach to these elements as editors' markings (rather bluntly called "latter-day graffiti"³² in Edward Menerth's 1966 *Music Educators Journal* article), though well-intentioned, are often problematic. First, markings are often unreliable since readers must determine their validity from relatively little information. Second, while intended to communicate vitality and expression, an overabundance of expressive markings can convey quite the opposite. If singers feel beholden to editors' prescriptive markings, they may be less inclined to allow the composer's authentic writing to inform their expression. Singers then become vehicles for someone else's interpretation, rather than active collaborators who engage both intellectually and intuitively with the music, bringing personal experience to analysis, interpretation, and execution. These qualities were intrinsic to music-making in the fifteenth and sixteenth centuries and should likewise permeate the rehearsal and performance of Renaissance repertoire in the twenty-first century.

In lieu of diacritical symbols, composers infused expressive ideas into their compositions by way of melody, harmony, rhythm, and textural interplay. Crescendos naturally occurred as pitches rose while diminuendos accompanied the lowering of pitches. Voices doubled at the unison or octave to increase overall volume, as did sections of homophony with wide-spread ranges. In the modern-day rehearsal setting, using movements like those suggested by Laban and Dalcroze can encourage singers to take charge of their own musicality, recognize expressive opportunities inherent in composers' writing, and ultimately produce a more natural and nuanced vocal sound that is truer to Renaissance musical style.

³² Menerth, Edward F. "Singing in Style: Renaissance." *Music Educators Journal* 52, no. 5 (1966): 57.

How might choirs use Laban Effort Movements to rehearse a quirky secular piece like Josquin's *El grillo è bon cantore* (1500), displayed in Figure J? This piece, an Italian *frottola*,

Figure J: Refrain from *El grillo è bon cantore* (1500) by Josquin des Prez

The image displays a musical score for the refrain of 'El grillo è bon cantore' by Josquin des Prez. The score is arranged in four systems, each representing a different vocal part: Superius, Altus, Tenor, and Bassus. The lyrics are written below the notes. The first system shows the beginning of the refrain: 'El gril - lo, el gril - lo è bon can -'. The second system continues with 'to - re Che tie - ne lon - go ver -'. The third system concludes with 'Da - le bre - ve gril - lo'. The lyrics are repeated for each part, with some parts starting with 'so.' (soprano) in the third system. The music is written in a style characteristic of the early 16th century, with a focus on rhythmic patterns and melodic lines.

15
can - ta, da - le, da - le, bre - ve, bre - ve, gril - lo, gril - lo can - ta. El
can - ta, da - le, da - le, bre - ve, bre - ve, gril - lo, gril - lo can - ta. El
can - ta, da - le, da - le, bre - ve, bre - ve, gril - lo, gril - lo can - ta. El
can - ta, da - le, da - le, bre - ve, bre - ve, gril - lo, gril - lo can - ta. El

20
gril - lo, el gril - lo è bon can - to - re.
gril - lo, el gril - lo è bon can - to - re.
gril - lo, el gril - lo è bon can - to - re.
gril - lo, el gril - lo è bon can - to - re.

incorporates invigorating rhythmic ideas into a simple harmonic structure. How then, might singers bring these ideas to life? Take the call and response motive beginning in measure 12. The text translates “of drinking, the cricket sings.” Both the upper and lower voices might perform each half note with a “flick” gesture (“Efforts” of which are sudden, indirect, light, and bound) to create a weightless, lilting sound, or a dab across the pair of half notes (less sudden, more direct, still light and bound) for a slightly weightier sound. A glide (sustained, direct, light, and free) would communicate an altogether different character, but still be fitting for this musical passage. Singers could experiment with various physical gestures and vocal sounds to enliven the rhythms on the page and unify the qualities of their vocal expression.

Singers might also clarify musical textures through this method. For example, in *El grillo*, measures 7-10, when the music depicts the cricket's "long note" (*longo verso*), the outer voices have a sustained musical gesture while the canonic motion of the inner voices produces jaunty voice exchange on every beat. To clarify and unify the rhythmic motion in the inner voices, singers could raise and lower their heels in a bouncing manner on the beat while the outer voices perform a "gliding" gesture in their hands and arms to fortify their sustained lines. Because producing physical motion beyond that which is automatic requires focus, singers would likely be more attentive during this process and have a greater chance of remembering and reproducing the musical nuances learned in each rehearsal of this kind.

Tone quality, perhaps the most challenging of qualities to examine, is equally important to the expression of music as dynamics, articulation, and phrasing. The discussion itself is a challenge to have because it attempts to translate perceived sound into words.³³ Do the descriptions "ethereal" or "lilting" in reference to vocal tone evoke the same mental quality of sound among different people? Even the more frequently used descriptors like "breathy," "nasal," "guttural," "hoarse," and "resonant," while suggesting familiar timbral traits, involve a large degree of subjectivity. Additional semantic obstacles emerge when attempting to render the meaning of terms describing timbral quality in musical treatises from five hundred years ago. While these challenges generate the need for additional research and interpretation by the conductor in precursory study, they also offer an opportunity once rehearsals have begun: conductors may use *movement* in substitution of or alongside verbal descriptions to convey a desired tone quality. Suggestions for this process are provided in Chapter Five, Module 5.

³³ Plank, *Choral Performance: A Guide to Historical Practice*, 14.

2.4 Text Expression

The Renaissance era was a time of increasing appreciation of and attraction to language as an art form. As the sensitivity to textual meaning and sentiment grew, so did the ways in which poets and musicians attended to them in their craft. Just as poets used imagery, rhythm, and patterns of syllabic and agogic stress to communicate text, so composers began incorporating these features into their music. The intricate combination of melodic, harmonic, rhythmic, and textural elements in music became a vehicle to express the deepest of human emotions. The humanistic movement of the Renaissance emphasized the need to educate and embrace all facets of the human being (body, mind, and soul), which substantially influenced artistic and musical culture.

Humanism was rooted in the philosophies of the Ancient Greeks and Romans. Through the study of humanities (*studia humanitatis*), including grammar, rhetoric, poetry, history, and philosophy, the individual was meant to develop “humane character which marks the cultured person.”³⁴ Rhetoric, the effective synthesis and communication of ideas, was not confined to a single branch of education or society but rather permeated all facets of life in the fifteenth and sixteenth centuries. Thus, the Ancient Greek and Roman components of rhetoric made their way into Renaissance musical compositions just as they had in Renaissance poetry and discourse.

Early music scholar Claude V. Palisca notes that Renaissance musicians and composers rarely wrote or spoke *about* rhetoric, but rather, they were immersed in its culture such that “by the time musical composition was attempted, the vocabulary and concepts of rhetoric, already ingrained, could be called upon to illuminate unfamiliar procedures and serve as mnemonic aids

³⁴ Kallendorf, Craig. “Ancient, Renaissance, and Modern: The Human in the Humanities.” *The Journal of General Education* 39, no. 3 (1987): 134.

for advanced and elegant composition.”³⁵ The five canons used to delineate the features of rhetoric in classical Rome are: “*inventio*,” the discovery of arguments in favor of cause, “*dispositio*,” distribution of arguments/material, “*elocutio*,” eloquence or style, “*memoria*,” memory, and “*pronuntiatio*,” delivery or performance.³⁶ *Elocutio* and *pronuntiatio* come to mind when reading this passage from the ninth century anonymous musical treatise *Musica enchiriadis* commenting on tone quality and its relation to textual affect: “In peaceful subjects let the notes be peaceful, happy in joyous matters, grieving in sad ones; let cruel words or deeds be expressed with harsh sounds—sudden, loud, and swift—shaped according to the nature and events in the emotions.”³⁷ The Renaissance treaties of G.M. Lanfranco (*Scintille di musica*, 1533), Gioseffo Zarlino (*Le Istitutioni armoniche*, 1558), Gaspar Stoquerus (*De musica verbali libri duo*, c1570) and Nicola Vicentino (*L’antica musica ridotta alla moderna prattica*, 1555) describe, among other theoretical principles, the importance of a close adherence to the text during the compositional process for rhetorical purposes. Vicentino expressed, “Music composed to words is composed for no other reason than for expressing their meaning and emotions as well as the effects of the latter with [proper] harmony...”³⁸ while Zarlino directed, “adapt the words of the speech to the musical figures in such a way and with such rhythms that nothing barbarous is heard, not making short syllables long and long syllables short...”³⁹ These remarks help inform the hierarchy against which our contemporary musical interpretations should be made.

³⁵ Palisca, Claude V. *Music and Ideas in the Sixteenth and Seventeenth Centuries*. Urbana, IL: University of Illinois Press, 2006, 206-207.

³⁶ *Ibid.*, 204-206.

³⁷ Quoted in Hiley, David. “Chant.” In *Performance Practice: Music before 1600*, edited by Howard Mayer Brown and Stanley Sadie. New York: W. W. Norton, 1990, 44.

³⁸ Quoted in Harrán, Don. “Vicentino and His Rules of Text Underlay.” *The Musical Quarterly* 59, no. 4 (1973): 621.

³⁹ Quoted in Plank, *Choral Performance: a Guide to Historical Practice*, 70.

Text influenced the composition of nearly all musical elements, creating a noticeable change in overall musical style from the late Medieval period to the Renaissance: metric flexibility replaced metric rigidity, melodic freedom replaced melodic constraint, rhythmic independence replaced rhythmic conventionality, and through-composition (often structured by phrases of text) was favored over conventional forms like the isorhythmic motet. Even desired mathematical relationships (i.e. ratios of duple and triple sections) were determined by textual affect. Given the importance of text in music of the Renaissance, choral conductors might benefit from using the text as a primary focus from the outset of rehearsals, rather than adding it after rehearsing the music on neutral syllables (a common practice for choirs). While there are benefits to removing the text (i.e. to match vowels and tone quality, and to tune chords), rehearsing text in rhythm while using physical movement to accentuate the important syllables and express the text's affect can provide a solid foundation from which to explore all other musical features.

2.5 Tension and Release

How does the human body experience tension? What is each person's level of awareness regarding his or her own physical and psychological manifestation of tension? If musicians are not sensitive to the areas of tension and ease in their bodies and minds, to what degree can they aurally perceive and execute these elements in music? Ongoing conversations among musicians, theorists, philosophers, and pedagogues reflect varying viewpoints on these topics (i.e. Bodnar 2017, Farbood 2012 & 2006, Richards 2011, Eitan and Granot 2011, Schubert 2004 & 2001, Fredrickson 2001 & 1995, Walton 1999, Hoffman 1994, Madsen and Fredrickson 1993). While

it is not my goal for this dissertation to definitively answer these questions, I do intend for such queries to draw attention to the many facets of tension that pervade the human experience of music. Exploring these matters may help choral conductors better understand how their singers perceive and express musical tension, as well as how a movement-based approach to learning might give singers a valuable new way to engage with a style of music that prominently features tension and release.

The practice of Dalcroze eurhythmics aims to improve musicians' conception of and control over their muscular sensations, including their physical experience of tension. Former president of the Dalcroze Society of America (1989-1993) Julia Schnebly-Black's description of the mental and physical processes that take place at the start of a eurhythmics session helps to clarify this objective:

“As the sound vibrations travel through the air and enter the ear, the aural system transmits them to specific areas of the brain for processing. Information about the body's arrangement in space and the state of its musculature (relaxed or tense) comes to the brain simultaneously through the proprioceptive system. The visual sense carries images of the teacher's hands reaching toward the piano keyboard. The complex flow of internal messages moving along different branches of the nervous system operates similarly in anyone who must perform with precision and skill—a violinist, a tennis player, or a surgeon.”⁴⁰

⁴⁰ Schnebly-Black, Julia, and Stephen Fred. Moore. *The Rhythm inside: Connecting Body, Mind, and Spirit through Music*. Van Nuys, CA: Alfred Pub. Co., 2003, 1.

Jaques-Dalcroze devised exercises that would enable his pupils to gain awareness and control over their muscular activity, and “to eliminate those [muscular tensions] that serve no purpose.”⁴¹ The introductory step in a set of processes he called “Exercises in Muscular Relaxation and Breathing”⁴² directed participants to contract and relax muscle groups in their bodies, one by one, while maintaining steady and focused breathing (see Appendix C, exercise 1.4). Today, psychologists, mindfulness coaches, and sleep therapists recommend a similar approach called Progressive Muscle Relaxation which has proven to help increase mental focus, lower blood pressure, reduce ancillary muscle tension, and decrease fatigue and anxiety in patients.⁴³ It seems then, that Jaques-Dalcroze’ muscular activation and relaxation process may enable greater control over not only physical tension, but also psychological tension. For musicians in particular, the complex relationships among the mental/physical experience of tension and the visual/aural perceptions of tension in music affect the practical execution of such elements in the score.

How does one define “tension” as it pertains to music? Scholars throughout history and into the twenty-first century have written at length about this topic due to its high esteem in the world of musical expression. Composer Roger Sessions once remarked, “The principle of tension and relaxation is perhaps the most important single principle of musical rhythm, and its bearing on all questions of musical expression cannot be overestimated.”⁴⁴ While there remains an incomplete understanding of the effect of musical syntax and sociological context on each person’s unique perception of tension, there are two common approaches that help narrow the

⁴¹ Jaques-Dalcroze, *Rhythm, Music & Education*, 65.

⁴² Ibid.

⁴³ Selva, Joaquin. *Progressive Muscle Relaxation (PMR): A Positive Psychology Guide*. July 4, 2019. <https://positivepsychology.com/progressive-muscle-relaxation-pmr/>

⁴⁴ Sessions, Roger. *Harmonic Practice*. New York: Harcourt, Brace, and World, 1951, 84.

focus.⁴⁵ The first pertains to the listener's expectations: upon listening to the unfolding of tonal and rhythmic events, the listener forms musical expectations that cause an increase of the perception of tension in the mind.⁴⁶ The perception of resolution comes when these expectations are met. This theory, however, begs several questions: How does the perception of tension manifest in the listener? Is it physical, psychological, or some combination of each? Does Newton's third law (every action has an equal and opposite reaction) apply to something as intangible as tension? Must tension grow and resolve equally? In his musings on musical tension, philosopher Kendall Walton (b. 1939) wrote his perspective on this issue: "Relaxation following tension is sometimes aptly characterized as a resolution of the tension, but sometimes it is not... in other instances musical tension merely dissipates. The tension may be of a kind that doesn't call for resolution or solution."⁴⁷ This viewpoint seems to categorize tension into two groups: those that require resolutions and those that do not. This idea supports the second of the two common approaches to musical tension, which suggests that the sensation of tension depends on levels of arousal and activity in the brain. According to this argument, such psychological parameters correspond to psychoacoustic parameters like volume, pitch, and intensity, so that when one rises or falls, the other does as well.⁴⁸ Due to the seemingly infinite variables that affect one's aural perception of tension, performers would likely benefit from an acute awareness of its manifestation in the body in order to prevent inadvertent tightening of the shoulders, facial muscles, or vocal apparatus in response.

⁴⁵ Granot, Roni Y., and Zohar Eitan. "Musical Tension and the Interaction of Dynamic Auditory Parameters." *Music Perception: An Interdisciplinary Journal* 28, no. 3 (2011): 219.

⁴⁶ Ibid.

⁴⁷ Walton, Kendall L. "Projectivism, Empathy, and Musical Tension." *Philosophical Topics* 26, no. 1/2 (1999): 410.

⁴⁸ Granot., "Musical Tension and the Interaction of Dynamic Auditory Parameters," 219.

Alongside the Dalcroze Method, the Alexander Technique provides a means for musicians to enhance their awareness of the physical sensations they experience while practicing, rehearsing, and performing. The technique also supplies a method for adjusting poor habits in order to avoid harmful tension. While initially developed by an actor (Frederick Matthias Alexander 1869-1955) for actors, the Alexander Technique, like the Dalcroze Method, has demonstrated success across several disciplines in teaching individuals how to adjust harmful physical habits to avoid potentially debilitating problems. The technique encompasses three steps: (1) developing awareness of the body's physical state, (2) making a conscious decision to respond contrary to poor habits (Alexander called this "inhibition"), and (3) organizing the body in such a way that it becomes balanced (particularly the neck, shoulders, and back).⁴⁹ A basic understanding of this technique and the ability to teach it might provide choral conductors with a supplementary method (alongside eurhythmics) to explore tension and release with their singers, eliminating the habitual (and potentially harmful) response to musical tension. Meribeth Bunch Dayme, a vocal consultant and authority on the science of singing, explains, "Professionals in, and those working with, the vocal arts need to know how good alignment feels and looks."⁵⁰ Once an instructor has experienced the physical sensation she describes, he or she is much more equipped to teach it (likewise in the instruction of the Dalcroze Method).

One might argue that conflicting ideas arise when comparing Dalcroze' and Alexander's methods. The Dalcroze Method encourages the physical embodiment of aural sensations (including tension), while Alexander seems to suggest that one should respond counter to his or her body's innate reactions if the aural sensation to which he or she is reacting is that of tension.

⁴⁹ Mayers, Hillary, and Linda Babits. "A Balanced Approach: The Alexander Technique." *Music Educators Journal* 74, no. 3 (1987): 52.

⁵⁰ Dayme, Meribeth Bunch. *The Performers Voice: Realizing Your Vocal Potential*. New York: W.W. Norton, 2005., 25.

However, understanding that musical tension does not disrupt the *motion* of the music the way that the tensing of muscles can disrupt the *motion* of the body can help reconcile these seemingly contrary ideas. A statement by Marjorie Barstow, a master teacher of the Alexander Technique, helps to clarify this idea: “Life is really moving from one position to another. We never stop and say, ‘This is right – this is my posture, this is the way I ought to be.’ If we do that, we’re stiff trying to hold that posture. It isn’t natural for our bodies to be held in positions.”⁵¹ Barstow’s description of the natural and constant flow of motion in the body bears a remarkable resemblance to the Renaissance view of music as continuous natural motion. If the mind can be creative in its messaging to the body to express the *movement* of tension and release rather than causing harmful muscle contractions or those that impede healthy vocal production, Dalcroze’ and Alexander’s methods work in harmony. Further, with practice, these movements can be intentional (rather than habitual) and deeply expressive of the music.

In the Renaissance, a clear set of harmonic and melodic rules caused educated listeners to have a similar set of learned expectations, likely causing them to experience tension with at least some level of comparability. Composers aimed to take advantage of such musical desires by writing successive dissonant-consonant pairs (i.e. suspension-resolution and syncopation-aligned rhythm) even within a single phrase in order to continually create and satisfy listeners’ expectations. The excerpt from Giovanni Pierluigi da Palestrina’s motet *Ego sum panis vivus* (1587) in Figure K demonstrates the pervasiveness of suspensions in late Renaissance polyphony, as well as the tendency to use sustained tones against which moving notes create quick pairs of dissonances and resolutions (through passing and neighbor tones). Such dissonances and resolutions are heard and felt differently depending upon pitch range, rhythm,

⁵¹ Quoted on the homepage of Marjorie Barstow’s personal website <https://www.marjoriebarstow.com/>.

Figure K: Suspensions and sustained tones in Palestrina's *Ego sum panis vivus* (1597) mm.1-12

The image displays a musical score for four voices: Cantus, Altus, Tenor, and Bassus. The music is in G minor (one flat) and common time. The lyrics are: "E - go sum pa - nis vi - - - - -", "E - - go sum pa - - - - nis vi - vus,", "E - - go sum pa -", "E -", "- - vus,", "e - go sum pa - - nis", "e - go sum pa - - nis vi -", "- nis vi - - - vus, pa - nis vi - vus, e - go sum pa -", "- go sum pa - - nis vi - - vus, e - go sum pa - nis vi -". The score illustrates various suspensions and sustained tones across the voices.

length of time between dissonance and resolution, pitch distance between and among voices, purpose and function of the dissonance/resolution, preceding and following material, text content, dynamics, and articulation. Given the number of variables, it is safe to say that not all dissonances are created equal, and therefore should not be sung with the same degree of tension and release. As conductors, what terminology can we use to categorize these types of harmonic tensions and relaxations and express them to our choirs? Perhaps it is not spoken terminology, but rather the singers' lived experience of these ideas through physical movement that will produce the best result.

Jaques-Dalcroze developed several exercises in order to help his pupils embody the nuances of harmonic play. Often, he incorporated malleable props such as elastic bands and flexible fabric that could be used between parts of the body (fingers and hands) or between and/or among his students. The resistance felt when stretching these flexible materials might be compared to the resistance felt in musical suspensions, while a relaxation of the material mimics the resolutions. The continuous motion of stretching and releasing the material is akin to the unceasing motion of the musical phrase. Experimenting with objects of varying weights (i.e. bean bags, medicine balls, or feathers) provides an opportunity to experience a different type of tension as gravity pulls these items toward the ground with varying degrees of force. When comfortable, musicians may also experiment with ebb and flow by pushing, pulling, and leaning against one another (see Appendix C, exercise 3.6.a). In the context of a choral rehearsal, singers may then relate their experiences in these activities to specific instances of musical tension and release in the score.

Shockingly few contemporary sources discuss a hierarchy of dissonance and resolution (or tension and release) in Renaissance vocal music. Original source materials speak to the matter in general terms, but the vocabulary is inconsistent and may be interpreted in several ways. Today, conductors often ask their singers to “lean” into the dissonance and “relax” the release. However, while composers throughout the Renaissance aimed to imbue their music with the feeling of tension and resolution, the concept of “dissonance” did not hold the same meaning from one century to the next, so a simple “lean” and “relax” is unlikely to satisfy composers’ intent.

In the sixteenth century, as earlier modal structures began to undergo changes by way of the observation of *musica ficta* and other harmonic and melodic conventions (i.e. *Una nota supra*

la semper est canendum fa- flattening of the sixth scale degree in Dorian mode to avoid a tritone), an emerging sense of harmony became the underpinning of polyphonic music. There was an increased emphasis on the triad (with root movement in the bass) and clear V-I cadences that defined the musical mode. It would stand to reason, then, that treatment of dissonances prior to this growing emphasis on the vertical would be less emphasized, and more naturally produced with the natural contour and phrasing of the independent lines, taken directly from chant. In these cases, singing through the independent phrases and allowing the body to spontaneously enact the shape of the musical line may more naturally frame dissonances when the phrases interconnect. Conversely, attending to the hierarchy of vertical dissonance as described by late Renaissance theorists will likely do well to inform one's level of emphasis on dissonances in sixteenth-century music.

2.6 Canon and Improvisation

Throughout the fifteenth and sixteenth centuries, canon played a significant role in the performing and composition of both vocal and instrumental works. This technique derived from imitative improvisational techniques that began in the late Medieval period. After the development of written notation, church musicians (from young boys in their early choir school days to older adults) sang monophonic chant daily from partbooks for the liturgy. After several hours per day, days per week, and weeks per month of practice, the singing of this music became intuitive. Late in the period and throughout the Renaissance, as the polyphonic style continued to advance (first through simple two-voice organum in the church and later fully fleshed out in four-voice polyphonic motets), an improvisational practice called "singing on the book"

developed in churches. In this style of improvisation, musicians spontaneously built upon pre-existing melodies by way of canon, note-against-note harmony, and repetition of motivic ideas, transforming them into multi-voice polyphonic pieces.⁵² A recent study by professors Julie Cumming and Peter Schubert of McGill University in Montréal found that, after analyzing and practicing (for several months) the improvisational and contrapuntal procedures found in Renaissance treatises, they were able to successfully recreate the improvised multi-voice singing that took place several hundred years ago. Their video series, “Singing on the Book,” released in December of 2019, demonstrates this intricate process.⁵³ When asked how students react to learning how to improvise (currently part of the music curriculum at McGill), Professor Cumming answered, “They are thrilled that they can do it, and challenged (in a good way) by the more complex techniques. They also feel that they finally understand how Renaissance music is put together.”⁵⁴ To this point, practicing improvisation (one of Jaques-Dalcroze’s three core branches of study) and developing skills to both aurally perceive and vocally execute canons could greatly benefit choirs learning music from this period.

Jaques-Dalcroze created several techniques to awaken the ear and mind to canon, imitation, and motivic development. These exercises not only focus on the rhythmic components of canon, but also address the reenactment of phrasing, dynamics, and articulation within the musical line. The simplest of these is called interrupted canon. In this exercise, the instructor creates musical phrases of set length at the piano “interrupted” by the same length of silence. If, for example, the musical phrase is four beats long, a four-beat musical interruption follows

⁵² Darroch, Hannah. “Singing on the Book: New Video Series Launched.” *McGill University Schulich School of Music* Video Series. December 16, 2019. <https://mcgill.ca/music/article/blog-faculty-research/singing-book-new-video-series-launched>.

⁵³ Ibid.

⁵⁴ Ibid.

before another four-beat musical phrase is played. During this time of rest, the student musician steps, gestures, or otherwise physically represents both the rhythm and the expression of the musical phrase just played. The student then pauses to listen for the next four-beat phrase from the piano and enacts its rhythmic and expressive components during the subsequent pause. The rhythmic patterns may increase in complexity as the exercise develops by way of notes with shorter durations, syncopations, or patterns of three or five against two (or vice versa). The game continues at the instructor's discretion before moving onto the next stage: continuous canon.

Continuous canons are aptly named: they lack the interruption that characterizes the previous game. For best results, this exercise should slowly work in rhythmic activity to the previously silent measures, otherwise singers may get lost (since they are performing actions to represent the *internal hearing* of the sound rather than singing aloud). In a choral context, I recommend improvising melodies in the style of the music to be rehearsed (i.e. using the same mode, metric division, representative rhythmic patterns, tempo, and even melodic figures as they appear in the piece). Figure L on the following page shows an excerpt from William Byrd's *Mass for Five Voices* with an accompanying continuous canon exercise that would be appropriate for an introductory rehearsal on the *Benedictus* movement. While the continuous canon figure shows pitch and rhythm in the imitative voice, singers are first encouraged to internally hear and silently embody the musical material (i.e. a representation of melodic contour in the arms and upper body positioning while stepping the rhythm) before adding singing.

There are many possible variations on this exercise. If rehearsal space is limited, singers can stand in place and gesture with their hands and arms to represent melodic contour and phrase shape as opposed to stepping the rhythms. Adding singing to movement upon a second round of the game is also beneficial, especially if the conductor leads by singing instead of playing the

Figure L: *Mass for Five Voices* (1592-3) by William Byrd, *Benedictus* mm. 48-59

48

Be - ne - di - ctus qui ve - - - - nit,
Be - ne - di - ctus qui ve - - - -
Be - ne - di - ctus qui ve - - - - nit, qui ve - - - nit in no - mi -

54

in no - mi - ne Do - mi - ni, in no - mi - ne Do - - mi -
- nit, in no - mi - ne Do - - mi - ni, in
ne Do - - mi - ni, in no - mi - ne Do - - - - mi -

Improvised melody from piano:

Physical representation of rhythm, melodic contour, and nuance:

9

piano. Additionally, conductors can give their singers an opportunity to practice improvisation by asking them to lead the activity. Once a musical mode and rhythmic language are established and students have gained a clear understanding of the technique, an individual singer from the ensemble can improvise his or her own melody for the ensemble to follow.

As Jaques-Dalcroze keenly observed his students throughout each exercise, so conductors should watch their singers while leading this canon game. I suggest repeating each phrase as needed before moving onto subsequent phrases given the complexity and assumed novelty of this exercise. It may take several attempts over the course of multiple rehearsals (or simply a few repetitions within a single rehearsal, depending on the abilities of the singers) before ensembles are ready to progress. This challenging activity is extraordinarily beneficial in developing the mind-body connection, improving cognitive dissociation skills, unleashing creativity, and creating opportunities for spontaneous musical analysis. If conductors mimic the musical content in the Renaissance piece toward which they are working, this exercise helps to establish the musical mode, familiarize singers with rhythmic and melodic ideas (therefore enabling more accurate and comprehensive reading), and draw attention to the structural elements of the piece.

Jaques-Dalcroze suggests a host of exercises, games, and activities to improve musicians' improvisation skills outside the context of canon. Many of these are geared toward piano improvisation but can be remolded to fit nearly any context. For example, Dalcroze describes an exercise at the piano in which the student improvises a melody and harmonization with a fixed rhythm.⁵⁵ In a choral context, an activity like this would be appropriate for the warm-up sequence prior to rehearsing a given Renaissance work. Possible variations include: (1) The choir members, provided with a fixed rhythm, tempo, and collection of notes (i.e. a frequently

⁵⁵ Exercise 9 under the heading Application of Exercises in Rhythm and Solfege to Practice of Pianoforte Improvisation, found in Jaques-Dalcroze, *Rhythm, Music & Education*, 76.

appearing triad, recurring motive, or selection of notes from the piece's mode), could improvise their own melodies simultaneously. The full choir could sing at the same time if the conductor selected a relatively simple and/or consonant pitch collection (i.e. singers may only use the notes A, C, and D as in the motive from Byrd's *Mass for Five Voices* shown in Figure L on page 51) while a smaller subset of singers would be appropriate for more complex and/or dissonant pitch collections. The conductor's command "*hopp*" could then indicate changes such as augmenting or diminishing the rhythmic pattern, changing to a different pattern (i.e. from anapest to dactyl), or even moving the collection of notes to the dominant or up a half step; (2) Singers could be given a tempo and harmonic progression (i.e. i-V-i), and asked to improvise rhythm and melody for four beats using the chord tones from each triad and then moving to the subsequent triad with the smoothest voice leading possible (using a tonal progression like this is only appropriate for music from the late Renaissance); (3) The choir could stand in a circle and sing an open fifth drone while individual singers (given a fixed rhythm ahead of time), could step into the circle and improvise a melody within a particular mode. This may start with one singer at a time coming into the circle, and then increase to two or three. Once one singer steps back to join the circle and resumes singing the root or fifth, another singer steps inside to take his or her place.

Activities in rhythmic improvisation without a pitch component are useful as well, especially if they simultaneously train memory, quick reaction, and the body-voice connection. In a choral context, singers might stand in a circle and take turns improvising a rhythmic pattern within a given number of beats. This could be done in call and response fashion wherein the leader speaks on nonsense syllables and performs physical gestures to match, and the ensemble subsequently imitates the rhythmic pattern and gestures. Leadership could be passed around the circle. Then, at the conductor's command "*hopp*," the number of beats across which the leader

improvises could change (i.e. four beats to six beats). If this change parallels a metric change in the music to be learned (i.e. duple to triple with a 3:2 metric modulation), this increases the potential benefit of the activity.

Conductors may prefer to use music from the choral canon in order to familiarize their ensembles with the structure of canon and practice of improvisation. A well-known piece from the thirteenth century is the anonymous *rota*, “*Sumer is icumen in*,” shown in Figure M.

Figure M: Anonymous thirteenth century *rota*, “*Sumer is icumen in*”

Upper 4 voices
(Canon)

Su - mer is i - cu - men in. Lhu - de sing cuc - cu;

5 Gro - weth sed and blo - weth med, and springth the w - de nu;

9 Sing cuc - - cu! A - we ble - teth af - ter lomb, lhouth

13 af - ter cal - ue cu; Bul - luc ster - teth, buc - ke uer - teth,

17 mu - rie sing cuc - cu; Cuc - cu Cuc - cu, _____

21 Wel sin - ges thu cuc - cu ne swik thu na - uer nu.

Pes1
Sing cuc - cu nu, _____ Sing cuc - cu.

Pes2
Sing cuc - cu, Sing cuc - cu nu, _____

In this piece, two simultaneous canons (the primary melody with three canonic imitations and an accompanying *Stimmtausch*⁵⁶ between two additional voices) comprise the entirety of the song. A reading of this work, or ones like it, during a choral warm-up before tackling the more complex canonic or imitative repertoire appearing on a choir's program can be a beneficial (and enjoyable) intermediate step.

⁵⁶ *Stimmtausch* literally means "voice exchange" and describes a feature of Medieval writing in which brief melodic phrases are exchanged between two voices.

Chapter Three: Score Study, Rehearsal Preparation, and Conducting

3.1 Score Study and Rehearsal Preparation

The application of the Dalcroze Method and other movement-based approaches to score study has only recently begun to appear in choral research. While it is likely that many conductors incorporate physical gesture into score study (whether purposefully or subconsciously), fairly little commentary on that process exists beyond that of the practice of conducting itself. Caron Daley's 2018 article in the *Choral Journal* is one of the first to directly address the use of Dalcroze's principles in score study. She explores how two of his basic principles, eurhythmics and *plastique animée*, can inform the conductor's interpretation, accuracy, and expressivity of Mozart's *Ave Verum Corpus* K.618.⁵⁷ Her equation, kinesthetic perception (embodiment and entrainment) + aural perception (musical ear) + visual representation (notated score) = embodiment of the musical score in conducting gesture⁵⁸ demonstrates the advantages of utilizing a movement-based approach to score study.

In order to prepare myself for the nine sessions with the research choir, I used the Dalcroze Method in my study of the selected repertoire, Josquin des Prez' "*Ave Maria... virgo serena*." I chose this work for its characteristic middle Renaissance musical features (i.e. imitative polyphony, paired duets, *musica ficta*, and a growing emphasis on text) and its substantial influence on the works of later Renaissance composers. Further, my relative unfamiliarity with the music provided a clean slate from which to develop my own

⁵⁷ Daley, Caron. "Reimagining Conductor Score Study through Émile Jaques-Dalcroze's Eurhythmics." *Choral Journal* 58, no. 8 (2018): 20-35, 29.

⁵⁸ *Ibid.*, 23.

interpretations. It is important to note that my use of the Dalcroze Method does not suggest that a movement-based approach to score study can inform all musical decisions (i.e. key, instrumental doublings, breakdown of divisi, and the selection of an appropriate edition). However, undertaking both movement and comprehensive research in score preparation might enhance conductors' confidence in their interpretive decisions and enable authentic musical outcomes. Because this study focuses on the former of these preparatory tasks, I will not include a methodology of my approach to document-based research. I will, however, provide the necessary foundation on Renaissance compositional style, performance practice, and the historical/musical context of *Ave Maria... virgo serena* and the work's composer, Josquin des Prez.

Scholars agree that Josquin des Prez (1450-1521) stands out as a master of compositional technique in the late fifteenth and early sixteenth centuries. Historian Lloyd Ultan comments, “[Josquin] used extensively paired imitation, sequential passages, a variety of canons, literal repetitions, mixed meters, and numerous other devices, all of which characterized his personal style and significantly influenced those who followed him.”⁵⁹ Each of the compositional characteristics to which Ultan refers find a distinct place within Dalcroze' method, which I used in order to prepare for the nine exploratory rehearsals with the research choir.

Without belaboring my personal experience of a movement-based score study, I will draw attention to a few primary practices that I found most helpful in making interpretive decisions and preparing for rehearsals. Because text affects all other elements in Renaissance compositions, I began with a study of the text. First, I did a silent reading and written translation. Then, I spoke the text aloud, following the highest voice part and allowing my body to move freely with the natural text stress. In doing this, my attention was drawn to the agogic nuances of

⁵⁹ Ultan, Lloyd. *Music Theory: Problems and Practices in the Middle Ages and Renaissance*. Minneapolis: University of Minnesota Press, 1977., 82.

the music and the imagery created by the melodic contour. Upon a second reading, I observed the written rhythm within each phrase twice through (the second time, I experimented with a new type of movement). This allowed me to mark note-groupings of twos and threes based on text stress and to begin memorizing the phrases. I should note that the memorization was ancillary—I only set out to familiarize myself with the text and overall musical structure but found that enacting the lines helped fix them in my memory. I used the same method in all other voice parts. By the end of this exercise, not only was I able to accurately recall a number of phrases of texts in rhythm, but I was keenly aware of the relationships among voice parts because my body had similar kinesthetic tendencies in reaction to reappearing phrases.

Throughout this process, when I arrived at a particularly long or rhythmically challenging phrase, I divided the tactus in two and stepped the subdivision around an open room while speaking the text in rhythm. After I felt comfortable with the rhythm and subdivision, I decreased the speed while increasing the length of my stepping in order to keep the tactus and continued to speak the text in rhythm. I then took the tactus away, speaking the text in rhythm and gesturing with the syllabic text stress instead. Finally, I sang the pitches in rhythm, once while stepping the tactus and once allowing my body to move at will with the text stress and musical line. This process helped me internalize rhythm, text, and tactus so that I was able to shape the phrases spontaneously and freely.

Following this study of text, I spent quiet time analyzing the harmonic ideas. I studied the music in my mind's ear and allowed my internal execution of the music to guide my external movements. I had not listened to any recordings up until this point, as I did not want other interpretations to influence my reactions to the music, particularly in regard to tempo. Although

this was challenging, I found that my internal hearing improved with each attempt. After I felt I had a clear mental hearing of the piece, I moved onto a more deliberate selection of tempo.

Through the process described earlier, I had settled on a tempo that felt comfortable and suitable based on the text and rhythmic features of each line. I wanted to be intentional and sure about my selection, so I experimented with a second technique (discussed briefly on page 28). I first found where the shortest note values in the duple sections took place and tapped the rhythm on my sternum while stepping a comfortable tactus. I set a metronome to that pulse and continued to step it while tapping through sections with the longest note durations, using a circular gesture in my hand that maintained speed when it came away from my sternum. I then explored different combinations of rhythm and tactus in different parts of my body, including my voice. Through this process, I came to a tempo that I felt enabled the greatest degree of expression and authenticity of rhythmic motion. I repeated this exercise after taking a several-hour break (and then a several-day break) to see if different results would occur. I stayed within 10bpm (58 to 68 beats to the semibreve) with each attempt. I used the mathematical proportion 3:2 for the section in triple meter (as a result of my research into historical practice) and followed a similar process in singing the musical lines from that section.

After choosing a tempo, I played through the music on the piano and listened to several recordings of the piece. I allowed my hearing of the music to dictate spontaneous movements, including those I might use to conduct. While I had previously decided I would not conduct the rehearsals or performances of the piece during the research project in a traditional sense, I felt it important to be able to demonstrate a wide variety of movements that might inspire the singers participating in the study.

3.2 Conducting Gesture

To conduct or not to conduct? This is a familiar question for choral conductors performing Renaissance music with their choirs, though many are likely asking, “Should the conductor direct the choir during *performance*?” Perhaps the more immediate question is whether and how the conductor should direct the choir in *rehearsal*. Certainly for amateur choirs there is a need for leadership from a trained and knowledgeable choral musician. However, there is little evidence to suggest that the Renaissance “conductor” did much more than keep the tactus with an upward and downward gesture of his hand. At that, it appears (from images of choral singing in the Renaissance) that the conductor was not the sole keeper of time, but rather, many other musicians in the ensemble kept the tactus as well.⁶⁰ To that end, it would be both appropriate and representative of early practices if the modern conductor trained and encouraged the ensemble both to make expressive decisions and to physicalize the music during rehearsal.

While the tactus is at the heart of Renaissance music, it need not limit the conductor’s gestural vocabulary, nor that of the ensemble. This is particularly true of polyphonic pieces in which each musical line comprises different combinations of two and three notes, contrary to the feeling of the tactus. It may be more appropriate in these instances for the singers to move their bodies (i.e. by a shift of weight) to their part’s division of time. The conductor may then physicalize the tactus with the hand and arm or eliminate a keeping of the beat altogether in favor of drawing out particular lines and shaping phrases with the hands. This method, of course, would only benefit the singers if they had a strong inner sense of beat and subdivision and were able to maintain an accurate composite rhythm (exercises to practice these skills are discussed in

⁶⁰ Plank, *Choral Performance: A Guide to Historical Practice*, 76.

Chapter Two, Section 2.1). Another consideration might be for the conductor to allow the principles of *plastique animée* to influence his or her gesture. Jaques-Dalcroze developed *plastique animée* as a way for his students to experiment with physical gestures and spacing around a room to embody, as a group, an array of features within a particular piece of music. After listening and/or singing the piece and allowing the body to naturally respond to its nuances, participants then practiced, memorized, and performed the movements. In Dalcroze' words,

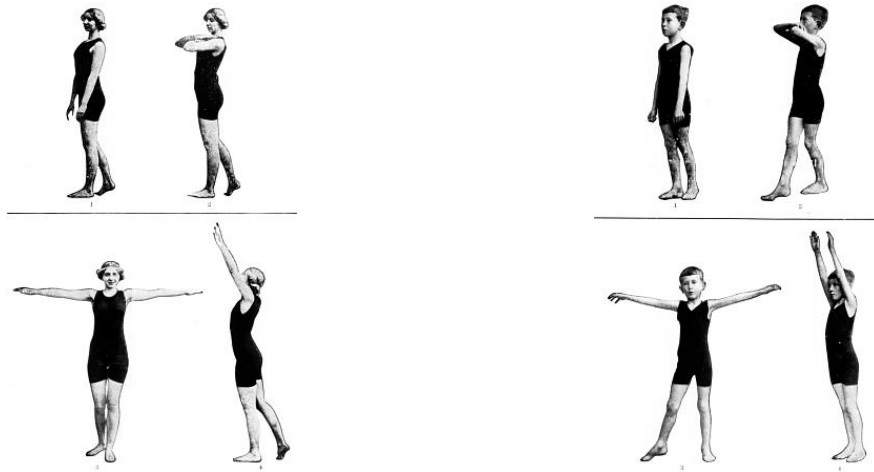
“The acquisition of all the plastic, dynamic, and agogic qualities indispensable to rhythmist or dancer, actor, or mime, will make him only an adapter, a transposer, an automaton, unless these technical qualities are controlled by wealth of fancy, a supple, elastic temperament, a generous spontaneity of feeling, and an artistic, responsive nature. All *Plastique* education, therefore, should aim especially at the arousing of natural instincts, spontaneity, individual conceptions.”⁶¹

This description of training in *plastique animée* demonstrates its application to conducting, as it is an art form itself. Likewise, the practice of Laban Effort Movements may enhance the conductor's ability to physically demonstrate the time, weight, direction, and flow of musical phrases. The verbal communication of such terms, once taught and experienced by the ensemble, might also enhance the quality of musical expression.

Some Renaissance music might benefit from a more traditional approach to conducting beat patterns (particularly music composed in the latter half of the sixteenth century). Jaques-Dalcroze taught his students to use both arms, shoulder to fingertip, to conduct metric patterns

⁶¹ Jaques-Dalcroze, *Eurhythmics, Art, and Education.*, 28-29.

Figure N: Dalcroze conducting gesture, two students



as shown in Figure N⁶². This allowed his students to fully experience the weight and gravitational pull of each beat without undue resistance. While these extreme gestures are likely inappropriate for the modern conductor to embody in rehearsal or performance, the sensation of the uninhibited swinging of the arms for each position might help the conductor fully experience the quality of each beat. Additionally, inhalation occurs quite naturally with the upward gesture of both arms due to the reflexive raising of the ribcage as the arms extend above the head, which prepares the body for an exhalation on the strong beat. This process parallels the preparation and execution of the conductor's cue and the ensemble's singing.

Dalcroze' emphasis on the embodiment of anacrusis, crasis, and metacrusis extends beyond conducting patterns into exercises aimed at preparing singers and instrumentalists for the onset and follow-through of musical sound. Since one of the conductor's roles is to visually convey these actions, he or she might benefit from practicing Dalcroze' exercises prior to

⁶² Images borrowed with permission from The Project Gutenberg EBook of *The Eurhythmics of Jaques-Dalcroze*, by Émile Jaques-Dalcroze.

rehearsing with the ensemble. As referenced in Chapter Two, my research project choir and I undertook one such exercise utilizing tennis balls. While the primary focus of the exercise was maintaining tempo, there were many noticeable benefits to conducting gesture: the subjects and I instinctively and audibly *breathed together* (without the verbal command to do so) in preparation for bouncing the balls at the same time; there was *almost no observable tension* in the arms of the subjects; subjects' *full bodies moved expressively* with the gesture of their arms; and the *preparation was in time* with the subsequent beats. This type of exercise may prove beneficial as a preparatory exercise for conductors to eliminate unnecessary tension and create freedom in the gesture while maintaining steady tempi.

One of Jaques-Dalcroze' colleagues at the Geneva Conservatory, Albert Pfrimmer, was among the first to recognize and advocate for the application of Dalcroze' philosophies and practices to the training of conductors. In his presentation at Geneva's First Congress of Rhythm in 1926, Pfrimmer said that the method "accentuates and intensifies rhythmic sense, sharpens the hearing for harmony and for phrase, strengthens the musical memory, and develops the ability to express, through mime, a form of body expression."⁶³ Several publications have since noted the method's benefits to the gesture of conducting, including the pedagogy thereof (i.e. Marzuola 2019, Meints 2014, Mathers 2008, McCoy 1994). It is of particular importance for conductors rehearsing Renaissance music to develop the skills to embody and communicate musical nuance due to the scores' limited markings regarding dynamics, tempo, rubato, articulation, and expression. If conductors plan to lead rehearsals using any type of physical gesture with their ensembles, then they must be prepared to convey a deep understanding of the music and text through their bodies, regardless of whether or not they plan to conduct in performance.

⁶³ Spector, Irwin. *Rhythm and life: the work of Émile Jaques-Dalcroze*. Stuyvesant, New York: Pendragon Press., 1990., 269.

Chapter Four: Research Study

4.1 Description of the Study and Ensemble Profile

In order to test the ideas presented in Chapter Two, I developed a Dalcroze-influenced curriculum appropriate for college choirs learning Renaissance vocal repertoire and implemented it into a nine-week rehearsal project which took place from January 6 to 24, 2020. There were three sessions per week, each lasting one hour (2:00 to 3:00 P.M.) Rehearsals took place in the Clarice Smith Performing Arts Center at the University of Maryland, College Park. While a consistent rehearsal venue was desired, no single room was available for all sessions. Instead, three spaces were used, as described in Figure O. The most significant variances were the size of the rooms and the amount of bare floor space, but the acoustics of each space were similarly dry. All three rooms had similar features (i.e. bare walls and windows to the outdoors) and contained the same musical provisions including a grand piano, chairs, and music stands. The doors from the hallway into each room remained shut throughout the study. There were no outside observers or interruptions during any session. All three rooms had comfortable temperatures and humidity levels throughout the study. The change in rehearsal space did not noticeably affect the study.

Figure O: Research Study venues

	Room A: Orchestra Rehearsal Room	Room B: Classroom	Room C: Chamber Ensemble Room
Grand piano	√	√	√
Chalkboard	√	√	no
Chairs & stands	√	√	√
Windows	√ (near ceiling)	√	√
Bare floor space	substantial	some	limited

Recruitment for this project was completed through email communication and word of mouth. As an educational study taking place at the University of Maryland during January Session (when neither fall nor spring semester classes were in session), an email was first sent to UMD choirs requesting participation from interested and available students, followed by announcements in ensemble rehearsals. Other local students (from colleges outside the University of Maryland) were invited to participate through word of mouth. No flyers or posted advertisements were used. In order to be considered for participation in the study, prospective candidates were required to (1) be enrolled in full-time coursework at the undergraduate or graduate level at the University of Maryland or other accredited institution, (2) be aged 18 or above, (3) have college-level music literacy skills, and (4) have had experience singing in a choral ensemble at the college level. If candidates met those requirements, they were otherwise eligible to participate regardless of gender, sexual orientation, race, ethnicity, religion, age, disability, or socioeconomic background. A more selective recruitment strategy based on voice type (soprano, alto, tenor, and bass) was not needed, as the initial group of interested candidates spanned all four parts. The resulting choir was comprised of fifteen students (six upper voices and nine lower voices), all enrolled at the University of Maryland, College Park. Fourteen of these were undergraduate students (the other a master's student) and thirteen were music majors. After being selected to participate, all subjects signed a consent form outlining the procedures, potential risks/discomforts, and projected benefits of the study, as well as detailing their rights as participants and the measures taken to protect confidentiality.

All participants were given Study ID numbers (02-16), which were used on all recorded data. I, as the researcher, was the only person with access to the corresponding names (saved as an encrypted file on my personal computer). While attendance at all sessions was encouraged,

some absences were unavoidable and participants had the right to withdraw at any time. One participant, Study ID #07, withdrew after the second session due to illness and scheduling conflicts. Two other participants (#04 and #13) informed me of week-long conflicts prior to the start of the study, but their participation was still deemed valuable for the study. Absences among the remaining participants took place 0-3 times throughout the nine sessions. Average attendance (excluding participant #07) was 7.43 out of 9 sessions. Participants were given freedom to spend additional time learning the music and practicing movement exercises outside the context of the group rehearsals (and were encouraged to do so if absent from any session). An attendance chart is provided in Figure P. Attendance and venue information specific to each session is provided in the detailed account of the rehearsal project exercises (Appendix C).

Figure P: Attendance in Research Study sessions

Session Number:	1	2	3	4	5	6	7	8	9
Date:	1/6	1/8	1/10	1/14	1/15	1/17	1/21	1/22	1/24
# Subjects Present:	14	14	9	10	13	12	9	12	12
02	√	√	√	A	A	√	A	√	√
03	√	√	√	√	√	√	A	√	√
04	A	A	A	√	√	√	√	√	√
05	√	√	√	A	√	√	√	√	√
06	√	√	√	√	√	√	√	√	√
07	√	√	A	A	A	A	A	A	A
08	√	√	A	√	√	√	A	√	√
09	√	√	√	√	√	√	√	√	A
10	√	√	√	A	√	A	√	√	√
11	√	√	A	A	√	√	√	A	√
12	√	√	√	√	√	√	A	√	√
13	√	√	√	√	√	A	A	A	A
14	√	√	A	√	√	√	√	√	√
15	√	√	A	√	√	√	√	√	√
16	√	√	√	√	√	√	√	√	√

The Preliminary Questionnaire, which was distributed at the end of the first session, provided additional information about the profile of the ensemble and enabled me to gauge the baseline of each individual and vocal section as well as the ensemble as a unit. I withheld distribution of the questionnaire until after the first session for two reasons: (1) I felt a framework of movement-related activities was necessary for subjects to provide accurate responses, and (2) question number 12 required participants to address their experiences with one of the preliminary activities. Of thirteen total questions, ten utilized a scale model from 1 (low) to 5 (high), with an additional option, “unsure,” for the two opinion-based questions (numbers 2 and 3), two questions required written responses in paragraph form (numbers 11 and 12), and the final question (13) required a yes or no answer. Figure Q shows all questions from the Preliminary Questionnaire as well as the mean, median, and range of the participants’ responses to the scale-based questions.

Figure Q: Preliminary Questionnaire responses with mean, median, and range

#	Question	Mean	Median	Range
1	How much experience do you have singing Renaissance music in a choral context?	3.31	3	1-5
2	How would you rate the level of musicality of your performance with this repertoire?	3.27	3	2-5 & two “unsure”
3	How would you rate the authenticity of your performances of this repertoire?	3.30	3.5	2-4 & three “unsure”
4	How would you rate your knowledge of Renaissance performance practice?	2.85	3	1-4
5	How would you rate your ability to make appropriate interpretive decisions?	3.00	3	1-5
6	How much experience do you have with eurhythmics?	1.62	1	1-5
7	How often do you consciously/purposefully incorporate movement into music practice?	3.08	3	1-5
8	How often do you instinctively/subconsciously incorporate movement into music practice?	3.92	4	2-5
9	Rate your rhythmic sensibility compared to others with a similar level of training.	3.46	3	2-5
10	Rate your personal sense of body awareness/coordination.	3.54	3	2-5

#	Question
11	Describe your background in activities relating to body awareness and coordination. (This may include training in dance or gymnastics, experience with approaches such as Dalcroze, Laban, or Alexander, participation in sports such as soccer or basketball, or the practice of yoga, karate, tai chi etc.).
12	Describe your experience sight singing the five melodies in today's session.
13	Have you ever sung " <i>Ave Maria... virgo serena</i> " by Josquin des Pres?

The two questions which yielded the highest self-ratings across the group were numbers 8 (How often do you instinctively/subconsciously incorporate movement into music practice?) and 10 (Rate your personal sense of body awareness/coordination). The question with the widest range of results was number 6, "How much experience do you have with eurhythmics?" where thirteen participants had no experience and two had significant experience (5 out of 5).

Question 13, "Have you ever sung '*Ave Maria... virgo serena*' by Josquin des Pres?" yielded only one "yes" response. Responses to question 11 were varied: two participants wrote of prior experiences with Dalcroze eurhythmics, four reported that they had been introduced to Alexander Technique, and all subjects referenced at least one of the following activities: soccer, baseball, softball, field hockey, weight-lifting, yoga, meditation, distance running, track and field, cheerleading, gymnastics, dance, and different forms of martial arts. This information helped me to gauge individual progress throughout the study and gave context to each participant's journal entries, exit interview responses, and comments during rehearsal. Likewise, observing participants as they sight sang five Renaissance melodies⁶⁴ and analyzing their responses to question 12 gave me insight into their strengths, weaknesses, and areas in which they wanted to improve. This was an efficient method of assessing an ensemble with whom I had never rehearsed.

⁶⁴ Melodies excerpted from *In hydraulis* (c. 1465) by Antoine Busnois, *Ave regina caelorum, ave* (late 15th c.) by Gaspar van Weerbeke, *Memor esto verbi tui* (c. 1515-1530) by Josquin des Prez, *Inviolata* (c. 1520) by Josquin des Prez, and *Quis dabit capiti meo aquam* (c. 1492-1494) by Heinrich Isaac. I chose music composed within a similar time frame of Josquin's *Ave Maria... virgo serena* to offer comparable stylistic features.

4.2 Methodology

Two weeks prior to the first of the nine group rehearsals, participants received a score for Josquin des Prez' *Ave Maria... virgo serena* (Appendix A) through email and were asked to learn each of their vocal lines independently, without the assistance of recordings. During this time, I (as the researcher/conductor) independently studied the music using Dalcroze-influenced techniques (as discussed in Chapter Three). At the first and second rehearsals, participants completed three preliminary tasks in order to gauge their initial status for the study: (1) they wrote responses to several questions (Figure Q) rating their level of experience with Renaissance music and movement-related activities, (2) they sang at sight a set of five short melodies excerpted from Renaissance pieces (this portion of the assessment was audio/video recorded, and I reviewed the footage following the rehearsal), and (3) they sang the prepared piece, *Ave Maria... virgo serena* by Josquin des Prez, without assistance from a conductor or pianist. Surrounding these initial exercises and for all subsequent rehearsals, participants were presented with movement-based exercises such as stepping, clapping, pushing, pulling, leaning, swaying, leaping, bending, turning, tapping, and gesturing to learn, embody, and vocally produce the nuances of the music (details of which are provided in Appendix C). My curriculum incorporated exercises from Jaques-Dalcroze' 1915 and 1921 method books as well as exercises I performed as a pupil in eurhythmics classes with Gregory Ristow (Eastman School of Music, 2009) and Monica Dale and Jack Stevenson (Institute for Jaques-Dalcroze Education, Modules I and II, 2011). I also developed several original exercises specifically for this study and built upon those already in my repertoire from previous teaching experiences.

All rehearsal sessions were video recorded (with audio) providing multiple opportunities for observation and more thorough and accurate data. Participants were given ten minutes at the end of each session to journal about their experiences. No prompts were used for their writing; rather, I encouraged subjects to complete their journal entries in a free form manner with the knowledge (through a consent form) that the advisor of the project (Dr. Edward Maclary) and I would have access to their responses and may choose to incorporate the data anonymously into the dissertation.

While there was no public performance of the music due to the exploratory nature of the sessions and limited rehearsal time, the final rehearsal included three run-throughs of the piece, all led without a conductor. One run-through was sung with natural performance-like movement, one with intentional improvised movement learned from the Dalcroze sessions, and one with relative stillness. I observed these three iterations first in person and then from video recordings, and compared and contrasted body language, accuracy of pitches and rhythms, ensemble unity, and elements of musical nuance. These and other results are provided later in the chapter (4.3 Presentation of Findings). At the conclusion of the study, participants underwent individual exit interviews. The Preliminary Questionnaire and exit interview questions can be found in Appendix B.

This applied research was exploratory in nature and provided a means of gathering both observational data and self-reported data from participants regarding their mental, emotional, and physical response to using movement-based techniques to learn a characteristic multi-voice piece from the Renaissance. Jaques-Dalcroze himself spent much of his energy creating and adjusting his own curricula through trial and error⁶⁵ and this project served a comparable function. Each

⁶⁵ Jaques-Dalcroze., *The Eurhythmics of Jaques-Dalcroze.*, 18.

session was used to test participants' responses to a concentrated body of movement-based techniques and to observe the effects of those techniques on vocal performance and overall experience. Sessions were not conducted like conventional choir rehearsals, nor were they run like strict Eurythmics classes, but rather as a blend of the two.

In developing the curriculum for this project, I was attentive to four main educational considerations: (1) utilizing a variety of movement types, (2) addressing differing learning preferences, (3) engaging each participant's whole being, and (4) teaching transferable skills. To the first point, I wanted my curriculum to include exercises that could be done in place (i.e. on risers) or moving about the room so that the resulting "toolkit" (presented in Chapter Five) could be used in any part of the rehearsal process (i.e. during the warm-up sequence, at a choral retreat, or anytime within a given rehearsal). Additionally, I wanted to provide exercises and variations that would be appropriate for the widest possible range of physical capabilities within an ensemble, including those singers with limited mobility. To the second point, each person brings to the experience a different learning preference or a combination thereof (best known as kinesthetic, auditory, visual, and reading/writing preferences). The Dalcroze Method inherently incorporates multiple learning styles, beginning with an emphasis on kinesthetic and auditory learning, followed by visual representations in the score or on a blackboard, and sometimes incorporating reading/writing (likewise in the score or on a blackboard). I was mindful to include all four of these approaches as often as possible in each lesson. To the third point (engaging each participant's whole being), I aimed for participants to have positive musical *and* social experiences because each directly affects the other. All groups of individuals must go through a natural social formation process that allows them to cohere and perform successfully. A popular leadership conference topic, this process involves four stages: forming, storming, norming, and

performing.⁶⁶ Choirs, as groups of individuals, must also experience this process in order to perform with confidence, meaning, and musicality. “Forming” is the coming together of individuals who may not know each other personally or professionally, resulting in “storming,” when contrasting ideas, perspectives, and personalities bring discomfort or confusion. “Norming” happens when groups develop and establish regular patterns and processes. The goal, “performing,” occurs as a result of individuals working interdependently in a supportive and productive environment. I would argue that in many choral contexts, ensembles are not given the opportunity to experience the second and third stages of group formation, but rather they are expected to perform (execute productive rehearsals) immediately upon forming. The Dalcroze Method, which gives individuals the opportunity to express their own creative ideas and perceive that of their colleagues through physical contact and artistic expression enables ensembles to naturally move through the stages of group formation. In developing curriculum for my rehearsal project, I prepared for diverse relationship types, the potential for discomfort with physical engagement, and varying levels of vulnerability. I planned strategies to develop physical and artistic connections incrementally, allowing a natural development of trust, open-mindedness, and cohesion, and I prepared to engage each participant’s *whole being*: mind (focus, appetite for knowledge), body (aural perception, vocal apparatus, and full physical being), and spirit (desire for belonging, connectedness, confidence, community, artistic development, creative expression, etc.). Finally, to the fourth point (teaching transferable skills), I wanted to follow an appropriate hierarchical teaching structure so that the skills developed early on could be applied to subsequent exercises/musical elements, as well as adapted and transferred from one section of

⁶⁶ Tuckman, Bruce W. “Developmental sequence in small groups.” *Psychological Bulletin* 63 no. 6 (1965): 384-399.

the *Ave Maria* to another, one Renaissance work to another, and music within the era to any time period in music history.

4.3 Presentation of Findings

The purpose of this project (both the foundational research on the Dalcroze Method and Renaissance historical practice and the applied research through the nine-week case study) was to discover the effects of a pre-existing educational approach, the Dalcroze Method, on college students rehearsing Renaissance vocal music in a choral context. Because a study combining these two specific areas (the Dalcroze Method and Renaissance music) has little prior groundwork in the choral research arena, I followed a quasi-experimental single group design. Comparing outcomes across multiple groups or from one experimental group to a control group was not appropriate due to a lack of foundational research. First, it was necessary to create a curriculum and, through trial and error, modify exercises that were inefficient, confusing, or redundant in practice, and further develop exercises that demonstrated more potential for success. The outcomes of this study make further research (through a potential cross-case study) possible. I did not intend to quantitatively measure the “authenticity” of an ensemble’s performance based on the use of movement-based techniques, but rather to observe and draw conclusions regarding participant experience and musical outcomes using this approach, thus contributing to the aforementioned gap in foundational qualitative research.

I posed several questions at the outset of this study: (1) By using this method, would participants feel involved in the musical decision-making process, therefore intensifying their investment in the music and outcomes in performance? (2) Could college level singers learn

about Renaissance historical practice through movement? (3) Would participants be more focused, engaged, and excited in these rehearsals than in their typical choral rehearsal? (4) Would this process enable singers to deepen their non-verbal connection with one another, therefore empowering them to perform confidently without a conductor? (5) By the end of the study, would participants be able to communicate the music and text with emotion, nuance, precision, clarity, and flexibility? (6) Would singers develop an appreciation for the repertoire and a desire to study the repertoire further? (7) What unexpected results might come about? Several of these questions were answered through the data collected during and after the study. Below, I have presented the data in two collections: self-reported data (that which was collected from subjects' journal entries, written responses on questionnaires, and verbal responses to exit interview questions) and observational data (that which was compiled from my personal observations of the subjects throughout the nine sessions of the rehearsal project).

4.4 Self-Reported Data

All participants recorded journal entries with pen and paper for the last ten minutes of every session. They were encouraged to write freely as opposed to responding to specific questions or adhering to a set of guidelines. Following the final rehearsal session, I collected and coded the data segments from all journal entries using two cycles of coding (In Vivo then Holistic)⁶⁷ before further identifying themes. “Common Themes,” as displayed in Figure R, encompass those that appear in two or more participants' journal entries whereas “Prevailing

⁶⁷ Miles, Huberman, and Saldaña's *Qualitative Data Analysis: A Methods Sourcebook* p. 74 states, “In Vivo coding uses words or short phrases from the participant's own language in the data record as codes.” The same source, p. 77, describes Holistic coding: “This method applies a single code to a large unit of data in the corpus, rather than line-by-line coding, to capture a sense of the overall contents and the possible categories that may develop.”

Themes” are those that occur in at least thirty percent of entries written for each session. Themes are best understood when examined alongside Appendix C.

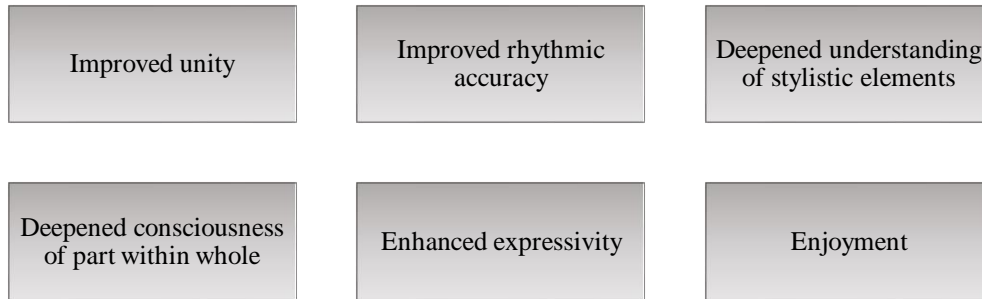
Figure R: Common and prevailing themes from participants’ journal entries

Session	Common Themes	Prevailing Themes
1	Increased relaxation Reinforced knowledge	Enjoyment Increased body awareness Excitement about future sessions
2	Enhanced understanding of Renaissance musical language and ability to read/sing it	Movement helps individual rhythm & ensemble unity Increased comfort level with movement activities Undefined musical improvement
3	Enjoyment Increased understanding of expressive benefits of linking music to movement Increased awareness of self and others	Musicality of <i>Ave Maria... virgo serena</i> improved after Laban Effort Movements Improved unity across ensemble Exercises inspired in-depth personal analysis of music
4	Enjoyment	Movement directly affects expressivity Deepening consciousness of individual responsibility and nuance in polyphonic contexts Moving while singing increases ensemble unity
5	Exercises were challenging Enlightening Exercises improve breath/preparations in conducting and singing Desire to apply techniques in the future	Enjoyment Improved recognition & execution of rhythmic patterns in score Improves unity across ensemble
6	Made learning easier Excitement Felt more secure Improved accuracy	Increased consciousness of how one’s part rhythmically fits into the whole Curiosity
7	More tuned into other parts than usual Standing still while singing is unnatural Movement made singing complex lines feel natural and expressive	Movement helped grasp concept Learned new Renaissance practice: groupings of 2 and 3 Sway gesture for large beat was non-intuitive (<i>see exercise 7.2 in Appendix C</i>)
8	Desired more direct connection from movement exercise to score Movement helped execute polyrhythms	Did not seem to achieve intended result (<i>see exercise 8.4 in Appendix C</i>) Frustration
9	<i>Exit interviews replaced journal entries for Session 9 (See Figure T).</i>	

Both common and prevailing themes articulate the participants' emotional, intellectual, and physical experiences, as well as their observations regarding the ensemble's musical progress. Excitement and enjoyment were the most common emotions expressed in journal entries across all sessions. At times, this emotion was in response to a specific activity: "This session, I really enjoyed learning about the different rhythmic modes and identifying them within our repertoire," (Participant #13, Session 5) while at other times, the emotion was an expression of participants' experience throughout a rehearsal: "I really enjoyed today's session," (Participant #08, Session 1). Additionally, several participants had common emotional threads within their own entries including a continuous increase in level of confidence and a reduction of self-consciousness. Session 8 showed a departure from the more characteristic positive emotional themes of the other sessions due to the structure of the rehearsal and types of movement exercises undertaken. One participant wrote, "The hemiola movement thing was tough and I never mastered it," (Participant #04, Session 8) while another's response was less subtle, "I didn't think that the [hemiola] exercise was helpful at all and I didn't really even understand the point," (Participant #08, Session 8). This feedback allowed me to reevaluate this portion of my curriculum and create alternate physical exercises to accompany the singing of hemiola. These and other modifications are displayed in Chapter Five.

The largest body of remarks across all journal entries fall into what we might categorize as "intellectual" comments. These were comments regarding knowledge gained during each session, further thoughts on the exercises, and observations of the impact of the movement-based exercises on the ensemble's music-making. Figure S demonstrates the most prevalent themes from journal entries across the entirety of the study (as opposed to session by session). These encompass five "intellectual" themes and one "emotional" theme (enjoyment).

Figure S: Most prevalent themes from journal entries across entirety of study



I supplemented journal entry results with the thematic ideas found in the participants' responses to exit interview questions in order to identify even more concrete themes. Exit interviews took place as soon as possible after the final session. Seven participants were interviewed within one hour of the closing session (#04, #06, #02, #08, #14, #10, and #05), five were interviewed within five days (#11, #13, #03, #16, and #15), one was interviewed two weeks following the closing session (#12), and one three weeks afterward due to logistical issues (#09). Because participant #07 was only able to attend two sessions, an exit interview was not deemed appropriate.

I used the same coding methods and thematic analysis for data from exit interviews as I did for the data from journal entries. Both common themes (those that appear in two or more participants' responses) and prevailing themes (thirty percent across all responses) are provided in Figure T. The subsequent table (Figure U) lists *all* the descriptors used in participants' responses to the first interview question, "How would you describe your overall experience of this study?", categorized by magnitude. The number in the parenthesis following each term indicates the frequency with which the term appears across responses. I have categorized the terms needing context to qualify their magnitude (i.e. "surprising" or "new") accordingly.

Figure T: Common and prevailing themes from exit interviews

#	Exit Interview Question	Common Themes	Prevailing Themes
1	How would you describe your overall experience of this study?	Learned a new approach (<i>various terms used- see Figure U</i>) Unsure → surprised → confident in technique	Positive (<i>various terms used- see Figure U</i>) Enjoyable Experienced personal growth
2	What, if anything, did you gain from this experience?	Exercises to use in future rehearsals, classrooms, etc. as student or teacher A new way of approaching musical nuance	Breaking out of the barline Greater understanding of the complexities of Renaissance music
3	What do you see are the benefits, if any, of applying the techniques we used to the choral rehearsing of Renaissance music?	Facilitates understanding of new concepts Provides alternative way to access rhythmically complex repertoire Skills are transferrable Social/interactive component enhances ability to work together and unite musically	Breaking out of the barline Achieving musical nuance Feeling and executing patterns of two and three
4	What activities, if any, were the most enjoyable?	Stepping rhythmic modes with augmentation and diminution	Laban Effort Movements Tennis ball exercise Feeling and executing patterns of two and three
5	What activities, if any, were the most helpful in the learning process?	Those that applied most directly to the piece (as opposed to those aimed at improving general musical acuity) Embodying groupings of two and three	Laban Effort Movements Tennis ball exercise
6	What activities, if any, were the least enjoyable?	All activities were enjoyable	--
7	What activities, if any, were the least helpful in the learning process?	All activities were helpful Stepping/clapping triple over duple	The hemiola exercise
8	In the future, would you or would you not prefer to utilize movement-based methods like those incorporated into this study in your choral rehearsing of Renaissance music?	--	Would prefer (this theme reflects <i>all</i> participants' responses)

Figure U: All descriptors used in response to exit interview question number one

Question	Negative Descriptors -	Neutral Descriptors ⁰	Positive Descriptors +
How would you describe your overall experience of this study?	--	“Interesting” (1) “New” (1)	“Fun” (4) “Helpful” (3) “Very positive” (3) “Surprising” (2) “Very Good” (2) “Intriguing” (1) “Really cool” (1) “Freeing” (1) “Informative” (1)

Questions one, two, and three asked participants to identify their overall impressions of incorporating the Dalcroze Method into the rehearsal of Renaissance music. Their reactions to the experience were overwhelmingly positive. Participants not only enjoyed the experience but felt that it opened their minds to a new way of intuitively approaching musical nuance as well as understanding (and being able to execute) the complexities of Renaissance musical language. Several singers found that the Dalcroze Method directly impacted their ability to shape musical phrases independently and outside the context of the imposed barlines. Participant #11 remarked,

“I’ve always had trouble looking past the barlines in Renaissance music... and I think it’s because I didn’t have any alternative to think about barlines, so having the little sub-rhythms and the division into threes and twos actually allowed me to not have to look at barlines anymore, so that was a revelation... several moments of ‘oh!’”

Likewise, Participant #03 said,

“Using our bodies to help break out of the barline was a big thing, especially because with conducting and things your life is sort of governed by the barline, so you think of

your body as the way to... keep that pulse. That gets so internalized into your body. Finding ways to break out of that using your body was very helpful! Making music irrespective (I know I keep saying it over and over again, but) of the barline is just so important, especially in the early Renaissance.”

Several participants also asserted that their trust and ability to make music with their peers was enhanced due to the interactive nature of the exercises. In building personal and collegial relationships through this somatic approach to learning, participants felt more engaged with the ensemble and with one another’s musical ideas. Participant #14 remarked,

“It was really interactive, and we got to know everybody and we felt more comfortable around each other. I think that’s important in a choral setting—being comfortable around people and building that relationship so you can sing and move together. With Renaissance [music], moving is super helpful...”

Similarly, Participant #05 said,

“I knew all of these people really by face, some of them by name... This got me to understand them more personally and feel a bit more connected to them. And musically this felt good...”

Another common thread in participants’ comments was the appreciation for a supplementary or alternative way of approaching both new and familiar Renaissance ideas that

both facilitated expressivity and improved rhythmic accuracy. Participant #10 said, “this finally got me to the point where I understand how to make it not feel like I’m just reading a textbook when I’m looking at the score.” Participant #13, who was newer to singing Renaissance music, commented, “I didn’t have much experience... with Renaissance music... I felt that the techniques we used to learn the music really helped because I was really thrown off by the rhythm at first.” Participant #15 also referenced the inherent rhythmic challenges of Renaissance music and the usefulness of a somatic approach: “[Movement is] very helpful for me, especially in more rhythmically challenging pieces, which I find Renaissance music to be, so I found it freeing in a lot of ways.” Participant #02 incidentally summarized these ideas by stating, “I think the biggest benefit ... is that it helps with nuance inherently. Especially when it comes to Renaissance singing with how the pieces are structured rhythmically. It can either be incredibly robotic and machine-like or incredibly vivacious... Adding the movement to it adds the human element to it.”

In terms of the individual activities (referenced in exit interview questions four through seven), the most favored were those that involved substantial contact with other members of the group (i.e. the most social of the experiences), those that related most directly to the piece we were performing, and those that utilized props. In the participants’ comments, any time they mentioned that an activity was “fun” or “enjoyable,” it was either preceded or followed by the activity’s musical benefit. The participants did not seem to have any trouble distinguishing the activities’ purposes and self-reflecting on their benefits, but they did seem surprised that they could gain so much knowledge and musical insight while being social and having fun.

Over half of participants commented on their experience with the tennis ball activity (Appendix C, exercise 5.1). The goal of this activity was to introduce the concepts of anacrusis,

crisis, and metacrisis as well as to embody and maintain musical tempo. First, each singer attempted to create and maintain a group pulse by bouncing and catching his or her tennis ball at the same time. The visual and aural experience of the repeated pattern bounce-catch, bounce-catch facilitated that unity. However, across the ensemble, the pulse accelerated. Next, the choir members stood in circle and bounced the ball to the singer on their right while looking out for the ball coming toward him or her on the left. We eliminated several of the tennis balls so that the passing was imagined in some parts of the circle (Dalcroze frequently utilized imagination to strengthen the mental impression of the physical action) and literal in other parts of the circle. I encouraged singers to use an arc shape upon catching the ball on their left and bouncing in on their right. The group began to breathe together and our pulse settled. We then added a beat prior to bouncing (bounce-catch-prepare, bounce-catch-prepare), and then another beat (bounce-catch-rest-prepare, bounce-catch-rest-prepare). I encouraged participants to continue physical motion during the rest, and for the arm to travel the same distance and speed as it did on the other beats. When reviewing the footage from this session, I was able to determine with a metronome that the singers maintained a pulse of 84 bpm throughout the four-beat variation of the exercise (the activity lasted for 25 seconds). In the exit interview, Participant #10 referenced the inevitability of an accidental accelerando without regard for space, time, and force, and how this exercise helped clarify that idea, while Participant #05 identified the auditory benefits of the exercise:

“Physical embodiment shows you have to have some sort of prep because there’s always time in between things. It helps you so clearly see when you’re rushing. When you smack the ball down and realize, ‘oh, I can’t catch it on [beat] two because it’s coming too soon,’ you see how inevitable that becomes, even though you don’t think it’s something

physics related when you're singing. But if you start speeding up, [the ball] is going to move faster and there's no way for it to slow down." (Participant #10)

"I found the tennis ball exercises to be extremely validating that we all do not feel the beat in the same way. There was an audible 'p-p-p-p' beating as our downbeats all hit the ground at slightly different times." (Participant #05)

Following the group activity, the ensemble divided into pairs with one ball between them and bounced the ball to each other in a similar fashion, this time accompanied by music on the piano. As the instructor, I changed meters at the piano and directed the participants to bounce the ball on the downbeat of each bar. The participants then utilized this metric sensation when singing the *Ave Maria...virgo serena*. From there, singers were able to use rubato in a purposeful and rhetorical way to express the compositional ideas and meaning of the text.

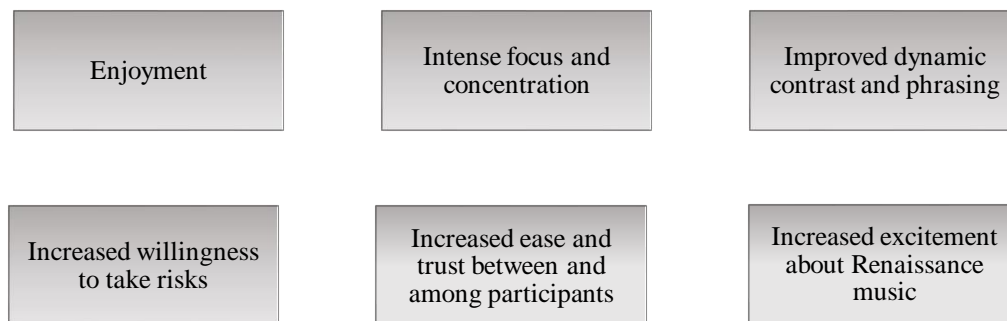
The final exit interview question asked if participants would desire to use a movement-based approach in future rehearsals of Renaissance music. All participants responded in the affirmative, some emphatically so. Additionally, several participants who were either music education majors or practicing conductors expressed their desire to utilize the techniques they experienced in their future classrooms and rehearsals.

4.5 Observational Data

My role in this study was both instructor and researcher. This dual responsibility afforded me the ability to observe the participants and record field notes throughout the study, as well as

to test the ideas discovered in my foundational research. All sessions were video recorded. My review of the footage yielded additional data that I was unable to gather while leading the rehearsals. As with the self-reported data, I examined my observational data and identified underlying themes from each session and from across the study. Figure V presents the six most common observations. These themes parallel many of those that were self-reported in participants' journal entries and exit interviews.

Figure V: Common themes across study recorded as observational data



Enjoyment was perhaps the most easily identifiable of all the themes. Participants were frequently smiling (and occasionally giggling) during the movement activities as well as after successfully singing passages of the *Ave Maria...virgo serena*. Enjoyment, which was one of Jaques-Dalcroze' key objectives, is the most consistent idea presented throughout journal entries, exit interviews, and observational data.

While participants ceased remarking about their level of focus and concentration in journal entries after the first few sessions, it was evident during the rehearsals and in reviewing the video footage that they were intensely engaged in each activity throughout the entirety of the study. Their body language and facial expressions expressed active listening and focused

participation. Likewise, the participants' consistent eye contact and immediate response to instructions indicated a high level of attention. Singers responded eagerly to questions posed to the group, concentration was not easily disrupted by external stimuli, and there was little extraneous chatter among participants.

The most noticeable musical improvement was in the flexibility of the ensemble's dynamics and phrase shapes. As participants became more comfortable with gesturing with their bodies, their voices seemed to follow suit and they became more expressive of the musical lines outside the context of the barlines, giving more attention to text, rising and falling pitches, and moments of tension and release. Because it is likely that these elements would have also improved in a more traditionally run choral rehearsal, I compared the ensemble's performance of the *Ave Maria...virgo serena* at the end of the study by asking them to employ three levels of movement: natural performance-appropriate movement, intentional Dalcroze-influenced movement, and relative stillness. The first run-through was well-performed and musically expressive, but lacked the same contrast in dynamics and phrase shape as the second run-through, in which singers moved freely while singing. The third run-through was rigid and constricted on nearly all accounts, and even fell substantially out of tune at times. While all three run-throughs were performed by the same ensemble that underwent the same process of learning, the positive effects of intentional movement while performing suggest that movement was a contributing factor to the choir's improvement in dynamic contrast and phrase shaping.

Increased risk-taking was a common thread from the first to the ninth rehearsal session. Many participants commented on their increased self-confidence and decreased self-consciousness in their journal entries and exit interviews. As an observer, I noticed that those individuals who seemed skeptical or wary at first became more comfortable with each successive

activity (evident in their more relaxed facial expressions and freer body language as well as in the reduced length of time for these participants to fully engage in each activity). Participants also displayed a greater level of excitement in trying new and more complex rhythmic exercises as the rehearsals progressed. They were also more willing to make interpretive decisions. This observation is supported by an exit interview comment by Participant #03 who said (in reference to the ensemble as a whole):

“It’s getting them to think about the music and experience it. You’re getting them to think about ... why they’re doing the things that they’re doing and make decisions for themselves about it. You’re leading them to that decision-making process.”

Healthy risk-taking of this kind is important in the choral rehearsal context for singers to gain new skills and perform to their full potential.

Participants were also more willing to take risks *with one another* as rehearsals advanced. Singers built trust with one another through partner and group exercises and began to work with different participants on each activity (instead of continually choosing to partner with the same people). They were not only willing to work with one another in the Dalcroze-influenced activities, but also to co-lead one another in singing. Throughout the entirety of the study, the singing was ensemble led. As the instructor, I did not conduct them through any part of the rehearsals or run-throughs of the piece. While there is no concrete evidence that the increase in trust among members of the ensemble contributed to their ability to lead one another from within the ensemble, the participants’ comments on this topic (i.e. Participant #14’s remark displayed on p. 79) seem to indicate that as a strong possibility.

Finally, the participants showed increased excitement about Renaissance music itself, as well as the desire to explore it further after the project ended. Several participants came into the study with fairly little experience performing Renaissance music. These singers showed an immediate interest in the musical language of the *Ave Maria...virgo serena*, though expressed that it was difficult and utterly complex. Those who came into the study with more experience showed more surprise and excitement at the expressive possibilities uncovered by the Dalcroze-influenced activities. This surprise was indicated in comments made during the rehearsals (i.e. “Whoa, mind blown!” and “Wow, that’s so cool,”) as well as in journal entries and exit interviews:

“[This experience was] eye opening. It made me think about details that we don’t normally touch... or they’re normally brushed over in the rehearsal processes that I’m in because we move so fast.” (Participant #06, exit interview)

“I kind of went into it like ‘I know a lot about Renaissance music’... then this helped me sort of break out of that, break it apart, look at, ‘here are the different elements of making Renaissance music and then here’s how they work together, here’s how they could work with your instrument and moving, and here’s how they can work in a beautiful synthesis.’” (Participant #03, exit interview)

“I really enjoyed learning about the different rhythmic modes and identifying them within our repertoire. I remember learning about them in music history, but I wasn’t able to retain them. This activity was very engaging and helped me to retain these modes! If I

ever teach a Renaissance piece to my future students, I will be sure to include an activity like this because it made it easier to connect with the music.” (Participant #13, Session 5).

Overall, the observational data and the self-reported data yielded similar results and supported many of the themes (i.e. enjoyment, focus, social connections, enhanced expressivity) found in similar studies that have applied the Dalcroze Method to the choral context. Several additional benefits were discovered (i.e. singing with authentic phrasing, dynamics, and flexibility) by using the Dalcroze Method to learn Renaissance music in a collegiate choral ensemble context.

Chapter Five: Conclusions and Toolkit

5.1 Conclusions

My foundational research on the Dalcroze Method and related approaches to movement (Laban and Alexander) as well as the study of Renaissance performance practices demonstrates many potential benefits of using somatic educational approaches in the choral rehearsal and performance of Renaissance music. In order to test these benefits, I developed a Dalcroze-influenced curriculum and implemented it into a case-study of fifteen college singers at the University of Maryland in January 2020. I then evaluated the outcomes from participants' journal entries and exit interviews (self-reported data) and from personal observations of the nine rehearsal sessions (observational data). I coded the data using In Vivo and Holistic coding methods and identified common themes within and across all sessions.

The Dalcroze Method has, both anecdotally and formally, demonstrated success in enhancing individuals' musical and non-musical skills and having positive social and emotional impact within classroom and rehearsal settings. My study affirms these benefits and uncovers several more that relate specifically to the study of Renaissance music. Sonic outcomes of the study included singers' increased sensitivity to musical phrasing and dynamic contrast and enhanced unity among the ensemble while executing accurate individual rhythmic ideas. Conceptual outcomes included an increased awareness of the part within the whole, increased excitement/interest in the repertoire, and a deepened understanding of stylistic elements of the Renaissance. Non-musical outcomes included enjoyment in the music-making process, increased

healthy risk-taking, increased ease and trust between and among participants, increased confidence, and a consistent high level of focus.

Due to the framework of the study, primarily the limited time frame, I did not explore the effects of the second branch of Dalcroze' method, *sofège*, on the experience and outcomes of learning Renaissance music in the choral context. Likewise, I did not attempt to measure the impact of eurhythmics or improvisation on intonation or the sight-reading of pitches and intervals. That said, it was discovered through a comparison of the research choir's singing of *Ave Maria...virgo serena* in three variations (with performance-appropriate movement, Dalcroze-influenced movement, and relative stillness), that singing with physical restrictions negatively affected intonation.

One of the inherent challenges of a traditional approach to conducting Renaissance repertoire in a choral context is the director's obligation to convey qualities of expressivity that are not marked in the score. There is seemingly an endless number of elements to communicate: dynamics, articulation, tempo, phrasing, entrances, releases, character, and mood; and qualities in which to respond: intonation, rhythmic execution, diction, balance, and vocal production. The Dalcrozian approach used in my research study, in which the singers learned to deepen their analysis, unleash their musical creativity, and infuse their singing with uninhibited expressivity, increased singers' investment in the music and in the rehearsal process. At the culmination of the study, participants were both better able to make interpretive decisions and able to sing the rehearsed piece, *Ave Maria...virgo serena*, in a musical and expressive way without a conductor.

5.2 Further Research

The present research study used a quasi-experimental approach with a single case in order to provide a strong foundation for further research. The immediate next step would be to examine the impact of a Dalcroze-influenced rehearsal approach across several college-level ensembles studying Renaissance repertoire in an extended time frame (i.e. a semester). Using a concrete pretest-posttest design with a control group and an experimental group (implementing the exercises that were deemed most effective in this study), and then doing so again with a second set of ensembles would help provide additional data regarding the method's level of success. While there are several inescapable variables with pedagogical studies like these, multi-case studies can often provide more robust than that of a single bound case. While this course of action most naturally augments my study, further research could take several other directions.

As potentially the first comprehensive exploration of the Dalcroze Method's impact on the study and rehearsal of Renaissance vocal music, this study may serve as the foundation for several future branches of research. Questions that arose throughout the study, which may be answered through further research, include: (1) What might a qualitative study of several conductors using the Dalcroze Method in Renaissance score study tell us about its impact? (2) Once introduced to movement-based learning methods, what type of impact, if any, would they have on singers' future experiences learning Renaissance music in a choral context? (3) If Renaissance "authenticity" can be quantitatively measured, how might movement-based choral rehearsal methods rank against more traditional pedagogical methods? (4) How do the effects of the Dalcroze approach differ among singers with initially high versus initially low degrees of kinesthetic awareness and experience (i.e. those who have backgrounds in dance, gymnastics,

yoga, or other intensive kinesthetic activities versus those without)? Likewise, how do the effects differ on younger versus older singers, or those with more or less choral singing experience? (5) Might we use a similar research design to study the impact of the Dalcroze Method on music from other parts of the world, or from different eras of music history? Each of these questions would be worthy to explore in the future and may help augment existing research.

This project uncovered several other possible avenues for the application of the Dalcroze Method to Renaissance music. For example, the approach may be suited for the study of Renaissance choral literature in a graduate seminar context. These courses (regularly called Choral Repertoire Seminar or Choral Literature) are staples of many choral conducting master's and doctoral programs in the United States, and often divide semesterly by eras in music history. Implementing the methods explored in this study may deepen students' understanding of the musical language and concepts of the Renaissance as well as aid in memorization of the repertoire. The Dalcroze Method might also be effective in introducing Renaissance repertoire to undergraduate music education students in a choral methods or music history class. Even an activity as simple as using the hand and arm to demonstrate the tactus (and further, to break down a musical phrase into sets of two and three micro beats) might help students understand the rhythmic intricacies of music from the fifteenth and sixteenth centuries as well as their philosophical underpinnings. For the late Medieval period and early Renaissance, exercises in canon, rhythmic modes, and augmentation/diminution may be useful and enjoyable for undergraduate music students.

The Renaissance era covers a broad spectrum of genres and musical styles across two hundred years. This project does not intend to oversimplify the era's musical language by claiming it is unchanging from one decade or century to the next, nor that sacred polyphony is

the only or most important body of repertoire from the era. A future study which employs a broader range of music from this era (i.e. madrigals, chansons, masses) with varying tempi and characters may help provide a more comprehensive and accurate demonstration of the benefits of the Dalcroze Method to the study of Renaissance music.

5.3 Contributions to the Field and Conductor “Toolkit”

The foundational research on the Dalcroze Method and Renaissance performance practice contributes to the field of choral pedagogy and practice by demonstrating both the philosophical and living relationship between movement and music. This dissertation provides practical suggestions for the application of kinesthetic techniques, especially those of Jaques-Dalcroze (with reference to Alexander and Laban), to score study, rehearsal technique, and conducting. The outcomes of the choral research study provide a foundation for continual exploration of the effects of movement-based pedagogical methods on choral conductors and singers rehearsing Renaissance music.

This dissertation also presents a toolkit comprising several movement-based exercises for conductors and in-ensemble music directors to use with their choirs. Many of these exercises were undertaken by my research study choir, while others were developed in response to those deemed less successful. Conductors can use the modules provided in this section to introduce new Renaissance concepts to their choirs, solve problems that arise in rehearsal, or improve singers’ musical skills outside the context of a particular piece. While initially developed for an ensemble of college-age students, these exercises can be modified and practiced with nearly any ensemble undertaking Renaissance repertoire and may even benefit instrumentalists. Educators

have full permission to excerpt these activities as desired and modify or build upon them as needed to best suit their ensembles' needs. The guidelines for incorporating Dalcroze techniques into education, as expressed by Ethel Ingham (co-founder of the London School of Dalcroze Eurhythmics, 1913), are made clear: "...the alphabet and grammar of the movements [must] remain the same, it is the combinations of them that are limitless. The music is, of course, always improvised."⁶⁸

Modules are categorized by Renaissance musical themes, then further broken down into Stationary and Mobile exercises (terms coined by Jaques-Dalcroze' student, Wilhelm Ehmann, in his book *Choral Conducting*, 1968) to describe movements that can be done in place versus those which involve travel throughout the room. Mobile exercises typically take up more time and may be better suited for the choral warm-up sequence, retreats, or at the midpoint of a longer rehearsal to help singers regain focus and energy. There is no need to systematically perform these exercises in the order in which they are displayed. Rather, conductors are encouraged to incorporate them at the appropriate time within their rehearsal plan. I have included several sample questions for conductors to ask their choirs beneath each module.

⁶⁸ Jaques-Dalcroze, *The Eurhythmics of Jaques-Dalcroze*, 49.

Module 1 Phrasing Outside the Barline

Stationary	Mobile
<ol style="list-style-type: none"> 1. The conductor improvises at the piano in a quick triple meter (i.e. $\frac{3}{4}$ at $\downarrow = 140$) and the choir sways right then left with the measure. At the conductor's cue "hopp" the singers (guided by the change in music) change to swaying in $\frac{2}{4}$ (maintaining the quarter note pulse). The conductor alternates between triple and duple with increasing frequency, verbally signaling the change "hopp" just before the meter change. 2. The exercise continues, now without a verbal cue. Singers shift with what they hear. 3. Singers mark their parts with sets of two and three micro beats primarily according to text stress. 4. The choir sings the music in duets, trios, or quartets (depending on the piece), and then <i>tutti</i> while swaying to their own sets of two and three. 	<ol style="list-style-type: none"> 1. The choir spreads out around the rehearsal space. The conductor improvises at the piano in a triple meter (i.e. $\frac{3}{4}$ at $\downarrow = 120$) and the choir lightly steps the quarter note beat around the room, accentuating the first beat of every grouping of three (i.e. by dipping toward the floor). At the conductor's cue "hopp" the singers (guided by the change in music) change to stepping in $\frac{2}{4}$ (maintaining the quarter note pulse). The conductor alternates between triple and duple with increasing frequency, verbally signaling the change "hopp" just before the meter change. (To add a visual and social element, the ensemble can form groups of two or three, depending on the meter, and step the beats together.) 2. The exercise continues, now without a verbal cue. Singers step with what they hear. 3. Singers mark their parts with sets of two and three micro beats primarily according to text stress. 4. The choir stands in a regular choral formation and sings the music in duets, trios, or quartets (depending on the piece), and then <i>tutti</i>, now swaying to their own sets of two and three.
<p>Questions for the choir:</p> <p><i>When and with whom does your part move with the same sets of two and three? When are they different?</i></p> <p><i>When must you "dissociate" with the tactus?</i></p> <p><i>What are the high and low points of your phrases?</i></p>	

Module 2 Enlivening Suspensions

Stationary	Mobile
<ol style="list-style-type: none"> 1. Each singer partners with an adjacent singer and explores resistance through pushing, pulling, and leaning. The conductor may provide singers with props (i.e. latex resistance bands) to explore resistance as well (can be done individually if physical contact with others is not desired) 2. The conductor or pianist plays an excerpt from the piece that features suspensions. Singers embody the resistance they hear with their partners/props. 3. The choir identifies suspensions in the score. 4. The choir sings the excerpt, gesturing spontaneously to feel the suspensions and resolutions. 	<ol style="list-style-type: none"> 1. Singers spread out around the rehearsal space and explore resistance with a partner or in small groups, using pushing, pulling, and leaning. The conductor may provide singers with props (i.e. latex resistance bands) to explore resistance as well (can be done individually if physical contact with others is not desired). 2. The conductor or pianist plays an excerpt from the piece that features suspensions. Singers embody the resistance they hear with their partners/props, moving about the room spontaneously as the music moves them. 3. The choir identifies suspensions in the score. 4. The choir sings the excerpt, gesturing spontaneously to feel the suspensions and resolutions.
<p>Questions for the choir:</p> <p><i>How would you describe the resistance you feel?</i></p> <p><i>Which vocal parts are involved in creating the dissonance in a particular suspension?</i></p> <p><i>What type of suspension is x? What type of suspension is y?</i></p> <p><i>How and why does one suspension feel different from another?</i></p> <p><i>How do duration, pitch range, harmonic content, etc. affect the way you experience suspensions?</i></p>	

Module 3 Clarifying Texture with Canon

Stationary	Mobile
<ol style="list-style-type: none"> 1. The conductor speaks an improvised four-beat rhythm on a nonsense syllables/sounds with simultaneous representative gestures of the arms and body. The ensemble speaks it back (mimicking the gestures) over the next four beats (an “interrupted canon”). Volunteers from the ensemble may lead this in place of the conductor to practice improvisation. 2. The conductor (or choir member) now invents successive four-beat patterns (without a pause in between) and the ensemble mimics the sounds and gestures four beats behind (a “continuous canon”). 3. The conductor invents a four-beat melody (executing it with musical nuance) in the mode of the piece being rehearsed (i.e. dorian) with accompanying representative gestures. The ensemble responds. This is first done as an interrupted canon, then as a continuous canon. 4. Sections of canon or imitation from the piece are rehearsed with singers’ keen awareness of imitating phrase shape, text stress, dynamics, articulation, and other elements of expressivity. (If singers are in a large circle, they might step forward and embody musical nuance with physical gestures when they have the imitative subject). 	<ol style="list-style-type: none"> 1. Singers spread out around the rehearsal space and listen to the conductor’s improvised four-beat melodic phrase on the piano. In the following four beats of rest, singers step the given rhythmic pattern while expressing the nuance of the phrase in the full body. This process continues in call and response fashion (an “interrupted canon”) 2. At the conductor’s discretion, the singers are notified that the rests will be replaced by very simple intervening melodic ideas such that the singers will be stepping a four-beat canon with the music from the piano. 3. Singers form a circle. Sections of canon or imitation from the piece are rehearsed with singers’ keen awareness of imitating phrase shape, text stress, dynamics, articulation, and other elements of expressivity. Singers step forward into the circle when they have the imitative subject (and may use spontaneous gestures to embody musical nuance).
<p>Questions for the choir:</p> <p><i>Which parts are in the foreground vs. background and when? How can we illuminate those in the foreground?</i></p> <p><i>What musical elements can we imitate besides rhythm and pitch?</i></p> <p><i>When does a new imitative idea begin and why?</i></p> <p><i>How is the line expressive of the text?</i></p>	

Module 4 Teaching and Tuning Paired Duets and Trios

Stationary	Mobile
<ol style="list-style-type: none"> 1. The conductor or pianist improvises in the style of the Renaissance piece being rehearsed. Singers sway side to side to match the tactus while listening for a monophonic line, a duet, or a trio. For a duet, singers raise both hands, for a trio, they make contact with fellow singers (i.e. by placing a hand on the shoulder of the adjacent person), and for a monophonic line, they put their hands to their sides. 2. Singers partner up with the person adjacent to them and sway the tactus side to side, listening for duets with varying intervallic content. If the duet is in thirds, singers link arms with their partners, if it is in sixths, they grasp forearms, while if it is in tenths, they hold hands (with extended arms if there is space). Singers may be asked to “freeze” at any time, listen for the intervallic content, and imagine walking it in the right form with their partner. Then they may “reanimate.” 3. Singers rehearse the duets and trios in the music, paying special attention to the intervallic relationships among parts, particularly parallel thirds, sixths, and tenths. If a wider interval is needed for better intonation, singers can physically recreate the variable distance with the person adjacent to them, and the part that needs to adjust intonation can slightly extend or retract the grip until tuning is properly adjusted. Singers can likewise <i>imagine</i> the physical gesture for the same purpose. 	<ol style="list-style-type: none"> 1. Spread throughout the rehearsal space, singers listen to the conductor’s (or pianist’s) improvised piano playing in the style of the Renaissance piece being rehearsed. Stepping the tactus around the room, singers listen for a monophonic line, a duet, or a trio. For a duet, singers form pairs (while continuing to step the tactus), for a trio, they form groups of three, and for a monophonic line they walk alone. 2. Singers form pairs and walk the tactus side by side, listening for duets with varying intervallic content. If the duet is in thirds, singers link arms with their partners, if it is in sixths, they grasp forearms, while if it is in tenths, they hold hands with extended arms. Singers may be asked to “freeze” at any time, listen for the intervallic content, and imagine walking it in the right form with their partner. Then they may “reanimate.” 3. Singers form a circle and rehearse the duets and trios in the music. Special attention is paid to the intervallic relationships among parts, particularly parallel thirds, sixths, and tenths. If a wider interval is needed for better intonation, singers can physically recreate the variable distance with the person adjacent to them, and the part that needs to adjust intonation can slightly extend or retract the grip until tuning is properly adjusted. Singers can likewise <i>imagine</i> the physical gesture for the same purpose.
<p>Questions for the choir:</p> <p><i>What interval (minor or major; third, sixth, or tenth) is being produced and by which voice parts?</i></p> <p><i>Should the interval be larger or smaller than the piano plays it? Why?</i></p> <p><i>What do these duets or trios express in the text?</i></p>	

Module 5 Attending to Vocal Quality

This exercise can be done in place (stationary) or moving about the room (mobile).

Laban Effort Movement table is displayed on chalkboard with the following terms and their categories: space (direct, indirect), time (quick, sustained), weight (heavy, light), flow (bound, free).

1. The conductor guides the exercise from the piano (with help from the pianist if needed), improvising music to fit each term below and giving a description of a familiar everyday activity. At any point, the conductor may instruct the participants to stop their physical movement but imagine it continuing on the word “stop” and physically move once again at the cue “move.” Likewise, the conductor can ask singers to vary their physical representation of a movement at any time (i.e. now put that in your feet).

Float like you’re seaweed in the ocean

Punch like you’re in a boxing match

Glide like you’re ice skating or ironing your clothes

Slash like you’re slashing a sword through the air

Dab like you’re dabbing sunscreen or lotion

Wring like you’re wringing out a wet towel

Flick like you’re flicking mosquitoes in the air

Press like you’re kneading dough

2. Once all movements are explored, the conductor says, “let the music guide you,” and singers change their movements to match the quality of the music they hear.
3. A discussion takes place on the relationship of time, space, weight, and flow to musical elements and the qualities of various passages in their music.
4. Singers explore dynamics, articulation, and tone quality in their music using these terms and gestures.
5. Singers focus specifically on tone color using a melody from the music. They use gestures with varying space (or direction), time (or speed), weight, and flow to explore vocal color, intensity, vibrato, and vowel sounds.

Questions for the choir:

Referencing the LMA chart: *What are the qualities of the flick gesture? (i.e. heavy or light, bound or free) Or the glide gesture?*

When singing x part of the music, what effort (or gesture) best exemplifies its quality?

Module 6 3:2 Metric Modulation

Stationary	Mobile
<ol style="list-style-type: none"> 1. The conductor improvises music (<i>andante</i> or <i>allegro</i>) at the piano with three beats per bar. Singers sway side to side at the downbeat of each bar. 2. The conductor clearly delineates the division of the bar into three parts as the singers, while continuing to sway side to side on downbeats, clap three times per measure to match the piano. 3. At the conductor’s verbal cue “<i>hopp</i>,” the singers, while maintaining the same measure length in their sway, now clap twice over the bar (mimicking the conductor’s change to duple on the piano). The space of the circular clapping expands to slow the division of the pulse. 4. Variations to this activity occur as the: <ol style="list-style-type: none"> a) The conductor removes the verbal cue and asks the singers to change their clapping based on the change in the piano music alone b) The conductor asks singers to clap the opposite of what they hear (duple over triple or triple over duple). c) The conductor asks a group of students (i.e. sopranos and altos) to clap what they hear while another group (i.e. tenors and basses) clap the other rhythmic division. 5. Singers rehearse the sections of metric modulation in their music, allowing their voices and bodies to replace their clapping. 	<ol style="list-style-type: none"> 1. The conductor improvises music (<i>andante</i> or <i>allegro</i>) at the piano with three beats per bar. Singers spread out around the room and step the downbeat of each bar (while maintaining contact with the floor at all times). 2. The conductor clearly delineates the division of the bar into three parts as the singers, while continuing to step on downbeats, clap three times per measure to match the piano. 3. At the conductor’s verbal cue “<i>hopp</i>,” the singers, while maintaining the same measure length in their step, now clap twice over the bar (mimicking the conductor’s change to duple on the piano). The space of the circular clapping expands to slow the division of the pulse. 4. Variations to this activity occur as the: <ol style="list-style-type: none"> a) The conductor removes the verbal cue and asks the singers to change their clapping based on the change in the piano music alone b) The conductor asks singers to clap the opposite of what they hear (duple over triple or triple over duple). c) The conductor asks a group of students (i.e. sopranos and altos) to clap what they hear while another group (i.e. tenors and basses) clap the other rhythmic division. d) Singers switch the roles of their hands and feet such that they clap the downbeat of each bar and step the division of two or three. The role of upper and lower body can continue to alternate at the conductor’s cue “<i>hopp</i>.” 5. Singers rehearse the sections of metric modulation in their music, allowing their voices and bodies to replace their clapping.
<p>Questions for the choir:</p> <p><i>At what point do you begin to feel the new division of time? Can you feel the two divisions simultaneously? What are the characteristics of the text and music at the duple section versus the triple section of this music? Why did the composer change the feeling of meter here?</i></p>	

Module 7 Hemiola

Stationary	Mobile
<ol style="list-style-type: none"> 1. The conductor improvises music that feels in $\frac{6}{8}$ time. Singers use circular clapping to sound the macro beat (<u>1</u> + a <u>2</u> + a). 2. At the cue “<i>hopp</i>,” the conductor changes the music to feel in $\frac{3}{4}$ time (maintaining the eighth note pulse from the music in $\frac{6}{8}$). At this, the singers step side to side at the quarter note pulse (<u>1</u> + <u>2</u> + <u>3</u> +). 3. The conductor alternates between these two meters and the singers respond accordingly by stepping or clapping (the conductor may choose to eliminate the verbal cue at any point so that the singers are relying on their aural perception of the meter change alone). 4. Singers rehearse the sections of their music that employ hemiola, allowing their bodies to move spontaneously to the emphasized macro beat. 	<ol style="list-style-type: none"> 1. Singers form pairs and spread out around the room. The conductor improvises music that feels in $\frac{6}{8}$ time. Facing one another and holding both hands with outstretched arms, singers swing their arms side to side on the macro beats (<u>1</u> + a <u>2</u> + a). (If singers are not comfortable holding hands, they may simply face one another and mirror each other’s swaying gesture.) 2. The at the cue “<i>hopp</i>,” the conductor changes the music to feel in $\frac{3}{4}$ time (maintaining the eighth note pulse from the music in $\frac{6}{8}$). At this, the singers release hands and march at the quarter note pulse (<u>1</u> + <u>2</u> + <u>3</u> +) 3. The conductor alternates between these two meters and the singers respond accordingly by swaying with their partner or marching (the conductor may choose to eliminate the verbal cue at any point so that the singers are relying on their aural perception of the meter change alone). 4. Singers rehearse the sections of their music that employ hemiola, allowing their bodies to move spontaneously to the emphasized macro beat.
<p>Questions for the choir:</p> <p><i>How does the music tell us that a hemiola is present?</i></p> <p><i>Where do hemiolas typically occur?</i></p> <p><i>Does it feel more natural to use circular gestures (like swaying) for patterns of triple and more square motions for duple (like marching)? Why? What if we switched them?</i></p>	

Appendix A

Below is the score of Josquin des Prez' *Ave Maria... virgo serena* used in the research study.
Changes I made to the text underlay are indicated in *italics*.

Ave Maria

Josquin des Prez

Discantus
A - ve Ma - ri - a, gra - ti - a

Altus
A - ve Ma - ri - a,

Tenor
8 A - ve Ma - ri - a,

Bassus
A - ve Ma -

9
a - ple - na,
ti - a ple -

gra - ti - a ple - na,
ti - a ple -

8
ri - a, gra - ti - a ple -
ti - a

16
Do mi - nus te - - - - - cum

Do - mi - nus te - cum, Vir - go se -

8
na, Do - mi - nus te - - - - - cum,

ple - na, Do - mi - nus te -

Copyright © 2008 by the Choral Public Domain Library (<http://www.cpdll.org>).
Edition may be freely distributed, duplicated, performed, or recorded
Revision 1.0, 2008-01-18 by Gerd Eichler

25

Vir - go se - re - na, se - re - na; A -
re - re - na, A -
8 Vir - go se - re - na,
cum, Vir - go se - re - na,

32

ve cu - ius con - cep - ti - o,
ve cu - ius con - cep - ti - o, con -
8 A - ve cu -
A - ve cu -

37

So - lem - ni ple - na
cep - ti - o, So - lem - ni ple -
8 ius con - cep - ti - o, So - lem - ni ple - na
ius con - cep - ti - o, So - lem - ni ple - na

43

gau - di - o, Coe - le - sti - a, ter - re - stri -
na, gau - di - o, Coe - le - sti - a,
8 gau - di - o, Coe - le - sti - a, ter - re - stri - a,
gau - di - o, Coe - le - sti - a, ter - re - stri -

48

a, No - va re - plet lae - ti - ti - a, A -
 ter - re - stri - a, No - va re - plet lae - ti - ti - a, lae - ti - ti - a,
 8 No - va - re - plet lae - ti - ti - a,
 a, No - va re - plet lae - ti - ti - a, -

55

ve cu - ius na - ti - vi - tas na - ti - vi - tas,
 A - ve cu - ius na - ti - vi - tas,
 8 No - stra fu - it so -
 No - stra fu - it

62

Ut lu - ci - fer lux o - ri - ens,
 Ut lu - ci - fer lux o - ri -
 8 lem - ni - tas, so - lem - ni - tas, Ut lu - ci - fer lux
 so - lem - ni - tas, Ut

70

ve - rum so - lem prae ve -
 ens, Ve - rum so - lem prae - ve - ni - ens,
 8 o - ri - ens, Ve - rum so - lem prae - ve -
 lu - ci - fer lux o - ri - ens, Ve - rum so - lem prae -

76

- ni - ens. A - ve pi - a hu - mi - li - tas, A - ve pi - a hu - mi - li - tas, - ni - ens, Si - ne vi - ro fe - cun - di - ve - ni - ens, Si - ne vi - ro fe - cun - di -

84

Cu - ius an - nun - ci - a - ti - o, Cu - ius an - nun - ci - a - ti - o, tas No - stra fu - it sal - va - ti - o. tas No - stra fu - it sal - va - ti - o.

94

A - ve ve - ra vir - gi - ni - tas, Im - mac - cu - la - ta cas - ti - A - ve ve - ra vir - gi - ni - tas, Im - mac - cu - la - ta cas - ti - A - ve ve - ra vir - gi - ni - tas, Im - mac - cu - la - ta cas - A - ve ve - ra vir - gi - ni - tas, Im - mac - cu - la - ta cas - ti -

101

tas, Cu - ius pu - ri - fi - ca - ti - o, No - stra fu - it pur - ga - ti - tas, Cu - ius pu - ri - fi - ca - ti - o, No - stra fu - it pur - ga - ti - o, ti - tas, Cu - ius pu - ri - fi - ca - ti - o, No - stra fu - it pur - ga - ti - tas, Cu - ius pu - ri - fi - ca - ti - o, No - stra fu - it pur - ga - ti -

109

o, A - ve prae cla - ra o - mni - bus,
 pur - ga ti - o, A - ve prae cla - ra o - mni - bus,
 o, A - ve prae cla - ra

117

An ge - li - cis vir - tu - ti - bus,
 An - ge - li - cis, vir - ra om - ni - bus, An - ge - li -
 o - mni - bus, An - ge - li -

124

bus, Cu - ius fu - it as - tu - ti - bus, Cu - ius fu - it as -
 cis vir - tu - ti - bus, Cu -

130

sump - ti - o, No - stra glo - as - sump - ti - o, No - stra glo -
 ius fu - it as - sump - ti - o, ius fu - it as - sump - ti - o,

135

ri - fi - ca - ti - o,

ri - fi - ca - ti - o, glo - ri - fi - ca - ti - o,

No - stra glo - ri - fi - ca - ti - o,

No - stra glo - ri - fi - ca - ti - o,

142

O Ma-ter De - i, me men-to me - i A - men.

O Ma-ter De - i, me men-to me - i A - men.

O Ma-ter De - i, me men-to me - i A - men.

O Ma-ter De - i, me men-to me - i A - men.

Appendix B

Preliminary Questionnaire

“Renaissance music,” as discussed in this questionnaire, includes music composed between c.1400 and c.1600. Primary vocal genres include chanson, madrigal, motet, and mass.

Directions: For the following ten questions, please circle the numeric response which best reflects your answer:

- 1) How much experience do you have singing Renaissance music in a choral context?

1 (None)	2	3	4	5 (Significant)
-------------	---	---	---	--------------------

If you answered “1- none” for the question above, please skip to question 4. Otherwise, proceed to question 2.

- 2) How would you rate (on average) the level of *musicality* of your performances with this repertoire? (“Musicality” in this context is defined as a performance that is nuanced and aesthetically pleasing to the ear.) If you are unsure, please circle that response.

Unsure	1 (Unmusical)	2	3	4	5 (Very musical)
--------	------------------	---	---	---	---------------------

- 3) How would you rate (on average) the level of *authenticity* of your performances with this repertoire? (“Authenticity” in this context is defined as a performance that best reflects how the music would have been performed at the time of its composition.) If you are unsure, please circle that response.

Unsure	1 (Not authentic)	2	3	4	5 (Authentic)
--------	----------------------	---	---	---	------------------

- 4) How would you rate your knowledge of Renaissance performance practice? (i.e. vocal timbre, ornamentation practices, application of *musica ficta*, tuning, treatment of dissonance and cadences, tempo, instrumental doublings, interpretation, etc.)

1 (No knowledge)	2	3	4	5 (Substantial knowledge)
---------------------	---	---	---	------------------------------

- 5) If given an unfamiliar piece of Renaissance vocal music, how would you rate your ability to make appropriate *interpretive decisions* without a recording or the guidance of a conductor?

1 (Unable to make these decisions confidently)	2	3	4	5 (Very confident in making these decisions)
---	---	---	---	---

- 6) How much experience have you had with the Dalcroze approach? (You may know it as “eurhythmics”)

1 (None)	2	3	4	5 (Significant)
-------------	---	---	---	--------------------

- 7) In your daily vocal music practice (including individual practice time, ensemble rehearsals, lessons, etc.), how often do you *consciously and purposefully* incorporate physical movement beyond that necessary to produce vocal sound? (i.e. stepping the beat, swaying, gesturing with the arms, performing a pli , etc.)

1 (Not at all)	2	3	4	5 (Almost always)
-------------------	---	---	---	----------------------

- 8) Reflect on your recent musical practice. In your estimation, how often do you believe you *instinctively/subconsciously* incorporated physical movement beyond that necessary to produce vocal sound? (i.e. stepping the beat, swaying, gesturing with the arms, performing a pli , etc.)

1 (Not at all)	2	3	4	5 (Almost always)
-------------------	---	---	---	----------------------

- 9) Rate your rhythmic sensibility compared with other musicians with a similar level of musical training. (Consider how confidently you sight read challenging rhythms, your ability to quickly adjust between time signatures, sing correct rhythms in a complex polyphonic texture, etc.)

1 (Poor rhythmic sensibility)	2	3	4	5 (Very strong rhythmic sensibility)
----------------------------------	---	---	---	---

10) Rate your personal sense of body awareness and coordination (with a single number) on the scale below.

1 (Lacking in body awareness and coordination)	2	3	4	5 (Strong feeling of body awareness and coordination)
---	---	---	---	--

Directions: For questions 11 and 12, please respond as thoroughly as possible. (You may use the space on the following page)

11) Describe your background in activities relating to body awareness and coordination. (This may include training in dance or gymnastics, experience with approaches such as Dalcroze, Laban, or Alexander, participation in sports such as soccer or basketball, or the practice of yoga, karate, tai chi, etc.).

12) Describe your experience sight singing the five melodies in today's session.

Directions: For questions 13, please circle yes or no:

13) Have you ever sung "Ave Maria" by Josquin des Prez?

Yes	No
-----	----

Exit Interview Questions

- 1) How would you describe your overall experience of this study?
- 2) What, if anything, did you gain from this experience?
- 3) What do you see are the benefits, if any, of applying the techniques we used to the choral rehearsing of Renaissance music?
- 4) What activities, if any, were the most enjoyable?
- 5) What activities, if any, were the most helpful in the learning process?
- 6) What activities, if any, were the least enjoyable?
- 7) What activities, if any, were the least helpful in the learning process?
- 8) In the future, would you or would you not prefer to utilize movement-based methods like those incorporated into this study in your choral rehearsing of Renaissance music?

Appendix C

Appendix C recounts the events of each of the nine rehearsal sessions and provides corresponding data acquired through visual observation and listening (in *italics*). The information is organized by session number followed by a chronological list of exercises performed within each session (then further broken down into stages if needed, i.e. 1.2.a = session one, activity two, first stage). I have included descriptions, goals, and intended benefits for the movement-based exercises but not for activities in which these items are implicit (i.e. vocal warm-ups and more traditional choral rehearsing of *Ave Maria... virgo serena*). The account describes the actual events of each rehearsal session as opposed to my initial lesson plans, as the Dalcroze Method requires the instructor to be flexible in this regard. Much like in an effective traditional ensemble rehearsal, activities were adjusted in real time according to the outcomes of each successive task.

Session One

Key Ideas: Introduction to eurhythmics and Renaissance musical language; exploration of physical tension and release; movement exercises related to polyphonic texture and canon.

1.1 Unguided stretching.

1.2 MIRROR EXERCISE

Goals and intended benefits: Awaken individual creativity; foster trust and vulnerability; expand range/variety of movement; enable concentration; elicit joy/excitement; focus participants on the source of leadership (themselves or others); physically represent the textural clarity desired in polyphonic music.

1.2.a Participants form pairs. Partners face one another as if they are seeing themselves in a mirror. One person begins moving, using any body part or combination thereof while the other reflects all motions. At the time of the follower's

choosing, he/she takes the lead, and the original leader begins following. Alternation of leadership continues spontaneously.

- 1.2.b Form new groups of three to four participants. One participant leads all physical movements while the others follow (now using rights and lefts instead of mirroring). At the adjacent person's desired time, he/she begins leading and the remainder of the group follows. Leadership is passed around the circle.
- 1.2.c The full ensemble forms a large circle. Participants follow the same process as 1.2.c, watching carefully for the change in leadership.
- 1.2.d Follow-up discussion with singers relating the mirror exercise to successful performances of polyphonic textures. (*Participant comments included: interplay among multiple voices, keen awareness of the part within the whole, expressive phrase shapes, a "handing off" of melody from one part to another, hierarchy of foreground and background, smooth transitions, etc.*)

1.3 BUILD A HUMAN MACHINE

Goals and intended benefits: Foster creativity; physically represent the essential role of the individual in an ensemble context; physically maintain group tempo; enhance kinesthetic awareness.

- 1.3.a Participants stand in a circle. One by one, they step into the circle and move their bodies to imitate the appearance and action of a machine's parts (gears, levers, etc.). All parts should connect and run smoothly together.
- 1.3.b Instructor asks participants to keep a steady tempo as the machine moves, and to pay attention to the parts of the body that are most and least active/engaged.

1.4 TENSION AND RELEASE EXERCISE

Goals and intended benefits: Enhance control over and awareness of muscular activity within and among parts of the body; "note [the body's] muscular resistances, and to eliminate those that serve no purpose."⁶⁹

- 1.4.a Lying on their backs, participants are asked to contract then relax a single muscle group while reducing muscular tension throughout the rest of the body. The same process is performed with several other muscle groups in the body.
- 1.4.b Various combinations of muscular contractions and releases are performed thereafter. Participants are encouraged to be aware of unintentional muscular activity/tension and to remove it.

1.5 METRICAL DIVISION AND ACCENTUTION⁷⁰ EXERCISE

⁶⁹ Jaques-Dalcroze, *Rhythm, Music & Education*, 65.

⁷⁰ This is the name Jaques-Dalcroze gives to this exercise in his book *Rhythm, Music & Education*, described on page 65. There are a number of variations to this exercise, including using only lower or upper body movements, or substituting one movement for another.

Goals and intended benefits: Introduce concept of embodying beat; practice quick aural perception of and physical reaction to meter changes; begin fusing these two processes and encourage instinctive physical reaction to strong versus weak beats; prepare singers for feeling of metrical shifts in Renaissance repertoire.

- 1.5.a The instructor improvises music at the piano, beginning in common time. Participants step the beat around the room and use their bodies creatively to represent the strong beat of each measure (*most participants bent their knees and gestured outwardly with their arms*).
- 1.5.b The instructor changes the meter to three, then two beats to the measure (maintaining the quarter note pulse). Participants are asked to listen for and change their stepping to match the meter, always physically accentuating beat one and using minimal muscular effort on weak beats.
- 1.5.c The instructor uses the verbal signal “hopp” to indicate a change in direction (i.e. participants might choose to turn 180 degrees for the next set of steps). Meters continue to shift among two, three, and four quarter notes per bar.

1.6 BEAT AND DIVISION STEP/CLAP EXERCISE

Goals and intended benefits: Practice maintaining tempo and constantly employing mental subdivision within lengthier note durations; gain a clear perception of the way music occupies space and time and the muscular energy/shift in weight needed to execute rhythmic changes properly.

- 1.6.a Begin with a lesson on Dalcroze circular clapping. Then, maintaining the pulse provided by music from the piano, participants step the beat (still accentuating the strong beat through a physical gesture of the lower body) and clap twice as fast. At the verbal prompt “hopp,” participants switch processes in their hands and feet (clap the beat, step the subdivision). Alternation among these two versions continues at each verbal cue.
- 1.6.b Follow the procedures for 1.6.a but with a subdivision that is four times as fast (i.e. one quarter note versus four sixteenth notes, or one whole note versus four quarter notes etc.). Maintain large, constant circles in the hands when executing slower claps. Take large steps in which the traveling foot maintains contact with the floor for long durations in the lower body.

1.7 CALL AND RESPONSE/CANON EXERCISE

Goals and intended benefits: Initiate participants into canonic structure; perform a physical realization of rests; practice listening to and preparing for what is ahead of the current task; enhance awareness and mental clarity of simultaneous lines of musical activity.

- 1.7.a While standing at rest, participants listen to a four-beat rhythm on the piano. In the following four beats of rest on the piano, participants step the given pattern in

response. This process continues with various patterns improvised at the piano by the instructor.

- 1.7.b At the instructor's discretion, the rests are replaced by simple rhythmic patterns such that the participants are continuously stepping a four-beat canon with the music from the piano.

- 1.8 Preliminary activity one: Participants sing short excerpts of musical lines from five different Renaissance works in unison.

Goals and intended benefits: Gauge ensemble's reading ability and pitch/rhythmic accuracy; evaluate participants' body language and emotional response to the activity (provided as responses to the Preliminary Questionnaire).

- 1.9 Preliminary activity two: Participants provide written responses on Preliminary Questionnaire (data discussed in Chapter 4).

- 1.10 Journal: Participants spend ten minutes completing free form journal entries reflecting their experiences from Session One.

Session Two

Key Ideas: Survey of past social, intellectual, and emotional experiences learning Renaissance music and goals for improvement; exploration of rhythmic language, tempo, and phrasing; physical representation of excerpt from *Ave Maria... virgo serena* through *plastique animée*.

- 2.1 Stretching: Participants stand in small circles according to voice part in Josquin's *Ave Maria... virgo serena* and stretch. Each person in the circle takes turn leading a new stretch. Upon becoming the leader, person introduces her/himself.
- 2.2 Preliminary activity three: sing *Ave Maria... virgo serena*.

Goals and intended benefits: Gauge baseline; give participant experience singing the piece as a basis for comparison in later run-throughs; hear subjects' voices regarding their experience singing *Ave Maria* for the first time as well as their past experiences learning Renaissance music.

- 2.3.a Participants stand in a semi-circle by voice part and sing *Ave Maria... virgo serena* by Josquin des Prez (with the score provided in Appendix A) without the guidance of a pianist or conductor.
- 2.3.b Participants sit in a circle and discuss their physical, mental, and emotional experience using adjectives. *Responses included: "hesitant," "frustrated," "forced," "feeling like I'm being pulled along a string and I don't have a choice," "tense," "I didn't feel like I was making music, I felt like I was struggling to survive," "there was a point that I kind of like let go, just like... we'll see what happens and we'll make it through and it'll be okay."*

2.3.c Participants are prompted to discuss their previous experiences learning Renaissance music in a choral context using adjectives and considering their mental, physical, and emotional states during the process. *Responses included: “vulnerable,” “fun,” “exposed,” “organized,” “different,” “the rhythm is not good.”*

2.3 Learn a complex musical line in unison (m. 16, top line from *Ave Maria... virgo serena*) using swaying and clapping.

Goals and intended benefits: Embody tactus and subdivision; enhance rhythmic accuracy of vocal line; encourage ensemble-generated (as opposed to conductor-generated) phrase shape.

2.3.a Clap the half note (subdivision of the tactus) and speak the phrase of text in rhythm.

2.3.b Clap the half note and move the body left and right to the tactus (whole note) while speaking the phrase of text in rhythm.

2.3.c Remove the clapping and sway the body to the tactus while speaking the text in rhythm.

2.3.d Speak the text in rhythm while spontaneously representing one’s own individual idea of phrase shape in the hands and arms.

2.3.e Stand up and move around the room spontaneously, keeping the tactus in some part of the body and showing phrase shape in another while speaking the text in rhythm. Discuss high and low points of the phrase and then repeat the exercise using pitch.

2.3.f Sing in place and turn all physical representation into vocal representation.

2.4 Form groups based on voice part and follow the procedure from 2.3. Perform unison gestures to physically embody the vocal line. Consider how to represent the rests.

Goals and intended benefits: Teach means of organizing (and executing) complex rhythmic structures through movement enabling self-instruction and practice, improve blend and achieve matching phrase shape among singers within section.

2.5 PLASTIQUE ANIMÉE EXERCISE

Create a short plastique animée for the first and second phrases of text.

Goals and intended benefits: Introduction to plastique animée; visual representation and vocal follow-through of dynamic phrase shapes; deeper understanding of musical elements of this part of the score; interpretative unity among singers in each voice part and among the full ensemble.

2.6 Journal: Participants spend ten minutes completing free form journal entries reflecting their experiences from Session Two.

Session Three

Key Ideas: Grounding in Renaissance musical philosophy; tension and release through syncopation and suspension, paired duets and fauxbourdon; introduction to Laban Effort Movements and the concepts of time, space, weight, and flow.

3.1 VOCAL/KINESTHETIC WARM-UP AND SUSPENSIONS EXERCISE

Goals and intended benefits: Warm up the vocal apparatus; achieve vowel unification; introduce suspensions to the ear, body, and voice; introduce duple and triple meters; begin developing links between aural perception of dissonance and resolution and both the physical and vocal responses to it.

- 3.1.a Participants sing the vocalise below on syllables [zi] to [a] (changing vowel after the first half note) and continue the pattern upward by half step while making a physical gesture on the suspended note with each iteration. The instructor improvises at the piano based on the I-V-I harmonic motion.



- 3.1.b Perform a second, similar exercise but in $\frac{6}{8}$ time, utilizing arpeggios, and perform a different motion on the suspended note.
- 3.2 KINESTHATIC WARM-UP: AUGMENTATION/DIMINUTION EXERCISE AND PAIRED DUETS AND TRIOS

Goals and intended benefits: Focus on listening and reacting; build upon coordination skills gained in Session One; introduce concepts of augmentation and diminution; develop aural skills hearing multiple lines and identifying intervals of thirds and sixths; foster team building and joy.

- 3.2.a Participants listen to the instructor's improvised piano playing in the style of a Renaissance motet and step the tactus around the room. At the instructor's command "augment," participants step twice as slow (the piano music reflects this change), at "beat," participants step the original tactus, and at "diminish," participants step twice as fast.
- 3.2.b While stepping the original tactus, participants listen for single musical line (in Mixolydian mode) at the piano and walk alone. When the instructor plays a duet, they form pairs (while continuing to step the tactus), and upon playing of a trio in the style of fauxbourdon, they form groups of three.
- 3.2.c Participants walk the new tactus and listen for a solo or duet. For a solo, participants walk alone. For a duet, participants form pairs. If the duet is in thirds, participants link arms, but if it is in sixths, participants hold one another's forearms to represent the intervallic distance.

- 3.3 Rehearse *Ave Maria... virgo serena*, beginning with the duets, trios, and quartets that appear at measure 31. Special attention is paid to tuning the thirds (tenths), sixths, and trios (in the style of fauxbourdon) and physically experiencing/singing the high and low points of each phrase. Singers are encouraged to move freely while rehearsing.

3.4 MOVEMENT EQUALS SOUND EXERCISE 1

Goals and intended benefits: Display inherent connection between physical gesture and vocal inflection and infuse this idea into the practice of singing; teach participants about Émile Jaques-Dalcroze and his philosophies; develop foundation in Renaissance thought in regard to music and movement in order to enhance authenticity of the music-making process.

- 3.4.a The ensemble sits in a circle. In call and response fashion, the instructor speaks her name while simultaneously performing a physical gesture to match. Participants mimic the instructor's vocal inflection and physical performance. The instructor repeats the exercise with different tone, phrasing, volume, and articulation. Participants mimic. Leadership is passed around the circle as desired.
- 3.4.b The instructor gives a *non-verbal* physical gesture with any part of her body or combination thereof to represent inflection of her name. Participants mimic the gesture and speak aloud the instructor's name in a representative way. *Outcome: participants all speak with the same inflection.*
- 3.4.c Participants are asked to translate the instructor's movements into sound effects (while mimicking the movement). Question is posed: "*How do you know what to do?*"
- 3.4.d Instructor makes the statement "movement equals sound" and participants are asked to try making a sound without moving any part of the body (including the vocal apparatus). *Outcome: no sound is made because it is not possible.* Instructor teaches participants about the Renaissance philosophy of music and movement, drawing on Ancient Greek models. *Outcome: participants affirm the argument that movement equals sound and begin establishing a foundation in Renaissance musical thought.*
- 3.4.e Introduce Émile Jaques-Dalcroze and reenact his initial discovery (see Chapter Two, section 2.1).

3.5 LABAN EFFORT MOVEMENTS EXERCISE

Goals and intended benefits: Introduce another movement-based approach developed by Rudolf Laban for dancers but useful in the interpretation and execution of certain qualities in music.

Laban Effort Movement table is displayed on chalkboard (see Chapter Two, section 2.3 Figure I) with the following terms and their categories: space (direct, indirect), time (quick, sustained), weight (heavy, light), flow (bound, free).

Instructor then guides the exercise from the piano, improvising music to fit each term and giving a description of a familiar everyday activity:

Float like you're seaweed at the bottom of the ocean

Punch like you're in a boxing match

Glide like you're ice skating or ironing your clothes

Slash like you're slashing a sword through the air

Dab like you're dabbing sunscreen or lotion

Wring like you're wringing out a wet towel

Flick like you're flicking tiny mosquitoes in the air

Press like you're kneading dough

- 3.5.a The instructor improvises music at the piano to fit the term, speaks the term, and gives a description. She asks the participants to express the sound through movement.
- 3.5.b The instructor directs the participants to stop their physical movement but imagine it continuing on the word "stop" and physically move once again at the cue "move."
- 3.5.c The instructor asks participants to change the way in which they're representing a single term in order to increase repertoire of movement (this is done at any time)
- 3.5.d Once all movements are explored, the instructor says, "let the music guide you," and participants change their movement to match the quality of the music they hear.
- 3.5.e A discussion takes place on the relationship of time, space, weight, and flow to musical elements and the qualities of various sections of *Ave Maria... virgo serena*.

3.6 RESISTANCE EXERCISE

Goals and intended benefits: Physically experience tension and release with an outside force and recognize the same features in polyphonic textures.

- 3.6.a With a partner, participants use their bodies to explore resistance (i.e. pushing/pulling, leaning into and away from one another, etc.). The instructor plays music at the piano to support.
- 3.6.b Singers indicate places of resistance or tension in *Ave Maria...virgo serena*.
Participants indicated areas of dissonance, suspension, and syncopation.

3.7 SYNCOPATION WITHOUT RESISTANCE EXERCISE

Goals and intended benefits: Demonstrate that rhythmic accuracy often occurs without musicality.

- 3.7.a The instructor physically demonstrates two measures of syncopation with quarter notes on the beat in the feet and quarter notes displaced by an eighth note in the hands (clapping), then she switches hands and feet.

3.7.b Participants perform the activity demonstrated in 3.7.a with the instructor improvising at the piano.

3.8 SYNCOPATION WITH RESISTANCE EXERCISE

Goals and intended benefits: Experience resistance in the body and relate it to the way it feels in a musical phrase, deepening one's connection with the elements of tension and release.

3.8.a Participants form pairs and face one another. Grasping each other's hands, one moves to the left and the other to the right to get into a "tango" position, where the exercise begins. One person steps forward while the other steps backward, both stepping the beat. The person stepping forward is pushing while the person stepping backward is resisting but still being pushed in the backward direction.

3.8.b The person stepping backward steps the offbeat (syncopated beat) while the person walking forward continues to step the beat.

3.8.c Following the exercise, the instructor asks, "*How does it feel? How does your physical experience relate to the same elements in the music we are learning?*"

3.9 Rehearse areas of syncopation in *Ave Maria... virgo serena* (beginning with measures 31-54). Allow freedom of physical gesture and flexibility of vocal expression.

3.10 Journal: Participants spend ten minutes completing free form journal entries reflecting their experiences from Session Three.

Session Four:

Key Ideas: Duple and triple meter; physical representation of text stress and phrase shape.

4.1 Aural/vocal warm-up: Instructor plays the three-measure melody below with the harmonization indicated (alternating between duple and triple meter and maintaining the quarter note pulse), then modulate (and continues to modulate) upward one half-step by way of an applied dominant:



4.1.a Participants step the beat as they listen, identifying and physically representing the weight of the beats in their body (i.e. allowing gravity to pull them downward with a knee bend and/or gesturing outward or downward with the arm on strong beats, and going up on the toes for weaker beats). Once the instructor notices an aligning of the strong beats across the ensemble, she stops playing the exercise and participants discuss and visually see (on the chalkboard) the written time signatures of the exercise.

- 4.1.b The instructor plays the example again, and this time the participants sing it as a vocalise on a neutral syllable, continuing to step the pulse and gesture on strong beats as they did in 4.1.a.

4.2 DUPLE VERSUS TRIPLE KINESTHETIC EXERCISE

Goals and intended benefits: Practice quick reaction; enhance sensitivity to changing meter.

- 4.2.a Instructor improvises music that alternates between duple and triple meter (maintaining the underlying pulse) and participants step the beat around the room, gesturing in some way to emphasize the strong beat of each grouping. The instructor gives the verbal cue “*hopp*” when preparing to change meters.
- 4.2.b Same as 4.2.a but the instructor no longer says the verbal cue. Rather, participants react to the meter change from only the music.

- 4.3 Learn bars 94-110 *Ave Maria... virgo serena* using impromptu movements as desired.

4.4 TEETER-TOTTER EXERCISE

Goals and intended benefits: Enhance mind/body/vocal connection; physically experience the directive “*lean*” when referring to important syllables in the text and/or high points in a phrase.

- 4.4.a Participants form pairs, face one another, and hold (both) hands. With feet in parallel, both partners lean backward gently until arms are taut. Subjects should feel “at rest.”
- 4.4.b Partners then teeter totter back and forth like a pendulum with straight bodies and taut arms.
- 4.4.c Start again. This time, one partner’s feet are in parallel, and the other’s feet are placed one in front of the other. The latter participant controls the forward and backward leaning motion in his/her partner, playing with distance and speed, and being conscious of degrees of resistance. Switch roles.
- 4.4.d Partners perform exercise 4.4.c while speaking phrases of text from the *Ave Maria*. The participant in control literally “leans” his/her partner based on text stress and phrase shape
- 4.4.e The instructor improvises musical phrases at the piano and the participants lean their partners, representing the shape of the phrase.

- 4.5 Review of Laban Effort Movements.

4.6 MOVEMENT EQUALS SOUND EXERCISE 2

Goals and intended benefits: Draw attention to a group’s capacity for *similar* but *inexact* reaction to and interpretation of both gesture and musical sound; think deeply about and execute clearly one’s desired sound.

- 4.6.a Participants form a circle and the instructor gestures with some part of her body. The ensemble vocalizes a representation of the gesture in unison, using nonsense syllables.
- 4.6.b Participants form pairs. One gestures and the other vocalizes to represent that gesture. *After several variations, the instructor asks the gesturers to consider if the sounds they are getting from their partner are the sounds they imagined when gesturing. If not, how might they clarify it?*
- 4.7 Review of syncopation with resistance and its application to *Ave Maria... virgo serena*.
- 4.8 Rehearsal of *Ave Maria... virgo serena*: participants walk around the room using spontaneous body movement to physicalize musical ideas that stand out (canonic ideas, syncopation, phrase shape, text stress, resistance, weight, etc.) as in a *plastique animée*. Following this, participants sing through the piece in a circle with movement characteristic of a performance but equal attention to musical ideas and execution.
- 4.9 Journal: Participants spend ten minutes completing free form journal entries reflecting their experiences from Session Four.

Session Five

Key Ideas: Steady tempo; relationships among time, space, and speed; anacrusis, crasis, and metacrusis; rhythmic modes and manipulation through augmentation and diminution

5.1 TENNIS BALL EXERCISE

Goals and intended benefits: Embody pulse and subdivision; relate time, space, and speed; use breath consistently for anacrusis; recognize meter changes and practice quick reactions; foster enjoyment.

- 5.1.a Participants stand in a circle, each holding a tennis ball, and bounce the ball in unison to a given tempo such that the pulse of the bounce *and* catch remains constant. Discuss force, distance, and speed.
- 5.1.b Perform exercise 5.1.a with several different tempi and notice the changes in force, distance, and speed. Relate this to singing.
- 5.1.c Still in a circle, participants bounce the ball to the person on their right and receive a different ball from the person on their left. Discuss creating an arc to prepare the bounce and use consistent space and speed to maintain tempo.
- 5.1.d Add one beat to exercise 5.1.c prior to bouncing the ball so that the pattern is bounce-catch-rest. Introduce anacrusis and crasis (bounce and prepare).
- 5.1.e Add two beats to exercise 5.1.c (pattern is now bounce-catch-rest-rest). Discuss using swinging motion of the arm, maintaining space and speed, to keep pulse.

- 5.1.f Participants form pairs, with one tennis ball per pair, and the instructor sits at the piano. Participants bounce the ball to one another on the downbeat of each measure, reacting to changes in meter.

5.2 BOWLING EXERCISE

Goals and intended benefits: Visually, auditorily, and kinesthetically experience anacrusis, crasis, and metacrusis; relate music to participants' common experience of playing sports.

- 5.2.a Participants form a circle and one holds a tennis ball. This participant "bowls" the ball to someone across the circle, focusing on the preparation (anacrusis), moment the ball comes in contact with the floor (crasis), and follow-through of the arm (metacrusis). The receiving participant does the same.
- 5.2.b Repeat exercise 5.2.a, but the ensemble adds a clap when the ball reaches the floor. Ensemble will clap together if the preparation is in time.

5.3 PIANO CALL, STEP RESPONSE EXERCISE WITH RHYTHMIC MODES

Goals and intended benefits: Teach Medieval rhythmic modes and their augmented and diminished variations; physically experience the weight, combination of durations, and character of each.

- 5.3.a Participants spread out throughout the room and the instructor sits at the piano. The instructor plays a rhythmic pattern with dynamic nuance (i.e. anapest) and the participants immediately respond by stepping the pattern in character. Call and response continues.
- 5.3.b The instructor changes the rhythmic pattern at her discretion and continues until all of Dalcroze' rhythmic modes (anapest, dactyl, iamb, trochee, and amphibrach) have been executed, then discuss and show notation for the patterns.
- 5.3.c The instructor combines two patterns at the piano and the participants execute them by stepping.

5.4 PIANO CALL, STEP RESPONSE EXERCISE WITH AUGMENTATION AND DIMINUTION

Goals and intended benefits: Teach concepts of augmentation and diminution; enhance visualization of rhythmic patterns and their motivic transformations.

- 5.4.a The instructor plays a rhythmic pattern twice through at the piano and the participants step the augmented version of the pattern (i.e. the instructor plays quarter note – quarter note – half note *twice through*, and the ensemble steps half note – half note – whole note *once* such that it takes up the same amount of beats overall). The instructor changes rhythmic patterns as singers master each one.
- 5.4.b Participants undertake exercise 5.4.a but in diminution.

5.5 IMPROVISATION OF RHYTHMIC MODES EXERCISE

Goals and intended benefits: Stimulate creativity; practice speaking and singing rhythmic patterns for easier identification and execution in the context of singing Renaissance pieces; enable healthy educational risk-taking; train musical memory; build confidence.

- 5.5.a The choir forms a circle and participants take turns improvising one four-beat bar of music by speaking the names of the rhythmic modes in rhythm (i.e. a – na – pest, dac – ty – lic), and the choir immediately responds.
 - 5.5.b In the key of C Major, using the first five notes of the scale, individual participants improvise a four-beat melody using the rhythmic modes. The ensemble immediately responds with the same melody. The leader may choose to use a neutral syllable or the names of the rhythmic patterns as they sing.
- 5.6 Rehearsal of *Ave Maria... virgo serena*, identifying the rhythmic patterns and their augmented and diminished variations within the score, as well as the affect these patterns have on text stress.
- 5.7 Journal: Participants spend ten minutes completing free form journal entries reflecting their experiences from Session Five.

Session Six

Key Ideas: Rhythm and complement; composite rhythm; clarity and accuracy among complex Renaissance rhythmic textures.

6.1 POSITIVE AND NEGATIVE SPACE EXERCISE

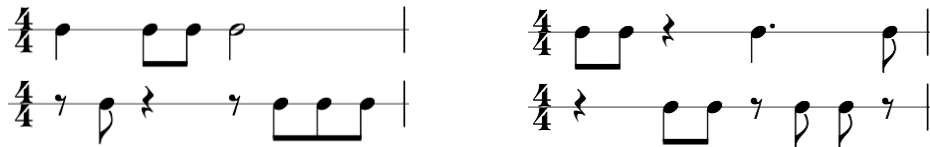
Goals and intended benefits: Discover positive vs. negative space and its relation to musical sound vs. rest; joy and positive social engagement.

- 6.1.a Participants spread out in the room and play with positioning their bodies in different ways to occupy space within imagined spheres surround their bodies.
- 6.1.b Participants form a circle. One person comes inside the circle and makes a shape with his or her body (this is “positive” space) within an imagined sphere. One at a time, additional participants fill in the negative space within the sphere. This is a physical representation of musical sound filling in a sphere (or measure) of silence.

6.2 EXERCISES IN RHYTHM AND COMPLEMENT

Goals and intended benefits: Enhance rhythmic acuity; learn concepts of rhythm and complement as well as composite rhythm.

- 6.2.a Participants face one another within an imagined sphere, and each holds a hand drum. The instructor improvises music at the piano. One partner hits the drum someplace in the sphere and in response, the other partner fills both the leftover physical space and aural space with a beat of his or her drum in time with the piano. The sound becomes continuous by alternating hits of the drum.
- 6.2.b Participants put the drums down and spread out in the room. A tempo is set, and participants step repeated half notes while the instructor plays the complement (a quarter note on the second beat of every half note). The instructor then plays the half notes and the participants step the complement. Following this, the instructor plays other note values at the piano (i.e. whole note or dotted half note) and the participants continue to step the quarter note complement.
- 6.2.c Participants stand in a circle. The subdivision (eighth note) is now designated as the level for rhythmic complement. The instructor improvises a rhythm that occupies the space of eight eighth notes (one measure in common time) by clapping it. Participants listen the first time and upon a second hearing, clap the eighth note complement as in the two examples below:



- 6.2.d The instructor improvises melodies at the piano beginning with a fixed rhythm, dactyl. The participants step the complement around the room. The instructor calls out and plays a new fixed pattern, and the participants adjust their stepping to fill the complementary space of the new rhythm.
- 6.2.e Exercise 6.2.d is repeated, but this time with a combination of two rhythmic patterns back to back (i.e. dactyl and anapest). This set is then played continuously while the participants step the complement.
- 6.2.f Instructor shows participants notation for the exercises they just performed and describes how the multiple rhythms put together form a composite rhythm.
- 6.3 Participants rehearse *Ave Maria...virgo serena*. Ensemble compares composite rhythms of passages beginning at measures 43 and 48 (consistent half note composite versus much more rhythmically active composite as it approaches the cadence). Continue further into piece with composite rhythm in mind. *Singers allow this knowledge to impact their singing of the music: more rhythmically complex lines are brought out and there is greater accuracy and unity regarding rhythm, tempo, and nuance.*
- 6.4 Journal: Participants spend ten minutes completing free form journal entries reflecting their experiences from Session Six.

Session Seven

Key Ideas: Discover divisions of two and three within Renaissance musical lines; quickly change from duple to triple meter in which macro or micro beats remain the same.

7.1 KINESTHETIC WARM-UP WITH CHANGING METER

Goals and intended benefits: Differentiate between duple and triple meters that maintain micro beats versus macro beats.

- 7.1.a Participants spread out in room. The instructor improvises a measure of a melody on piano in $\frac{6}{8}$ and participants respond by stepping it. After several measures in $\frac{6}{8}$, the instructor changes to $\frac{2}{4}$ (with the length of the bar remaining the same) and participants respond by stepping, as before.
- 7.1.b Repeat exercise 7.1.a but with the eighth note remaining constant.

7.2 TWO VERSUS THREE STEP AND PAT EXERCISE

Goals and intended benefits: Reveal musical phrasing as intended by the composer outside the context of imposed modern barlines and execute it as such.

- 7.2.a Participants stand in a circle with the instructor. Everyone leans to the right with a slight step and bend of the knee and then to the left, maintaining 60 bpm. Once moving together, the ensemble pats their legs (where their arms comfortably fall) on the offbeat in duple meter. Then, on the instructor's command "Three," and maintaining the micro beat (the eighth note at 120 bpm), the ensemble pats twice instead of once, thus changing the meter into triple. The instructor calls out "Two" or "Three" at will and the ensemble adjusts their movements to match.
 - 7.2.b The same procedures follow as exercise 7.2.a, but now the macro beat stays the same such that the length of the lean to each side is constant but now it is divided into duple or triple by the pats of the legs.
- 7.3 Ensemble rehearses *Ave Maria...virgo serena*, beginning with the upper voice duet at measure 31. Participants sing with leans and pats as in exercise 7.2.a dividing their individual lines into groupings of two or three notated half notes, focusing primarily on text stress. Ensemble continues to phrase music accordingly as rehearsal continues.
- 7.4 Singers perform measures 16-31 three times: once with intentional movement, once with relative stillness, and once with what subjects consider performance appropriate movement.
- 7.5 Journal: Participants spend ten minutes completing free form journal entries reflecting their experiences from Session Seven.

Session Eight

Key Ideas: Dalcroze procedures for double-fast, triple-fast, and breakdown of triples; hemiola; two against three in many contexts.

8.1 CLAPPING TWICE AS SLOW/TWICE AS FAST EXERCISE

Goals and intended benefits: Embody relationships among space, time, and speed; continue to physicalize consistent pulse and subdivision.

- 8.1.a Participants stand in a circle and use Dalcroze' clapping method to maintain an adagio tempo. At the instructor's command "*hopp*," participants clap twice as fast, adjusting the size and speed of their circular clapping gesture accordingly. At the second command "*hopp*," participants double the speed again.
- 8.1.b Beginning at a quick speed, participants follow the same procedure as exercise 8.1.a but now going twice as slow, and twice as slow again.

8.2 STEPPING TWICE AS SLOW/TWICE AS FAST EXERCISE

Goals and intended benefits: Continue to embody relationships among space, time, and speed; practice quick reaction to rhythmic changes; practice augmentation and diminution of rhythmic modes that appear in Renaissance music.

- 8.2.a Participants spread out around the room and listen to the music being improvised at the piano. They step the slow beat, staying connected with the floor throughout, and change to "double-fast" (Dalcroze' term for twice as fast), "triple-fast" (three times as fast), or back to the original beat as the music indicates.
- 8.2.b Participants undertake the same procedure as 8.2.a but this time with rhythmic modes (i.e. dactyl as demonstrated below).

The image shows two staves of musical notation in 4/4 time. The first staff starts with a tempo marking of *Andante* and a rhythmic mode of I (dactyl). It then transitions to a *(Double fast)* tempo with rhythmic modes IV, V, and I. The second staff starts at measure 16 with a *(Triple fast)* tempo and rhythmic mode I, then transitions to a *(Double fast)* tempo with rhythmic modes IV and V, ending with "(etc.)".

8.3 MULTI-LEVEL STEPPING EXERCISE

Goals and intended benefits: Develop cognitive dissociation skills; foster teamwork; improve rhythmic acuity; practice aurally perceiving and physically executing rhythmic patterns within thick textures.

- 8.3.a Participants form pairs and move around the room together. One partner steps the first level of a rhythmic pattern played on the piano, while the other steps the rhythm twice as fast. When the instructor calls "*hopp*," the partners switch roles. This continues with different rhythmic patterns.
- 8.3.b Participants form groups of three. The same procedure is followed from 8.3.a, but now the original level, twice as fast, and three times as fast. The instructor plays the composite rhythm of all three levels at the piano. Once participants are

successfully perform the activity, the movement pauses and the three group members select a different level. The activity resumes, then pauses again after successful completion to rearrange once again. The final grouping performs the activity.

- 8.3.c Participants form new groups of three. Levels of rhythmic activity with notation are written at the chalkboard and labeled a, b, and c (c being triple fast). Each participant in the group chooses a letter to start. They are informed that at the word “*hopp*,” the “a”s will become “b”s, “b”s will become “c”s, and “c”s will become “a”s. The instructor begins playing the composite rhythm of a rhythmic pattern at all three levels and participants move around the room in their groups of three, stepping their level. At “*hopp*,” they move to the next level as directed.

8.4 HEMIOLA EXERCISE

Goals and intended benefits: Embody feeling of hemiola and identify it in a score.

- 8.4.a Participants form groups of four and are given a tarp. Two participants hold one end and the other two hold the other end (facing the other pair). The instructor improvises music at the piano that feels in $\frac{6}{8}$ or $\frac{3}{4}$. Holding the tarp taut, the groups rock back and forth where the primary beat changes (underlined and bolded in the following example): $\underline{\mathbf{1}} + a \underline{\mathbf{2}} + a$ or $\underline{\mathbf{1}} + \underline{\mathbf{2}} + \underline{\mathbf{3}} + .$
- 8.4.b Discover, embody, and sing hemiola in *Ave Maria...virgo serena* at the text “*fuit purgatio.*”

8.5 DALCROZE BREAKDOWN OF TRIPLETS EXERCISE

Goals and intended benefits: Enhance understanding of mathematical proportions of triplets; physically experience them with accurate execution in order to avoid accidental dotted rhythmic feel.

- 8.5.a Participants spread out around the room, stepping a slow pulse and clapping a triple division. At “*hopp*,” switch movement in hands and feet.
- 8.5.b Participants step the slow pulse and clap the triple division, this time counting out loud to 6 as they clap (therefore stepping on numbers 1 and 4). Each time they arrive at 6, they immediately repeat back to 1. When ready, participants begin vocally and physically (in the hands) accentuating the numbers 1, 3, and 5, eventually taking away the vocalization of numbers 2, 4, and 6 altogether.
- 8.5.c Participants take the clapping away. Now they are speaking 1, 3, 5 and stepping 1 and 4.
- 8.5.d Finally, participants replace their vocalization with clapping. They are now clapping numbers 1, 3, and 5 and stepping beats 1 and 4. This is duple division in the lower body and simultaneous triple division in the upper body.
- 8.6 Continue to rehearse *Ave Maria...virgo serena*, using the body spontaneously when desired to help embody the ideas presented in all eight sessions.

- 8.7 Journal: Participants spend ten minutes completing free form journal entries reflecting their experiences from Session Eight.

Session Nine

Key Ideas: Closing exercises to compare singing with different levels and types of movement.

- 9.1 Vocalises to warm up.
- 9.2 Touching up of various sections of *Ave Maria...virgo serena* (often using stepping, leaning, or gesturing to help with rhythmic accuracy, unity, and expression).
- 9.3 Closing comparison activity: Participants perform three run-throughs of *Ave Maria...virgo serena*, first with natural performance-appropriate movement, second with intentional Dalcroze-influenced movement, and third with relative stillness.

Bibliography:

- Bachmann, Marie-Laure. *Dalcroze Today: An Education through and into Music*. Oxford: Clarendon Press, 1991.
- Batson, Glenna and Margaret Wilson. *Body and Mind in Motion: Dance and Neuroscience in Conversation*. Chicago: Intellect, the University of Chicago Press, 2014.
- Bent, Margaret. "Impossible Authenticities." *Il Saggiatore Musicale* 8, no. 1 (2001): 39-50.
- Berger, Karol. *Musica Ficta: Theories of Accidental Inflections in Vocal Polyphony from Marchetto Da Padova to Gioseffo Zarlino*. Cambridge: Cambridge University Press, 1987.
- Blachly, Alexander. "Mensuration and Tempo in 15th-Century Music: Cut Signatures in Theory and Practice." Columbia University, 1995. ProQuest Dissertations Publishing (9533514).
- Blackburn, Bonnie J. "Tramline Music." *Early Music* 41, no. 1 (2013): 52-53.
- Bokulich, Clare. "Contextualizing Josquin's Ave Maria...virgo serena." *The Journal of Musicology* 34, no. 2 (2017): 182-240.
- Bradley, Karen K. *Rudolf Laban*. New York: Routledge, 2009.
- Brooks, Lynn Matluck. "Harmony in Space: A Perspective on the Work of Rudolf Laban." *Journal of Aesthetic Education* 27, no. 2 (1993): 29-41.

- Brown, Howard Mayer. "Choral Music in the Renaissance." *Early Music* 6, no. 2 (1978): 164-169.
- Caldwell, J. Timothy. *Expressive Singing: Dalcroze Eurhythmics for Voice*. Mount Pleasant, Mich: Glenn Street Press, 2012.
- Crosby, Angela. "Dalcroze's Eurhythmic Techniques for the Choral Rehearsal: MOVING To O Magnum Mysterium." *Choral Journal* 48, no. 11 (2008), 30-41.
- Daley, Caron. "Moved to Learn: Dalcroze Applications to Choral Pedagogy and Practice." DMA Dissertation. University of Toronto, 2013. ProQuest Dissertations Publishing (NR96066).
- Daley, Caron. "Reimagining Conductor Score Study through Émile Jaques-Dalcroze's Eurhythmics." *Choral Journal* 58, no. 8 (2018): 20-35.
- Darroch, Hannah. "Singing on the Book: New Video Series Launched." *McGill University Schulich School of Music Video Series*. December 16, 2019.
<https://mcgill.ca/music/article/blog-faculty-research/singing-book-new-video-series-launched>.
- Dayme, Meribeth Bunch. *The Performers Voice: Realizing Your Vocal Potential*. New York: W.W. Norton, 2005
- Dickson, John H. "The Training of Conductors Through the Methodology of Kinesthetics." *Choral Journal* 32, no. 8 (1992): 15-20.
- Ehmann, Wilhelm. *Choral directing*. Minneapolis, Minnesota: Augsburg Press, 1968.

- Fabian, Dorottya. "The Meaning of Authenticity and The Early Music Movement: A Historical Review." *International Review of the Aesthetics and Sociology of Music* 32, no. 2 (2001): 153-67.
- Fabian, Dorottya, Renee Timmers, and Emery Schubert. *Expressiveness in Music Performance: Empirical Approaches across Styles and Cultures*. Oxford: Oxford University Press, 2014.
- Gajard, Dom Joseph. *The Solesmes Method: Its fundamental Principles and Practical Rules of Interpretation*. Collegeville, Minnesota: The Liturgical Press, 1960.
- Grant, Roger Mathew. *Beating Time and Measuring Music in Early Modern Era*. Cary: Oxford University Press US, 2014.
- Granot, Roni Y., and Zohar Eitan. "Musical Tension and the Interaction of Dynamic Auditory Parameters." *Music Perception: An Interdisciplinary Journal* 28, no. 3 (2011): 219-246.
- Harrán, Don. "Vicentino and His Rules of Text Underlay." *The Musical Quarterly* 59, no. 4 (1973): 620-632.
- Hart, John T. "The Effects of Single Laban Effort Action Instruction on Undergraduate Conducting Students' Gestural Clarity." *Contributions to Music Education* 41 (2016): 93-111.
- Hibbard, Therees Tkach. "The Use of Movement as an Instructional Technique in Choral Rehearsals." University of Oregon, 1994. ProQuest Dissertations Publishing (9418994).

Hiley, David. "Chant." In *Performance Practice: Music before 1600*, edited by Howard Mayer Brown and Stanley Sadie. New York: W. W. Norton, 1990.

Holt, Michele Menard. "The Application to Conducting and Choral Rehearsal Pedagogy of Laban Effort/Shape and its Comparative Effect upon Style in Choral Performance." University of Hartford, 1992. ProQuest Dissertations Publishing (9214439).

Hurlburt, Russell T. "Descriptive Experience Sampling." *The Blackwell Companion to Consciousness*, Second Edition ed. Susan Schneider and Max Velmans. (Hoboken, NJ: John Wiley & Sons, Inc., 2017), 740-753.

Jaques-Dalcroze, Émile. *Rhythm, Music & Education*. Translated by Harold F. Rubenstein. Revised Ed. London: Dalcroze Society, 1967.

Jaques-Dalcroze, Émile. "Eurhythmics and Its Implications." Translated by Fred Rothwell. *The Musical Quarterly* 16, no. 3 (1930): 358-65.

Jaques-Dalcroze, Émile. *Ear-Training Music and Movement: Games and Preliminary Exercises in Ear-Training, Singing and Rhythmic Movement*. LeLocle, Switzerland: Charles Huguenin, 1939.

Jaques-Dalcroze, Émile. *Rhythmic Movement*. London: Novello and Co., 1920.

Jaques-Dalcroze, Émile. *The Eurhythmics of Jaques-Dalcroze*. Boston: Small Maynard and Company, 1915.

- Kallendorf, Craig. "Ancient, Renaissance, and Modern: The Human in the Humanities." *The Journal of General Education* 39, no. 3 (1987): 133-151.
- Kite-Powell, Jeffery, ed. *A performer's guide to Renaissance music*. Indiana University Press, 2007.
- Laban, Rudolf. "Effort" in McCaw, Dick. *The Laban Sourcebook*. London: Routledge, 2011., 217-230.
- Lowinsky, Edward Elias. *Tonality and Atonality in Sixteenth-Century Music*. Berkeley: Univ. of California Press, 1962.
- Marvin, Jameson. "Perfection and Naturalness: Guides to the Performance of Renaissance Music." *Choral Journal* 35, no. 1 (1994): 49-52.
- Marzuola, Nicholas J. "An Investigation of Dalcroze-Inspired Embodied Movement within Undergraduate Conducting Coursework." Ph.D. Dissertation. Case Western Reserve University, 2019.
- Mayers, Hillary, and Linda Babits. "A Balanced Approach: The Alexander Technique." *Music Educators Journal* 74, no. 3 (1987): 51-54.
- McCoy, Claire Wehr. "The Effects of Movement as a Rehearsal Technique on Performance, Meter Discrimination, Ability, and Attitude of Members of High School Choral Ensembles." Ph.D. Dissertation. The University of Iowa, 1986. ProQuest Dissertations Publishing (8628132).

- Meints, Kenneth L. "The Application of the Kinesthetic Learning Theories of Émile Jaques-Dalcroze in Conductor Preparation Coursework." DMA Dissertation. The University of Nebraska - Lincoln, 2014. ProQuest Dissertations Publishing (3628246).
- Menerth, Edward F. "Singing in Style: Renaissance." *Music Educators Journal* 52, no. 5 (1966): 56-58.
- Miles, Matthew B., A. Michael Huberman, and Johnny Saldaña. *Qualitative Data Analysis: a Methods Sourcebook*. Los Angeles: Sage, 2014.
- Palisca, Claude V. *Music and Ideas in the Sixteenth and Seventeenth Centuries*. Urbana, IL: University of Illinois Press, 2006.
- Phillips, Peter. "Singing Polyphony." *The Musical Times* 155, no. 1929 (2014): 7-18.
- Plank, Steven Eric. *Choral Performance: a Guide to Historical Practice*. Lanham, MD: Scarecrow Press, 2004.
- Poe, Francis R. "The Development of Instructional Materials for Teaching and Performing Renaissance Choral Music." Indiana University, 1978. ProQuest Dissertations Publishing (7906720).
- Reese, Gustave. *Music in the Renaissance*. Revised Edition. New York: W.W. Norton, 1959.
- Rowell, Lewis. "Aristoxenus on Rhythm." *Journal of Music Theory* 23, no. 1 (1979): 63-79.
- Ultan, Lloyd. *Music Theory: Problems and Practices in the Middle Ages and Renaissance*. Minneapolis: University of Minnesota Press, 1977.

Schnebly-Black, Julia, and Stephen Fred. Moore. *The Rhythm inside: Connecting Body, Mind, and Spirit through Music*. Van Nuys, CA: Alfred Pub. Co., 2003.

Selva, Joaquin. *Progressive Muscle Relaxation (PMR): A Positive Psychology Guide*. July 4, 2019. <https://positivepsychology.com/progressive-muscle-relaxation-pmr/>

Sessions, Roger. *Harmonic Practice*. New York: Harcourt, Brace, and World., 1951.

Spector, Irwin. *Rhythm and life: the work of Émile Jaques-Dalcroze*. Stuyvesant, New York: Pendragon Press., 1990.

Tuckman, Bruce W. "Developmental sequence in small groups." *Psychological Bulletin* 63 no. 6 (1965): 384-399.

Vasconcellos, Helena Maria de. "The Effect of Choral Performers' Body Movement on Performance Ratings Assigned by High School Choral Students and College Music Majors." University of Missouri - Kansas City, 2002. ProQuest Dissertations Publishing (3059716).

Walton, Kendall L. "Projectivism, Empathy, and Musical Tension." *Philosophical Topics* 26, no. 1/2 (1999): 407-440.