

A Program of Study for 21st Century Clarinet Techniques
Featuring Five New Compositions for Unaccompanied Clarinet

by

Olivia Lauren Meadows

A Research Paper Presented in Partial Fulfillment
of the Requirements for the Degree
Doctor of Musical Arts

Approved April 2019 by the
Graduate Supervisory Committee:

Robert Spring, Co-Chair
Joshua Gardner, Co-Chair
Jeffery Meyer
Albie Micklich
Kotoka Suzuki

ARIZONA STATE UNIVERSITY

May 2019

ABSTRACT

As clarinet students progress in their studies, there comes a point at which many are assigned to perform contemporary repertoire that is either overplayed due to accessibility and use in pedagogy, or includes difficult extended techniques like microtones, multiphonics, and more. This project identifies a “gap” in unaccompanied clarinet repertoire and seeks to expand this repertoire by outlining a program of study featuring five newly commissioned unaccompanied clarinet solos through which students can learn both traditional and untraditional techniques. Each of the first four works focus on one aspect of clarinet technique—musicality, the altissimo register, microtones, and multiphonics, respectively—and the final work is a culmination of all these techniques. Included in this document is biographical information for each composer, program notes, a brief description, and a performance guide for each piece. Additionally, each work was recorded by the author and included with this document.

DEDICATION

To the clarinet community—a wonderful, weird, and ever-evolving place.

ACKNOWLEDGMENTS

I would first and foremost like to thank Dr. Robert Spring and Dr. Joshua Gardner, without whom all of this would not have been possible. There are not enough words in the English language to express what you both mean to me, and the profound impact you have had on my life to date. I look forward to a lifetime of friendship with you both.

Thank you to my committee Dr. Jeffery Meyer, Dr. Albie Micklich, Dr. Kotoka Suzuki, and my recording engineer, Clarke Rigsby, for being amazing role models, educators, and musicians.

To the composers, Zach, Spencer, Kurt, Josh, and Eric, for bringing my ideas to life with your music and creating something so exciting that will hopefully have an important impact on the clarinet community. You have given me a great gift, thank you.

To Dr. Deborah Bish, who encouraged me to pursue a DMA and who always knows exactly what to say before I even know it's what I need to hear.

To Mom, Dad, and Rebecca for the love and unwavering support over the course of my life and development as a musician, especially as I entered a somewhat volatile field. I love you all so much.

To my friends, who have become my family. Wen, my duo partner and chosen sister. Patrick (my forever office buddy), Jack, Jeremy, Amy, Paul, Vince, Kate, Caitlin, Stephanie, and more...I owe you all my sanity (and maybe some of my insanity, too).

Finally, to my husband, Dan; thank you for always encouraging me to be the best version of myself, for supporting me throughout this insane process, for providing me

with the freedom to pursue what I love to do, and for being the best partner I could have ever hoped for. I love you.

TABLE OF CONTENTS

	Page
LIST OF TABLES	vii
LIST OF FIGURES	viii
LIST OF MUSICAL EXAMPLES	ix
CHAPTER	
1 INTRODUCTION	1
2 REVIEW OF EXISTING REPERTOIRE	3
The “Gap” in the Existing Repertoire	4
Objective Pedagogical Parameters	5
Brief Description of Applicable Existing Repertoire	9
3 DEVELOPMENT OF THIS “PROGRAM OF STUDY”	11
4 NOTATED RUBATO: <i>OF MOONS AND MEADOWS</i>	12
Biographical Sketch: Zachary Bush	13
Program Notes	14
Overview and Impact Within Existing Repertoire	14
Performance Guide	15
5 THE ALTISSIMO REGISTER: <i>ROPES COURSE</i>	18
Biographical Sketch: Joshua Gottry	19
Program Notes	19
Overview and Impact Within Existing Repertoire	20
Performance Guide	22

Chapter	Page	
6	MICROTONES: <i>MY OWN THOUGHTS: CAPRICE FOR INTERNAL MUSINGS</i>	24
	Biographical Sketch: Kurt Mehlenbacher.....	24
	Program Notes	25
	Overview and Impact Within Existing Repertoire.....	26
	Performance Guide	31
7	MULTIPHONICS: <i>SOLILOQUIZE</i>	34
	Biographical Sketch: Spencer Brand	35
	Program Notes	35
	Overview and Impact Within Existing Repertoire.....	36
	Performance Guide	38
8	FINALE: <i>WINTER FANTASY</i>	40
	Biographical Sketch: Eric Mandat	41
	Program Notes	42
	Overview and Impact Within Existing Repertoire.....	42
	Performance Guide	46
9	CONCLUSION.....	48
	REFERENCES	49
	APPENDIX	
	A PURCHASING INFORMATION	51
	B TRACK LIST.....	53

LIST OF TABLES

Table	Page
2.1 Table of Selected Repertoire.....	10
8.1 Assessment of a Selection of Eric P. Mandat's Works for Solo Clarinet.....	40

LIST OF FIGURES

Figure	Page
5.1 Voicing Exercise.....	22
6.1 Microtonal Key.....	26
6.2 Practice Techniques.....	32
8.2 Glossary of Symbols.....	44

LIST OF MUSICAL EXAMPLES

Example	Page
4.1 <i>Of Moons and Meadows</i> , mm. 1-4.....	14
4.2 <i>Of Moons and Meadows</i> , mm. 14-26.....	15
5.1 <i>Ropes Course</i> , mm. 95-99.....	20
5.2 <i>Ropes Course</i> , mm. 107-108.....	21
5.3 <i>Ropes Course</i> , mm. 120-123.....	21
5.4 <i>Ropes Course</i> , mm. 133-142.....	21
6.1 <i>My Own Thoughts</i> , mm. 30-32	27
6.2 <i>My Own Thoughts</i> , mm. 46-49	27
6.3 <i>My Own Thoughts</i> , mm. 90-93	28
6.4 <i>My Own Thoughts</i> , m. 33-36.....	28
6.5 <i>My Own Thoughts</i> , m. 71-73.....	29
6.6 <i>My Own Thoughts</i> , mm. 68-73	29
6.7 <i>My Own Thoughts</i> , mm. 74-79	30
6.8 <i>My Own Thoughts</i> , mm. 87-89	30
7.1 <i>Soliloquize</i> , mm. 1-2	37
7.2 <i>Soliloquize</i> , mm. 108-109	38
8.1 <i>Winter Fantasy</i> , mm. 68-74	43
8.2 <i>Winter Fantasy</i> , mm. 6-14	44
8.3 <i>Winter Fantasy</i> , mm. 19-23.....	45
8.4 <i>Winter Fantasy</i> , mm. 68-69	45

Example	Page
8.5 <i>Winter Fantasy</i> , mm. 86-90	46
8.6 <i>Winter Fantasy</i> , mm. 32-37	47

CHAPTER 1

INTRODUCTION

The solo repertoire of each musical discipline contains works that can be considered “standards” based upon musical, historical, and pedagogical value. These works are frequently performed by young, developing students, and thus are often devalued by sheer repetition. The clarinet is fortunate to have a rich history of unaccompanied repertoire from which to choose, dating as far back as the early classical era, circa 1760. But in addition to the standard repertoire being all too familiar, many pieces within the realm of unaccompanied clarinet repertoire, both with and without extended techniques, are simply too difficult to assign to young students. In 1973, James Gillespie, renowned clarinetist and pedagogue, wrote, “Far too many of the works may be played only by very advanced players, and it is hoped that composers will respond to the need for more intermediate-level pieces within the reach of student clarinetists.”¹ The works to which he referred are still in the active repertoire, and since the early twentieth century, compositional use of extended techniques such as glissando, flutter tonguing, vibrato, microtones, multiphonics, and others in clarinet repertoire has increased exponentially. However, from their inception, the difficulty level of these solos with extended techniques has overwhelmed the abilities of many young clarinet students.

It is the purpose of this document and overarching project to contribute music to the unaccompanied clarinet repertoire that will aid young students of high school and/or college age in learning and becoming familiar with notated rubato, the altissimo register,

¹ James Gillespie, *Solos for Unaccompanied Clarinet: An Annotated Bibliography of Published Works* (Detroit: Information Coordinators, Inc., 1973), 12.

microtones, and multiphonics in an easier and less intimidating manner than the existing repertoire provides. Five works were commissioned for this project that each focus on one of the aforementioned pedagogical areas of clarinet technique. These pieces and their corresponding pedagogical focuses are: *Of Moons and Meadows* by Zachary Bush (notated rubato), *Ropes Course* by Joshua Gottry (the altissimo register), *My Own Thoughts: Caprice for Internal Musings* by Kurt Mehlenbacher (microtones), *Soliloquize* by Spencer Brand (multiphonics), and *Winter Fantasy* by Eric Mandat (a culmination of all discussed techniques).

CHAPTER 2

REVIEW OF EXISTING REPERTOIRE

The first known unaccompanied piece for clarinet can be credited to Mozart's muse for his clarinet repertoire, Anton Stadler, though unfortunately the knowledge regarding this music ends there.² As virtuosic repertoire for clarinet continued to grow through the late Classical and Romantic eras, few works were composed for clarinet alone. During this time period, the only known unaccompanied clarinet solos are those by English clarinetist and composer Joseph Williams of Hereford.³

As clarinet repertoire evolved into the Paris Conservatoire's yearly *morceaux de concert* (end of the year playing examinations), unaccompanied solos were considered to be less important.⁴ Finally, the early twentieth century was a plentiful time for unaccompanied clarinet; although it may be perceived that "performances of works for unaccompanied clarinet will probably always present a bit of a problem to the players as well as to the audience," unaccompanied clarinet repertoire was padded during this period by Igor Stravinsky, Gordon Jacob, Willson Osborn, Miklos Rószka, and others.⁵

Extended techniques were introduced in clarinet repertoire around 1950 and became increasingly noticeable in unaccompanied clarinet music from that point forward.⁶ Catalogues have been created as references for learning microtonal and

² Gillespie, 11.

³ Colin Lawson, ed., *The Cambridge Companion to the Clarinet* (Cambridge: Cambridge University Press, 1995), 70.

⁴ *Ibid.*, 87.

⁵ *Ibid.*, 87-91.

⁶ Phillip Rehfeldt, *New Directions for Clarinet: Revised Edition* (Maryland: Scarecrow Press, 2003), vii.

multiphonic fingerings, based upon the works of composers such as William O. Smith and Eric Mandat; popular catalogues that will be discussed in this document include, but are not limited to, those by Phillip Rehfeldt, Dr. Jack Liang, Dr. Gregory Oakes, Dr. Heather Roche, and others.

The “Gap” in Existing Repertoire

My review of existing unaccompanied clarinet repertoire, for the purposes of this document, will be focused on a pedagogical “gap” in clarinet compositions that will be identified. In this context, the term “gap,” hereafter referenced without quotations, refers to the leap in difficulty level between two commonly taught and performed unaccompanied solos for students. Specifically, the leap in difficulty as students begin to learn extended techniques. There are few compositions that are or can be utilized by pedagogues as teaching pieces with extended techniques. As both a student and teacher in higher education, I have observed that two compositions that my peers and students were frequently assigned to learn these techniques were *Excursions for A Clarinet* by Ronald Caravan and *Tri-Color Capers* by Eric Mandat. These pieces are considered to be staples in clarinet repertoire by many pedagogues and are referenced in Phillip Rehfeldt’s highly regarded resource for extended techniques, *New Directions for Clarinet*. However, the disparity in difficulty between these two compositions, and between these compositions and those without extended techniques, may be intimidating to students who are still working to develop their fundamental clarinet technique. It is this gap in the repertoire that this project seeks to satiate.

Objective Pedagogical Parameters

Before delving into the applicable existing unaccompanied repertoire, I am compelled to briefly outline the parameters by which I will measure these pieces. For this project, these categories were my primary points of reference when determining where new commissions were needed to enhance the existing repertoire. Although teaching methods may vary between teachers and instruments, objective goals can, in most cases, be considered universal. Such goals can be divided into three broad categories: musicality, sound development, and technique.

A teaching piece should promote augmentation of musical expression. Does the piece inspire the musical progression through clear phrases and/or ideas that the student can both understand and expand upon? While a lot of solo repertoire must be performed in one particular fashion, unaccompanied repertoire has a specific benefit for teachers through the freedom of being just that: unaccompanied. Teaching pieces can easily stimulate musicality through use of *rubato*; if the piece does not require the student to play strictly in time but rather encourages the opposite, the student must automatically expand her/his musical knowledge by becoming creative beyond what is written on the page. Repertoire that is most effective for teaching the abstract ideas of musicality are those that actually have detailed instructions written by the composer; this will henceforth be referred to as “notated *rubato*.” By providing students with explicit musical instructions, upon playback, the students can hear and feel the need to be musically overindulgent in order to effectively portray an idea to their audience. In this manner,

students can create a mental bank of musical examples from which to draw when needed in more advanced repertoire.

In addition to musicality, it is important to encourage young students to consider how changes in the oral cavity affect performance. When considering a teaching piece for clarinet, one may ask: does the solo approach voicing on the clarinet in a way that encourages the student, rather than discourages? “Voicing” on the clarinet refers to the oral cavity configuration necessary to produce a given note or effect. Teaching such a potentially abstract concept early on may seem overly ambitious but young people often learn very quickly, being uninhibited by years of frustration and schooling. Accurate voicing yields partial accuracy throughout the instrument and improved intonation; by understanding voicing, clarinetists are better suited to appropriately adjust both their intervallic pitch and their pitch within an ensemble. Voicing manipulation can also produce special effects like multiphonics and glissandi. Voicing is an important point of sound production for clarinetists and can often be the hardest obstacle to overcome, even for advanced players. Ideal voicing on the clarinet, although a complex and abstract concept, can be simplified to one main point: the tongue should form syllables like “ee,” “eu,” or “shh” to produce the appropriate pitch or pitches as written.⁷ Voicing is dynamic—as one plays through the range of the instrument, the vocal tract configuration changes, particularly in the altissimo register and with some extended techniques like multiphonics. Beginning discussion of this concept when a student is still young and impressionable and can learn without conscious restrictions could be crucial in guiding

⁷ Ibid., 37.

them down the path to playing clarinet correctly and beautifully. As philosopher Mary Harrington Cross stated in her 1986 dissertation entitled *Learning Expectation and its Effects on Learning Outcomes in Experiential Learning: A Case Study of a Group Relations Conference*, “The more learners can link their expectations to the unconscious learning, the more learning will be enhanced, particularly in the dimension of skills learning.”⁸ Increased voicing awareness at a young age should also help students understand how to produce multiphonics and play into the higher altissimo register more easily and earlier on in their studies. Accurate multiphonic production also relates directly to increased awareness of tongue position in the oral cavity—if the student can voice each note of the specified multiphonic individually, then theoretically they will be able to find the intermediate voicing necessary to produce the multiphonic.⁹ Teaching repertoire should ease students into this concept by approaching large leaps into the clarinet’s altissimo register in a generally smooth fashion. If the leap up is larger than a perfect fourth it can seem daunting to developing students. Using increasing leap sizes (thirds, then fourths, then fifths, etc.) would guide the student through the process of learning accurate voicing. Teaching repertoire should also utilize multiphonics that do not require excess voicing manipulation and are therefore relatively easy to produce. This would allow students to begin to understand the concept of producing multiphonics.

⁸ Mary Harrington Cross, “Learning Expectation and its Effects on Learning Outcomes in Experiential Learning: A Case Study of a Group Relations Conference” (PhD diss., The Wright Institute, 1986), 145, ProQuest (AAT 303446748).

⁹ Jack Yi Jing Liang, “Clarinet Multiphonics: A Catalog and Analysis of Their Production Strategies” (DMA diss., Arizona State University, 2018), 41, ProQuest (AAT 2040068240).

Finally, pedagogically valuable pieces, specifically for younger students, must encourage use and development of good finger technique. Does the piece emphasize technique that the student is already learning and/or perfecting? The seemingly most obvious avenue to emphasize technical knowledge and advancement is through the use of scalar patterns and chromaticism. Exercising these patterns serves to test muscle memory and improve finger dexterity, both of which are extremely important when playing clarinet. In addition, chromaticism can lead young students to increased awareness of alternate fingerings that may be even more useful than the standard fingerings in the long term.¹⁰ These exact principles can be applied to a student's development of extended techniques such as microtonal fingerings. A teaching piece should ideally balance the technical difficulty level in a way that pushes the student to challenge themselves but does not discourage them, which can be achieved through an even proportion of demanding technical and easier passages.

Using these criteria as guidelines, I have determined three broad pedagogical levels that can be used to categorize teaching repertoire. The beginner level should include easy technique (predominately scalar) and stay in the chalumeau and lower clarion registers of the clarinet. The intermediate level should feature more difficult technique (less scalar, more intervallic leaps), extend into the altissimo register, and may utilize extended techniques. The advanced level should feature difficult technique (melodic patterns that are perhaps atypical), extend into the high altissimo register, and

¹⁰ Danielle Nicole Woolery, "Correcting Technical Deficiencies in High School Clarinet Sections: A Resource for Band Directors" (DMA diss., University of Miami, 2011), 58-59, ProQuest (AAT 887901381).

may include extended techniques that increase in difficulty (e.g., harder to produce multiphonics). In my brief analysis of existing repertoire, I accounted for variation within and between these levels of difficulty by using “+” and “-”.

Brief Analysis of Applicable Existing Repertoire

Included in Table 2.1 is a small selection of unaccompanied solos both with and without extended techniques that I understand to accurately identify the gap within this body of repertoire. These pieces have been chosen for use in this document through my personal understanding as a student, educator, and professional clarinetist of their popularity in both performance and pedagogy, and is by no means an exhaustive list. Included is the identifying information (title, composer, composition date), the top range, and the pedagogical level of each piece, based upon the aforementioned “Objective Pedagogical Parameters.”

In Table 2.1, no pieces are identified at the beginner level and only three are identified as intermediate. Of the latter, only one includes extended techniques.¹¹ As a result, I consider this small representative body of work as enough to justify additions to clarinet repertoire.

¹¹ *Tri-Color Capers* by Eric Mandat was determined to be on the more difficult side of the “intermediate” category, hence the plus sign indicating that I do not consider it strictly intermediate. This indication will prove relevant in Chapter 8 of this document, where Mandat’s works are discussed in more detail.

	Title	Composer	Date	Range (Top)¹²	Level of Difficulty
Without Extended Techniques	Three Pieces	Igor Stravinsky	1919	G6	Advanced
	Capriccio	Heinrich Sutermeister	1946	G6	Advanced
	Rhapsody	Wilson Osborne	1958	D-flat 6	Intermediate
	Five Pieces for Clarinet Alone	William O. Smith	1959	A6	Advanced
	Five Pieces	Gordon Jacob	1973	G6	Intermediate
With Extended Techniques	Fantasia	Jörg Widmann	1973	C7	Advanced
	Excursions for A Clarinet	Ronald Caravan	1974	A6	Intermediate
	Four Soliloquies	Leslie Bassett	1976	B6	Advanced
	Tri-Color Capers	Eric Mandat	1980	C-sharp ⁷	Advanced-
	Gra	Elliott Carter	1993	B-flat ⁶	Advanced

Table 2.1: Table of Selected Repertoire

¹² Written pitch for B-flat clarinet.

CHAPTER 3

DEVELOPMENT OF THIS “PROGRAM OF STUDY”

Since there is an excess of clarinet etude books, I chose to pursue commissions of full solo works for this document. Solo works provide students the opportunity to learn as well as potentially perform the indicated techniques, whereas etudes are often (though not always) used exclusively for individual study. In order to challenge young players and not to mentally and physically exhaust them, I requested that each new composition be approximately seven and a half minutes long. This time limit was loosely determined based upon the pieces included in Table 2.1.

All composers chosen for this project have prior experience in composing for clarinet and more specifically composing for my colleagues, teachers, and/or peers.

It is suggested that these pieces be studied or performed in the following order, which steadily increases in difficulty:

1. *Of Moons and Meadows*
2. *Ropes Course*
3. *My Own Thoughts: Caprice for Internal Musings*
4. *Soliloquize*
5. *Winter Fantasy*

Though this is my suggested order for this program of study, the first four works could theoretically be played in any order. Since *Winter Fantasy* incorporates all of the techniques of the previous compositions, it needs to be studied last. I hope that through this program of study students will subsequently feel more confident and better prepared to pursue more difficult repertoire.

CHAPTER 4

NOTATED RUBATO: *OF MOONS AND MEADOWS*

Many of the most successful and widely performed teaching pieces in the clarinet repertoire manipulate time in such a way that the student may not even realize they are producing a *rubato* effect. This is the phenomenon of notated *rubato*. One such piece is the infamous *Rhapsody* by American-born composer Willson Osborne. Originally composed for bassoon and clarinet, this piece is commonly heard in a collegiate studio, and is one of the most effective solos for guiding a student through employing musicality.¹³

In Italian, the word *rubato* means robbed or stolen. Translated literally, the term *tempo rubato* means stolen time.¹⁴ When this term originally appeared, it referred to the alteration of some notes in a melody for musical expression, while the accompaniment remained in strict time. Over time however, *tempo rubato* has come to refer to the tempo of the entire musical substance, rather than in only the melody. This latter type of *rubato* involves the flexibility to which modern musicians have become accustomed—the flexibility that goes beyond the *ritardandi* and *accelerandi* in the score in a more subtle and expressive manner.¹⁵ But can this expressivity, seemingly stemming from emotional investment, be taught? With the appropriate repertoire and teaching philosophy, I think so. By introducing musicality and *rubato* early on in a student's developmental years,

¹³ Kelly Austermann, "A Supplemental Repertoire List for the Development of Fundamental Skills in Pre-Collegiate Clarinetists" (DMA dissertation, ASU, 2014), 130, <http://search.proquest.com.ezproxy1.lib.asu.edu>.

¹⁴ Richard Hudson, *Stolen Time: The History of Tempo Rubato*, (Oxford: Clarendon Press, 1994), 1.

¹⁵ *Ibid.*

listening to recordings and/or performances by good musicians, and relating musical ideas to tangible things like spoken words, students can more easily grasp these ambiguous and often very personal concepts.¹⁶ Furthermore, the addition to clarinet repertoire and subsequent pedagogical use of pieces that manipulate tempo in a way that yields a *rubato*-like effect without the performer even needing to make temporal choices on their own would provide students with real-time learning opportunities.

This can be achieved by following suit from Osborne's almost excessive use of expressive markings—rhythmic, dynamic, and temporal—to outline what may be interpreted as the composer's ideal musical interpretation. In composing for this precise purpose as part of this project, Zachary Bush has done just this.

Of Moons and Meadows was written in 2018 by Zachary Bush. It is published by the composer and available for downloadable purchase at <zacharywarrenmusic.com>.

Biographical Sketch: Zachary Bush

Zachary Bush (b. 1993) studied composition with Dr. James David and bass performance with Dr. Forest Greenough at Colorado State University (CSU) from 2011-2015. Zachary graduated from CSU in 2015 with degrees in Music Composition, Music Performance, and Music Education. While at CSU, he won two awards in the CSU annual composition contest and received two commissions from CSU's Middle School Outreach Ensemble. He also performed with the Cheyenne Symphony Orchestra for 3 seasons, and with the Fort Collins Wind Symphony for 2 seasons. Zachary graduated from Arizona State University (ASU) in 2018 with a double master's degree in Music Composition and Music Performance. He is currently pursuing a DMA in Composition at ASU and expects to graduate in 2020. While at ASU, he has received several commissions from The Harmony Project Phoenix, has collaborated with the Biodesign Institute at ASU, and has played as principle bass in local ensembles such as ProMusica, Musica Nova, Symphony of the Southwest, and the Four Seasons Orchestra. Zachary also

¹⁶ Bonnie and Cynthia Blanchard, *Making Music and Enriching Lives*, (Bloomington: Indiana University Press, 2007), 137, accessed March 23, 2017, ProQuest Ebook Central, 138.

performs as a section bassist in the West Valley Symphony and as a freelance bassist in local concerts and music theaters.¹⁷

Program Notes

Of Moons and Meadows was written for my friend and colleague, Olivia Meadows. For her clarinet DMA, she commissioned this piece as part of a series of works written by different composers. These pieces are for clarinet students who want to advance their technique through repertoire. The main focus of this work is musicality and as such contains many instructions that help guide the performer’s musical choices. The inspiration for this work stemmed from my relationship with my wife and was written after one year of marriage. The inspiration for the title is based on the maiden and married names of the commissioner – “Moonitz” and “Meadows.” Since this piece was inspired by marriage, it seemed appropriate to tie the title to a marriage tradition. I hope you enjoy the piece!¹⁸

Overview and Impact Within Existing Repertoire

To create the effect of notated *rubato*, using Osborne’s *Rhapsody* as an example, Bush included explicit musical instruction in every bar of the piece; in the first four bars alone, there are twenty expressive markings, both temporal and dynamic.



Example 4.1: *Of Moons and Meadows*, mm. 1-4

With each tempo change a numerical value is included, leaving no room to question the implied tempo. This allows the student to plan any notated *accelerandi* or *ritardandi*

¹⁷ “About,” Zachary Warren Music (website), accessed January 14, 2019, <http://www.zacharywarrenmusic.com/about.html>.

¹⁸ Zachary Bush, “Of Moons and Meadows,” score, 2018.

accordingly, based upon the tempo at which they begin and are to arrive at the next section.

Example 4.2: *Of Moons and Meadows*, mm. 14-26

Pauses in the music are all indicated by *fermatas* or breath marks, every articulation is dictated, and musical instructions are detailed throughout the score, as evidenced by Example 4.2. Students’ creativity can be expressed in how much or how little to stress each of these markings.

Performance Guide

In order to perform this composition with the intended musicality, when preparing this piece for tutelage or performance the student needs to adhere to composer’s musical instructions as written. In collaboration with Bush on this piece, I sent him audio recordings of the work after receiving a nearly finished draft. He and the co-chairs of my DMA committee are the only people who received and listened to this recording. Shortly

thereafter, the piece was premiered at a Composition Studio recital at Arizona State University (ASU). The premiere was performed by another doctoral candidate from the ASU Clarinet Studio whose performance was almost identical to the recording that was created for the composer.¹⁹

The technique required to perform this work is less demanding than that of even Osborne's *Rhapsody*, allowing the performer to truly focus on their musical ideas. To produce the intended musical effect, the student will be most effective if they exaggerate all markings beyond what they believe is "enough." However, as previously stated, their creativity would come into play with their decisions on how much or how little to stress each marking.

Use of recording devices in practice would be useful in determining if the clarinetist is truly portraying the musical ideas on the page and would be highly encouraged by the author. This is a practice technique often suggested by pedagogues to ensure a student's ideas are being adequately portrayed to the audience.

Practicing each section at the indicated tempo marking before applying the *accelerandi* and *ritardandi* is a useful way to ensure temporal accuracy. Determining the lengths of each of the indicated articulations prior to beginning the piece could be an effective way to ensure that each articulation sounds unique and distinct, and thus creating a more impactful performance. Finally, being careful to include dynamics and dynamic changes from the beginning of learning the piece, rather than adding dynamics after all the notes and rhythms are learned, is imperative to practicing efficiently

¹⁹ A recording of the performance mentioned is not available; snippets of the premiere performance were shared but not archived via social media.

producing a compelling musical performance—dynamics are an important part of the muscle memory that is created through practice.

CHAPTER 5

THE ALTISSIMO REGISTER: *ROPES COURSE*

The standard for the top of the clarinet's range is at the very least written G6. This is expected of clarinetists from a relatively young age, with this note being common in both ensemble and solo repertoire. Popular etude books such as Cyrille Rose's *32 Etudes*²⁰, Alfred Uhl's *48 Etuden*²¹, and Carl Baermann/Gustave Langenus' *Complete Method for Clarinet*²² include studies that ascend to G6. However, it is far less common to require students to reach beyond that note at a young age. The Baermann/Langenus method book is one of few such technique compendiums for intermediate to advanced clarinet pedagogy that includes notes beyond G6. Referring to Table 2.1, it can be noted that six out of the ten pieces selected as a sample of the existing repertoire are written with a range extended beyond G6. Of these five pieces, four were determined to be at the advanced level.

The journey of developing accurate voicing can be an uphill battle. Without direct observation, it is not possible to see how the oral cavity is changing and how the tongue is moving during performance. Pedagogues must draw from personal experience and established voicing exercises to guide their students. Alternatively, students must often rely heavily on trial and error to establish which tongue positions do or do not work for a given pitch or multiphonic. So why do we not have more repertoire that approaches the

²⁰ Cyrille Rose, *The New Rose Studies for Clarinet*, ed. Melvin Warner (New York: Carl Fischer, 2002).

²¹ Alfred Uhl, *48 Etüden*, (Mainz: Schott Music, 1940).

²² Carl Baermann, *Complete Method for Clarinet*, ed. Gustave Langenus (New York: Carl Fischer, 1917).

higher altissimo register in an accessible manner? Josh Gottry's *Ropes Course* uses stepwise motion, scalar patterns, moderate tempos, natural dynamic changes, and differing rhythms to guide students to extend their range to A6 comfortably.

Ropes Course was written by Josh Gottry in 2018-2019. It is published by the composer and available for purchase or digital download at <http://gottrypercussion.com/composer/>.

Biographical Sketch: Josh Gottry

A respected educator, accomplished percussionist, and internationally recognized composer, Josh Gottry has been creating innovative, pedagogical, and engaging new compositions and arrangements for over twenty years. Mr. Gottry holds degrees in percussion and composition from Northern Arizona University and Arizona State University respectively, and has served as part of the music faculty at numerous colleges and universities around the Phoenix metropolitan area. In these roles, he was tasked with directing performance ensembles and teaching courses in percussion, music theory and composition, and music humanities. He is an ASCAP award-winning composer whose works have been performed world-wide at universities, junior high and high schools, and multiple national conferences. Mr. Gottry is a member of the Percussive Arts Society and the American Society of Composers, Authors, and Publishers, has been published in *Percussive Notes*, *Rhythm! Scene*, and *The PAS Educators' Companion*. He has presented clinics at the Arizona Music Educators Association Conference, multiple state PAS days of percussion, and the Percussive Arts Society International Convention.²³

Program Notes

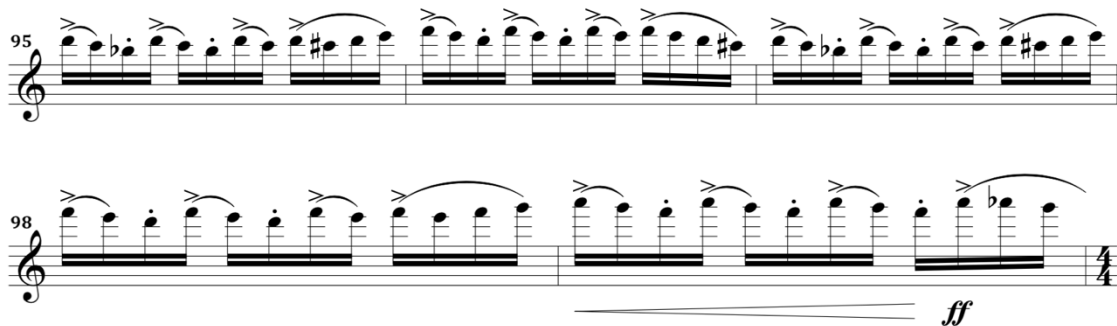
Ropes Course is a solo work for B-flat clarinet composed on commission as an exploration of the altissimo register. It was composed in 2018-2019 for Olivia Meadows as part of a doctoral thesis project to create a program of study in new unaccompanied solos for clarinet that assist students in bridging the gap into advanced works for the instrument. A ropes course is an outdoor recreational obstacle course consisting of ropes or cables strung from trees or utility poles. Supported by climbing harnesses and other safety gear, participants climb, navigate, and even race through a sophisticated web of ropes, logs, tires, and towers. Drawing from this imagery, *Ropes Course* is composed with four distinct sections, each portraying an aspect of this elevated experience. The solo

²³ Josh Gottry, E-mail to author, January 16, 2019.

opens by “climbing, exploring” the course, gradually ascending into the altissimo register by means of the G blues scale. After reaching the top, the player is “dangling, lazily” in this upper register, weaving through the C blues scale in a relaxed and slower compound meter. After climbing again, the soloist is “off to the races” in D minor, navigating rapid sixteenth-note figures, accent patterns, and interspersed chromatic runs. With one misstep, the player is “falling, freely” through whole tone and chromatic scales back to the lower registers, supported safely by the climbing harness. After a little more time “dangling, more lazily,” the solo makes “one last climb” into the altissimo register for a final climax of the adventure.²⁴

Overview and Impact Within Existing Repertoire

In an effort to help students feel comfortable playing in the upper altissimo register, *Ropes Course* begins in the chalumeau register and quickly ascends to F6 and G6. The top of the range is maintained at G6 until the middle of the third page, where a syncopated pattern is established through the written articulation pattern and leads up to an A6. This is aided by a *crescendo* up to *fortissimo*.



Example 5.1: *Ropes Course*, mm. 95-99

These patterns allow students to reach the A6 stepwise from the previous G6, where their voicing should already be high enough to successfully navigate to the A6. If the student’s voicing is too low, the preceding F6 and G6 will sound flat or crack and yield an “undertone” or “grunt.” These terms refer to an often non-descript sound that occurs

²⁴ Ibid.

when the register key is depressed but the voicing is too low for the intended pitch. If the voicing drifts to a lower position specifically for the articulated F6 in m. 99, the subsequent A6 could sound as an E6 since the fingerings for these two notes are the same. If the airflow is strong and the voicing is accurate, these scalar patterns will yield a stronger altissimo register.

The following approaches to A6 are equally scalar, but with the occasional use of rhythmic deceleration and more difficult dynamic changes to vary the student's experience in reaching this part of their range.

Example 5.2: *Ropes Course*, mm. 107-108

Example 5.3: *Ropes Course*, mm. 120-123

Example 5.4: *Ropes Course*, mm. 133-142

I find these compositional techniques to be useful for pedagogical purposes. While extending a student's range through scales alone would be effective, use of solo repertoire engages their creativity and helps create an overall positive experience with extending their altissimo register.

Performance Guide

Prior to beginning work to extend one's range, it may be beneficial to enlist the use of some voicing exercises. One such exercise that may be useful begins on G5; adjusting only one's tongue position, re-articulate the note and simultaneously raise the pitch up to the next partial, then repeat to the partial above that. At least three pitches can be produced with the correct tongue position using that single fingering. Once all harmonics using the G5 fingering can be reached, move up chromatically to G-sharp5, A5, and B-flat5.



Figure 5.1: Voicing exercise

Even if one is not successful in reaching all of the partials on each of these fingerings, the exercise will increase one's awareness of how the tongue can and should move in and out of the altissimo register and reshape the oral cavity to produce certain pitches.

When beginning any new piece of music, in particular one that requires precise voicing such as this, it is imperative to begin practicing at a significantly slower tempo than the one set by the composer. This ensures that the student begins practicing at a

tempo at which they can play all of the written patterns without error, including all correct notes, articulations, dynamics, and accurate voicing of all pitches. To reach the final tempo, increase the tempo over time by two to four metronome clicks, returning to a slower tempo when a mistake is made. In the process of learning *Ropes Course*, I began working at quarter note equals sixty beats per minute and worked up to the marked tempos for each section. The metronome was set to sound the eighth notes only to accommodate the meter changes throughout the piece. As comfort with the technique required for the piece developed, I alternated practicing with and without the metronome to ensure that I would feel comfortable doing the latter in a performance or recording situation.

To guarantee that the correct tongue position is being utilized, use of a tuner is invaluable. Practicing with a tuner could also alert the student to any potential biting and make them aware of how their tongue motion could affect their pitch in the altissimo range. Additionally, and especially in the altissimo range, it is important to know one's own pitch tendencies and be able to adjust accordingly to produce a more in tune note instantaneously.

CHAPTER 6

MICROTONES: *MY OWN THOUGHTS: CAPRICE FOR INTERNAL MUSINGS*

The term “microtone” refers to any interval that is smaller than a semitone; microtones have been utilized in music throughout history and are seen with increasing frequency in clarinet repertoire beginning with the music of William O. Smith and his contemporaries.²⁵ Phillip Rehfeldt’s book *New Directions for Clarinet: Revised Edition* is home to what is perhaps the most comprehensive resource for microtone fingerings. The revised edition includes microtone fingerings created by composer Eric Mandat, who will be discussed later in this document, whereas the initial edition of the book does not. Rehfeldt’s book has not been edited in the years since the revised edition’s publication, and as such there have been discoveries in this field through practice and performance that have not yet been published. Regardless, the revised edition of *New Directions for Clarinet* is the most reliable and popular compendium of microtone fingerings, and it is the resource that Kurt Mehlenbacher predominately used in composing *My Own Thoughts*.

My Own Thoughts: Caprice for Internal Musings was written by Kurt Mehlenbacher in 2018-2019. It is published by the composer and can be found at <<https://www.kurtmehlenbacher.com>>.

Biographical Sketch: Kurt Mehlenbacher

Kurt Mehlenbacher (b. 1985) is an active composer, copyist, and concert producer in the Boulder, CO area. He has studied at the University of Colorado Boulder, Arizona State University, the École Normale de Musique in Paris, and the University of Oregon.

²⁵ Rehfeldt, 15.

His principle teachers include Carter Pann, Daniel Kellogg, Roshanne Etezady, Rodney Rogers, Jody Rockmaker, Michele Merlet, and Robert Kyr. He has also studied bassoon with Steve Vacchi and conducting with Robert Ponto and Gary Hill.²⁶

Program Notes

My Own Thoughts is the product of getting caught up in my own head. Though this is not technically my first venture into microtonality, it is most definitely the first time someone requested their piece be microtonal, which is quite a game changer. When Olivia first approached me with this proposal, I was terrified to say the least. No longer was I really permitted to dink around with microtones, spending hours upon hours reworking their purpose and presentation. No, this time someone was ASKING me for a piece that she was going to PERFORM in PUBLIC while also using to complete her dissertation. This was not the same thing at all. Thus, research ensued, and the mental loops started turning to try and create some sort of sense of my suddenly expanded tonality. How could they be incorporated? And was there a way to do so without the piece coming out as an “exercise” in microtones? As I thought more and more about the project, I found myself starting to sing microtones, and then correct myself verbally when the microtone was “used in the wrong way.” This would happen while walking down the street, in the shower, and—most animatedly—at my writing location of choice. While I do not think I was being too exaggerated, I did actually have someone ask me if I needed help while in a local coffee shop, which I took as a hint that I needed to tone it down a bit....And so, I pulled inside. Shut away from sound and visuals blocked by a computer screen, this piece came to fruition through the internalization of what I hope to be a temporary neuroticism borne from the fleeting grasp of microtonality. And though it may sound like this was torturous, it was actually really fun and freeing! All of the sudden, my technical tricks and musical aesthetic was amplified by literally two thirds more melodic possibilities, allowing for more coloring, greater control of timing, and—being the notation nerd that I am—a reason to actually evaluate and establish my desired way of writing these sounds down. This joy was further compounded by the fact that Olivia is a true collaborator, never afraid to request an adjustment to an unreasonable passage, or flat out telling me when something I wrote was not actually playable by a human. Of significance for me is now knowing that, when I get caught up in my head again, there is always a way out, and that it is probably better on the other side.²⁷

²⁶ Kurt Mehlenbacher, E-mail to author, January 12, 2019.

²⁷ Ibid, February 16, 2019.

Overview and Impact Within Existing Repertoire

The notation that is used in this piece differs slightly from what will be seen later in the final piece of this program of study. Of his notation usage, Mehlenbacher states:

The symbols are derived and refined through a number of places, the easiest being the sharps. The quarter sharp and three-quarter sharp symbols are called “Tartini sharps,” developed in the mid 1700s by Guisepppe Tartini, and seem to me to be the most intuitive approach to microtonal sharps because they have been around for so long AND they are a very clear visual representation of “kinda sharp,” “actually sharp,” and “more sharp than normal.”

The flats are not as old and came about in a more wandering type of fashion: Giacinto Scelsi opted to use a set of flat symbols which actually consisted of a colored in flat for quarter flat, and then a double-flat with one colored in for three-quarter flat. Corigliano took this a bit further and actually reversed the colored in flat to make it appear less like a printer error (I think the phrase is “too incorrect to be wrong”). But then, based on the opinions of Kurt Stone and Elaine Gould (two authors of major notation manuals in use in the western world), I opted to drop the fill of the backwards flats, more or less to remove the chance of it being confused with a note head.²⁸

‡	quarter sharp	♭	quarter flat
#	sharp	b	flat
##	three-quarter sharp	♭	three-quarter flat

Figure 6.1: Microtonal Key

Other microtone notations may be derived from Rehfeldt’s *New Directions for Clarinet*, or the works of composers such as Smith and Mandat.

Much of the existing repertoire that includes microtones also includes other extended techniques and can seem daunting to younger clarinetists. By only having to focus on microtones in *My Own Thoughts*, the pressure of learning difficult techniques is

²⁸ Ibid.

already minimized. The main written tempo, to which the piece returns throughout, is slow enough to ensure that each microtone speaks clearly and that the piece as a whole is not intimidating for a student who has perhaps not yet encountered microtones in their studies. The opening is exploratory; Mehlenbacher establishes a melodic motive that will be expanded upon throughout the piece as more microtones are introduced. The use of microtones is at first minimal, but this increases as the piece progresses. When swaths of microtones are at first encountered, Mehlenbacher uses temporal and dynamic markings such as *ritardandi*, *crescendi*, and/or *decrescendi* to allow the player to perform the microtonal passages with more time and ease. I have seen this in many other pieces, and I often encourages students to “lean in” to these temporal markings to make the piece or technique easier, and to play more musically. As shown in Examples 6.1, 6.2, and 6.3, Mehlenbacher uses this compositional practice often, particularly as an established pattern or motive is changing.

Example 6.1: *My Own Thoughts*, mm. 30-32

Example 6.2: *My Own Thoughts*, mm. 46-49

poco rit. ----- a tempo

90

poco rit. ----- a tempo

92

Example 6.3: *My Own Thoughts*, mm. 90-93

This is an important compositional technique for teaching repertoire, as it pushes students out of their comfort zone with technique, but not all at once.

What I find most effective pedagogically in this composition is Mehlenbacher's use of chromaticism, repetition, and enharmonic notes. Chromatic patterns are often learned early in a student's tutelage, so it seems and feels natural to utilize such familiar patterns to become comfortable with microtonal fingerings.

Triumphantly; a tempo

33

Triumphantly; a tempo

a tempo

Example 6.4: *My Own Thoughts*, m. 33-36

Example 6.5: *My Own Thoughts*, m. 71-73

The written repetitions of some of these patterns, as shown in Examples 6.4 and 6.5, allow not only for increased familiarity with the patterns, notation, and fingerings, but also yields quicker recognition of the microtones. In this context, “recognition” refers to reading a note and knowing which fingering to use with ease—perhaps without having to read and interpret the fingering chart that is included above the note.

Example 6.6: *My Own Thoughts*, mm. 68-73

Flowing forward

Example 6.7: *My Own Thoughts*, mm. 74-79

In Examples 6.6 and 6.7, the chromatic motive in m. 69 returns throughout, between interruptions of standard scalar runs, grace notes (a returning idea from the beginning of the piece—m. 25), and register leaps. This particular pattern can be found through the remainder of the piece, sometimes written in a different octave or key, emphasizing note recognition in the same manner as the use of enharmonic notes.

Indeed, shortly after its introduction as seen in Example 6.6, Mehlenbacher broadens the motive to include enharmonic notes, shown in Example 6.8.

Slightly airy; a little faster (c. $J. = 60$)

Example 6.8: *My Own Thoughts*, mm. 87-89

At this point, the pattern is familiar enough that one is reading the written notes rather than the fingerings, and by including enharmonic notes Mehlenbacher is providing an

opportunity to become familiar with seeing the different notations for producing the same pitch.

This piece provides an opportunity to learn to read microtones with the same familiarity with which we read standard semitones through the use of repetitive chromatic patterns and enharmonic notes. By learning this piece, I can confidently state that it does in fact help with this particular skill.

Performance Guide

Of the music that was commissioned for this project, I found this piece to be the most challenging. Having spent years developing the muscle memory for fundamental patterns such as scales, arpeggios, thirds, and more, it was difficult to adapt to these non-traditional finger patterns. As such, while I believe my pedagogical suggestions to be a good starting point, I acknowledge that everyone learns differently and will have to adapt accordingly.

To learn the patterns as precisely as possible, I began working at least ten clicks under tempo; half tempo in trickier passages. Working on the piece in sections was also found to be helpful—for example, starting with the first two pages together, and then adding one page slowly as practicing advanced. I also practiced backward from the last page to ensure that the end of the piece received the attention and practice that it requires. This is not something that I previously did when learning repertoire, but considering the nature of this piece, this practice technique yielded a more well-prepared result. I found that, at the end of each practice session, returning to the beginning and working through

the sections that were the focus of that day’s work in context was an important and effective way to help establish muscle memory.

Isolating the motives that included the most microtones or the most difficult fingering changes and doing “practice rhythms” was the best way for me to learn those passages as well as possible. These rhythmic variations help reinforce the muscle memory that we seek to strengthen in learning technical patterns.²⁹



Figure 6.2: Practice Techniques

²⁹ Joshua Gardner, “Clarinet Fundamentals: A Workbook for Developing Clarinet Technique,” (self-pub., 2017), 28.

Microtones often do not sound as clearly as semitones, so it is important to consider this when planning, practicing, and performing dynamic changes. I noticed that in order for my dynamic changes to be as pronounced as in passages without microtones, I had to exaggerate the louder dynamics.

Finally, in a piece ripe with somewhat unfamiliar patterns and fingerings, consistency is the best practice technique in one's arsenal. Practicing every day and beginning each time with this piece, when my mind was fresh, helped strengthen my muscle memory and allowed me to read the written notes more easily than each notated microtone fingering.

CHAPTER 7

MULTIPHONICS: *SOLILOQUIZE*

The term “multiphonic” refers to the production of multiple simultaneous pitches. As with microtone fingerings, Rehfeldt’s revised edition of *New Directions for Clarinet*, was, until recently, the most useful resource when researching multiphonics. There are now several online resources including Dr. Gregory’s Oakes and Dr. Heather Roche’s websites. Both websites include a catalog of multiphonics, and Oakes’ is particularly helpful as an easy search engine. Additionally, Dr. Jack Liang’s dissertation from 2018 entitled *Clarinet Multiphonics: A Catalog and Analysis of Their Production Strategies* provides clarinetists with a more in-depth discussion of not only multiphonic fingerings, but also the production of the multiphonics. In this document, Liang created a compendium of all previously organized dyadic multiphonic catalogues and such multiphonic fingerings that can be found in published works; Liang also indicated the level of difficulty of each written multiphonic. This yielded an important resource for composers and for this document. Liang’s research also includes strategies and instructions for multiphonic production and ultrasound tongue images of clarinetists performing multiphonics. For students who are learning this technique and working to better understand voicing, this is an invaluable resource for comprehending sound production in general and specifically of multiphonics.³⁰

Similar to the discussion regarding microtones, much of the existing repertoire that includes multiphonics also includes other difficult extended and/or fundamental

³⁰ Liang.

techniques. By including just this particular technique—the production of multiphonics—in *Soliloquize*, Spender Brand has provided an opportunity for students to encounter multiple sonorities amidst techniques with which they are likely already familiar.

Soliloquize was written by Spencer Brand in 2018-2019.

Biographical Sketch: Spencer Brand

Trumpeter-composer Spencer Brand is a doctoral student at Arizona State University, where he holds a trumpet teaching assistantship. Mr. Brand received his Master of Music in Trumpet Performance and Composition at Arizona State and holds a BMus in Trumpet Performance with a Management Minor from the University of Minnesota. Mr. Brand recently advanced to the final round of the ASU Concert of Soloists Competition, performing the *Concertino per tromba ed Orchestra* by Václav Trojan. In addition to playing in university ensembles, he has performed with the Chandler Symphony Orchestra, Salt River Brass, and the Central Lakes Symphony Orchestra as principal trumpet/cornet. During the summer of 2018, Mr. Brand performed in the Czech Republic as a part of the Prague Summer Nights Festival Orchestra, playing in the Estates Theatre and Rudolfinum. A passionate pedagogue, he teaches in the greater Phoenix area and serves as an Artist-in-Residence at Brophy College Preparatory. Active as a composer, Mr. Brand has been commissioned to write music for various settings, including the University of Minnesota Symphonic Band in celebration of the 125th Anniversary of Bands. His music is often inspired by and explores the nature of Minnesota. Mr. Brand is an active member of the International Trumpet Guild and his teachers include David Hickman, David Baldwin, Robert Dorer, Ladislav Kozderka, and Albert Moore.³¹

Program Notes

To “utter a soliloquy” is to speak one’s thoughts aloud when alone. *Soliloquize* for solo clarinet embraces this idea by creating a conflicting conversation someone might have aloud with them self. Two characters are constantly alternating between each other, and even the *Dolce e Espressivo* section is a juxtaposition with the *Agitato* sections. This inner conversation, often questioning and with moments of reflection, is captured through *subito* dynamics and interjecting multiphonics. This piece was composed as a part of the Olivia Meadow’s Doctoral project, which was to commission introductory level unaccompanied pieces that each featured a different technique. This piece features

³¹ Spencer Brand, Facebook message to author, February 18, 2019.

multiphonics and the opening three multiphonics create the entire harmonic structure and melodic content for the work. The resulting scale (mostly chromatic) has a unique sound quality due its missing three notes that create a M3 between F and A (the missing notes include: D-sharp, F-sharp, G, and G-sharp). The only note that appears outside of this scale is F-sharp, and it appears twice: as the climax of the slow section, and at the end in the last multiphonic. The melody that begins in m. 3 is based on the rising chromatic line created in the opening multiphonics. This set (0, 1, 2) is displaced by octaves and is used in various rhythmic permutations throughout. Perhaps the most obvious of these permutations is the melody of the *Dolce e Espressivo* section. Just as in m. 3, the notes descend chromatically, but now, each note is displaced so that the notes rise by M7 and have drastically longer values. Throughout the piece this set is by no means strict, but it becomes an idea spurred by the initial statement of multiphonics. With these thoughts in mind, I hope you enjoy performing *Soliloquize*.³²

Overview and Impact Within Existing Repertoire

In the aforementioned DMA document published by Liang, a scale is developed by which to rate the level of difficulty to produce each multiphonic that is listed in his catalogue. Liang stated the following when explaining the development of his five-level rating system:

Once the process of compiling the new catalog was complete, each multiphonic was played to investigate a possible production strategy and to assign a difficulty rating from 1 to 5, with 1 being the easiest to produce and 5 being the hardest to produce. The production strategy was determined by a mixture of subjective perception and observation using ultrasound imaging. Initially, the author attempted to play every multiphonic 10 times, noting the perceived *voicing* adjustments necessary to produce them. A difficulty rating was also assigned to each multiphonic based on the number of times the multiphonic was successfully produced out of the 10 attempts. The fingerings that produced multiphonics more easily than the individual pitches were assigned a difficulty level of 1. Multiphonics that could be produced consistently (9 to 10 times out of 10) were assigned a difficulty level of 2. Multiphonics that were relatively easy to produce (6 to 8 times out of 10) were assigned a difficulty level of 3. Multiphonics that were difficult to produce consistently (3 to 5 times out of 10) were assigned a difficulty level of 4. Multiphonics that were very difficult to produce (1-2 out of 10 or requiring more than 10 attempts to successfully produce once) were given a difficulty level of 5. An attempt was considered successful when both pitches were audible for a duration of at least 2 seconds. The difficulties of sustaining both pitches beyond 2 seconds and of producing either of the individual notes using the

³² Spencer Brand, “Soliloquize,” score, 2019.

multiphonic fingering was not considered when determining the difficulty for each multiphonic.³³

Soliloquize opens with three multiphonics that ascend chromatically. Per Liang’s catalogue, these multiphonics are categorized at the easiest levels: 1, 1, and 3, respectively.³⁴

Agitato (♩ = 120)

The image shows a musical score for the beginning of *Soliloquize*. It is in 4/4 time and marked *Agitato* with a tempo of 120 beats per minute. The score consists of three measures, each featuring a multiphonic. The first measure is marked *mf*, the second *f*, and the third *sfz*. Below the staff are three diagrams showing the fingering for each multiphonic on a stringed instrument. Each diagram shows a string with a finger placed on a specific fret, and a bow or plectrum positioned to play the string.

Example 7.1: *Soliloquize*, mm. 1-2

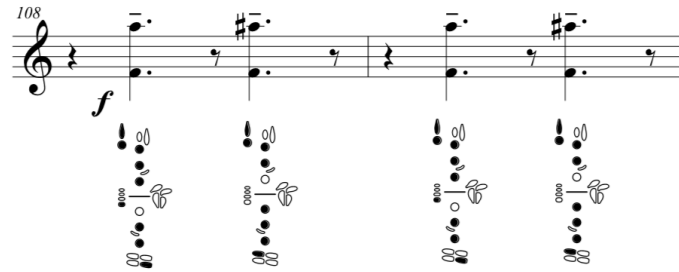
As stated in the program notes for *Soliloquize*, these three opening multiphonics outline the melodic and harmonic framework for the entire piece. This is an effective way to directly illustrate how multiphonics fit into the framework of standard harmonic and melodic structures. These multiphonics return throughout, as part of the “argument” that is depicted in the piece. Only six different multiphonics are introduced during the piece, but none of them are above a difficulty level of three on Liang’s scale.³⁵ By using the same few multiphonics throughout the piece, students can become comfortable performing them accurately from the attack and can focus on the technique necessary for just those pitches. They also gain experience producing multiple sonorities at varying

³³ Liang, 34.

³⁴ Ibid, 72.

³⁵ Ibid.

levels of difficulty without encountering multiphonics that potentially require a more advanced knowledge of voicing.



Example 7.2: *Soliloquize*, mm. 108-109

As seen in Examples 7.1 and 7.2, Brand also uses chromaticism to make the piece more accessible to younger players. As in Mehlenbacher’s work with microtones, this compositional technique embraces most young student’s familiarity with the chromatic scale and applies it to a less familiar technique. Eliminating the need to coordinate many different multiphonic fingerings allows the player to focus on the appropriate voicing. Writing chromatic multiphonics also means that the necessary voicing for each of them will be somewhat similar, teaching students how chromatic fingering relationships relate to similar pitch changes with multiphonics. The use of these fundamental techniques to inform the clarinetist’s performance of multiple sonorities in *Soliloquize* is what makes it useful as a teaching piece for multiphonics.

Performance Guide

While learning this composition, I noticed that the chromatic multiphonics did in fact require fewer voicing adjustments than a non-chromatic pattern of multiphonics. It was also observed that the written dynamic changes were helpful in producing all written

pitches of the multiphonics. Whereas it may feel natural to play softly to produce some multiphonics, Brand's dynamics are written in such a way that, if followed, the multiphonics seem to speak more easily and more clearly.

I found it useful to practice the multiphonics separately at the beginning of each practice session, prior to working on the piece as a whole. It was also productive to isolate the music between the multiphonics and work them up to tempo in the same manner as discussed in previous chapters. I then went back and worked the multiphonics back in to the context of the music.

To work on producing the multiphonics accurately from the attack, extreme patience is necessary. I found success in consistently trying to produce one multiphonic at a time with breaks in between. When the multiphonic spoke clearly right away at least three times in a row, I moved on to the next multiphonic. I had previously utilized this practice technique as a general voicing exercise and found it equally successful when working on multiphonics.

In performance, it is important to note that not everything will go as planned. I recommend that students ensure that they have run through the piece in its entirety many times prior to any potential performance, without stopping, whether or not the multiphonics speak properly.

CHAPTER 8

FINALE: *WINTER FANTASY*

Composer Eric P. Mandat has a vast body of work for solo clarinet, all pieces of which involve extended techniques including, but not limited to, multiphonics and microtones. Below can be found an assessment of a selection of Mandat's works for unaccompanied clarinet, the levels of difficulty for which being determined by the same directives as outlined in chapter two.

Title	Date	Extended Techniques	Level of Difficulty
Tri-Color Capers	1980	Timbral trills, microtones, multiphonics, vibrato, glissando	Intermediate+
Folk Songs	1986	Clariflute, timbral trills, microtones, multiphonics, vibrato, glissando, circular breathing	Advanced+
The Jungle	1989	Timbral trills, microtones, multiphonics, vibrato, circular breathing	Advanced
Etude for Barney	1990	Microtones, multiphonics	Intermediate
Sub(t)rains O' Strata's Fears	1996	Timbral trills, microtones, multiphonics, vibrato, glissando, key clicks, rapid articulation, circular breathing	Advanced+
Rrowzer!	2005	Timbral trills, microtones, multiphonics, vibrato	Advanced
The Moon in My Window	2007	Timbral trills, microtones, multiphonics, glissando	Intermediate

Figure 8.1: Assessment of a Selection of Eric P. Mandat's Works for Solo Clarinet

This table provides a somewhat wider lens through which to view the existing repertoire with extended techniques for unaccompanied clarinet. It may be considered that a larger volume of works would sensibly include repertoire that is of varying levels, and thus increase the amount of repertoire that is considered by this document to be at the intermediate level. This general overview of these works shows that all but one piece includes at least three different extended techniques; of this sub-category, only one piece stands firmly in the intermediate range.

Winter Fantasy was written by Eric P. Mandat in 2018-2019. It is published by the composer and can be purchased at <<https://www.ericmandat.com/store>>.

Biographical Sketch: Eric P. Mandat

Through his performances, compositions, and master classes at more than 100 conservatories and universities around the world, clarinetist and composer Eric Mandat has had a profound influence on the way an entire generation of clarinetists approaches playing their instrument. Eric Mandat tours world-wide as a soloist, presenting lectures and recitals featuring new American clarinet music as well as traditional repertoire. He has premiered and performed his works at international festivals in Chicago, Stockholm, Tokyo, Vancouver, Porto, Los Angeles, and Madrid, and he has appeared as soloist with the Latvian National Chamber Orchestra, the Chicago Chamber Orchestra, and the Cleveland Chamber Symphony. A member of the Chicago Symphony's MusicNOW ensemble since its inception in 1999, Eric has worked with such distinguished composer/conductors as Pierre Boulez and Esa-Pekka Salonen. He is also a member of Tone Road Ramblers, an eclectic sextet specializing in improvisation and experimental music. The Ramblers present residencies and performances at universities and new music festivals nationwide, and have performed at Merkin Hall and Roulette Intermedium in New York. Their CD, *Intersections & Detours*, is described by *Option* magazine as “filled with wit, joy and creative sparkle.” Their latest CD, *Dancing With the Ramblers* features Mandat’s *Dark Energy*, together with extended works by fellow Ramblers Morgan Powell and John Fonville. As a composer, Eric’s work focuses primarily on solo and chamber pieces for clarinet, exploring the inner galaxies of multiphonics, microtones, and subtle timbral transformations. *The Clarinet* finds that his “process at writing and playing is bound to leave any listener in awe... (One) is constantly challenged and

surprised by gorgeous tone color changes, exciting rhythmic action and 21st century clarinetistry,” and “Mandat provides tremendous musical interest with his impressive display of tonal colors, dynamic control...rhythmic variety and groove, and imaginative playing.” Mandat is a recipient of multiple Illinois Arts Council Artist Fellowship Awards for composition, and his music is featured in concerts and recordings by clarinetists throughout the world. Mandat received his education at the University of North Texas (B.M.), the Yale School of Music (M.M.), and the Eastman School of Music (D.M.A.). His principal teachers included Richard Joiner, Lee Gibson, Keith Wilson, Stanley Hasty, and Charles Neidich. He is Professor of Music and Distinguished Scholar at Southern Illinois University at Carbondale, where in 1999 he was the recipient of the university’s highest honor for scholarly and creative work, the Outstanding Scholar Award. At SIUC, Mandat teaches clarinet and graduate courses in musical analysis. Eric Mandat is a Buffet Group USA performing artist and clinician.³⁶

Program Notes

Winter Fantasy was commissioned by Olivia Meadows, and was conceived as an introduction to extended techniques for advancing players, along the lines of the popular *Rhapsody* by Willson Osborne. As with the *Rhapsody*, there are various character markings throughout (calmly, warmly, lilting, affrettando, etc.), which are important indicators of the mood at those points in the music.

Overview and Impact Within Existing Repertoire

Winter Fantasy is meant to be the culminating work of this project, incorporating all techniques which have been discussed individually in the preceding works. As such, the only extended techniques that Mandat includes in this work are multiphonics and microtones. By eliminating some other difficult techniques that are featured in many of his earlier works, Mandat has created a piece that is accessible to students who are still figuring out how to appropriately perform those techniques.

The opening melodic motive is actually similar to that of Bush’s *Of Moons and Meadows*, though unintentionally so. Without realizing it, Mandat has drawn these pieces

³⁶ “More Info,” Eric P. Mandat: Clarinetist/Composer (website), accessed February 5, 2019, <https://www.ericmandat.com/more-info>.

together. Similarly, *Winter Fantasy* includes detailed temporal instructions to achieve notated *rubato*. Mandat has included specific numerical tempo markings with each change thereof in addition to both traditional and non-traditional verbiage to provoke a new “mood,” as seen in Example 8.1.

Example 8.1: *Winter Fantasy*, mm. 68-74

This provides continuity for students who may be working through this collection of pieces, or program of study, as it is presented here.

Though the format of Mandat’s microtones and multiphonics are slightly different from those of Mehlenbacher and Brand, students will notice that many of the same pitches can be found in *Winter Fantasy* as in *My Own Thoughts* and *Soliloquize*. Mandat includes a glossary of symbols for performers to reference when learning his repertoire.

Glossary of Symbols

NB = no breath

$\flat_{1/8}$ = 1/8 step flat

$\flat_{1/4}$ = 1/4 step flat

\flat_{sl} = slightly lower than 1/2 step flat

$\sharp_{1/4}$ = 1/4 step sharp

(\circ) = Optional breath

Multiphonic and microtonal fingerings are given, with keys to be depressed expressed either graphically, or by letter name, corresponding to the normal pitch of that key in the fundamental register, and placed graphically proximal to the location of that key:

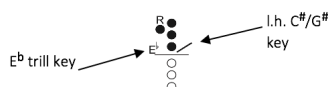


Figure 8.2: Glossary of Symbols

As with the composers of those pieces, Mandat wrote pitches that are easily accessible to the target audience of this program of study—intermediate and advanced levels of clarinet students. Most figures that include microtones, of which there are significantly fewer than in Mandat’s earlier works, are chromatic or use other easily accessible fingerings.

The image shows a musical score for a clarinet piece, 'Winter Fantasy', measures 6-14. The score is written in treble clef with a 3/4 time signature. It includes various dynamics such as *pp*, *p*, *mf*, and *f*, and performance instructions like *meno mosso*, *piu mosso*, *cresc.*, and *cord.*. Fingerings are indicated by circles above the notes, with some filled (required) and some empty (optional). Microtonal fingerings are shown with symbols like $\flat_{1/8}$ and $\flat_{1/4}$. The score also includes a trill in measure 11 and a *tr* (trill) marking in measure 14.

Example 8.2: *Winter Fantasy*, mm. 6-14

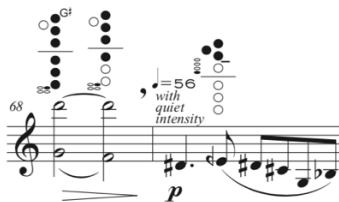
In fact, the excerpt above is the only section of music that is heavily microtonal. Following this, only twelve measures in the remainder of the piece include microtones, and none as dense as shown in Example 8.2. This passage is both chromatic and repetitive, emphasizing the microtones in a similar manner to repetitive practice.

When multiphonics are introduced, Mandat chooses to build them from the fingerings of the previous notes; this allows the player to focus more on producing the pitches than having to move their fingers. The multiphonics written in the beginning of the piece are of medium difficulty, both rated at level 3 in Liang’s multiphonic catalog.³⁷



Example 8.3: *Winter Fantasy*, mm. 19-23

In fact, none of the multiphonics in the piece are above a difficulty rating of three. As the piece progresses, shown here in Examples 8.4 and 8.5, multiphonics of levels 1 and 2 are written.



Example 8.4: *Winter Fantasy*, mm. 68-69

³⁷ Liang, 83 and 87.



Example 8.5: *Winter Fantasy*, mm. 86-90

As a whole, this piece is far less dense with extended techniques than Mandat’s other works. Not only is the focus only on microtones and multiphonics, with the occasional timbral trill, but the patterns and pitches that Mandat writes are far easier than in his other pieces. This work is a fitting culmination of this paper’s research, including all aspects of each of the other individual works featured in this document.

Performance Guide

After working through the first four pieces in this program of study, *Winter Fantasy* came more easily to me than prior experience working on Mandat’s repertoire would have led me to expect. Though this piece by nature requires less demanding technique than Mandat’s other pieces, the preparation of the other solos in this set of works yielded a much faster learning process.

It is imperative that the students apply all practice and/or performance techniques of the previous pieces to this finale. Slow practice and exaggeration of all temporal markings would yield an effective performance, similarly to *Of Moons and Meadows*, with the technical practice exerted in *My Own Thoughts* and *Soliloquize*. Though the altissimo register is not directly explored in *Winter Fantasy*, many of the top pitches in the written multiphonics require altissimo voicing. The voicing exercises described in

chapter five in combination with the practice methods outlined in chapter seven would be useful in working to accurately produce Mandat's written multiphonics easily in performance.

Surprisingly, the most difficult passages do not include extended techniques but rather metric modulation and fast tempi.



Example 8.6: *Winter Fantasy*, mm. 32-37

Slow practice and temporal planning yielded the best results when practicing the section shown in Example 8.6. Utilizing the numerical values of each temporal change will yield smooth and calculated musical changes; I found that this planning minimized nerves in performance and allowed for smoother rehearsals of the entire piece.

CHAPTER 9

CONCLUSION

The commissioning of these five unaccompanied works for clarinet hopefully provides students with an unintimidating program of study through which to learn and become comfortable with many important aspects of music and the clarinet: musicality, the altissimo register, microtones, and multiphonics. If studied in succession, this program of study will help students accurately learn the aforementioned techniques and subsequently delve further and more easily into the existing clarinet repertoire. I believe these pieces to be effective sources for learning these techniques, as I found them to be helpful in my own studies and feel that I can more confidently approach other repertoire with extended techniques as a result of having learned (and recorded) these new works for solo clarinet. As such, I am confident that these pieces will successfully help minimize the gap in the existing clarinet repertoire and be an aid to all clarinet pedagogues and students.

REFERENCES

- “About.” Zachary Warren Music. Accessed January 14, 2019.
<http://www.zacharywarrenmusic.com/about.html>.
- “More Info.” Eric P. Mandat: Clarinetist/Composer. Accessed February 5, 2019.
<https://www.ericmandat.com/more-info>.
- “Spencer Brand.” Leading Tones Music. Accessed February 11, 2019.
<https://www.leadingtonesmusic.com/spencer-brand.html>.
- Austermann, Kelly. “A Supplemental Repertoire List for the Development of Fundamental Skills in Pre-Collegiate Clarinetists.” DMA diss., Arizona State University, 2014. ProQuest (AAT 3666885).
- Baermann, Carl. *Complete Method for Clarinet*. Edited by Gustave Langenus. New York: Carl Fischer, 1917.
- Blanchard, Bonnie and Cynthia Blanchard. *Making Music and Enriching Lives*. Bloomington: Indiana University Press, 2007. Accessed March 23, 2017. ProQuest Ebook Central.
- Cross, Mary Harrington. “Learning Expectation and its Effects on Learning Outcomes in Experiential Learning: A Case Study of a Group Relations Conference.” PhD diss., The Wright Institute, 1986. ProQuest (AAT 303446748).
- Gardner, Joshua. “Clarinet Fundamentals: A Workbook for Developing Clarinet Technique.” Self-published, 2017.
- Gillespie, James. *Solos for Unaccompanied Clarinet: An Annotated Bibliography of Published Works*. Detroit: Detroit Studies in Music Bibliography, 28 (1973).
- Hudson, Richard. *Stolen Time: The History of Tempo Rubato*. Oxford: Clarendon Press, 1994.
- Lawson, Colin, ed. *The Cambridge Companion to the Clarinet*. Cambridge: Cambridge University Press, 1995.
- Liang, Jack Yi Jing. “Clarinet Multiphonics: A Catalog and Analysis of Their Production Strategies.” DMA diss., Arizona State University, 2018. ProQuest (AAT 2040068240).
- Rehfeldt, Phillip. *New Directions for Clarinet: Revised Edition*. Maryland: Scarecrow Press, 2003.

Rose, Cyrille. *The New Rose Studies for Clarinet*. Edited by Melvin Warner. New York: Carl Fischer, 2002.

Uhl, Alfred. *48 Etüden*. Mainz: Schott Music, 1940.

Woolery, Danielle Nicole. "Correcting Technical Deficiencies in High School Clarinet Sections: A Resource for Band Directors." DMA diss., University of Miami, 2011. ProQuest (AAT 887901381).

APPENDIX A
PURCHASING INFORMATION

Of Moons and Meadows, 2018, by Zachary Bush. It is published by the composer and available for downloadable purchase at <zacharywarrenmusic.com>.

Ropes Course, 2019, by Josh Gottry. It is published by the composer and available for purchase or digital download at <<http://gottrypercussion.com/composer/>>.

My Own Thoughts: Caprice for Internal Musings, 2018, by Kurt Mehlenbacher. It is published by the composer and can be purchased at <<https://www.kurtmmehlenbacher.com>>.

Soliloquize, 2019, by Spencer Brand. It is published by the composer, who can be contacted at <spencer.brand@hotmail.com>.

Winter Fantasy, 2019 by Eric P. Mandat. It is published by the composer and can be purchased at <<https://www.ericmandat.com/store>>.

APPENDIX B

TRACK LIST

Track Number	Title	Composer
1	<i>Of Moons and Meadows</i>	Zachary Bush
2	<i>Ropes Course</i>	Josh Gottry
3	<i>My Own Thoughts: Caprice for Internal Musings</i>	Kurt Mehlenbacher
4	<i>Soliloquize</i>	Spencer Brand
5	<i>Winter Fantasy</i>	Eric P. Mandat

This recording was made on April 1 and 2 of 2019 at Tempest Recording in Tempe, AZ. The recording engineer was Clarke Rigsby and the producer was Robert Spring.