Études in Performing Extended Techniques:

Twelve Newly-Commissioned Canadian Works for Solo Clarinet

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Abstract

This document discusses the pedagogical pieces using extended techniques for the clarinet that I have commissioned from Canadian composers. My intention was to develop a resource to introduce the undergraduate clarinetist to extended techniques through works intended for performance. While they focus on one technique per piece and minimize the technical challenges, these pieces nevertheless explore diverse techniques and are musically interesting for performers and audiences. The techniques, pieces and composers included in this collection are: timbre trills in “Teco-Teco” by Sylvia Rickard; microtones and vibrato in “A Micro Tale” by Richard Désilets; glissando in “Sometimes Doing Nothing Leads to Something” by Shane Krepakevich; multiphonics in “Speak Out” by Chan Ka Nin; vocalization while playing in “All Good Children” by Lori Freedman; key sounds in “Clap” by Robert Lemay; air sounds in “Almost There” by Don Ross; flutter tonguing in “flutterby” by Joel Hoffman; double tonguing in “VAV” by Jérôme Blais; playing pieces of the clarinet in “Duo for one, (hand)” by Elma Miller; buzzing into the clarinet in “Leaving” by Evan Ware; and moving while playing in “Nimbly” by Melissa Hui. Because it consists of études intended for performance by a diverse group of artists, this collection provides a new approach for students and teachers to study extended techniques.

This document provides commentary and context for these new works that will give teachers and students guidelines about how best to use this new resource. In each chapter, the first section considers the composer’s other pieces for clarinet, uses of extended techniques, and pedagogical works as well as the composer’s compositional process. The second section explains the extended technique, including its sound, execution, potential, notation, history, and pedagogy. The third section is a practical guide to learning and teaching the piece in the collection. It also discusses how learning these techniques and playing these pieces may benefit other aspects of technical and musical development. This contextual information will be useful both to students and teachers in not only learning the pieces in this collection, but also investigating other contemporary works and techniques.
Acknowledgements

I would like to thank everyone who has made this project possible. First the composers who wrote the pieces for me: Jérôme Blais, Chan Ka Nin, Richard Désilets, Lori Freedman, Joel Hoffman, Melissa Hui, Shane Krepakevich, Robert Lemay, Elma Miller, Sylvia Rickard, Don Ross and Evan Ware. Without their contributions this endeavour would not have been possible. Second the members of my committee: Joel Hoffman, who guided me through the logistics of commissioning; Ron Aufmann, who helped me to perfect many of these pieces and techniques; and Mary Sue Morrow who brought a broad scholarly perspective to this document. Thanks are also due to Carolyn and Michael Eagen for letting me stay in their beautiful home during the final stages of writing, and to David Schneider for his help with editing and using Finale. Thanks to my family and friends for their unwavering support throughout my educational journey. Finally thank-you to my students – past, present and future – for inspiring me to initiate and persevere with this project.
# Table of Contents

Abstract....................................................................................................................................................ii

Acknowledgements................................................................................................................................... iv

Note about registers.................................................................................................................................. vii

Chapter 1: Introduction...............................................................................................................................1

Chapter 2: Timbre Trills, Sylvia Rickard’s “Teco-Teco”............................................................ 9
   Sylvia Rickard: the Composer and the Compositional Process........................................................... 9
   Timbre Trills: the Technique..................................................................................................................12
   Learning and Teaching “Teco-Teco”...................................................................................................17

Chapter 3: Microtones and Vibrato, Richard Désilets’s “A Micro Tale” ...........................................21
   Richard Désilets: the Composer and Compositional Process............................................................ 21
   Vibrato: the Technique....................................................................................................................27
   Microtones: the Technique..............................................................................................................29
   Learning and Teaching “A Micro Tale”............................................................................................32

Chapter 4: Glissando, Shane Krepakevich’s “Sometimes Doing Nothing Leads to Something” ....38
   Shane Krepakevich: the Composer and Compositional Process...................................................... 38
   Glissando: the Technique..............................................................................................................43
   Learning and Teaching “Sometimes Doing Nothing Leads to Something”.......................................44

Chapter 5: Multiphonics, Chan Ka Nin’s “Speak Out” .................................................................47
   Chan Ka Nin: the Composer and Compositional Process................................................................. 47
   Multiphonics: the Technique............................................................................................................55
   Learning and Teaching “Speak Out”.................................................................................................57

Chapter 6: Vocalization while Playing, Lori Freedman’s “All Good Children” .......................64
   Lori Freedman: the Composer and the Compositional Process...................................................... 64
   Vocalizing while Playing: the Technique .........................................................................................69
   Learning and Teaching “All Good Children” ..................................................................................73

Chapter 7: Key Sounds, Robert Lemay’s “Clap” ............................................................................77
   Robert Lemay: the Composer and Compositional Process.............................................................. 77
   Key Sounds: the Technique.............................................................................................................83
   Learning and Teaching “Clap”.........................................................................................................87

Chapter 8: Air Sounds, Don Ross’s “Almost There” ......................................................................92
   Don Ross: the Composer and Compositional Process.................................................................... 92
   Air Sounds: the Technique.............................................................................................................96
   Learning and Teaching “Almost There”.........................................................................................99
Chapter 9: Flutter Tonguing, Joel Hoffman’s “flutterby” ................................................................. 104  
Joel Hoffman: the Composer and Compositional Process ................................................................. 104  
Flutter Tonguing: the Technique ..................................................................................................... 107  
Learning and Teaching “flutterby” .................................................................................................. 112  

Chapter 10: Double Tonguing, Jérôme Blais’s “V A V” .................................................................. 115  
Jérôme Blais: the Composer and Compositional Process ................................................................. 115  
Double Tonguing: the Technique .................................................................................................... 121  
Learning and Teaching “V A V” ...................................................................................................... 123  

Chapter 11: Playing Pieces of the Clarinet, Elma Miller’s “Duo for one (hand)” ......................... 128  
Elma Miller – the Composer and Compositional Process ............................................................... 128  
Playing Pieces of the Clarinet: the Technique ................................................................................ 130  
Learning and Teaching “Duo for one (hand)” ............................................................................... 136  

Chapter 12: Buzzing into the Clarinet, Evan Ware’s “Leaving” ....................................................... 141  
Evan Ware: the Composer and Compositional Process ................................................................. 141  
Buzzing into the Clarinet: the Technique ........................................................................................ 151  
Learning and Teaching “Leaving” .................................................................................................. 154  

Chapter 13: Moving while Playing, Melissa Hui’s “Nimbly” ............................................................ 160  
Melissa Hui: the Composer and Compositional Process ............................................................... 160  
Moving while Playing: the Technique ............................................................................................. 165  
Learning and Teaching “Nimbly” .................................................................................................... 169  

Chapter 14: Conclusion .................................................................................................................. 176  

Bibliography ................................................................................................................................... 187  

Appendix A: Scores .......................................................................................................................... 194  
Richard Désilets – “A Micro Tale” .................................................................................................... 196  
Shane Krepakevich – “Sometimes Doing Nothing Leads to Something” ...................................... 200  
Chan Ka Nin – “Speak Out” ............................................................................................................ 213  
Lori Freedman – “All Good Children” ............................................................................................ 220  
Robert Lemay – “Clap” ................................................................................................................... 221  
Don Ross – “Almost There” ............................................................................................................. 223  
Joel Hoffman – “flutterby” ............................................................................................................... 226  
Jérôme Blais – “V A V” ...................................................................................................................... 229  
Elma Miller – “Duo for one (hand)” ................................................................................................. 235  
Evan Ware – “Leaving” .................................................................................................................... 238  
Melissa Hui – “Nimbly” .................................................................................................................... 248
Note about registers

In this document numbers are used to indicate the register of pitches, as shown below.

Unless otherwise indicated pitches refer to the written pitches for the clarinet, not the sounding pitches.

e.g. B4 sounds as A440.
Chapter 1: Introduction

This document will study the pedagogical pieces using extended techniques for the clarinet which I have commissioned from twelve Canadian composers. Table 1.1 shows the composers involved in this project, their pieces and the extended techniques they are using.

Table 1.1: Composers, techniques and titles of my commissions

<table>
<thead>
<tr>
<th>COMPOSER</th>
<th>TITLE</th>
<th>TECHNIQUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jérôme Blais</td>
<td>VAV(^1)</td>
<td>Double tonguing</td>
</tr>
<tr>
<td>Chan Ka Nin</td>
<td>Speak Out(^2)</td>
<td>Multiphonics</td>
</tr>
<tr>
<td>Richard Désilets</td>
<td>A Micro Tale(^3)</td>
<td>Quarter tones and vibrato</td>
</tr>
<tr>
<td>Lori Freedman</td>
<td>All Good Children(^4)</td>
<td>Vocalising while playing</td>
</tr>
<tr>
<td>Joel Hoffman</td>
<td>flutterby(^5)</td>
<td>Flutter tonguing</td>
</tr>
<tr>
<td>Melissa Hui</td>
<td>Nimbly(^6)</td>
<td>Movement</td>
</tr>
<tr>
<td>Shane Krepakevich</td>
<td>Sometimes Doing Nothing Leads to Something(^7)</td>
<td>Glissando</td>
</tr>
<tr>
<td>Robert Lemay</td>
<td>Clap(^8)</td>
<td>Key clicks</td>
</tr>
<tr>
<td>Elma Miller</td>
<td>Duo for one [hand](^9)</td>
<td>Top joint only</td>
</tr>
<tr>
<td>Sylvia Rickard</td>
<td>Teco-teco(^10)</td>
<td>Timbre trills</td>
</tr>
<tr>
<td>Don Ross</td>
<td>Almost There(^11)</td>
<td>Air sounds</td>
</tr>
<tr>
<td>Evan Ware</td>
<td>Leaving(^12)</td>
<td>Buzzing into the clarinet</td>
</tr>
</tbody>
</table>

\(^1\)Jérôme Blais, “VAV,” score, 2008, Rebecca Danard personal collection, Ottawa.


\(^5\)Joel Hoffman, flutterby (Cincinnati: Onibatan Music, 2009).


\(^7\)Shane Krepakevich, “Sometimes Doing Nothing Leads to Something,” score, 2008, Rebecca Danard personal collection, Ottawa.


\(^9\)Elma Miller, “Duo for one (hand),” score, 2008, Rebecca Danard personal collection, Ottawa.


\(^12\)Evan Ware, “Leaving,” score, 2011, Rebecca Danard personal collection, Ottawa.
In commissioning these pieces, my intention was to develop a resource to introduce the average undergraduate clarinetist to extended techniques through works intended for performance. While minimizing the technical challenges, these pieces maximize the musical interest for the performer and for the audience. Each composer was given the same guidelines, but arrived at very different solutions for the commission. Because this collection consists of études intended for performance by a diverse group of artists, these pieces provide a new approach for students and teachers to study extended techniques.

The commissioning of these works was motivated by two gaps in the clarinet literature: first the absence of musically interesting studies which effectively teach a wide variety of extended techniques; second, the lack of repertoire, using extended techniques, suitable for the average undergraduate. Although existing studies, such as those by Ronald Caravan\(^{13}\) or W. O. Smith\(^{14}\), may be useful in learning a technique they are often not musically inspiring and are limited to relatively few techniques. All of the pieces in existing collections are by the same composer which creates a uniformity of style and approach that does not reflect the diversity of contemporary repertoire.

Much of the repertoire, on the other hand, has either a too high or a too low density of extended techniques to be pedagogically useful. For example, to play Berio’s *Sequenza IX*,\(^{15}\) the clarinetist must master timbre trills, multiphonics, glissando, and flutter tonguing as well as some technically challenging “normal” clarinet playing. On the other hand, perfecting the glissando at the end of Copland’s *Clarinet Concerto*\(^{16}\) does not provide the student a complete understanding of the technique.


\(^{16}\)Aaron Copland, *Concerto for Clarinet and String Orchestra (with Harp and Piano)* (London: Boosey & Hawkes,
and its potential. Because my commissions focus on one technique per piece, the student can learn each technique thoroughly and independently. Furthermore, much of the repertoire using extended techniques is too long and/or too difficult for most students or requires the collaboration of other musicians. My commissions are short (approximately five minutes), not technically challenging and for clarinet alone. By specifying these parameters I hoped to achieve a collection that not only maximizes accessibility to the student, but also supplements the existing resources.

My commissioned pieces were designed to bridge the divide between studies and repertoire. While they are intended to teach a particular technique they are nevertheless musically interesting and suitable for performance. Practicing any technique never results in the same degree of mastery as performing it. In the practice room, it is all too easy to allow oneself to accept poor tone quality, inconsistencies and unmusical playing, particularly when learning a new technique. In a performance, however, there is increased motivation for not allowing these flaws to persist. Because this collection consists of études intended for performance, these pieces provide a new approach for students and teachers to study extended techniques. The collection is unique because it focuses on one technique per piece, uses a wide variety of techniques and contains the work of twelve different composers.

Examining composers, books, studies and repertoire that use extended techniques allowed me to successfully accomplish this commissioning project. The first step was to find composers who would be interested in participating and that I thought would produce the kind of piece I was looking for. I limited my field of search to Canadian composers, for funding purposes and because of my personal interest in promoting Canadian music. In order to select the composers, I examined the clarinet literature at the Canadian Music Centre in Toronto. I looked for composers who wrote for the clarinet, used extended techniques, and who wrote pedagogical works. Having thus arrived at a short list, I searched websites for additional scores, recordings and biographical information. Based on this

1950) 27.
research and a desire for a diverse demographic and geographic representation, I sent requests to fifteen composers in October 2007. Of these twelve agreed to participate, although one subsequently dropped out and was replaced by my advisor Joel Hoffman, who is, incidentally, also Canadian.

The composers who have remained dedicated to the project are Jérôme Blais, Chan Ka Nin, Richard Désilets, Lori Freedman, Joel Hoffman, Melissa Hui, Shane Krepakevich Robert Lemay, Elma Miller, Sylvia Rickard, Don Ross and Evan Ware. These composers are based in cities across Canada, from Halifax to Victoria and are at different stages of their careers. Some are graduate students, some are composers working inside or outside of academic institutions, others are in or approaching retirement. Only one of these composers was personally known to me before this project began, but they have all become friends and colleagues without whom none of this would have been possible. These pieces are a testament to their dedication to promoting new Canadian music to the next generation of clarinetists.

To select which extended techniques to use I examined a variety of books, articles, studies and repertoires including: *New Sounds for Woodwinds* by Bruno Bartolozzi,\textsuperscript{17} *New Techniques for the Bass Clarinet* by Henri Bok,\textsuperscript{18} *The Clarinet of the Twenty-First Century* by E. Michael Richards,\textsuperscript{19} *Multiphonics and Other Contemporary Clarinet Techniques* by Gerald Farmer,\textsuperscript{20} *Clarinet Secrets* by Michèle Gingras,\textsuperscript{21} *The Versatile Clarinet* by Roger Heaton,\textsuperscript{22} *Contemporary Instrumental Techniques*


\textsuperscript{21}Michèle Gingras, *Clarinet Secrets* (Lanham, MD: The Scarecrow Press, 2004).

\textsuperscript{22}Roger Heaton, ed., *The Versatile Clarinet* (New York: Routledge Taylor & Francis Group, 2006).
by Gardner Read,\textsuperscript{23} and \textit{New Directions for Clarinet} by Phillip Rehfeldt.\textsuperscript{24} From this research I compiled a list of standard as well as some of the more unusual extended techniques from these sources. From this list, I selected techniques which I believed could make a viable basis for a piece. I wanted techniques that were specific to the clarinet, affected the sound produced and did not require any special equipment. Techniques such as reading graphic notation, circular breathing or electronically processed sound were therefore not eligible for this project. Each composer then chose one technique from this list. The techniques they chose, as shown in Table 1, were glissando, multiphonics, vocalizing while playing, key clicks, air sounds, quarter tones, timbre trills, flutter tonguing, double tonguing, movement, buzzing into the clarinet, and playing pieces of the clarinet. Although many techniques are covered, the collection does not attempt to be comprehensive. Indeed, it is my hope that these pieces will inspire clarinetists and composers to use the clarinet in yet more new ways.

Perhaps most importantly, I needed to determine the specifications for the piece to give to the composers. I examined other studies which used extended techniques including: \textit{Polychromatic Diversions for Clarinet: 10 Graded Compositions Using Non-Traditional Techniques}\textsuperscript{25} and \textit{Preliminary Exercises & Etudes in Contemporary Techniques for Clarinet: Introductory Material for the Study of Multiphonics, Quarter Tones & Timber Variation} by Ronald Caravan,\textsuperscript{26} \textit{Weird Etudes for Saxophone, Clarinet, Violin, Flute, Oboe: Futuristic and Atonal Studies for Technique, Reading and Intonation} by


\textsuperscript{24}Philip Rehfeldt, \textit{New Directions for Clarinet}, 2d ed. (Berkeley: University of California Press, 1994).

\textsuperscript{25}Ronald L. Caravan, \textit{Polychromatic Diversions for Clarinet}.

\textsuperscript{26}Ronald L. Caravan, \textit{Preliminary Exercises & Etudes in Contemporary Techniques}.
David Gornston,27 “Vade-Mecum” du Clarinettiste by Paul Jeanjean,28 Methods for New Music for Clarinet by Keith McCarty,29 The Twentieth Century Clarinetist: Advanced Studies in Contemporary Music for the Clarinet by Allen Sigel,30 and Fancies for Clarinet Alone: Multiple-sound Studies31 and Nine Studies by William O Smith.32 These studies are different from my pieces in several respects. They use several techniques per study, but overall, they cover fewer techniques. All of the pieces in each collection are by the same composer which creates a uniformity of style. Perhaps most importantly, they are for the most part not musically interesting and therefore less suitable for performance. I also examined standard solo and orchestral clarinet repertoire using extended techniques. Since none of these works were designed as pedagogical pieces, they generally do not provide enough examples or variety for a student to truly master a particular technique. Many also contained technical challenges which are unrelated to the extended techniques but nevertheless make them inaccessible to the average undergraduate.

This examination of studies and repertoire not only allowed me to determine what was already available, but also confirmed my belief that this collection was unique. I gave the composers four guidelines in writing the piece; it was to be for solo clarinet, have a maximum duration of 5 minutes, be playable by the average college freshman or an advanced high school student and to explore the potential of one extended technique. I emphasized that my goal was to have these pieces be as

31William O. Smith, Fancies for Clarinet Alone.
32William O. Smith, Nine Studies.
technically accessible as possible; the student should not need any special equipment, a collaborative pianist or knowledge of numerous techniques to play the piece. I was concerned with the following criteria: an interesting, viable use of the technique, a reasonable technical level for the piece and a musically interesting finished product. Balancing all three of these factors has been a challenge for me and for the composers. Although they were written for pedagogical purposes, these pieces are primarily musical creations. In working with the composers, I did not want to limit their musical intentions even if sometimes the results were outside the parameters initially specified. As a result some of pieces are longer, more technically challenging and/or use more than one technique. On the other hand the collection as a whole addresses many of the issues in playing new music beyond the scope of the specific techniques, such as stage presence, acting, improvisation, and non-specific notation.

The purpose of this document is to provide commentary and context for these new works. The pieces in this collection can stand alone as works of art; they do not require explanation to be artistically and pedagogically effective. Nevertheless, there is a synergy between these works which makes the collection greater than the sum of the individual pieces. For this to become apparent each composer, technique and piece must be examined within a frame of reference. The first section of each chapter puts this commission in the context of the composer’s other works. This includes considering the composer’s other pieces for clarinet, uses of extended techniques, and pedagogical works as well as the process through which their piece developed for this collection. Since almost all of the works underwent significant revisions, I will discuss the compositional method and transformations which led to the final pieces. Where relevant, an exploration of the composer’s compositional philosophy and aesthetics will also be included. In the second section, I explain the extended technique, including its sound, execution, potential, notation, history, and pedagogy. Since there is such a wide variety of techniques in this collection, I focus on aspects of the particular technique that are the most relevant for the clarinetist. Where appropriate I will discuss how learning this technique can improve other aspects
of clarinet playing. The concluding section of each chapter is a practical enchiridion to learning and teaching the piece. It will include a critical guide to the work that will identify its technical and musical challenges and provide solutions and methods for overcoming them. Much of this section is devoted to exploring how the extended technique is used in the piece, but also contains information about other aspects of the work. Playing these pieces can be a stepping stone to other more challenging repertoire. It is far beyond the scope of this paper to catalogue all of the uses of these techniques by other composers. Particularly with the more obscure techniques, however, it is interesting to examine how they are used in canonic repertoire and/or by renowned composers.

The information contained in my document will provide the student and the teacher everything they need to master the pieces and these techniques. Depending on the piece and the technique, this may include all or some of the following: fingering charts, practicing tips, exercises, particular challenges of the piece, particular challenges of the technique, and suggestions for other relevant repertoire, method books and studies. Furthermore, the document will provide resources which will allow the clarinetist to take the next step in a variety of directions such as discovering more works by these composers, finding additional pieces which use these techniques and pursuing tangential contemporary performance issues such as acting or improvisation. This contextual information will be useful both to students and teachers in not only learning the pieces in this collection, but also investigating other contemporary works and techniques. My document will illuminate the pedagogical and musical characteristics of each piece and will provide teachers and students guidelines about how best to use this new resource.
Chapter 2: Timbre Trills, Sylvia Rickard’s “Teco-Teco”

_Sylvia Rickard: the Composer and the Compositional Process_

Sylvia Rickard lives in Victoria BC, where she is an active member of the musical community. In addition to composing, she has adjudicated composition for the Greater Victoria Performing Arts Festival, the BC Registered Music Teachers Association, the Okanagan Composers Festival and the Canada Council for the Arts. Her music has been broadcast on CBC and performed across Canada, the US, Hungary, Germany, Sweden, Italy, England and Japan. In 1999 Sylvia Rickard was the first resident composer of the “Oberlin in Casalmaggiore International Chamber Music Festival” in Italy.¹

Two pieces of Rickard’s attracted me to her music and led me to seek her participation in this project: “Songs of the Loon” (1995) for clarinet and cello² and “With Every Breath You Take” (1993) for solo clarinet.³ Both pieces use several extended techniques musically and idiomatically. In nature, sounds are not restricted to discrete pitches or any particular tuning system. As shown in Example 2.1 Rickard frequently uses glissando and microtonal alteration of notes to imitate the “Songs of the Loon.”

This example also shows the natural rhythmic freedom of the piece. There is no time signature and the players must rely on one another’s cues rather than counting to stay together. In a climactic moment Rickard uses a very colourful effect combining a “same note” (i.e. microtonal) trill with flutter tongue.

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⁴Sylvia Rickard, Songs of the Loon, 2.
Example 2.2: “Songs of the Loon – Hoot and Mew” mm. 18–9.\(^5\)

Ad libitum

For more subtle effects she uses key tapping,\(^6\) a quiet multiphonic,\(^7\) and air sounds.\(^8\) The only difficulty with “Song of the Loon” is that Rickard provides relatively few performance notes. To an experienced performer, her notation is intuitively clear, but the novice might need more specific directions. For example, she only provides fingerings on two occasions: for the multiphonic and for one microtonally altered note. Other altered notes and microtonal trills are left to the performer to figure out. Fortunately there is a recording\(^9\) of this work featuring the performers for whom the piece was written: Patricia Kostek (clarinet) and Paula Kiffner (cello). This gives the performer an excellent reference for interpreting the extended techniques in the work.

“With Every Breath You Take” is a real *tour de force* of extended techniques including breath sounds, key clicks, microtonal trills, flutter tonguing, quarter tones, glissando, multiphonics, and playing the mouthpiece in the lower joint.\(^10\) There is also rhythmic freedom in this piece as shown in Example 2.3.

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\(^5\)Ibid, 11.
\(^6\)Ibid, 3.
\(^7\)Ibid, 8.
\(^8\)Ibid, 10.
\(^10\)Sylvia Rickard, “With Every Breath You Take.”
Example 2.3: “With Every Breath You Take...” first movement mm. 8–12.\(^\text{11}\)

The pitches are notated, as is the approximate duration, but the player is allowed to determine how fast the notes are played and how the passage is repeated. The notation of the microtonal trills in this piece is also much more precise. Unlike the trills in “Songs of the Loon” (Example 2.2) the direction (↓) the interval (“¼ tone”), the fingering (“side Bb”), and the trill possibilities (“ring only or add fork”) are specified. Also unlike “Songs of the Loon” this score is handwritten. Perhaps the limitations of notational software in the early 90s discouraged Rickard from putting more information like this into “Songs of the Loon”. Because of her choice of techniques, the idiomatic way she used them, and the specificity of her instructions, I was convinced that Rickard played the clarinet. For example, to write appropriately for the mouthpiece/lower joint combination requires an understanding drawn from experimentation with this instrument.\(^\text{12}\) She does not, in fact, play the clarinet but works closely with performers, in this case Patricia Kostek, to achieve the desired results.

When I approached Sylvia Rickard about writing a piece for my collection, her only hesitation was finding a clarinetist to work with. Since I was in Cincinnati and she was in Victoria BC, collaborating directly with me was obviously impractical. Fortunately Rickard was able to work with Gordon Clements, the bass clarinetist of the Victoria Symphony. Clements not only provided technical expertise on the clarinet, but input the score into the computer. Rickard’s piece is called “Teco-teco” which is the Portuguese word for a high-flying glider airplane. Her chosen technique is timbre trills, microtonal trills or “single note trills” as she calls them. The soaring melodies seem to float easily over

\(^{11}\)Ibid, 2.

\(^{12}\)I will be discussing this section of “Every Breath You Take” in the chapter about playing pieces of the clarinet.
the Brazilian landscape while the agitation of the microtonal trills and fast notes bring to mind the rush and vibration of the wind.

**Timbre Trills: the Technique**

As an extended technique microtonal trills – also known as colour trills, timbre trills or same note trills – are relatively easy to execute. Unlike a normal trill which raises the written note by a half or a whole step, a timbre trill changes the note by a microtonal interval. Furthermore, the direction of the microtone can be above and/or below the written pitch. It is also possible to trill between alternate fingerings that produce essentially the same pitch, but a different tone colour. Unlike quarter tones or multiphonics, there is an easy systematic method of determining fingerings for microtonal trills. The first step is to know which hole is determining the length of the bore; this is usually the first open hole, exclusive of the register key. Adding fingers or key on the clarinet that are below the first open hole on the instrument changes the pitch microtonally.\(^\text{13}\) For example, as shown in Example 2.4, when fingering Bb, covering the next open whole produces an A.

Example 2.4: The effect of closing holes on the pitch of Bb.

Covering any of the holes below the next open hole gives a microtonally lowered Bb. The holes closest to the open hole have the greatest effect on the pitch, while more distant hole have less effect. If more than one hole is covered the pitch is lower still further. Since this effect can range from very subtle to a

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quarter tone or more in difference, deciding how significant a pitch alternation is desired is one of the choices a performer must make. Since there are almost always one or more holes that can be closed below the first open hole almost any note can be lowered microtonally in ways too numerous to catalogue. For example, the Bb shown in Example 2.4 can be lowered microtonally with the right hand third finger, the F/C key, the F#/C# key, and the E/B key as well as all of the combinations of these fingerings.

Similarly, opening holes below the first open hole raises the pitch microtonally. Holes can be opened using any of the keys that open holes: G#/D# key, right or left sliver keys, C#/G# key, any of the right hand side keys, and the A and G# throat keys. To be effective for microtonal trilling, the hole that is opened must be close, but not too close to the first open hole. Because of the placement of keys that open holes, not every note can be raised microtonally in this way. Functional ascending microtonal trills in the chalumeau and clarion registers are shown in Example 2.5.

Example 2.5: Effective ascending microtonal trills with fingerings.
The trill key has the greatest effect on the lowest pitch and the least effect on the highest pitch. Interestingly some trill fingerings that produce a significant effect in the clarion register have very little influence in the equivalent chalumeau register. Note that, in most cases, opening a hole above the first open hole results in a larger interval, a register change or a multiphonic, not a microtonal interval.

There are a few notes on the clarinet for which the first open hole principle does not work: E3, F3, and G3 in the chalumeau register and B4, C5 and D5 in the clarion register. E3 is the lowest note of the instrument and therefore there are no additional holes to cover or open below it. Similarly F3 has only one open hole below it and covering it results in E3, not a microtonal interval. The difficulty the microtonal trills on G3 relates to the construction of the clarinet. There are two open holes below the critical first open hole, but neither of them can be operated independently. The effect is that any key that is pressed results in at least a semitone change in pitch. Without resorting to extraordinary measures – covering the bell with the leg, or carefully half closing keys – there is no way to microtonally alter E3, F3 or G3. B4, C5 and D5 present a similar problem in the clarion register, but this time there is a solution. Once the clarion register is established, removing the register key will lower the pitch microtonally, adding the throat A, throat G# or one of the upper two right hand side keys will raise the pitch.

Upper and lower microtonal trills are certainly possible in the altissimo, but because of the diversity of fingerings, there is no standard rule for finding effective trills. The difficulty in the altissimo is not in finding a microtonal trill fingering, but in choosing which fingering is the most appropriate in the context. For example, as shown in Example 2.6 the standard C#6 fingering can be raised or lowered microtonally in a number of different ways.

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14Ibid.
Example 2.6: Microtonal variations of C#6.

Several of these alternatives can be used simultaneously or sequentially. In addition, Ridenour shows seven alternate fingerings for C#6 in addition to the standard one. Since all of these can also be microtonally trilled in a number of ways, the choices available are vast.

Simply moving between one alternate fingering and another also creates a timbre trill. Although they may produce the same pitch, alternate fingerings generate subtly different harmonic spectra, which gives them different timbres. Because there are many choices for alternate fingerings, this type of timbre trill is natural in the altissimo, but is also useful in the lower registers; for example moving between the standard throat and side fingering of Bb4. More obscure alternate fingerings can give greater timbral variation, but are often more awkward and less familiar than standard fingerings.

Because this type of trill changes primarily the timbre not the pitch, it is useful in situations where tuning is important. On the other hand, the effect can be quite subtle so it is sometimes desirable to enhance the effect with small changes to the embouchure, air pressure or tongue position.

With all these colourful alternatives one might imagine they could be used in contexts other than trills. To a limited extent this is true: composers use these colour fingerings in passages of repeated notes (Example 2.7a) or in a predictable pattern (Example 2.7b).

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17 Ibid.

18 Ibid.
Example 2.7a: *Berio Sequenza IX* uses colour fingerings in a passage of repeated notes.\(^{19}\)

\[\begin{array}{c}
\text{Example 2.7b R. Murray Schafer *Wizard Oil and Indian Sagwa* uses microtonally altered notes in a predictable pattern.}^{20}\n\end{array}\]

The key to both these passages is that the adjusted note is always compared to the “normal” fingering of the pitch. Without this direct comparison the sound of the coloured notes either goes unnoticed or may be perceived as out of tune.\(^{21}\) While timbre trills do microtonally alter notes, playing or writing microtonal music for the clarinet presents a different challenge for both the composer and the performer. These issues will be discussed in the context of Richard Désilets’s piece “A Micro Tale”.\(^{22}\)

Although they both change the pitch microtonally, timbre trills are not like vibrato. Vibrato, like glissando, is a smooth bending of pitch up and down and it done primarily with the air and embouchure. Microtonal trills, like standard trills change the pitch instantaneously and are done entirely with the fingers. Vibrato will also be discussed in Richard’s piece.


In addition to working with Rickard on developing the piece and inputing it into the computer, Gordon Clements also provided assistance in writing the performance notes. Rickard writes:

The recommended fingerings were arrived at in a practice session with both the composer and clarinetist, Gordon Clements. Since there are often many ways to achieve a musical result, the performer is encouraged to try different combinations of fingerings and embouchure adjustments to create smooth movement within phrases.

For the most part Clements’s solutions are excellent, but there are a few instances in which I use an alternative. In the first movement, I include a microtonal trill on the G♮ using the E/B key before sliding up to the Ab (Example 2.8).

Example 2.8: “Teco-Teco” first movement mm. 3–4.  

In m. 5, Rickard includes a timbre trill on F3 (Example 2.9) which, as described above is not possible to trill microtonally.

Example 2.9: “Teco-Teco,” first movement m. 5.

Clements suggests trilling the second finger of the left hand which produces approximately an F3- Eb4 trill. I decided to trill the third finger of the right hand which approximates a F3-A3 trill. Since a microtonal trill is not possible, trilling any one of the fingers will produce an acceptable trill. Clements does not include a fingering for the alteration of C#5 m. 18 and m. 20 (Example 2.10); this note can be

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24 Ibid.
lowered with the B/E key and/or by removing the register key.

Example 2.10: “Teco-Teco” first movement mm. 18–20.25

In Example 2.11, using covering the Bb/F tone hole to trill the D4, rather than only the ring, does not substantially alter the pitch, but it does dull the sound.

Example 2.11: “Teco-Teco” first movement m. 25.26

Therefore I concur with Clements’s suggestion to trill the ring only for this note. In the last measure of the first movement, Clements suggests trilling the B/E and the Ab/Eb keys simultaneously to achieve the microtonal trill on D5 (Example 2.12).

Example 2.12: “Teco-Teco” first movement m. 32.27

I prefer to use the throat Ab key because it is less awkward and the microtonal interval is smaller. According to her performance notes, Rickard want the G# microtonal trill in m. 10 of the second movement to be more dramatic than the trill on Ab in m. 5 (Example 2.13).

25Ibid.
26Ibid.
27Ibid.
Clements’ suggestion of using the F/C key in m. 5 and the E/B key in m. 10, is one way to achieve this effect. If the performer chooses different fingerings, the relationship between these trills should be maintained. In general, my solutions are not necessarily better than Clements’s ideas, but more a matter of personal preference. As Rickard does, I would encourage each performer to explore a variety of possibilities to decide what works best.

“Teco-teco” has less explicit rhythmic freedom than either of Rickard’s other clarinet works. There is always a time signature and even passages marked “ad libitum” are not as free as in “With Every Breath You Take...” There are passages, however, which imply they need not be played in strict time as shown in Example 2.14.


The lengthy passages of grace notes occupy an indeterminate amount of time to be decided by the performer. To my mind, the quintuplet, sextuplet and sixteenth notes in m. 17 delineate melodic groups rather than a sense of precise metric subdivisions. Playing this passage strictly in time would rush the grace note and detract from the fluidity of the musical line. In other parts of “Teco-teco,” the notated rhythm must be played absolutely correctly. Because there are no issues of coordinating with others, it is sometimes tempting to lose rhythmic integrity when playing an unaccompanied piece. In example 2.15 the notated rhythm should be observed.

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28Ibid., 2.

29Ibid.
Example 2.15: “Teco-teco” second movement mm. 1–6.30

The dotted 16\textsuperscript{th} + 32\textsuperscript{nd} rhythm give the piece an unexpected lilt that would be lost if the notes were played out of time. In m. 4 the established rhythm changes to introduce a syncopation, which serves to lead into the first trill. This device is only effective if the rhythm is played as written. One of the keys to understanding Rickard’s work is to know when rhythmic freedom is implied and when the notated rhythm should be followed.

Learning to play “Teco-teco” not only prepares the clarinetist for other pieces that use timbre trills, but also familiarizes them with microtonal and timbral alterations. This is a good first step towards playing microtonal music, such as Richard Désilets’s “A Micro Tale.”31 It also provides the clarinetist with tuning and timbre options for use in standard repertoire.

\footnotesize
\textsuperscript{30}Ibid.

\textsuperscript{31}Richard Désilets, “A Micro Tale.”
Richard Désilets: the Composer and Compositional Process

Richard Désilets studied composition at the University de Montréal under Serge Garant and Marcelle Deschênes. He has been composer in residence at the Orford Arts Centre, the Banff Centre and the Canadian Opera Company; he has won prizes from the Composers, Authors and Publishers Association of Canada (CAPAC), Brock University, and the CBC National Competition for Young Composers; he has received grants from the Conseil des Arts et des Lettres du Québec (CALQ), the Québec Ministry of Cultural Affairs and the Canada Council for the Arts.¹ Désilets is a composer who creates universal and accessible new music that is both contemplative and experimental. His eclectic influences include jazz, opera, pop, electronic, and contemporary music as well as multi-ethnic instruments such as those found in ancient Greece, Africa and Asia. Recently he has been focusing on recording his music, and has produced ten CDs since 2006. Out of 420,000 contenders, his album Nuits à jour was nominated in the experimental music category at the 2009 Just Plain Folks Music Awards. His song Irishing gypsy from the album Éclats de rêve was also nominated in the world music category from a selection of 560,000 entries. Désilets’s day job is teaching music for elementary school students in the Marguerite-Bourgeoys school board.²

I chose Richard Désilets for this project because of his three major works for solo clarinet: “Trajets”(1987), “Clés d’évasions” (1997) and “Un endroit pour clarinette”(2006). All of these works use a number of extended techniques: vibrato, key noise, multiphonics, flutter tongue, glissando, stage movement and using percussion instruments in “Trajets”;³ flutter tongue, vibrato and multiphonics in “Clés d’évasions”;⁴ vibrato, microtones, singing while playing, glissando, and multiphonics in “Un

endroit pour clarinette”. With his experience, Désilets could have chosen almost any extended technique to write for this project; he chose vibrato and microtones for his piece “A Micro Tale.” The principle of this project was to use one technique per piece, but I chose to make an exception in this case for two reasons. Firstly none of the other composers wanted to use either of these techniques, secondly the technique of vibrato alone does not offer the composer much scope for the composer or challenge to the performer. The principal challenge of a “Micro Tale” is the microtones, while the vibrato is an added effect. I decided that the disadvantage of having two unrelated techniques in the same piece, is outweighed by the benefit of exposing students to both of these techniques.

Since vibrato appears in all of Désilets’s solo clarinet works, it is interesting to trace changes over time. His use of vibrato does not alter significantly in terms of the musical context, but his notational system evolves with the available notation software. As shown in Example 3.1, in “Trajets” the vibrato and the score are hand written.

Example 3.1: Hand written vibrato in “Trajets” mm. 10–12.

Désilets uses the height and frequency of the waves in the line to indicate the type of vibrato he wants. In this example, the vibrato is played while turning in a circle which would create an additional effect for the audience. In “Clés d’évasions”(Example 3.2), the vibrato notation is typeset and much less precise.

Example 3.2: Typewritten arrows in “Clés d’évasion” mm. 41– 8.


S.V. stands for “sans vibrato”, V.L. stands for “vibrato large”, while the arrow indicates a gradual transition. Unlike the wavy line, this notation cannot show the rate of change to the vibrato or indicate nuances of how wide the vibrato should be. In “Un endroit pour clarinet” (Example 3.3) the notes are typeset but the vibrato notation is done by hand.

Example 3.3: Handwritten vibrato and typeset notes in “Un endroit pour clarinet” mm. 11–8.

In “A Micro Tale” (Example 3.4) Désilets develops a type set vibrato notation that allows him to use the same nuances as hand written notation.

Example 3.4: Nuanced and typeset vibrato notation in “A Micro Tale” mm. 80–8.

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8Ibid.


These examples document how a notational system can influence what and how a composer writes.

Of his earlier works, only “Un endroit pour clarinette” uses microtones. Once again Désilets’s notation changes between the two pieces, as shown in Example 3.5 and 3.7.

Example 3.5: The microtonal notation system in “Un endroit pour clarinet.”

There are several flaws in this system that are corrected in “A Micro Tale”. Firstly, he uses two ways to notate $\frac{1}{4}$ sharps and $\frac{1}{4}$ flats. Just as enharmonic equivalents are useful for semi-tones, they can also be advantageous for microtonal music. On the other hand, having the same note notated in different ways, in addition to enharmonic equivalents, is redundant. For instance, in the passage shown in Example 3.6, the second pitch is A $\frac{1}{4}$ sharp and the seventh pitch is G $\frac{1}{4}$ sharp, but the symbols used are different.

Example 3.6: Redundancies in microtonal notation in “Un endroit pour clarinet” mm. 116–7.\footnote{Richard Désilets, “Un endroit pour clarinette,” 6.}
In this context it might be justifiable to write the seventh pitch as A ¾ flat, but using different symbols to mean the same thing is unnecessary. In this system Désilets uses a small upward arrow to raise the pitch by one eighth of a tone. This means that in most cases two symbols are needed to indicate eighth tones. It is also not possible to lower the pitch by an eighth tone. This means that the eighth pitch in the second system must be notated as F ¾ sharp, rather than simply as G ¼ flat.

The notational system Dèsilets uses in “A Micro Tale” is much more elegant (Example 3.7).

Example 3.7: The microtonal notation system that Dèsilets uses in “A Micro Tale.”

<table>
<thead>
<tr>
<th>Eighth-tones sharp</th>
<th>0/8</th>
<th>1/8</th>
<th>2/8</th>
<th>3/8</th>
<th>4/8</th>
<th>5/8</th>
<th>6/8</th>
<th>7/8</th>
<th>8/8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eighth-tones flat</td>
<td>8/8</td>
<td>7/8</td>
<td>6/8</td>
<td>5/8</td>
<td>4/8</td>
<td>3/8</td>
<td>2/8</td>
<td>1/8</td>
<td>0/8</td>
</tr>
</tbody>
</table>

Each eighth-tone has one unique symbol and there are logical enharmonic equivalents. The only symbol that is missing is a ¾ flat sign. Since the majority of the piece is written in sharps, perhaps Désilets did not feel that this symbol was needed. This system is intuitive, logical and therefore easier to read and interpret.

It is also interesting to compare how Dèsilets uses microtones musically in “Un endroit pour
clarinette” and “A Micro Tale.” The simplest way he uses them in “Un endroit pour clarinette” is for timbral variation of the same note (Example 3.8).

Example 3.8: Désilets suggests using different fingerings to obtain microtonal and timbre variations in “Un endroit pour clarinette” m. 115.\(^\text{12}\)

\[
\begin{array}{c}
\text{Essayer de trouver un doigté différent pour chaque note. Assez soutenu} \\
\text{10 à 12 sec} \\
p_{mp}
\end{array}
\]

This is equivalent to the timbre trills I discussed in the context of Sylvia Rickards “Teco-Teco”.\(^\text{13}\)

Another use of microtones in “Un endroit pour clarinette” is in a rhythmically free melodic passage as shown in Example 3.6. Although the rhythm is not fixed, the notes must be played fairly rapidly to fit into the allotted time. Neither of these styles of microtonal writing is found in “A Micro Tale”. In Example 3.9, Désilets uses quarter tones in a staccato passage that mixes quarter steps, half steps, whole steps and leaps.

Example 3.9: “Un endroit pour clarinette” mm. 19–26.\(^\text{14}\)

This is most similar to how he uses microtones in “A Micro Tale” Example 3.10 shows a passage from

\(^{12}\text{Ibid, 5.}\)

\(^{13}\text{Sylvia Rickard, “Teco-teco,” score, 2008, Rebecca Danard personal collection, Ottawa.}\)

\(^{14}\text{Richard Désilets, “Un endroit pour clarinette,” 1.}\)
“A Micro Tale” in which Désilets also uses a variety of intervals from eighth-tones to large leaps.

Example 3.10: “A Micro Tale” mm. 29–32.\(^{15}\)

Note that most of the microtonal writing in both these passages is conjunct; this clarifies the microtonality of the piece. Disjunct microtonal music can often sound merely out of tune.\(^{16}\) This example includes a glissando over a microtonal interval. Désilets also does this in “Un endroit pour clarinette” in mm. 74–6.\(^{17}\) An innovation of “A Micro Tale” is combining vibrato with microtonal intervals as shown in Example 3.10 and above in Example 3.4. When Désilets combines vibrato and microtones, the intervals between the notes are always larger than a whole tone. This means that, even with the pitch altered by vibrato, the changes of notes are audible.

**Vibrato: the Technique**

Although vibrato is a standard expressive tool for many wind instruments, it is has not historically been part of the clarinet sound. How and if vibrato should be used in interpreting standard repertoire, is beyond the scope of the current discussion. When composers specifically ask for it however, the performer should be able to produce a range of vibrato from subtle to extreme. As Désilets does, many composers will notate the shape of vibrato they want with a wavy line.

Vibrato is a technique which creates minor fluctuations in the sound either by adjustments in jaw pressure or by fluctuations in air pressure. The former, referred to by Rehfeldt refers to as “lip vibrato” or “jaw vibrato”\(^{18}\) and by Richards as “pitch vibrato”,\(^{19}\) creates changes in the pitch. The latter,


\(^{17}\)Richard Désilets, “Un endroit pour clarinette,” 3.


\(^{19}\)E. Michael Richards, *The Clarinet of the Twenty-First Century*, 219.
which Rehfeldt calls “wind vibrato”\textsuperscript{20} and Richards calls “amplitude vibrato”,\textsuperscript{21} changes the amplitude or loudness of the sound. Richards’s terms, first introduced by Drushler\textsuperscript{22} are perhaps more appropriate since they refer to the changes in the sound, not how they are produced. For example, “pitch vibrato” can be created by the jaw, lips or even the fingers, but it always alters the pitch of the note. Because the speed and depth of the vibrato are quite flexible and controllable by jaw pressure,\textsuperscript{23} pitch vibrato has a much richer and more varied sound potential.\textsuperscript{24} Pitch vibrato also produces slight variations in timbre as the reed is pinched and released. Amplitude vibrato, which is more commonly used on flutes and double reeds, is not difficult to produce, but because it is controlled by the diaphragm, glottis or throat,\textsuperscript{25} it is not as flexible on single reed instruments such as clarinet or saxophone.\textsuperscript{26} The change in amplitude possible with this technique is also quite limited, which restricts its potential.\textsuperscript{27} Because of the variety of vibrato in Désilets’s writing, pitch vibrato is more useful for his music, although using a combination of pitch and amplitude vibrato can be effective.\textsuperscript{28}

Gingras discusses four factors that are important in producing a good pitch vibrato: shape, control, speed and consistency. Good shape is produced by even oscillation of the pitch down and up, without jagged gaps or plateaus. Control is achieved by making each oscillation have the desired amount of pitch variation up and down. This begins with making the oscillations identical to one

\textsuperscript{20}Philip Rehfeldt, \textit{New Directions for Clarinet}, 62.

\textsuperscript{21}E. Michael Richards, \textit{The Clarinet of the Twenty-First Century}, 219.

\textsuperscript{22}Paul Drushler, “Clarinet Vibrato: Terminology, Utilization, Aesthetics Part I,” \textit{NACWPI Journal} 27, no. 4 (Summer 1979): 44.

\textsuperscript{23}Philip Rehfeldt, \textit{New Directions for Clarinet}, 62.

\textsuperscript{24}E. Michael Richards, \textit{The Clarinet of the Twenty-First Century}, 219.

\textsuperscript{25}Ibid.

\textsuperscript{26}Philip Rehfeldt, \textit{New Directions for Clarinet}, 62.

\textsuperscript{27}E. Michael Richards, \textit{The Clarinet of the Twenty-First Century}, 219.

another, and then learning to increase or decrease their depth at will. Speed is the rate of oscillation or the number of oscillations per beat. Gingras suggests practicing with a metronome to precisely control vibrato speed. Consistency involves being able to manage the shape, control and speed of vibrato in any musical context, such as fast moving notes, complex rhythms or extreme registers and dynamics.²⁹

**Microtones: the Technique**

Intervals smaller than a semitone have been used traditionally in many non-Western cultures, in ancient European music and have come to play an important role in contemporary music practices.³⁰ Microtones are not a new idea for music theorists; Christopher Simpson wrote about them in his 1667 *Compendium of Practical Musick*, and N. Vincentino described a quarter-tone harpsichord in the sixteenth century.³¹ Before the mid twentieth century however, microtonal intervals were not commonly used by Western composers. In *Harmonielehre* (1911) Schoenberg wrote that “the efforts made here and there to write music using one-third and quarter-tones are destined to failure as long as the instruments capable of playing such music are so few.”³² During the twentieth century, an increased interest in the scientific nature of sound and in folk music, lead to a significant exploration of microtonal music. In his “New Aesthetic of Music” (1906) Busoni described a system based on third tones, but saw electronic music as the best way achieve them.³³ Microtonal clarinet music was first notated by European composers of the early twentieth century. At first, microtones were achieved by modifying the instrument, either by adding tone holes and keys or by using two different tubes a quarter tone apart. These instruments were not successful because of the reluctance of performers to

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³⁰Philip Rehfeldt, *New Directions for Clarinet*, 15.

³¹E. Michael Richards, *The Clarinet of the Twenty-First Century*, 56.


³³Ibid., 27.
accept such drastic changes. Bruno Bartolozzi’s *New Sounds for Woodwinds* (1967), was among the first to examine in depth the possibility of producing microtones with the standard wind instruments. What is lost in precise intonation and matching timbres is more than made up for by the familiarity and accessibility of a conventional instrument.

Discussing microtones on the clarinet involves a consideration of how the instrument treats pitch space. A string instrument, such as a violin, uses continuous pitch space; throughout its range an infinite number of microtones are available. The challenge for the string player in performing microtonal music, or indeed any music, is to hear and precisely place the correct pitch. A keyboard instrument, such as a piano, uses discrete pitch space. Even if it is tuned microtonally, there are only 88 possible pitches to achieve on the piano. If the pianist strikes the correct key, then the correct pitch will sound. The clarinet falls somewhere between these two extremes. Through the placement of holes and keys, the instrument is designed to play a twelve-tone equal tempered scale, but by using alternative finger combinations, more pitches are available. Computer analysis indicates that there are 373, 248 possible finger combinations on the clarinet, most of which produce distinctive sounds. Unfortunately these pitches are not evenly distributed over the entire range of the clarinet; some notes (e.g. the throat tones) have many fingered microtonal alterations, while others (e.g. low E) have none. These discrete alternate fingerings are analogous to the keys of a piano, theoretically the correct fingering should produce the correct pitch. In reality variation in the player’s equipment, including the size of the bore, the dimensions of the barrel, the facing and tip opening of the mouthpiece, the cut of the reed and any customizations of the instrument, all affect the pitch. This means that clarinetists must experiment with fingerings to determine the best choices for them.

34 E. Michael Richards, *The Clarinet of the Twenty-First Century*, 56.
38 Ibid., 21-2.
Fingerings, however, are not the only way to alter pitch on the clarinet. Changes in the embouchure and tongue position allow the clarinetist access to continuous pitch space. Therefore, playing microtonal music on the clarinet requires a combination of alternative fingerings and embouchure adjustments to achieve the desired pitch. The degree of pitch alteration possible through lipping depends on the register and dynamics of the notes involved. Since it is much easier to bend the pitch downwards rather than upwards, a higher pitched fingering that can be bent down is often a better choice. The performer must be attuned to the natural tendencies of the fingerings and compensate appropriately by lipping. Hearing and adjusting intonation with the embouchure should be part of every clarinetist’s skill set, but playing microtonal music requires a greater degree of pitch sensitivity.

Developing a heightened awareness and control of pitch, as well as a new fingering system, through playing microtonal music, can help the performer to refine his or her playing of standard repertoire. Even with adjustments in embouchure and the wealth of alternate fingerings, playing microtones on the clarinet is not an exact science. While it is often possible to produce seven different pitches within a whole step it is not always possible to make them all equidistant. Composers who are looking for perfect equal temperament or mathematically precise intervals, may be unsatisfied with the clarinet’s potential for this music.

The clarinet was not designed with microtones in mind, therefore many of the fingerings needed to achieve them are awkward to execute. Learning these fingerings is similar to learning a new, but related instrument. There are also some microtones that are simply not available on the standard

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39These principles are discussed more fully in the chapter about glissando.


42E. Michael Richards, The Clarinet of the Twenty-First Century, 59.

43Ibid., 60.

44Ibid., 59.
Boehm system clarinet.\textsuperscript{45} Producing quarter tones often involves “cross fingerings”, in which there are one or more closed holes below an open hole. This disturbs not only the normal fingering patterns, but also the resonances in the air column in such a way that the harmonic overtones of the pitch are reduced.\textsuperscript{46} This means that many quarter tone fingerings have limited dynamic ranges and distinctive timbres that are often darker and duller than the normal fingerings.\textsuperscript{47} These colour changes can be minimized by adjustments to the embouchure and air pressure,\textsuperscript{48} but should for the most part be considered idiomatic.\textsuperscript{49} In this respect, microtonal fingerings are similar to multiphonic fingerings, in that different timbres of the same pitch can be derived from different fingerings. For example, Rehfeltd gives four fingerings for F4 ¼ sharp, as shown in Example 3.11.

Example 3.11: Rehfeltd’s four fingerings for F4 ¼ sharp, arranged from brightest to dullest.\textsuperscript{50}

They are arranged from brightest to dullest, left to right. The fingering on the far right is marked “pp” because it only speaks at the pianissimo dynamic. The performer should choose a fingering that is musically appropriate and the least physically awkward in the context of the other notes.

\textit{Learning and Teaching “A Micro Tale”}

Many such fingering choices must be made in performing “A Micro Tale.” For example, there are multiple fingerings available for all of the notes in Example 3.12 but the shown fingerings are the

\textsuperscript{45}Philip Rehfeltd, \textit{New Directions for Clarinet}, 123.


\textsuperscript{47}Ibid.


\textsuperscript{49}Philip Rehfeltd, \textit{New Directions for Clarinet}, 123.

\textsuperscript{50}Philip Rehfeltd, \textit{New Directions for Clarinet}, 25.
easiest to execute in context.

Example 3.12: The least awkward fingerings for “A Micro Tale” mm. 51–2.⁵¹

![Example 3.12: The least awkward fingerings for “A Micro Tale” mm. 51–2.](image)

The awkwardness of some fingerings necessitated a few revisions to “A Micro Tale.” For example some of the eighth tones between C₅ and D₅ are very laborious to finger. Example 3.13 shows the good fingerings for C₅ ⅛, ⅜ and ⅝ sharp.

Example 3.13: Available eighth tones between C₅ and D₅, without awkward fingerings. Red indicates deviations from a normal fingering.

![Example 3.13: Available eighth tones between C₅ and D₅, without awkward fingerings. Red indicates deviations from a normal fingering.](image)

To achieve C₅ ¼ sharp (D₅ ¾ flat) the clarinetist must finger C₅ and gently half depress the F#/C# key. This can be facilitated by providing resistance to the opening hole by pressing the clarinet against the left knee.⁵² A similar solution is used for D ½ flat (C ¾ sharp) by fingering D₅ and controlling the F#/C# key. C₅ ¾ sharp can be raised to C₅ ¾ sharp by opening the top side key. Since all the other fingers are needed elsewhere the only way to do this is with the right hand thumb, which is usually used to support the instrument. Thus while C₅ ¼ sharp, C₅ ¾ sharp and D ½ flat are possible to

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⁵²Philip Rehfeldt, New Directions for Clarinet, 27.
achieve, they require time before and after the note adjust the normal playing position. Example 3.14a (mm. 45–6) shows Désilets’s original version of “A Micro Tale.”

Example 3.14a: Original version of “A Micro Tale” mm. 45–6.\(^{53}\)

At this tempo (quarter note = 120), it is not possible to play D\textsuperscript{5 ⅛} flat or D\textsuperscript{5 ¼} flat. Example 3.14b shows the revised version, with fingerings, in while D\textsuperscript{5 ⅛} flat is replaced by D\textsuperscript{♮} and D\textsuperscript{5 ¼} flat is replaced by C \textsuperscript{⅝} sharp.

Example 3.14b: Revised version of “A Micro Tale” mm. 45–6 avoids awkward fingerings.\(^{54}\)

These changes makes this passage playable at the correct tempo; similar solutions were applied to other similar passages involving these notes.

Half covering holes and partially depressing keys is another way to obtain microtones. Because they require delicate finger control, these fingerings are not suitable for fast passages. Fortunately Désilets uses notes requiring these fingerings in a slow passage, as in Example 3.15.

Example 3.15: “A Micro Tale” mm. 38–40.\(^{55}\)


\(^{55}\)Ibid., 2.
For the F3 ⅛ flat I use the fifth finger of my right hand on the F key and bend it slightly to also partially depress the right hand E key. It requires a certain amount of dexterity to then jump to the G3 ⅝ sharp because this note also requires the fifth finger of the right hand, but on a different key. Since the passage is not slurred it is possible to use the tongue to cover the transition.

Because it is possible to bend pitches with the embouchure, it is appropriate to enhance the direction of a microtonal line through subtle changes in voicing. A series of intervals of an eighth tone are not effective unless the difference in pitch is perceptible. Being aware of the direction of the line allows the performer to slightly alter the tuning to make the intervals more apparent. For example, in m. 8 (Example 3.16) the G# at the end of the measure should be played on the high side to differentiate it from the G ⅜ sharp that precedes it.

Example 3.16: “A Micro Tale” m. 8.  

On the other hand, the G# in m. 17 (Example 3.17) should be played on the low side to differentiate it from the G ⅝ sharp that follows it.


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56 Ibid., 1.

57 Ibid.
It is also necessary to consider how dynamics affect the tuning of the clarinet. Quiet notes tend to be sharp, while loud notes tend to be flat. In playing any music, the clarinetist must compensate for these tendencies, but it is particularly important in playing microtonal music because the smaller intervals leave less room for error.

One of the most significant changes we made to “A Micro Tale” was to add fingering to all the microtones in the score. Although it does not appear to be very challenging, I found myself struggling to learn “A Micro Tale.” On the clarinet, most microtonal fingerings are not intuitive; there is no logical pattern to produce a microtonal scale. Since each note has an individual solution, it is necessary to recall and reproduce the fingering for each one. I found that I could learn a passage one day, but by the next practice session, I needed to look up the fingerings again. It is common for clarinetists to mark short hand symbols for fingerings in any music, so I tried this with “A Micro Tale.” Unfortunately, as shown in Example 3.18a the requisite fingering information was so complex that it was difficult both to read and to remember my abbreviations.

Example 3.18a: “A Micro Tale” mm. 27–8, with my indecipherable fingerings.58

I realized that, although they also have complex and unfamiliar fingerings, I did not struggle as much to learn Ka Nin’s “Speak Out” because he included the fingerings in the score. I was able to easily read Ronald Caravan’s quarter tone exercises, because they show all the fingerings below the notes. Therefore, with Désilets’s permission, I decided to add printed fingerings to the score, as shown in Example 3.18b. Having the fingerings in the score provides the performer with two types of notation simultaneously: standard notation and tablature. Tablature is often regarded as a dubious pedagogical tool because of its limitations as a notational system. In combination with standard notation, however, I have found it to be a very valuable device. If a performer were to learn and play microtonal music frequently, then it could be worthwhile to memorize the required fingerings. For the average performer, however, including tablature makes playing microtonal music much more accessible.

Playing “A Micro Tale” has several benefits for the clarinetist. First having learned to control the shape and speed of vibrato over a wide range of registers and dynamics, the performer has the option of using this expressive tool in standard repertoire. Simply hearing how vibrato can be used effectively may encourage the performer to explore the potential of this technique. Microtonal music sensitizes the performer’s ears to more subtle differences in pitch, which can help with tuning in standard repertoire. Furthermore the timbres associated with microtones provide the clarinetist with a greater sound pallet to work with. Finally learning to read fingerings quickly and easily prepares the performer for playing other techniques, such as multiphonics, that require special fingerings.

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60 Ronald L. Caravan, Preliminary Exercises & Etudes in Contemporary Techniques for Clarinet, 12-8.
Chapter 4: Glissando, Shane Krepakevich’s “Sometimes Doing Nothing Leads to Something”

Shane Krepakevich: the Composer and Compositional Process

I found Shane Krepakevich, not through the Canadian Music Centre, but through a recording made by the Edmonton-based clarinetist Don Ross, who has also written a piece for this collection. Krepakevich’s “if I move slowly through this task” is featured on this recording. The pieces highlights the full range and the enormous dynamic contrast possible on the clarinet. The extended techniques (glissando, flutter tonguing, colour trills) are perhaps not the most unusual, but they are used idiomatically and expressively. This convinced me that he would be a good addition to this project.

Krepakevich is originally from Edmonton Alberta, but moved to Montreal and then completed an MFA visual art at the University of Guelph. He was interested in creating a piece with visual and dramatic as well as auditory appeal. The piece that Krepakevich wrote for me, “Sometimes Doing Nothing Leads to Something” is a companion to his solo flute piece “Sometimes Doing Something Leads to Nothing.” Both of these pieces were inspired by “Paradox of Praxis”: a two part video piece by Francis Alÿs. Krepakevich's titles are taken from the titles of the two parts of the Alÿs’s video. In the video “Sometimes Doing Something Leads to Nothing” the artist pushes a block of ice around Mexico City until all that is left is a small puddle. Alÿs identifies with the many Mexicans who also spend hours in manual labour and have nothing to show for it at the end of the day. Krepakevich's flute piece reflects the journey of the video piece with a repetitive line that begins complex and difficult and gradually melts away into a single pitch. The video piece “Sometimes Doing Nothing Leads to


"Here, a pedestrian - Francis Alÿs once again - stops on a square and looks fixedly at a precise point in the empty sky. Gradually, anonymous passers-by join him and surround him to gaze at something the flâneur has invented, but which does not really exist. At this point, Alÿs leaves his observation post, abandoning the pedestrians to their vain search, "gawkers" who will remain a few minutes more on the scene of the gag. This video - like the other part of the piece - is founded on a slight, poetic perturbation of urban space."

Juxtaposing these two videos makes them even more interesting. Doing “Something” as unusual as pushing a big chunk of ice around the city streets does not even get a second glance from the bystanders. Doing “Nothing”, on the other hand, gathers a crowd of spectators. Krepakevich’s clarinet piece “Sometimes Doing Nothing Leads to Something” also has elements of trickery to it. It plays with performance conventions and audience expectations. The piece has a false start; the audience expects the performer to begin playing the clarinet immediately, but the performance begins with shuffling papers, fussing with the reed, swabbing the instrument and other stage business. When I performed the piece at the University of Western Ontario, the conscientious sound engineer, eager to start a track at the “beginning” of the piece, actually broke this up into three separate segments. The long delay before the sound begins initially makes the audience think the performer is incompetent or disorganized. It is only in the context of the whole piece that the audience realizes they have been fooled and that the entire performance was planned and deliberate. Krepakevich's interest in playing with audience expectations is also present in his saxophone quartet “Theme, Things That Happen to it, and Other Unjustifiable Material”; this piece has a false ending rather than a false beginning. While three of the players finish the piece, unceremoniously take their music stands and chairs, and exit the stage, the tenor saxophone continues to play. Even when a stage hand removes his stand and music, he continues, eventually following his colleagues off stage while playing. The players return to the stage only when the audience applauds. Once again the audience is deluded into thinking the performers don’t know

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what they are doing, only to have these doubts dispelled by the ending.

The ending of “Sometimes Doing Nothing Leads to Something” is also dramatic. Section G (Example 4.1) is repeated nine times with increasing emphasis.

Example 4.1: The repeating phrase of “Sometimes Doing Nothing Leads to Something” (mm. 52–6) \(^5\)

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Forceful, strong and a bit harsh;
very determined - you will be perfect*

I clear throat (slight pause), turn page
noisily and quickly**
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Repetition as a concept is something that Krepakevich explores in several of his works. In the case of “Sometimes Doing Nothing Leads to Something” Krepakevich is proving that perfect repetition of a musical idea is not possible or even desirable. The attempt to perfectly repeat this phrase causes the music and eventually the performer to stop and give up in frustration. Krepakevich also considers repetition in “Memory and the Moon” in which “the same section of music is composed numerous times. . . The intention was to write the same piece of music many times with the nature of the piece changing in reaction to my environment and state of mind as well as in reaction to my cumulative experience with the material.” \(^6\)

At the beginning of the piece, each part is completely notated with pitches, rhythms, dynamics and techniques (Example 4.2). In each subsequent section, the material becomes increasingly free and varied until in the last section (Example 4.3) the events are almost entirely composed by the performers.

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Unlike “Sometimes Doing Nothing Leads to Something,” the repetition in this piece is not supposed to be “perfect”. Like the phases of the moon, the material is allowed to change gradually and naturally. This repetition with variation is much more interesting than the rigid “perfection” of “Sometimes Doing Nothing Leads to Something.”

In addition to its theatrical aspects, “Sometimes Doing Nothing Leads to Something” also fulfills its primary goal of teaching the technique of glissando. Before he began work on the piece, we

7Ibid.

8Ibid.
discussed the range, dynamics and register for the glissandos Krepakevich was going to use. Since he was the first composer I worked with, I was still very concerned about making the extended technique easy. In subsequently working with other composers, I allowed them to include more challenging material in order to make the piece more musically interesting or to make fuller use of the technique. For Krepakevich’s piece however, we decided that he should limit the glissando to upward motion, relatively high in the clarinet register and at a relative loud dynamic. Krepakevich also wanted a way to distinguish between a smooth slide between pitches, as on a violin, and a rapid chromatic or diatonic motion, as on a piano. Technically the former is a portamento while the later is a glissando, but composers frequently write “glissando” when they want a smooth slide, and rarely use the term portamento in wind music.\(^9\) We decided to use the more accurate “portamento” rather than the more common “glissando” in this piece. In retrospect this might not have been the best choice, but Krepakevich’s notation and performance notes are still perfectly clear.

Krepakevich’s first indication “Awkward, nervously” together with the chromatic writing and long rests reminded me of practicing the clarinet excerpt from Stravinsky’s *Firebird*. When I mentioned this to him, he decided to include a reference to Stravinsky as shown in Example 4.4.

Example 4.4a: Krepakevich reference to *Firebird* in “Sometimes Doing Nothing Leads to Something” (mm. 6–10).\(^10\)

Example 4.4b: Excerpt from “Dance of the Firebird” mm. 1–3.\(^11\)


This makes a good inside joke those who know the Stravinsky, but it does not detract from the piece if
the audience does not hear the allusion.

**Glissando: the Technique**

The glissando has become a relatively standard technique for the clarinet, but may still present a
problem for the clarinetist because of the need to modify finger motion and the embouchure shape.
Although the fingers do play a role, most of the smooth sliding effect is achieved through alterations of
the oral cavity. Since it is initially difficult to coordinate throat and finger motion, they should be
practiced in isolation: first maintaining the same fingering while bending the pitch with the
embouchure, then sliding the fingers while maintaining a steady embouchure. Gingras suggests playing
harmonic overtones with the same fingering to practice control and flexibility of the throat muscles. A
smooth glissando is more easily achieved in the upper clarion and altissimo registers, where the
harmonics are closer together. Errante suggests beginning in the upper register and bending pitches
down as far as possible orally before using the fingers. Gingras suggests the syllables “Hee-Yah” to
produce this effect. To achieve a smooth upward glissando, it is necessary to be able to lower the
fingered pitch by at least a semitone. Michael Webster recommends using the throat rather than the
lips to do this; by keeping the embouchure firm, it is possible to lower the pitch without getting the
undesirable grunt or undertone. For a longer glissando, the pitch is changed primarily by the fingers,
but each note is played flat to fingered pitch. When the top of the glissando is reached then returning to

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43
a “normal” embouchure will complete the slide.\textsuperscript{18} Thus used in combination, finger sliding and embouchure bending can create a smooth ascending or descending glissando in the clarion or altissimo register. In the low register, a smooth glissando is harder to achieve since the throat plays a secondary role and the effect is achieved primarily by sliding the fingers gradually on or off the holes.\textsuperscript{19} Since it is easier to slowly and smoothly raise a finger than to lower it, ascending glissando in the chalumeau register is somewhat easier to execute. Truly smooth glissandos that use keys (rather than holes) or that cross the break are difficult to achieve. Alternate fingerings, a flexible embouchure and rapid motion through the problematic registers can usually produce the desired result.

\textit{Learning and Teaching “Sometimes Doing Nothing Leads to Something”}

The glissandos in “Sometimes Doing Nothing Leads to Something” are relatively easy to execute because they are ascending, in the upper range of the instrument and at loud dynamics. Nevertheless a few practical suggestions may facilitate some passages, such as Example 4.5.

Example 4.5: “Sometimes Doing Nothing Leads to Something” (mm. 12–4).\textsuperscript{20}

\begin{center}
\includegraphics[width=0.5\textwidth]{Example4.5.png}
\end{center}

In mm. 13, using the 1+1 fingering for the Bb eliminated the use of a key and therefore creates a smoother glissando. Anytime the glissando goes over the break between the clarion and the altissimo (as in mm. 14, for example), open D to the regular D fingering makes a good transition between the registers. The glissando between G and G\# (Example 4.6), although only a semitone, is problematic because it is difficult to depress the G\# key gradually.


\textsuperscript{20}Shane Krepakevich, “Sometimes Doing Nothing Leads to Something,” 2.
Example 4.6: “Sometimes Doing Nothing Leads to Something” (mm. 29–31).  

I practiced this glissando in three steps: bending the pitch of the G down with embouchure, adding the G# key, then bending the pitch back up to G#. Once the first two steps can be done almost simultaneously, a smooth glissando is achieved.

When I received Krepakevich’s piece, I realized that it was going to be able to teach much more than glissando; it is not just a piece, it is a philosophical statement. The ending of the piece illustrates the futility and frustration of a musician trying to master a passage. As performers we are often perfectionists, and risk getting so caught up in the details that we lose sight of the larger musical picture. About the last section Krepakevich writes:

Section G should be performed so that each segment is almost the same, as if you are trying to perfectly perform the passage, over and over. My intention is to show that such notions of reproducible perfection are misguided and outdated.

By provocatively questioning the value of perfection in music, Krepakevich opens up the possibility for a discussion with the student. What is musical perfection? Is it attainable or even desirable? Is there anything that gets lost when perfectionism becomes the only goal? Krepakevich’s piece not only teaches glissando, it is also an object lesson on the perils of pursuing perfectionism.

In Krepakevich’s piece everything you do on stage is part of the performance; this another valuable lesson for the student. Inexperiences players often assume that the audience only hears the music and that when performers tap their feet, shuffle their music or gasp for air it is somehow

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21Ibid.

22Ibid., 3. Krepakevich later wrote: “I dislike the way I phrased the second sentence . . . ”... misguided and outdated” - I’ve painted it a bit too black and white, too negatively. . . . . The piece could perhaps be used to think about what it is to try and reproduce a piece of music from a score - how possible it is to repeat a piece or a performance and how a consideration of these questions might impact an approach to pedagogy and performance.” Shane Krepakevich, <fskrepakevich@gmail.com>. “Document chapter.” Private e-mail message to Rebecca Danard, 22 June 2011.
inaudible and invisible. By making these gestures part of the piece, Krepakevich demonstrates how they can have an impact on the performance. Similarly, he allows clarinetists to show and use stage fright as part of their performance. In learning how to show their nervousness in this piece, the students may learn how to control it in other contexts.

Glissando has been used frequently in standard clarinet repertoire of the twentieth century such as Copland’s *Clarinet Concerto*, Bernstein’s *Sonata for Clarinet and Piano* and perhaps most famously in the opening of Gershwin’s *Rhapsody in Blue*. Learning to play the relatively short and easy glissandos in Krepakevich’s “Sometimes Doing Nothing Leads to Something” will prepare the clarinetist for these works. Furthermore glissando is idiomatic in jazz and klezmer music; learning this technique will be an asset for players who wish to pursue these styles.

23 Aaron Copland, *Concerto for Clarinet and String Orchestra (with Harp and Piano)* (London: Boosey & Hawkes, 1950) 27.


Chapter 5: Multiphonics, Chan Ka Nin’s “Speak Out”

Chan Ka Nin: the Composer and Compositional Process

Chan Ka Nin’s “Speak Out” uses the extended technique of multiphonics. Chan was born in Hong Kong, but moved with his family to Vancouver in 1965. His music has been performed by all of the major Canadian orchestras and he has won two Juno awards for Best Classical Composition with “Among Friends” in 1992 and “Par-çi, par-là” in 2002. Chan has been teaching composition and theory at the University of Toronto since 1982. Chan has written many works for the clarinet: “Three Movements For Clarinet and Piano” (1978), later transcribed for clarinet and percussion (1979); “The Disquiet” (1990) for clarinet, violin, cello, and piano; three works for the Amici Ensemble (Joaquin Valdepeñas, clarinet, David Hetherington, cello, and Patricia Parr, piano), “Among Friends” (1989), “I think that I shall never see...” (1993), and “Our Finest Hour” (1999); “Nature / Nurture” (2002) for the Estria Wind Quintet and marimba; and “Sound of Sound” (2002) for clarinetist James Campbell and percussionist Beverley Johnson. “Speak Out” is Chan’s only work for solo clarinet and I am particularly honoured that he wrote it for me.

Extended techniques are an integral part of Chan’s clarinet writing. Pitch bending and flutter

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4Chan Ka Nin, “Three Movements for Clarinet and Percussion,” score, 1979, Canadian Music Centre, Toronto.
7Chan Ka Nin, “I think that I shall never see...,” score, 1993, Canadian Music Centre, Toronto.
tonguing appear frequently throughout his works; he also uses key clicks, timbre trills, singing while playing, vibrato, staging and costumes, and moving while playing. Chan used multiphonics in three of his clarinet works before “Speak Out”. It is interesting to trace the development of his use of this technique. “Three Movements” (1978) uses three different multiphonics as shown in Example 5.1

Example 5.1a: Multiphonic after rehearsal F in the second movement of “Three Movements.”

Example 5.1b: Multiphonic before rehearsal G in the second movement “Three Movements.”

Example 5.1c: Multiphonic before rehearsal I in the third movement of “Three Movements.”

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12 Ibid., 24.
13 Ibid., 12; Chan Ka Nin, “Our Finest Hour,” 1; Chan Ka Nin, “Sound of Sound,” 9.
15 Chan Ka Nin, “I think that I shall never see....”
16 Ibid., 25.
18 Ibid.
19 Ibid., 13.
The multiphonic in Example 5.1c produces the written notes and is possible to play; however, the fingering is awkward because of the half holed thumb, and it is difficult to balance all the pitches. The multiphonic in Example 5.1a derives from an alternate fingering for C which precedes it. It is difficult to maintain upper and lower pitches simultaneously and I can’t get the middle pitches to sound at all. The multiphonic in Example 5.1b is the most problematic. The given fingering produces the notes A3, E5 and C#6, which are obviously not the written pitches. I have not been able to find a fingering that produces the combination of notes that Chan wrote. Furthermore, the archival recording of the piece at the Canadian Music Centre clearly uses the multiphonic fingering, not the written pitches.\footnote{Chan Ka Nin, “Three Movements for Clarinet and Percussion,” online audio recording (Toronto: Canadian Music Centre, November 1982), http://www.musiccentre.ca/apps/index.cfm?fuseaction=score.FA_dsp_details&bibliographyid=24195&dsp_page=1 (accessed December 1st, 2010).} In “Three Movements” Chan’s use of multiphonics is musically successful, but not easy for the performer to interpret and execute.

Chan’s next piece that used multiphonics is “Our Finest Hour” (1999), composed more than twenty years after “Three Movements.” In this piece, Chan uses the same multiphonic (Example 5.2) three times.

Example 5.2: The multiphonic used in “Our Finest Hour” m. 22, m. 50, and m. 114.\footnote{Chan Ka Nin, “Our Finest Hour,” 2, 6, 12.}

![Example 5.2: The multiphonic used in “Our Finest Hour” m. 22, m. 50, and m. 114.][1]

Although perhaps less venturesome than the sounds used in “Three Movements,” this multiphonic is more successful. In performance, the C# tends to be flat and D tends to be sharp, but the pitches are accurately notated. The fingering is not awkward, and the multiphonic speaks easily over a wide dynamic range. Furthermore the context in which Chan uses the multiphonic – after a bar of rest, a long...

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[1]: #
note or a note with a similar fingering – facilitates successful sound production.

Other than in “Speak Out” Chan makes the most extensive use of multiphonics in “Sound of Sound” (2002).22 The clarinetist James Campbell, for whom the piece was written, runs the Festival of the Sound in Parry Sound, Ontario where the work was premiered. The title is a reference to this town and this festival. Chan writes:

In this piece, I tried to create a personal language to describe nature. The clarinet pitches are, in general, bent microtonally because my observation is that nature’s sound is not necessarily discreet–as defined by the keyboard. Natural sound is rather complex, multiphonics on the clarinet are sometimes employed to simulate such sound.23

As shown in Example 5.3, Chan’s use of multiphonics in “Sound of Sound” is in many respects similar to “Speak Out.”

Example 5.3: A typical multiphonic passage from “Sound of Sound” mm. 85–8.24

With the exception of the first one, all of the multiphonics in this passage are also found in “Speak Out.” This is the first time that Chan uses several multiphonics in a row – a technique he continued to employ in “Speak Out.” He also introduces the idea of bending multiphonics, which he subsequently pursued in “Speak Out.” Since pitch bending and multiphonics both require flexibility and control of the oral cavity, bending multiphonics is a natural progression for the technique. Example 5.4 shows another use of multiphonics in “Sound of Sound” that is not developed in “Speak Out.”

22 Chan Ka Nin, “Sound of Sound.”
23 Ibid.
24 Ibid.

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Example 5.4: Passage with subtones from “Sound of Sound” mm. 117–20.\textsuperscript{25}

In this passage, the multiphonic is achieved by allowing the subtone of an upper note to speak. Because the regular fingering of the higher note is used, the passage is easier to finger, but more difficult to maintain the multiphonic, particularly at louder dynamics.

The journey of “Speak Out” has been to make the relatively difficult technique of multiphonics accessible to the average undergraduate. In approaching this technique, I started with W.O. Smith’s list of multiphonics\textsuperscript{26} in which he rates the difficulty, describes the tone quality and gives the suggested dynamic range for each multiphonic. I played through all of them myself to test Smith’s assessment. At this point, I had relatively little experience playing multiphonics; I decided that any sound I could produce easily and immediately, the average undergraduate could learn to do with practice. I sent the list of suitable multiphonics to Chan, but he wisely wanted to hear what they actually sounded like before writing the piece. Unlike, for example, chords on a stringed instrument, each clarinet multiphonic has distinct timbre, tuning and dynamic possibilities.\textsuperscript{27} Thus two multiphonics involving the same pitches may have very different sounds, as in Example 5.5.

Example 5.5: Two multiphonics with the same pitches, but having different tuning and timbre.\textsuperscript{28}

\begin{itemize}
  \item \textsuperscript{25}Ibid.
  \item \textsuperscript{26}W. O. Smith, “Smith’s Multiphonics,” appendix in \textit{New Directions for Clarinet}, by Phillip Rehfeldt (Berkeley: University of California Press, 1977), 89-110.
  \item \textsuperscript{27}Lawrence R. Singer, “Multiphonic Possibilities of the Clarinet,” \textit{The American Music Teacher} 24, no.3 (January 1975):14.
  \item \textsuperscript{28}W. O. Smith, “Smith’s Multiphonics,” 101-102.
\end{itemize}
In January 2008, I went to Chan’s house and we recorded samples of all the multiphonics on our list. This provided him with a database of multiphonic sounds to draw from. (Interestingly the composer William O. Smith and the clarinetist John Eaton used a similar collaborative process to derive this collection of multiphonics.29) During our session that day, we talked about circumstances under which a particular multiphonic would or would not speak. This gave Chan the inspiration for the title “Speak Out.”

In August 2008, Chan gave me the first completed version of the piece. I was delighted with the scope and energy of the work, but at the same time slightly dismayed by the virtuosity of the writing. The piece was long with many technical passages, and lots of other extended techniques. Furthermore the multiphonics were sometimes difficult to achieve at the indicated dynamic. I knew that, with time, I could learn to play the piece, but I feared it would be too challenging for my target undergraduate. With some trepidation, I approached Chan about making some changes to his piece. Fortunately, he was most accommodating and flexible in implementing my suggestions.

Some of the extraneous extended techniques we removed altogether, while others were made optional. The passages that used rapid figuration for effect, we made more free. Instead of specifying every note, as in Example 5.6a, it is left to the performer to “improvise on given notes” as in Example 5.6b.

Example 5.6a: “Speak Out” with all the notes specified mm. 5–7 (March 17th 2008).\textsuperscript{30}

Example 5.6b: “Speak Out” allowing the performer to improvise mm. 6–7 (December 8th 2008).\textsuperscript{31}

It is interesting that sometimes if the composer provides less specific information, it makes it easier for the performer to execute. Since Chan’s intentions are clear, the performer can be trusted to appropriately fill in the blanks. We also made some changes to the multiphonics to suit the dynamic context or changed the dynamic to suit the multiphonic. For example in m. 12, the original multiphonic did not speak at a forte dynamic so we chose to replace it with one more suitable for the peak of a crescendo as shown in Example 5.7.


Example 5.7a: “Speak Out” with the original multiphonic mm. 9–12 (March 17th 2008).\textsuperscript{32}

Example 5.7b: “Speak Out” with multiphonic which accommodates the forte dynamic mm. 9–12 (December 8\textsuperscript{th} 2008).\textsuperscript{33}

In mm. 19–20 we used a different solution by adding a decrescendo to allow the multiphonic to speak at a quieter dynamic (Example 5.8).

Example 5.8: “Speak Out” mm. 19–20.\textsuperscript{34}

One of our most significant changes was to break the piece into three movements. The movements may be played continuously or with a short pause between them so that the performer may take a mental and


\textsuperscript{34}Chan Ka Nin, “Speak Out,” December 2008, 2.
physical break. We also agreed on the option of performing fewer than all three movements. In the first movement “Fear” the multiphonics appear at first tentatively; they gain strength in the second movement “Audacity.” In the third movement “Affirmation”, the chords “speak out” loudly both as multiphonics and in their arpeggiated form. Even with these changes, “Speak Out” remains one of the more difficult pieces I have received as part of this project. Since multiphonics are one of the more challenging techniques it seems appropriate that the piece featuring them should also be more difficult.

In 2009 Chan created yet another version of “Speak Out.” The new version, “Out Spoken,” is for clarinet and string quartet. The clarinet part is virtually identical in both pieces while the strings sometimes interrupt and sometime accompany the clarinet. The version with string quartet is written for professional players, not for students. To play “Out Spoken” the clarinetist must precisely coordinate tuning and timing of the multiphonics with the strings – neither of which skills were necessary for “Speak Out.” Furthermore, because the string parts are challenging and contain several extended techniques, it is unlikely that the average student clarinetist could find a quartet willing and able to play the piece. This problem is not unique to students, which is why I have not yet been able to perform “Out Spoken.”

_Multiphonics: the Technique_

Of all the extended techniques, multiphonics are among the best documented. In the early 1960s William O. Smith was the first to investigate clarinet multiphonics, after hearing similar sounds on the flute in Berio’s _Sequenza_. Since that time, textbooks ostensibly covering a variety of extended techniques have devoted a disproportionate amount of attention to multiphonics. Examples include Bruno Bartolozzi’s _New Sounds for Woodwind_ (1967; second edition 1982)\(^\text{37}\), Phillip Rehfeldt’s _New Directions for Clarinet_, 2d ed. (Berkeley: University of California Press, 1994), 99.

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Directions for Clarinet (1978, revised 1994)\textsuperscript{38}, Ronald Caravan’s Preliminary Exercises & Etudes in Contemporary Techniques for Clarinet: Introductory Material for the Study of Multiphonics, Quarter Tones & Timbre Variation (1979)\textsuperscript{39} Gerald Farmer’s Multiphonics and Other Contemporary Clarinet Techniques (1982)\textsuperscript{40} and E. Michael Richards’s The Clarinet of the Twenty-First Century (1992)\textsuperscript{41}. There is even an online resource designed and created by Nicolas del Grazia which not only covers the acoustical theory and practicing tips for multiphonics, but also includes a database of fingerings complete with sound clips.\textsuperscript{42} These works provide fingerings and attempt to classify and categorized the multiphonics by harmonic structure, ease of production, dynamic range, response, stability, timbre, texture, and/or arpeggiation. Since none of the authors use the same classification system and the distinctions between categories are somewhat arbitrary, I have chosen not to discuss multiphonics in categories. Some authors (e.g. Caravan) include sounds produced by singing while playing as multiphonics. This is technically correct since more than one pitch is produced simultaneously. On the other hand, the method in which the sound is produced and the acoustic possibilities of singing while playing are completely different from other multiphonics. Therefore I, like Refeldt, have chosen to treat singing while playing as a different technique and in a different piece – Lori Freedman’s “All Good Children”\textsuperscript{43}, discussed in Chapter 6.

The wealth of information in the Bartolozzi, Farmer, Rehfeldt and Richards can be overwhelming; therefore they are better used as references for finding fingerings than as teaching tools.

\textsuperscript{38}Philip Rehfeldt, New Directions for Clarinet.


\textsuperscript{40}Gerald Farmer, Multiphonics and Other Contemporary Clarinet Techniques, (Rochester, NY: SHALL-u-mo Publications, 1982).


\textsuperscript{42}Nicolas del Grazia, “Clarinet Multiphonics,” http://www.clarinet-multiphonics.org/ (accessed September 18\textsuperscript{th} 2010).

\textsuperscript{43}Lori Freedman, “All Good Children,” score, 2009, Rebecca Danard personal collection, Ottawa.
For a student learning to play multiphonics, there are better options: for example Caravan’s *Preliminary Exercises & Etudes in Contemporary Techniques for Clarinet: Introductory Material for the Study of Multiphonics, Quarter Tones & Timbre Variation.* Caravan provides a variety of exercises to develop multiphonic technique including approaching multiphonics from the clarion and fundamental registers, attacking multiphonics directly, connecting multiphonics and linking multiphonics with single tones. He also provides six short etudes that place multiphonics in a musical context. Since he considers singing while playing as a multiphonic technique, these etudes include this method as well as more standard multiphonic technique.

**Learning and Teaching “Speak Out”**

I approached learning this piece and its multiphonics in three steps: playing the multiphonics individually, approaching and leaving the multiphonics, and playing the multiphonics within the context of the whole piece. Chan provides fingerings for all of the multiphonics he uses. This is common practice for multiphonic notation and the most practical for the performer, because, as described above, multiphonics with the same pitches can have very different timbres and tunings. When learning a new multiphonic, I always begin by playing the notes of the multiphonic with the regular fingerings. Having the pitches and the intervals in the “mind’s ear” ahead of time lets me hear what sounds I am trying to achieve. Next I try to achieve each pitch of the multiphonic individually, using the specified fingering. It is helpful to know which pitches are more prominent so that necessary adjustments to balance can be anticipated. I move between the pitches, noticing the embouchure

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44Ronald Caravan, *Preliminary Exercises & Etudes in Contemporary Techniques for Clarinet.*


46Ibid., 34-42.


changes that are required to move from one to the next. An embouchure somewhere between the highest and lowest pitch usually works to produce the pitches simultaneously. It is usually necessary to adjust the embouchure to balance the notes of the multiphonic; experimenting with jaw pressure, throat position and air speed will change the results. Multiphonics are relatively consistent in pitch and timbre on different equipment, so that the make of instrument, mouthpiece or reed type does not affect the qualities of the multiphonic.  

On the other hand, many multiphonics require a good seal to work effectively; therefore adjusting the alignment of the clarinet and keeping the instrument well-maintained will sometimes be the key to solving multiphonic problems.

Most of Chan's multiphonics use only two notated pitches, but because of the nature of clarinet multiphonics, there may be other harmonics present in the sound. The notated pitches, however, should be the most prominent. In the third movement “Affirmation” Chan takes advantage of the rich harmonic spectrum above written E3, the lowest note of the Bb clarinet.

Example 5.9: The harmonic spectrum above E3 in “Speak Out” mm. 104–5.

The performer starts on the fundamental and arpeggiates the harmonic spectrum from the 5th through the 7th, 9th, 10th up to the 11th partial. In this case the notes of the multiphonic are sounded sequentially...

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50Phillip Rehfeldt, “Some Recent Thoughts of Multiphonics,” The Clarinet 4, no. 3 (January 1977): 21. There is some scholarly disagreement about this point. In his article “Multiphonic Possibilities of the Clarinet” Lawrence Singer contends that two clarinet of the same model but a different manufacturer do not produce the exact same multiphonics (p. 16). It has been my experience that any differences between models are so slight as to be negligible.


52The 10th partial is achieved as an overtone of the 5th partial. Normally, of course clarinet sound is characterized by odd number partials only.
rather than all simultaneously and the pitch is changed through embouchure and air adjustments, not fingering changes. The higher partials are closer together and less tied to equal tempered tuning. The pitches can also be significantly raised or lowered by embouchure adjustments. Therefore to produce the pitches that Chan has written, the clarinetist must listen and adjust. Adding a $D^\natural$ to the pitches of the multiphonic produces a pentatonic scale. When this scale bursts forth from the multiphonic, it is far more effective if the multiphonic is in tune. One other instance in which Chan uses sequential harmonics above the consistent fundamental occurs in mm. 130–2.

Example 5.10: Trill between harmonics of a multiphonic in “Speak Out” mm. 130–2.  

![Trill between harmonics of a multiphonic in “Speak Out” mm. 130–2.]

In this case the change between harmonics begins slowly and increases in velocity to eventually become a trill. Since the alternation of harmonics is done with the embouchure not the fingers, it is challenging to do quickly, but the faster the changes the better the effect.

The next step is to practice approaching the multiphonic in the context of the piece. The player must not only remember the unfamiliar fingering, but also anticipate the sonority and the embouchure feel for each multiphonic before the sound is produced. One of the challenges is to avoid a hesitation before the multiphonic, particularly if it is approached by fast notes as show in Example 5.11


Example 5.11 Multiphonics approached by fast notes in “Speak Out” mm. 99–102.\textsuperscript{55}

Chan has facilitated this by making the multiphonics generally longer in duration. If the both notes do not speak immediately, there is time to adjust and allow the multiphonic to emerge. In the passage shown in Example 5.12, he even indicates which note should speak first.

Example 5.12: Chan indicates which note of the multiphonic speaks first in “Speak Out” mm. 117–8.\textsuperscript{56}

As discussed above, Chan uses sequences of multiphonics idiomatically. It is possible to move from one to the next in the dynamic context with minimal adjustments to the embouchure. Chan frequently approaches or leaves a multiphonic from a single pitch contained within the multiphonic.

Example 5.13: Leaving and approaching a multiphonic from a single pitch in Chan’s “Speak Out” mm. 52–4.\textsuperscript{57}


\textsuperscript{56}Ibid.

\textsuperscript{57}Ibid., 3.
In most of these cases I have chosen to use the multiphonic fingering to produce the single pitch that precedes or follows the multiphonic. This not only makes a smoother transition into the multiphonic, it also better matches the pitch and timbre. Unlike “normal” clarinet playing, this requires the air pressure and the embouchure to change independently of the fingers in order to move from the single pitch to the multiphonic and back again.\textsuperscript{58} In the passage shown in Example 5.14, I chose to use the regular rather than the multiphonic fingering for the G.

Example 5.14: Chan “Speak Out” mm. 49–50.\textsuperscript{59}

\begin{figure}
\centering
\includegraphics[width=\textwidth]{example5.14.png}
\caption{Example 5.14: Chan “Speak Out” mm. 49–50.}
\end{figure}

Because of the breath mark and the repeated Gs following the multiphonic, I switch to the regular G fingering, while maintaining as much as possible the timbre and tuning of the G in the multiphonic. Choosing a reed to play Chan’s piece is another challenge. Multiphonic responses more freely with a lighter, more flexible reed.\textsuperscript{60} On the other hand, “Speak Out” has many high register passages with leaps and articulation that would have a “better” sound with a harder reed. Since multiphonics are the reason d’être of the piece, I have chosen to compromise somewhat on sound quality to allow the multiphonics to “speak out” at their best.

Many of the multiphonics in “Speak Out” produce harsh and dissonant sounds. The variety of timbres are musically expressive but not always “pretty” in the conventional sense. With the technical demands of the piece and the technique it can be tempting to neglect tone quality. I try to achieve the same integrity of sound as in standard repertoire. For example, before beginning “Speak Out” I always

\textsuperscript{58}Lawrence R. Singer, “Multiphonic Possibilities of the Clarinet,” 14.


think of the calm and placid beauty of the second movement of Mozart’s *Clarinet Concerto*. I find that preparing the air, the embouchure and the mental sound image of the Mozart puts me in the right frame of mind to play “Speak Out.” The idea is not to stifle the natural timbre of the multiphonics, but rather to embrace their own particular beauty and allow them to “Speak Out.”

Practicing multiphonics can improve other aspects of musicianship and clarinet playing. To play multiphonics successfully the performer must have a clear aural concept of the sound he is trying to produce.\(^{61}\) Hearing and tuning multiple pitches simultaneously is not something that clarinetists usually practice with their instrument, but doing so in the context of multiphonics will improve this ability in other situations. Achieving flexibility in the oral-cavity and tongue position is another benefit of multiphonics. Grazia notes that the ability to play glissando helps with multiphonics because both require the ability to control the inside of the mouth. The gradual change of the tongue from the vowel EEEE to AAHH creates a glissando which eventually breaks into a multiphonic.\(^{62}\) Thus these two techniques – glissando and multiphonics – each help to improve the other.

In his article “Expanding Timbral: Flexibility Through Multiphonics” Eric Mandat illustrates how practicing multiphonics can solve the common problem of subtones in the upper clarion register. Due to a slow air stream or a poorly supported embouchure, novice clarinetists often produce the fundamental as a “grunt” before the desired third partial in this register. Mandat suggests deliberately slowing the air and softening the embouchure until only the fundamental is produced, though with the upper register fingering. By gradually increasing the air speed and firming the embouchure the player can achieve first the multiphonic and then the pure upper partial. This exercise gives the player the feeling of the air speed and embouchure needed to achieve each sound.\(^{63}\) I have used this technique successfully with students. The same control of jaw pressure, embouchure configuration, tongue


\(^{62}\) Nicolas del Grazia, “Clarinet Multiphonics.”

position and air support needed to play multiphonics allows the performer to explore the timbral possibilities of the clarinet. Another Mandat exercise can be used to develop a focused tone at a quiet dynamic. It is sometimes difficult for a student to hear whether or not a soft sound is well focused. Some multiphonics have an inherent breathiness that produces an audible hiss when the air is unfocused; as the air becomes focused this hiss is perceptibly reduced. If the student can reduce the hiss in the multiphonic, then he or she can also use the same method to focus the air for single pitches. Thus practicing multiphonics can give the player not only timbral flexibility but also a more supported sound.

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64Ibid., 29.
Chapter 6: Vocalization while Playing, Lori Freedman’s “All Good Children”

Lori Freedman: the Composer and the Compositional Process

Lori Freedman is a Montreal-based freelance and independent clarinetist, improvisor and composer. She plays written and improvised music for contrabass, bass, A, Bb, C and Eb clarinets, ranging in settings from orchestra and concerti, to chamber ensemble and solo. She also works with fixed format and live processed electronics. She writes concert music as well as for dance, film and theatre and performs in all of these arenas both live on stage and in the recording studio. She frequently performs her own music as well as music written for her by other composers. In addition to touring extensively, she teaches contemporary and improvised music for all instruments internationally and at McGill University in Montreal.¹

I became familiar with Freedman’s work though her recordings. À un moment donné consists of thirteen of Freedman’s improvised pieces for clarinet and bass clarinet.² For Freedman, extended techniques are not out of the ordinary, but a natural part of her music making. Her creative use of sounds and expressive range of timbres is truly extraordinary and convinced me that I wanted her to participate in this project. The pieces that Freedman has written for herself lie somewhere between composition and improvisation. When writing music to be performed by another, the composer must either try to notate every nuance or accept that the performer will interpret what is written according to his or her knowledge and experience. In writing for herself Freedman does not need to make this compromise; she only needs to notate enough to remind herself of how she wants the music to sound. The advantage is that her music is never limited by what can easily be notated. The disadvantage of this is that much of her music is not necessarily easy for others to interpret and perform. On the other hand,


²Lori Freedman, À un moment donné, Ambiances Magnétiques AM103, 2002, CD.
“All Good Children,”¹ the piece that Freedman wrote for this project is for students and therefore has very clear notation. She uses the extended technique of vocalization while playing – a technique she uses often in her own work. She notates pitches that are sung with an x through the notehead; these notes are frequently doubled in unison with the clarinet.

Although in “All Good Children” the only extended technique is vocalizing while playing, her other works, such as “Brief Candles” for bass clarinet, frequently combine vocalizations with other extended techniques. In Example 6.1 she uses the voice in a slow descending glissando over two octaves.

Example 6.1: Vocal glissando in “Brief Candles.”⁴

Since it uses only the voice, this type of glissando is actually easier to execute than a glissando on the clarinet or bass clarinet. In Example 6.2, she combines vocalization with a “witchy key wiggle”.

Example 6.2: “Witchy key wiggle” in “Brief Candles.”⁵

One might expect that this is some kind of key noise sound, but the recording reveals that it is actually a timbre variation achieved by singing and playing high notes on the bass clarinet while wiggling keys to subtly affect the pitch.⁶ Freedman uses both double tonguing (Example 6.3) and flutter tonguing (Example 6.4) in combination with vocalization.

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³Ibid.
⁴Lori Freedman, “Brief Candles,” Bridge, Collection QB CQB0909, 2009, CD.
Example 6.3: Double tonguing with vocalization in “Brief Candles.”

Example 6.4: Flutter tonguing (fltz) tonguing with vocalization in “Brief Candles.”

These techniques are particularly difficult because the tongue placement must accommodate not only the singing and the playing but also the multiple articulation. However, “All Good Children” requires only simple single tonguing.

Freedman’s original version of “All Good Children” is for bass clarinet and female vocalization – a configuration she often uses in her own improvisations. The prevailing texture is the bass clarinet and the voice in unison. In the performance notes Freedman writes:

From beginning to end all “normal” notes should, at the performer’s discretion, be in “unison” with voice i.e. half played, half sung. Voice should be fragile and breathy creating slight disturbances to the bass clarinet sound.

For the purposes of this project, however, I wanted to make the piece accessible to students who do not have a bass clarinet. The tessitura of Freedman’s bass clarinet writing is very high (Example 6.5a), which could also pose a challenge for a student bass clarinetist, but by transposing it down an octave, it can be played on the Bb clarinet (Example 6.5b).

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7Lori Freedman, “Brief Candles,” score, 2.

8Ibid., 3.

9Lori Freedman, “All Good Children,” score.
Example 6.5a: “All Good Children” (mm. 14–9) for bass clarinet and female voice. Note that the voice, like the bass clarinet is written in Bb and sounds one octave lower than notated.¹⁰

Example 6.5b: “All Good Children” (mm. 14–9) transposed for Bb clarinet and female voice.¹¹

Since every note in the piece should be at least partially sung, adjustments also had to be made to accommodate the male vocal range. There were two options that I could think of to make the piece accessible for male performers. The first option is to maintain the relationship between the voice and the instrument, but to transpose the whole piece down an octave (Example 6.5c).

Example 6.5c: “All Good Children” (mm. 14–9) with both the bass clarinet and the voice part transposed down one octave for the male voice.¹²

The second option is to keep the clarinet pitches as written, but transpose the voice part down the octave. This would mean that, for most of the piece the voice would be doubling at the octave rather than at the unison (Example 6.5d).

¹⁰Ibid.
¹¹Ibid.
¹²Ibid.
Freedman was most willing to consider the possibility of playing “All Good Children” on the clarinet and making adjustments for the male vocal range. She wanted the clarinet and the voice to sound in the same octave regardless of the instrument being played or the vocal range of the performer. Therefore both the bass clarinet and the clarinet versions of the piece should be transposed down one octave for the male performer as in Example 6.5c. This creates a slight problem on the clarinet because concert Db3 – the lowest note in “All Good Children” – is not available on the Bb clarinet. Since it is available on A clarinet the male voice with clarinet version is written for this instrument (Example 6.5e).

Example 6.5e: “All Good Children” (mm. 14–9) transposed for A-clarinet and male voice.

Example 6.6 shows the vocal ranges needed to play “All Good Children”. The notes in parentheses indicate notes that may be doubled with the voice, but need not necessarily be sung.

Example 6.6: The female (treble clef) and male (bass clef) vocal ranges of “All Good Children”

With the transpositions for male voice, “All Good Children” is technically within the vocal range of most voice types. In practice, however, the range of “All Good Children” may not always be

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13Ibid.

14Lori Freedman <freelori@cooptel.qc.ca>, “All Good Children”, private e-mail message to Rebecca Danard, 6 February 2011.

15Lori Freedman, “All Good Children,” score.
comfortable, particularly for the untrained singer. This is precisely Freedman’s intention. She writes “It is very nice to sometimes here a voice “straining” to match the clarinet and I personally have always found that such an “exercise” pushes my vocal range in a positive way!”

**Vocalizing while Playing: the Technique**

Before composers began using vocalization with woodwind playing in avant-garde concert music, it appears in other musical contexts. Combining vocal and instrumental sounds is a feature of many traditional cultures around the world. Vocalizing an unspecified drone while playing a melody to produce a “growl” or “buzz tone” is also standard technique for woodwind players in a jazz idiom. To explore these roots in depth is beyond the scope of this paper, but a knowledge of this music would enrich the performer and the teacher’s understanding of this technique.

Since vocalizing while playing creates two pitches simultaneously on the clarinet, some authors have linked this technique with fingered multiphonics. On the other hand, the technique and sounds produced are so different that I decided to treat them separately. The piece in this collection using fingered multiphonics is Chan Ka Nin’s “Speak Out”. Unlike a fingered multiphonic which is restricted to the harmonic overtones of the clarinet, almost any interval is available through vocalization. Furthermore the intervals can be much more easily tuned by adjusting the pitch of the vocalization. Because the vocal and played lines can operate independently, using vocalization is much more suitable for producing counterpoint than are fingered multiphonics. Melodies can be played in harmony or in canon with the voice. On the other hand, some effects that can be played with fingered multiphonics are limited by the overtone series of the clarinet.

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16Lori Freedman, “All Good Children,” private e-mail message.


multiphonics are not possible with vocalization. Obviously it is restricted by the vocal range of the performer. As discussed above, this presents a problem for composers who wish to write vocalizations that will work for both male and female clarinetists. Fingered multiphonics can produce more than two pitches whereas the vocalization can only sound two: the sung pitch and the fingered pitch. Each fingered multiphonic is associated with a particular timbre and dynamic range. The timbre and dynamics of vocalization can be controlled independently from the pitch content.

Although not the most difficult of techniques, vocalizing while playing may be intimidating for many performers. Fortunately, singing while playing does not require a deep knowledge of vocal technique or a particularly well developed voice to be effective.\(^\text{21}\) The voice is the most basic and natural form of expression, but as clarinettists we tend to use our instrument to replace the voice. Playing the clarinet feels comfortable, whereas singing can make us feel self conscious or vulnerable. Once the performer is accustomed to singing while playing, however, he or she may also be able to access other forms of expression.\(^\text{22}\)

One of the challenges of this technique is to get used to the sensation of singing and blowing through the instrument simultaneously. Singing most often demands a wide open mouth, a low tongue and a relatively diffuse air stream, whereas the standard clarinet embouchure with a small mouth opening, a high tongue and very focused air. In vocalizing while playing the size of the mouth opening and the focus of the air cannot be compromised. Dropping the front of the tongue while keeping the back elevated allows the vocal sound to project and resonate better, while maintaining the focus of the clarinet sound. To sing and play simultaneously requires the throat muscles to be relaxed;\(^\text{23}\) therefore, it is a good way to recognize and eliminate throat tension.

A methodical approach to learning to vocalize while playing will give the performer confidence.


\(^{22}\)Ibid.

\(^{23}\)Philip Rehfeldt, New Directions for Clarinet, 2d ed. (Berkeley: University of California Press, 1994), 68.
It is useful to begin a practice session with a vocal as well as an instrumental warm up. Experimenting with different vowel sounds promotes awareness of how tongue placement affects vocal sounds. The next step is to practice singing with the clarinet in the mouth and the embouchure formed; this helps to maximize vocal projection despite the impediment of the clarinet. When first starting this technique it is best to sing in unison with the played pitch. I practiced shifting back and forth between an entirely played and an entirely sung pitch. The next exercise is to sing a drone while changing played notes and to play a drone while changing the sung intervals. As shown in Example 6.7, Caravan’s *Preliminary Exercises & Etudes in Contemporary Techniques for Clarinet: Introductory Material for the Study of Multiphonics, Quarter Tones & Timbre Variation* provides additional useful exercises, but they are in the low chalumeau register and geared for the male vocal range.

Example 6.7: Caravan vocalization exercises in the low chalumeau register.

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Because less air is required, vocalization while playing is easier in the chalumeau register and a quiet
dynamic.\textsuperscript{27} Singing while playing is most challenging when both parts are high, since the upper register
of the clarinet requires a tighter embouchure and a more closed throat.\textsuperscript{28} While most men would be
comfortable singing in unison with the chalumeau register, this is very low for most women. The
clarion register aligns better with female vocal range, but it also requires more air to produce. The
female vocalizer is at a disadvantage because her natural vocal range is not as easy to produce on the
clarinet while singing. I found that the easiest range is the throat register because it is within my vocal
range and does not need as much air to produce. This is the register that Gerald Farmer uses for his
exercises, as shown in Example 6.8.

Example 6.8: Gerald Farmer’s vocalization exercises.\textsuperscript{29}

\begin{equation}
\text{Parallel motion}
\end{equation}

\begin{equation}
\text{Contrary motion}
\end{equation}

\begin{equation}
\text{Chromatics}
\end{equation}

\textsuperscript{27}F. Gerard Errante, “Contemporary Aspects of Clarinet Performance,” Woodwind Brass & Percussion 16, no 1

\textsuperscript{28}Gerald Farmer, Multiphonics and Other Contemporary Clarinet Techniques (Rochester, NY: SHALL-u-mo
Publication, 1982), 16.

\textsuperscript{29}Ibid., 18-9.
When transposed for Bb clarinet much of “All Good Children” falls within this range. Since both the vocalization and the clarinet playing are heard by the performer partially through bone conduction, it is difficult to observe and judge balance. In my experience, what sounds to me like very loud singing is actually heard at a relatively moderate dynamic by the audience. It is easy for the vocal sound to be covered by the clarinet sounds which projects much more easily. As with any musical endeavour, recording oneself provides a more objective perspective.

**Learning and Teaching “All Good Children”**

The first choice for the performer of “All Good Children” is whether to play it on Bb/A or bass clarinet. Some aspects of vocalizing while playing are easier on the bass clarinet. The mouth is open wider and there is less muscle tension in the embouchure. On the other hand, the bass clarinet generally requires more air than the clarinet. Furthermore, the extremely high register used in “All Good Children” can produce an beautiful ethereal timbre, but it is not easy to control. These notes are particularly sensitive to changes in tongue placement, air speed and embouchure shape; it is easy to drop down to a lower partial or pop up to a higher one with minute adjustments. Since vocalizations modify all of these factors, it is difficult to reliably produce the correct partial when playing these notes while singing. When transposed to for Bb clarinet, the register the notes are played in is much more forgiving and therefore more stable when mixed with vocalization. For almost all clarinetists, the Bb clarinet is the primary instrument and the bass clarinet a secondary one, hence the Bb clarinet is more comfortable for trying new techniques. Perhaps the most compelling motive for favouring the Bb version is that many students do not have regular access to a bass clarinet. For all of these reasons, I would recommend learning “All Good Children” first on Bb/A clarinet, before attempting it on the bass. The examples in the discussion below are drawn from the Bb-female voice version. Many of the struggles and strategies, however, are similar on the bass clarinet and with the male voice.

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31 Ibid.
As described above, most of “All Good Children” uses the clarinet and the voice in unison. Singing in unison with the clarinet is the easiest way for beginners to start to vocalize because they only need to match the pitch with their voice, not find it independently. When learning the piece I first played through the phrase without singing, then sang the phrase while fingering but not playing, and finally sang and played together. Many subtle adjustments can be made to the unison voice and clarinet texture by, for example, fluctuating the balance of the voice and the instrument suddenly or slowly over the course of a long note or phrase. Since most of “All Good Children” is written at a soft dynamic, it is easier to play with these nuances. At a loud dynamic it is necessary to sing a full volume all the time just to make the effect audible. Another timbre results from singing very slightly sharp or flat to the played pitch. This creates interesting beats which can be increased or decreased by adjusting the sung pitch. The slow tempo and sustained notes gives the performer time to explore these possibilities, but may also be challenging to sustain the line. Some players find that breath control is reduced due to singing while playing.\textsuperscript{32} Since Freedman provides ample breath marks and rests, these should be adhered to. Practicing with a metronome subdividing eighth notes encourages more accurate rhythm and decreases the temptation to “cheat” the long notes.

Having mastered the unison texture, the next step is to learn to sing and play different notes. It is important to anticipate the vocal line in the mind’s ear. While it is necessary to hear the vocal pitch to sing it accurately, the played pitch will usually be correct if the right fingering is used. For instances in Example 6.9, imagine the Ab descending to the G even when fingering the Bb.

Example 6.9: “All Good Children” m. 2.\textsuperscript{33}

I found it useful to practice with an intermediate stage, singing and playing the G before changing

\textsuperscript{32}Gerald Farmer, \textit{Multiphonics and Other Contemporary Clarinet Techniques}, 17.

\textsuperscript{33}Lori Freedman, “All Good Children,” score.
fingerings to achieve the Bb-G dyad. Intermediate stages are definitely useful for practicing the parallel fifths in m. 16. (Example 6.10a).

Example 6.10a: Parallel fifths in “All Good Children” m. 16.\(^{34}\)

Here the note that is played in the first dyad is sung in the second dyad. Example 6.10b shows how this passage should be practiced with unisons between the dyads.

Example 6.10b: Practice exercise for the parallel fifths in “All Good Children.”\(^{35}\)

When singing different pitches from the ones played it is tempting to shape the embouchure towards the sung note rather than the played note. This results in either a split note or the wrong partial sounding. For example in 6.11, when playing the Bb do not lip it down towards the sung F, instead lip it lip so that a pure fourth is obtained.

Example 6.11: Maintain embouchure for pure fourth in m. 14 of “All Good Children.”\(^{36}\)

In “All Good Children” Freedman occasionally requires pitches to be only sung, not played. In Example 6.12 these pitches are an echo of the previous measure.

Example 6.12: Purely sung notes in m. 10 of “All Good Children” echo played notes in m. 9.\(^{37}\)

\(^{34}\)Ibid.

\(^{35}\)Ibid.

\(^{36}\)Ibid.

\(^{37}\)Ibid.
I use almost no voice in m. 9 to contrast with the all voice notes in m. 10. Although she does not specify, I have chosen to sing these notes through the clarinet. This gives a better match with the rest of the piece and means that the embouchure remains in place for the next played note.

Learning to sing while playing is not only a useful extended technique, it can also benefit a player’s ear training, intonation, embouchure control, breath control, tone production and awareness of bodily and instrumental resonance.\textsuperscript{38} Because combining vocal and instrumental sounds can produce such a rich diversity of timbres, pitches and textures it is a technique that encourages creativity and expression.\textsuperscript{39} Freedman writes:

\begin{quote}
[Vocalization] helps me play the clarinet better (more honestly) and while improvising it allows me to reach more exact intervals and pitches. While improvising I can’t say that I am overly conscious of pitches and their relationships to one another...my vocalizing seems to put my playing (and definitely improvising) in a more logical context.\textsuperscript{40}
\end{quote}

\textsuperscript{38}Jane A. Rigler, “Flute Vocalization,” 6.

\textsuperscript{39}Ibid.

\textsuperscript{40}Lori Freedman, “All Good Children”, private e-mail message.
Chapter 7: Key Sounds, Robert Lemay’s “Clap”

Robert Lemay: the Composer and Compositional Process

A native of Montreal, Robert Lemay currently teaches at Laurentian University and is president of the 5-Penny New Music Concerts in Sudbury Ontario. He has won numerous international awards including the International Competition Prize Luxembourg (2007), the Kazimierz Serocki 10th International Composers’ Competition (2006), the Harelbeke Muziekstad Wind Ensemble Competition in Belgium (2004) and the “El Ruiseñor Grave” in Buenos Aires (1998). His music, which often employs virtuoso performance techniques, is characterized by an imaginative and unconventional use of the concert hall space. The saxophone is dominant in his entire oeuvre; he has written for saxophone soloist and wind ensemble, saxophone ensembles, mixed chamber ensembles with saxophone, saxophone and piano, as well as unaccompanied saxophone.¹ His works for the instrument range from extremely virtuosic to pieces intended for students.

Lemay’s pedagogical saxophone works “B Film”², “Beat the drum”³, and “From the tip of the tongue to the tips of your fingers”⁴, were all composed in 1999 especially for young performers at college and university levels at the request of the Association des saxophonistes du Québec (ASQ). They were made possible with the financial assistance of the Conseil des Arts et des Lettres du Québec (CALQ). Lemay also wrote a set of eight easy pieces for saxophone quartet called “Un ciel variable pour demain.”⁵ It was these works together with Lemay’s use of extended techniques that convinced me that he would be a good choice for this project. Because the saxophone and the clarinet are both


⁴Robert Lemay, “From the tip of the tongue to the tips of your fingers,” score, 1999, Canadian Music Centre, Toronto.

single reed wind instruments, many extended techniques work in the same way on both instruments. Lemay’s experience writing for the pedagogical works using extended techniques for the saxophone were an asset writing a similar piece for solo clarinet. Lemay has also written solo and chamber works for clarinet. Particularly relevant to this project is “Relief” for solo clarinet written for Jean-Guy Boisvert in 2001.6

Lemay’s piece for my collection is “Clap”7 and his chosen technique is key sounds. He uses both pitched and unpitched sounds, both rhythmically and arrhythmically. “Clap” also uses other special effects such as speaking, stage directions, foot stamping, blowing air through the instrument, and hand pops. Many of these techniques appear in Lemay’s previous works for saxophone and for clarinet. “Clap” begins with the spoken words “And....Action” and ends with the words “And...Cut”; it seems clear that the title refers to the clapperboard used in filming movies.8 “B Film” for solo saxophone also relates to the movies. As shown in Example 7.1, it, like “Clap”, uses foot stamps, spoken words and pitched key sounds.

Example 7.1: Foot stamps, spoken words and key sounds in “B Film”9

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8Ibid.
Lemay explains that the “pad sounds” are produced by “hitting the keys in the low register so as to hear only the sound of the key pads”.10

As the title suggests there are many percussive sounds used in “Beat the drum.” Example 7.2 show a passages of pitched key sounds together with the fingerings and instructions Lemay provides.

Example 7.2: Pitched key sounds with fingerings in “Beat the drum.”11

Approx. 25 seconds

[Music notation diagram]

Pad sounds: Percussive sound produced by hitting the keys in the low register so as to hear only the sound of the key pads.

Fingerings for the pad sounds in the first measure. They must be played in order. Asterisk indicates which key must be “hit” to create the pad sound.

Interestingly Lemay provides much more specific information about the key sounds he wants in “Beat the drum” than he does in “Clap.” Perhaps this is because he is more familiar with saxophone fingerings than clarinet ones, or perhaps because he trusted me to provide the necessary explanations for students. Another characteristic of Lemay’s music that appears in both pieces is indeterminate repeats. In the case of “Beat the drum” he gives a timing (“Approx. 25 seconds”)12 but in “Clap” the length of the repeats are left to the performer’s discretion (see Examples 7.4, 7.10 and 7.14). One key effect that Lemay uses in “Beat the drum”, but not in “Clap” is to modify the sound by opening and closing the mouth around the mouthpiece, as shown in Example 7.3.

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10Ibid.
12Ibid.
Example 7.3: Modifying the key sound by opening a closing the mouth in “Beat the drum.”

Opening the mouth changes the sound and the pitch of the key sound. Lemay also uses an arrhythmic key rattle in this passage.

“Beat the drum”, “From the tip of the tongue to the tips of your fingers” and “Clap” all use movement and staging in a dramatic way. As shown in Example 7.2, to play “Beat the drum” the performer enters the stage “rhythmically as in a military march” while executing a rhythm with key clicks. In “Clap” the performer leaves the stage while doing hand pops, as shown in Example 7.4.

Example 7.4: Hand pops and stage motion in “Clap.”

“From the tip of the tongue to the tips of your fingers” does not have any key noises, but does have the most dramatic staging. The performer is asked to play with his or her back to the audience, turn from right

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13Ibid., 2.

14Ibid, 1.

to left and even make semi-circular motions with the saxophone.\textsuperscript{16} Lemay uses similar dramatic staging in his other solo clarinet work “Reliefs.” In addition to the movements found in “From the tip of the tongue to the tips of your fingers”, the performer turns in a slow circle while playing and moves between from five different positions on the stage while improvising short musical fragments. Improvisation III (Example 7.5), which is performed while moving from Position 3 on the far right of the stage to Position 4 on the far left of the stage, uses rhythmic unpitched key sounds.

Example 7.5: Key sounds used in Improvisation III of “Reliefs.”\textsuperscript{17}

In addition to movement and key sounds, “Reliefs” uses many other extended techniques such as quarter tones, timbre trills, glissandos, multiphonics, air sounds, vibrato, singing while playing and flutter tongue. All of these techniques, together with the difficulty of the “normal” clarinet playing make this piece unsuitable for most students, but it is a tour de force for virtuosic players to

\textsuperscript{16} Robert Lemay, “From the tip of the tongue to the tips of your fingers.”

\textsuperscript{17} Robert Lemay, “Reliefs,” 10.
demonstrate extended techniques.

Perhaps Lemay’s most comprehensive use of key noises is in “Possibilité de précipitation”, one of the eight easy pieces for saxophone quartet in the set “Un ciel variable pour demain.” Although these pieces are collected in a set, they are all independent and designed to be played individually. Many of them use extended techniques and interesting staging. In “Possibilité de précipitation” the saxophonists begin in the audience and improvise on their mouthpieces alone until they reach the stage where their saxophones are placed. The majority of the piece is performed on the saxophones without the mouthpiece attached; in fact the baritone saxophone player only plays six notes on the instrument at the very end of the piece. Most of the music is made up of percussive and vocal sounds including singing, tongue clicks, lip sounds, foot stops, whistling, air sounds, pad sounds and key noise. The majority of the piece is rhythmically notated, as in Example 7.6, but it begins with an improvised section for all four players show in Example 7.7. It is interesting that Lemay makes a distinction between “pad sounds” which produce pitched sounds and “key noise” that is purely percussive.

Example 7.6: Some of the rhythmic percussive and vocal sounds in “Possibilité de précipitation” mm. 13–6.

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19 Ibid., 41.
Key Sounds: the Technique

It is generally acknowledged that the first use of key noise was by Edgar Varèse in 1936 in his solo flute piece *Density 21.5*. Although it has remained among the less common techniques, it nevertheless appears in woodwind composition throughout the twentieth and twenty-first centuries. There are two types of sounds that can be made with the clarinet keys: pitched percussive sounds that result from forcefully closing an open hole with a finger or a pad, and unpitched percussive sounds that result from noise in the key mechanism. The range of pitches available through key clicks is much smaller than that of the clarinet. Adding the register key changes the pitch, but it does not move the

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20Ibid., 40.
percussive sound into a different register. The purest pitch is obtained when an open hole is hit with the finger and no other keys are moved. Since all but one of the holes on the clarinet has an attached ring, this pure sound may be obtained by depressing the ring before striking the open hole. Notes that are operated by keys always add the noise of the key to the pitched sound. Keys and rings that are used to close holes (e.g. low E and F) make a pitched sound when they are depressed and a percussive sound they are released. To obtain the pitched sound alone the key must be held down. As shown in Example 7.8, Lemay specifies this technique in the performance directions of “Beat the drum.”

Example 7.8: The final measure of “Beat the drum” including performance directions.

Because the end of this piece mimics an execution, it is important not to spoil the single percussive sound by releasing the keys. For keys that open holes (e.g. low Ab) the best sound is obtained by flicking the key so that the sound is created when the hole is re-closed by the pad.

As shown in Example 7.9, when the mouth is closed and the tongue is on the reed, the sound produced is the same pitch as when the fingered note is played normally; if the tongue is not on the reed or the clarinet is not in the mouth a higher pitch is obtained.
Example 7.9: Pitches obtained by key sounds using standard fingerings.

The pitch is created by closing one or more of the holes needed to obtain the fingering. For example, the fingering for G3, uses the first three fingers of the right and left hands. Any or all of these fingers forcefully striking a open hole with the remaining fingers closed creates the same pitch. A wider range of pitches is available by opening the register key, the throat keys or by using numerous other non-standard fingerings. I have left experimentation with these fingerings for the individual performer to explore. When playing the clarinet, pitch is altered by opening and closing holes, sometimes simultaneously. Because the percussive sound is only made by closing holes, not by opening them, there is not a one to one correspondence between played pitches and percussive pitches. Because they close the same or similarly placed holes, alternate fingerings usually create the same percussive pitch. The keys on the upper joint produce almost no perceptible pitch and therefore are not included.

Lemay writes unpitched key clicks both rhythmically and arrhythmically as “key rattles”. To play key clicks rhythmically it is often easier to choose keys that open holes rather than keys or rings that close holes. As mentioned above, when a hole is closed by a pad, it makes a sound both when the
hole is covered and when the key is released and springs back to place. The sound of the hole covering has some pitch content, whereas the sound of the release is entirely percussive. If using a key that covers a hole both of these sounds must be accounted for in a rhythmic passage, which can lead to unnecessary complications. Even quickly flicking the key results in two sounds, rather like a grace note. This can be an interesting effect, but is not desirable in precise rhythmic passages. Keys that operate in this way include: right and left low E, F and F#, right and left hand rings. Depressing a key that opens a hole makes almost no sound. The sound of the hole being re-covered and the sound of the key springing back to position both happen when the key is released. Flicking or simply releasing one of these keys results in one sound per action. Keys that operate in this way include: low G#, right and left sliver keys, C# key, all of the side keys, the throat A, G# and register keys.

Arhythmic key rattles require yet another strategy. Usually key rattles should make many noises in quick succession. Different effects are possible depending on which keys are chosen. Using all of the fingers on the right and left fifth finger keys creates a rainstorm effect with relatively low pitched and unpitched sounds. Using the right and left rings and sliver keys creates a higher pitched more rattling sound. Running the right hand index finger down the side keys creates a regular rhythmic effect which can be varied by adding any of the other keys in the left hand. Most composers including Lemay do not specify the type of key rattle they want; therefore all of these effects can be varied and combined at the discretion of the performer.

One consideration that composers need to take into account when writing key sounds for the Bb clarinet is that they are not very loud. Because the holes and keys on the Bb clarinet are relatively small, there is a limit to how much sound they can make. Since it is a larger instrument, key noises on the bass clarinet have the potential to be much louder and therefore the technique is often more effective on this instrument. It is also possible to amplify key clicks on either the clarinet or bass clarinet to increase their dynamic flexibility. Jérôme Blais used this effect in his piece “Plugged 1.3”

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22Gerald Farmer, *Multiphonics and Other Contemporary Clarinet Techniques* (Rochester, NY: SHALL-u-mo
for amplified bass clarinet. Moving towards or away from the microphone and/or the collaboration with a sound engineer can balance the key noises with the “normal” clarinet sound. Another context in which key noises can be effective is in generating electrically processed sounds. These can either be generated live or recorded for playback during performance. Obviously all extended techniques can be used in this way, but the percussive sounds of key noises generate entirely different timbres when processed than extended techniques that preserve more of the normal clarinet sound. The sound can also be manipulated so that balance is no longer an issue.

Another percussive technique that Lemay uses is the hand pop. This is one of my personal favourite sounds, but did not offer enough variety to form the basis of an entire piece in this collection. To produce this sound, the clarinetist strikes either the opening of the barrel with the mouthpiece off, or the top joint or the bell with the palm of the hand. This produces soft acoustic pitches as well as a percussive pop. The clearest sound is achieved by striking the barrel with the middle of a stiff palm. More variation in the sound is possible by modifying the shape of the hand and where in strikes the instrument. For example, using the fingers rather than then palm creates a softer sound. Strikes to the bell can produce a wider variety of sounds, but are less consistent than strikes to the barrel. The pitch of the pop can be modified by using the free hand to cover holes and/or depress keys.

Learning and Teaching “Clap”

Lemay uses both pitched and unpitched key sounds in “Clap”. These variations of the technique present different compositional and notational challenges. Gardener Read asserts that an x shaped note head either on or off the staff is used for unpitched sounds, while a cross above or below a note head

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25Ibid.

26Gerald Farmer, Multiphonics and Other Contemporary Clarinet Techniques, 146.
indicates a click combined with a specific tone. This is not a fool proof notation as note heads on the staff, even if they are x shaped may be confused with pitches. Furthermore a cross above or below a note head may indicate other things, such as a change in timbre. Therefore clear verbal explanations for key clicks are needed, at least the first time they appear in the score.

As shown in Example 7.10, for the pitched sounds, Lemay uses hollow diamond shaped note heads and the staff, as usual, to indicate pitches.

Example 7.10a: Pitched key sounds in “Clap”.

This was one of the few changes I asked Lemay to make to the score. The original version (Example 7.10b) uses the notes B, A, Bb in the second system.

Example 7.10b: Original version (2008) of pitched key sounds in “Clap”.

Since moving from A to Bb only involves lifting a finger off an open hole there is no way to make a

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percussive noise while doing so. Had Lemay left this passage unchanged there would have only been two sounds instead of three in this passage. To make the key sound pitches match the played pitches, the tongue needs to be on the reed while key clicking. This means that the tongue needs to be moved off the reed simultaneously with the start or end of the played notes.

When notating unpitched key clicks, key rattles, foot stomps, hand pops and speaking, Lemay uses a variety of note head shapes and the lines of the staff, to indicate different methods or timbres of sound production. This is how much unpitched percussion music is notated. Since it is easy to mistake these for pitched clicks I encouraged Lemay to specify unpitched key noise in his footnotes. Don Ross uses a similar notation system for unpitched percussive sounds in “Almost There”, although he uses verbal explanations rather than different shaped note heads.\textsuperscript{30} Lemay uses a total of six different unpitched key sounds. As shown in Example 7.11 the first key noise is a transition from a pitched trill to key sounds for which he provides a fingering (the side Eb key).

Example 7.11: Trill to key sound in “Clap”.\textsuperscript{31}

\begin{figure}
\centering
\includegraphics[width=0.4\textwidth]{example7.11}
\caption{Trill to key sound in “Clap”.}
\end{figure}

This key is normally operated by the side of the right index finger close to the palm. This allows constant contact with the key which minimizes clicking; ordinarily this is a good thing, but not if clicking sound is desired. Adjusting the hand position to flick the key with the tip of the index finger creates a much louder clicking sound. To execute the diminuendo of the clicking, move the hand back to normal playing position. For the key sounds in example 7.12, and indeed for the remaining unpitched keys sounds of the piece, Lemay leaves the choice of fingering up to the performer.

\textsuperscript{30}Don Ross, “Almost There,” score, 2008, Rebecca Danard personal collection, Ottawa.

Example 7.12: Unpitched key clicks to be chosen by the performer in “Clap.”

Notes on the same line or space of the staff should always use the same key click while different notes use different clicks. Because the rhythms in this passage are quite rapid, it is necessary to choose keys that are operated by different fingers. In this passage I chose to use to use the throat G# key for written G, the Eb sliver key for written E, the register key for written B and, the Bb trill key for written A. This fingering system also works for the other key click passages which used these notes. The volume and sound quality of key noises can vary considerably between instruments depending on the tension of the springs, the type of pads and the overall state of repair of the mechanism. Therefore my choices of fingerings may not be the best for everyone.

For the key rattles shown in Example 7.6, I have chosen to use all of the fingers on the fifth finger keys.

Example 7.13: Key rattles in “Clap.”

This sound is the loudest and most varied of the key rattles available. The diminuendo is achieved by decreasing the speed of the finger motion. There are several things to consider in choosing a fingering for the passage shown in Example 7.14.

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32Ibid.

33Philip Rehfeldt, New Directions for Clarinet, 77.

Example 7.14: Key clicks and finger motion in “Clap.”

The fingering needs to alter the sound of the C, produce an audible click and use finger motion that is visible to the audience. I chose to use the three fingers of the right hand to move the rings on the upper and lower joint. As described above this makes sound both when the fingers come down and when they lift up. Strictly speaking the clicks written as Gs should have the same sound, but the ability to maintain the same fingering and the same gesture throughout the passage makes this choice very appealing. In my interpretation the first eighth note is generated by the fingers coming down and the second by the fingers releasing the keys. To create good key sounds, the fingers need to strike the clarinet more forcefully than in normal playing. The diminuendo in this passage is an excellent exercise in finger control. The key sound begins loudly with forceful strikes by the fingers, but then decrease in volume until there is no percussive sound with very gentle, but still moving fingers. Through exercises in with key sounds, students can become aware of how the force of their fingers affects the sound and facility of their technique.

In most clarinet playing, key sounds are considered an unavoidable side effect, to be minimized or ignored whenever possible. When using them as a deliberate sound, a surprising number of interesting nuances, effects and dynamics can be achieved. Perhaps because it seems simple, most books and articles devote very little time and attention to key noise. As with any technique however, results are greatly improved by practicing, attention to detail and a correct technique. Having become aware of key noise the student can not only maximize it where called for, but also minimize it in situations where it would be a distraction.

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Chapter 8: Air Sounds, Don Ross’s “Almost There”

Don Ross: the Composer and Compositional Process

Don Ross is a clarinetist, composer and educator based in Edmonton Alberta. He obtained his Master’s degree in clarinet performance at Northwestern University under Robert Marcellus, but as a composer he is self taught and writes primarily chamber music for the clarinet. Ross is the leader of Saint Crispin’s Chamber Ensemble, one of Edmonton’s most innovative art music groups. Since 1994 the group has appeared on numerous CD’s, CBC broadcasts and new music festivals and has played over two dozen programs of traditional masterpieces and cutting edge new works. They often appear in partnership with the Edmonton Composers’ Concert Society (now call Tonus Vivus Society), for which they recorded three CDs, Brief Confessions Brèves, The Weather Inside and Glossa. Ross has also collaborated and appeared with the Edmonton and Prince George Symphonies, The Citadel Theatre, The Brian Webb Dance Company, The Sasquatch Festival, Opera Nuova, Piano Plus, Red Deer, Mount Royal and King’s Colleges and MusicAlberta. He is an enthusiastic improviser with the Boreal Electroacoustic Music Society, currently serving as its President. In 2005, his electroacoustic work with Dave Clarke was nominated for a Telus Award for Innovation in the Arts, and a Sterling Award for best theatre soundtrack. Recordings of his compositions and performances appear on Arktos, CLEF Records and Eclectra labels. His latest recording projects have been collaborations with singer-songwriters Colleen Brown's Foot in Heart and Carrie Day's Immaculate Night. Recent compositions include soundtracks for Robert Moberg's The Plateau, John Osborne's animated Lines for Clarinet and the Nina Haggerty Sessions, a show by dancers with disabilities. Ross teaches clarinet at King’s University and the Alberta College Conservatory and he is much in demand as a clinician, adjudicator and conductor.\footnote{Don Ross, “Ross, Don - Biography,” Société Tonus Vivus Society, 2009, http://tonusvivus.com/members/ross-don-biography/ (accessed May 12 2011); and Don Ross, “Don Ross,” Alberta College Conservatory of Music, http://www.macewan.ca/web/pvca/conservatory/Faculty/DetailsPage.cfm?id=727 (accessed May 12 2011).}
I first played Ross’s music, “Brief Refuge” for flute, clarinet and cello, in the summer of 2005 when I was a resident at the Banff Centre for the Arts. In looking for composers for this project in the fall of 2007, I came across Ross’s recording “The Weather Inside.” This not only led me to rediscover Ross’s music, but also enabled me to find Shane Krepakevich, who wrote “Sometimes Doing Nothing Leads to Something” for this collection. “The Weather Inside” is also the title of Ross’s composition for clarinet and piano. This virtuosic work explores the a full range of sounds, styles and extended techniques of the clarinet including groovy jazz, klezmer-like improvised cadenzas, colourful effects, timbre trills, multiphonics, vibrato and glissando. The strength of this piece alone convinced me that Ross would be an asset to this project.

The technique that Ross chose for his piece “Almost There” is air sounds. This technique is not one that he has used in other pieces, but as a clarinetist, he was able to do his own exploration and experimentation with this sound. He writes:

In 2008 Rebecca Danard, then a doctoral candidate at the University of Cincinnati, presented me with the challenge of writing a piece for clarinet using only unpitched sounds – no notes allowed! Clarinet is an instrument particularly gifted in its palette of alternate sounds, but even still, creating a coherent story out of only clicks, pops and whooshes was diverting and mind-stretching project. At the time I was working on a show with a dancer at Amber's Brewery in Edmonton, which involved manipulating sampled recordings of their big malty machines. All that rhythmic hissing and clanking gave me a starting point for this piece. My sampling of Amber's fine products may also have influenced some of my choices. The title plays on the dual meaning of a feeling of pending arrival, and a piece whose sound doesn't quite exist. The text is entirely derived from sounds in the words Almost There.

While it is not true that I actually prohibited Ross from using “normal” clarinet sounds, the fact that he chooses not to makes “Almost There” a very interesting piece. Because there is no “normal” playing,

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2Don Ross, _The Weather Inside_. Canadian clarinet music performed by the author, Eclectra Records B000BGR0YW, 2005, compact disc.


5Don Ross, “Almost There,” score, 2009, Rebecca Danard personal collection, Ottawa, 3.
the problem of balancing quiet air sounds with regular clarinet sounds does not arise. In a large performance space, this piece would benefit from amplification, but in a normal recital hall, its subtle sounds draw in the audience. In order to create his “story” Ross uses pitched tongue clicks, key clicks, whispered words, blowing through the instrument, and finger pops. He alters these sounds with articulation, by opening and closing the mouth and by combining them with one another.

Ross’s notation for the clarinet is very practical; he often tells the performer how to produce the desired sound rather than notating the sound itself. In “The Weather Inside”, as shown in Example 8.1, he writes the notes and keys the clarinetist should finger to achieve the multiphonics and coloured notes, rather than indicating the actual pitches produced.

Example 8.1: The clarinet part of “The Weather Inside” mm. 58–65.⁶

He also does this in “Almost There”, as shown in Example 8.2

Example 8.2: “Almost There” mm. 82–5.⁷

Rather than notating exactly how the rhythm of the air sounds, the toneless F-major scales and the open

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⁷Don Ross, “Almost There,” score, 2.
and closed mouth need to line up, Ross leaves this up to the performer. About mm. 84–5 he writes “don’t worry about maintaining the written rhythm, go nuts.” This is much easier for the performer than having to precisely coordinate these events.

Figuring out how to write and read the notation system for “Almost There” is one of its principle challenges. Ross writes:

In trying to come up with a notation scheme, it occurred to me that Almost There is basically a specialized percussion piece. I borrowed from drum world the idea of putting the different sounds on different lines of the staff. The bottom space is always toneless air going through the instrument. The second space is whispering, which always has a text attached in rounded bold font. The third space is key clicks, which usually have a fingering attached. I’ve called the low E E₁, first line E E₂, and open G G₂. The top two spaces and the A line above the staff are three approximately pitched tongue clicks...These rules always hold, even when other activities are happening on neighbouring lines and spaces.⁹

Example 8.3: Ross’s percussive notation system for “Almost There.”¹⁰

The use of different lines for different percussive sounds, as shown in Example 8.3, is similar to Robert Lemay’ notation of unpitched key clicks in “Clap”¹¹, though Ross does not use different shaped note heads to indicate percussive sounds. The lines and spaces that Ross chose for his percussive notation are, for the most part, in a register above where he wants actual fingered pitches. He also provides clear verbal explanations both in the score and the performance notes. There are only two instances of possible confusion, as shown in Example 8.4 and 8.5.

⁸Ibid., 3.

⁹Ibid.

¹⁰Ibid., 1.

Ross generally uses the bottom space to indicate unpitched air blown through the instrument, but in m. 49, the pitch F is desired. This is should be intuitively clear because it is slurred to other notes. The musical material in mm. 47–9 also echos that in mm. 44–6; this further reinforces the pitch F rather than an unpitched air sound.

Example 8.5: “Almost There” mm. 61–4.13

Ross uses the second space to indicate whispered text, but in m. 61, the pitch A is desired. This is obvious because the pitch A completes the upward motion of the line and there is no text associated with that note.

**Air Sounds: the Technique**

The basic technique of making air or breath sounds on the clarinet is very simple. The performer blows air through the instrument, but without a firm enough embouchure to allow the reed to vibrate. It is the loose embouchure, not the lack of air, which causes the reed not to vibrate. Creating the breathy sound actually takes more air than “normal” clarinet playing because there is less resistance to the air flow from the reed. To sustain the air sound, it helps to maintain the same focused air stream used for “normal” clarinet playing. In other words, although the external portion of the embouchure is relaxed, the inside of the mouth maintains its shape. As with “normal” playing, it is possible to control the dynamics of the air sounds by blowing more or less air, but it is never possible to make this sound

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12 Don Ross, “Almost There,” score, 2.
13 Ibid.
very loud. As with key clicks, this problem can be solved with amplification. It is also possible to alter
the pitch of the sound by using different fingerings. Although slight changes are perceptible in the
clarion register, this technique works best in the fundamental register (E3 to Bb4).\footnote{Philip Rehfeldt, \textit{New Directions for Clarinet}, 2d ed. (Berkeley: University of California Press, 1994), 69.} The basic air sound
can be changed in a variety of ways: with articulation, by opening or closing the mouth, by inhaling as
well as exhaling,\footnote{Ibid.} by using saliva on the reed, by putting more or less mouthpiece in the mouth,\footnote{Gerald Farmer, \textit{Multiphonics and Other Contemporary Clarinet Techniques} (Rochester, NY: SHALL-u-mo Publications, 1982), 142.} or by
changing the shape of the oral cavity.\footnote{E. Michael Richards, \textit{The Clarinet of the Twenty-First Century} (Fairport, NY: E & K Publishers, 1992), 228.} It is also possible to make different air sounds without the reed
or without the mouthpiece.\footnote{Gerald Farmer, \textit{Multiphonics and Other Contemporary Clarinet Techniques}, 142.}

Karlheinz Stockhausen is one of the most prominent composers to use air sounds in his work. His works for clarinet, bass clarinet and basset horn were all written for and performed by Suzanne
Stephens. Composer and performer worked closely together to notate exactly the sounds they wanted,
including a variety of air sounds. In \textit{In Freundschaft} (1977) for solo basset horn or bass clarinet, the
performer is instructed to “inhale slowly through instrument (hissing).”\footnote{“langsam durchs Instr. einatmen (Rauschen)” Karlheinz Stockhausen, \textit{In Freundschaft} (Küten: Stockhausen Verlag, 1992), 1.} In \textit{Amour: 5 Stücke für Klarinette} (1976), “during the pauses, one may \textit{slowly} suck the saliva from the instrument; this noise
should be soft, and varied in speed and pitch.”\footnote{“In den Pausen kann \textit{langsam} die Spucke aus dem Instrument gesaugt werden; dieses Geräusch soll leise, in Tonhöhe und Geschwindigkeit variiert sein.” Karlheinz Stockhausen, \textit{Amour: 5 Stücke für Klarinette} (Küten: Stockhausen Verlag, 1978), 4.} In his later works for basset horn, \textit{Freia} (1991)\footnote{Karlheinz Stockhausen, \textit{Freia} (Küten: Stockhausen Verlag, 1997).} and
\textit{Bassetsu} (1997)\footnote{Karlheinz Stockhausen, \textit{Bassetsu} (Küten: Stockhausen Verlag, 2006).} Stockhausen and Stephens develop a pitch scale for air sounds, which they call
“coloured noise,” as shown in Example 8.6.

Example 8.6: Stockhausen and Stephens pitched scale for “coloured noise.”

Stephens’s technique is to relax the embouchure and blow energetically through the instrument so that the air rushes out the corners of the mouth, hissing past the mouthpiece. Using this open mouth technique means that the air sounds do not always correspond directly to the fingered pitches. Therefore this chart is needed to establish which fingerings correspond to which air sounds. This problem does not arise in Ross’s piece because he does not require specific pitches for open mouth air sounds. Stockhausen notates the pitch he wants (transposed to F like the basset horn) as a note head with a slash through it, as shown in Example 8.7.

Example 8.7a: Stockhausen notation of air sounds in “Freia” m. 27.

In her realization (Example 8.7b) Stephens included the actual fingerings used and the transposed

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23Karlheinz Stockhausen, *Friea*, V.
24Ibid.
25Ibid., 4.
sounding pitch in brackets.

Example 8.7b: Stephens’s realization of air sounds in Stockhausen’s “Freia” m. 27.

Writing the fingered pitches rather than the sounding ones and including diagrams for non-standard fingerings is certainly the most practical approach to notating any unusual sounds. The extraordinarily detailed notation and the use of many extended techniques make Stockhausen’s clarinet music somewhat intimidating for the performer. Learning Ross’s “Almost There” and other pieces in this collection, is a good first step in preparing to tackle Stockhausen.

Learning and Teaching “Almost There”

I approached this piece by learning each of the percussive techniques separately before combining them in the piece. The simplest one is the rhythmic whispered text, which is always done with the mouth open. The consonants begin and end the notes, while the vowels sustain the sound. The air sound made by blowing through the instrument is also straightforward. Because it makes the loudest sounds this should, whenever possible, be done while fingering low E, which Ross writes as E1. One exception to this is mm. 82–5 which add an fast toneless F major scale to the air sounds (see Example 8.2 above). To go from closed mouth to open mouth while making an air sound (as for instance in mm. 4–5, shown in Example 8.3) keep the clarinet resting on the bottom lip, but lift the top lip and teeth away from the mouthpiece. This way some air still goes through the clarinet even with the

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26Ibid., 10.

27Don Ross <donross5@telus.net>, “Almost There!”, private e-mail message to Rebecca Danard, 13 May 2011.
mouth open. The open mouth sound is higher in pitch than then closed mouth sound. The open (o) or closed (+) mouth symbol is valid until the next symbol; the redundant symbols in mm. 4, 30, 31, 86, and 90 are courtesy reminders.²⁸

Ross explains tongue clicks as “produced by pulling a tensed tongue quickly away from the roof of the mouth.”²⁹ The tongue clicks should be as loud as possible, which means using as much surface area of the tongue as possible against the roof of the mouth. For the lowest tongue click, the tongue is very forward in the mouth, just behind the top teeth, while the lips form a tight circle as if whistling. To raise the pitch of the tongue click, the tongue moves back in the mouth and the lips stretch out to a line. I think “oo”, “ah” and “ee” for the low, medium and high tongue clicks. Before adding the clarinet the performer should experiment with placement of the low, medium and high tongue clicks so that they all sound different. Experimenting with tongue pitched tongue clicks enhances the performer’s awareness and control of mouth shape; this is an essential tool for the clarinetist to build a reliable yet flexible embouchure. Ross sometimes enhances the pitch of the tongue clicks by using lower fingerings for lower tongue clicks and higher fingerings for higher tongue clicks, as in Example 8.8.

Example 8.8: “Almost There” m. 6 uses different fingerings to enhance the tongue clicks.³⁰

At other times the clicks are over the same fingering and must be differentiated in pitch with the mouth alone, as in Example 8.9.

²⁸Ibid.
²⁹Don Ross, “Almost There,” score, 3.
³⁰Ibid., 1.
Example 8.9: “Almost There” m. 22–3 has different pitched tongue clicks over the same fingering (E1).  

For closed mouth tongue clicks, it is important to get the air column of the clarinet to resonate with the tongue click. This done by touching the reed as well as the roof of the mouth while clicking. For open mouth tongue clicks, the clarinet once again rests on the bottom lip and the fingering does not greatly affect the sound produced.

When Ross writes pitches in “Almost There” they indicate finger pops. As shown in Example 8.10, he always specifies whether these are done with or without air and with or without the tongue.

Example 8.10: “Almost There” mm. 65–70.  

This passage in interesting, because moving from G to A simply requires lifting a finger off an open hole, which makes no sound. This is the effect that Ross wants.

[In m.] 65 since there’s no air here, nothing audible happens on 2 and 4; it sounds like half note finger pops. [In m.] 67 now that toneless air is moving through the instrument we will hear the pitch change in quarter notes. [In m.] 70 gradually bring the air speed up until you flirt with the threshold of actual tone, then back down.

Using the fourth finger forcefully on the G throughout this passage makes it more effective.

Unless another specific pitch is notated, the key clicks in “Almost There” are on low E (E1). This creates some issues because the low E key makes a sound when it is released as well as when it is depressed. How much loud the release sound is depends on the individual clarinet and its condition. It

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31Ibid.
32Ibid., 2.
33Ibid., 3.
is certainly audible on my clarinet and on the recording that Ross made of “Almost There”.\(^{34}\) In some instances, Ross addresses the release sound, as shown in Example 8.11.

Example 8.11: “Almost There” m. 50.\(^{35}\)

\[
\begin{array}{c}
\text{low E key on low G} \\
\text{(no air)}
\end{array}
\]

m50 in the key clicks: keep the holes for low G closed, all we'll hear is the thud of the low E key closing and maybe a click when it opens.

At other times it is possible to cover the sound of the release with the next percussive sound. In Example 8.12, the release of the quarter note click can be done simultaneously with the tongue click, while the release of the eighth note click can be done simultaneously with the air sound.

Example 8.12: “Almost There” m. 24–7, my arrows indicate the release of the keys.\(^{36}\)

This means that is this passage both the air sound and the tongue click are done over an open G fingerign. Where the release sound becomes most obvious is in passages with sequential key clicks alone, as shown in Example 8.13.

Example 8.13: “Almost There” m. 16–21.\(^{37}\)

Since Ross does not notate the release, it is up to the performer to choose how and when to do it. With a slow gentle release, it is possible to make this sound almost inaudible, but at the correct tempo (quarter

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\(^{34}\) Don Ross, “Almost There,” mp3 sound recording, 2009, Rebecca Danard personal collection, Ottawa.

\(^{35}\) Don Ross, “Almost There,” score, 2.

\(^{36}\) Ibid., 1.

\(^{37}\) Ibid.
note = 120–132), this is very difficult to execute. One good option is to release the keys just prior to the next hit, creating a grace note effect. Another possibility is to release the key in a consistent rhythm throughout the passage: on beats 2 and 4, for example. The question of when to release the keys is further complicated when the key clicks are combined with tongue clicks and air sounds, as in Example 8.14

Example 8.14: “Almost There” mm. 28–32.

One possibility is to release the keys simultaneously with the tongue clicks on beats 2 and 3. This also helps to make the tongue clicks sound higher, because they are done over an open G rather than low E. Ross writes: “from [mm.] 16–31 the tongue pops will happen on a low E or an open G, whatever your hands happen to be doing for the key clicks.” Therefore there is no reason not to “help” to raise the pitch of the tongue click sound with the release of the key click.

This passage is perhaps the most challenging of the piece. Ross writes:

A lot of the stuff here is not an intuitive product of clarinet training, especially the bars where you have to co-ordinate tongue clicks, finger pops and air bursts. It can be a pain to learn, but it comes with some drill. One of the rules on repertoire choice for my own group, Saint Crispin's Chamber Ensemble, is that a piece must say something profound about human experience, or it must be short. I hope you enjoy this short piece!

It seems to me that this is Ross’s way of telling performers not to take themselves or the piece too seriously. Of course “Almost There” needs to be practiced and the performance well prepared, but not at the expense of the lightness and fun of the piece.

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38Don Ross, “Almost There!” , private e-mail message.

39Don Ross, “Almost There,” score, 3.
Chapter 9: Flutter Tonguing, Joel Hoffman’s “flutterby”

Joel Hoffman: the Composer and Compositional Process

The importance of Joel Hoffman’s participation in this project cannot be underestimated. As the Head of the Division of Composition, Musicology and Theory at CCM, he is my advisor for this project, not solely in the academic sense. Hoffman was able to impart very practical and insightful advice about selecting composers to approach with this idea, getting them interested in writing for me, following up with them about changes to their pieces as well as pursuing further development of the project such as publication and recording. From the very earliest stages, Hoffman was always there to answer questions and offer suggestions. He was, however, the last to join this project as a composer.

In November 2008, over a year into the project, the composer writing the flutter tonguing piece dropped out. If it had been one of the more obscure techniques, I might have considered not finding a replacement and proceeding with the eleven remaining composers. Since flutter tonguing is such a common extended technique, however, I felt that a collection for students that omitted it would be fundamentally flawed. Going through the process researching and recruiting another composer was also not ideal, since the project was already underway. I would not be able the offer the composer a choice of techniques or as much time to write the piece; I would also have to explain why I didn’t initially ask them to be part of the project. The perfect solution arrived when Hoffman volunteered to write the flutter tonguing piece for me. Not only did he already know all the details of the project, he is also a distinguish composer that I was confident would produce an excellent and appropriate piece. As a bonus, although he has lived in the US for many years, Hoffman was born in Vancouver so my collection would still be all Canadian composers.

In choosing the other composers for this project I looked for people who had often featured the clarinet and who frequently used extended techniques. This is not the case with Hoffman; for the most part he does not use extended techniques in his music. Although he has written a number of chamber
works that include the clarinet, the instrument is usually an equal member of an ensemble containing four to eight other players, not the featured instrument\(^1\) Hoffman has only one other work for a solo wind instrument ("Concert-Study" for solo flute from 1978\(^2\)), and no pieces for intermediate level players, which makes his contribution to this project an interesting departure.

Hoffman has participated in two other projects in which different composers wrote works for a collection. The "'Round Midnight Variations" was commissioned by Music02, a new music festival run by Hoffman, and premiered by the pianist Emanuele Arciuli. Each composer wrote a variation on the Thelonious Monk tune 'Round Midnight. Participants in this project included Matthew Quayle, Frederic Rzewski, Milton Babbitt, Roberto Andreoni, Augusta Read Thomas, Filippo Del Corno, Michael Torke, Carlo Boccadoro, John Harbison, David Crumb, Michael Daugherty, William Bolcom, Gerald Levinson, Alberto Barbero, Tobias Picker, Aaron Jay Kernis and George Crumb.\(^3\) Since this was Hoffman’s project, he wrote the final movement “Cadenza e finale: Round Midnight Variations” so as to draw the set of variations to a logical and pleasing conclusion.\(^4\) The other collection project was initiated by Cincinnati’s concert:nova and performed in May 2010. Each of the composers, Wenhui Xie, Jeff Silva, Charles Coleman, Danny Clay, George Flynn, Inez McComas, Jerod Sommerfeldt, Jennifer Jolley, Juan Campoverde, Douglas Knehans, Mara Helmuth, Kurt Westerberg, Ellen Harrison, Doug Pew and Joel Hoffman wrote a response to one of the movement’s of Saint-Saens’ “Carnival of the Animals.”\(^5\) Once again Hoffman was designated to write the finale and he chose to put together a collage of fragments recalling the earlier movements.

In both these projects, Hoffman was able to write his contribution after having seen the work of

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\(^4\) Joel Hoffman. “Joel Hoffman.”

the other composers. This was also the case with “flutterby.” Hoffman noticed that most of the other pieces were melodically and rhythmically active, so he decided to write something contrasting. He also had the idea to use sections of his piece to somehow musically connect the other pieces in the collection, as he did with the “‘Round Midnight” and the “Carnival of the Animals” projects. In the performance notes he writes:

The five sections of this piece are designed to be played in either of two ways:
1. In this order, with brief pauses separating them.
2. Alternatively, they can all be played separately, interspersed before and/or after other pieces or movements of pieces ("fluttering by", as it were, during the concert).
If performed in this second manner, the order of the sections should be chosen by the clarinetist. 6

Although “flutterby” was originally conceived to go between the pieces of this collection, it can also be paired with almost any music, including standard clarinet repertoire. This recontextualization of standard works forms part of a recent performing project of Hoffman’s. He has developed an uninterrupted sequence of pieces including works by Debussy, Brahms, Schoenberg, and his own piece “Hands Down” interspersed by improvisations throughout. While the pieces certainly affect the nature of the improvisations, the improvisations also affect how the audience listens the familiar works. In “flutterby” Hoffman takes this idea one step further. Unlike the solo piano programme where all of the pieces remain intact, “flutterby” is internally interrupted by other pieces. Furthermore, “flutterby” may also be used to interrupt standard repertoire: between movement of a sonata, for example.

Deciding where to include each section of “flutterby” in a programme is an important consideration for the performer. Ideally when “flutterby” is heard, it should be unexpected yet appropriate. Since “flutterby” breaks performing conventions, it is important to be aware of how an audience is likely to behave. While it is possible to list each section on the programme, but this would spoil the element of surprise. It also might encourage the audience to applaud each section separately which would detract from the connection with the other works. Using “flutterby” to precede works or

6Joel Hoffman, flutterby (Cincinnati: Onibatan Music, 2009), 3.
movements, would almost always work, since the audience is unlikely to applaud before the beginning
or in the middle of the listed piece. Adding “flutterby” to the end of a piece is more risky, since the
audience may applaud immediately, especially if the ending is loud and fast. Interpolating sections of
“flutterby” into an otherwise standard programme affects how the audience perceives both “flutterby”
and the other works. It is therefore necessary to consider the musical shape of the entire programme as
well as each component piece and the sections of “flutterby”.

Flutter Tonguing: the Technique

Flutter tonguing is one of the first extended techniques that Western composers used to modify
the sound of wind instruments. It was first introduced by Richard Strauss in Don Quixote in 1897. As
shown in Example 9.1, Strauss uses flutter tonguing in both Bb and the bass clarinet parts in a passage
that also uses flutter tonguing in the horns, trumpets and trombones.

Example 9.1: Strauss’ use of flutter tonguing in Don Quixote five measure before rehearsal 24.

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7Philip Rehfeldt, New Directions for Clarinet, 2d ed. (Berkeley: University of California Press, 1994), 63.

8Richard Strauss, Don Quixote: Fantastische Variationen über ein Thema ritterlichen Characters, (New York and

9Ibid.
Since then, flutter tonguing has been become common in orchestral, chamber and solo clarinet music. It is also one of the first techniques to be included in clarinet method books. As shown in example 9.2, Paul Jeanjean includes a flutter tonguing exercise in his 1927 “Vade-Mecum” du Clarinettiste.  

Example 9.2: Paul Jeanjean flutter tonguing exercise. 

Interestingly, he pairs it with a rapid tonguing exercise which not only uses a totally different technique, but also produces dissimilar sound. By the 1970s, when many other extended techniques were beginning to flourish, flutter tonguing was considered “hardly an avant-garde technique” and “neither new nor uncommon.”  

Authors of the time justified its inclusion as an extended technique

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11 Ibid.


because of its prominence in contemporary music and the new uses to which composers were putting it. For these reasons and for pedagogical purposes, I also chose to include it in this collection.

Flutter tonguing is achieved by breaking up the air stream as it enters the clarinet; the tongue does not actually touch the reed in the process. There are two ways to flutter tongue: rolling an r with the tip of the tongue against the teeth (tr-r-r-r) or hard palate (dr-r-r-r) or rolling an r with the back of the throat (gr-r-r-r or hr-r-r-r). To clarify these different ways of flutter tonguing for the student I have abbreviated these ways of flutter tonguing to TR, DR and GR. Hoffman uses this notation in “flutterby.” Rolling an r against the teeth (TR) gives a defined or even accented attack to the note, because the tongue touches the reed to initiate the flutter tonguing. It is not possible to slur into a TR note or to add the flutter TR to a sustained pitch. Rolling the r against the hard palate (DR) has a similar sound to the TR but does not have a distinct attack. Because the tongue does not touch the reed, it is better to slur into or add DR to a sustained pitch. TR and DR are both useful in different contexts, so it is interesting my sources discuss on or other of the techniques, but do not differentiate between them. Jeanjean uses “Trrr” to describe a “Tremolo dental,” while Michele Gingras suggests “thinking of the sound “TRRRR” with a Spanish or Italian “R.” On the other hand, Rehfeldt, Farmer, and Richards all describe a “d-r-r-r” sound, while Errante suggests “a rolled r sound with the tongue bouncing against the hard palate.”

Several authors contend that rolling the r with the back of the throat (GR) is a can be used as a

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17Philip Rehfeldt, New Directions for Clarinet, 63.
18Gerald Farmer, Multiphonics and Other Contemporary Clarinet Techniques (Rochester, NY: SHALL-u-mo Publication, 1982), 139.
substitute for TR/DR if “owing to physical incapacity”\textsuperscript{21} or “difficulties with the mouthpiece obstructing such movement”\textsuperscript{22} the clarinetist cannot flutter with the tongue. This description leads one to believe that GR is the inferior technique, only resorted to by those who cannot flutter tongue the “right” way. Furthermore Rehfeld states that the GR technique is “nearly identical”\textsuperscript{23} to TR/DR, while Errante describes the sound as “a coarse sounding growl.”\textsuperscript{24} I have found that GR can have a quite different sound from TR and DR depending on the dynamic level and the register and, while it can produce harsh sounds, it is possible to achieve a range of timbres using this technique. Unlike normal tonguing or even double tonguing, it is not possible to change the speed of TR/DR flutter tonguing. With good control of the throat muscles it is possible to modify the pace of GR flutter tonguing, but the range of speeds is still quite small and generally a little slower than TR/DR. Using GR flutter tonguing produces even less attack than DR, so it is possible to slur smoothly or to subtly add the effect to a sustained note. Because there is a threshold amount of air needed to keep the tongue fluttering for TR/DR, there is also a minimum dynamic below which this technique is not possible. Because less air is required, GR is easier to achieve at a quiet dynamic. One disadvantage to GR flutter tonguing is that it is quite tiring for the throat muscles\textsuperscript{25} and therefore uncomfortable to sustain over long performances or practice sessions.

Flutter tonguing is most effective below G5. In this register, it is easily possible to start notes without getting the sub tones and to have a relatively wide dynamic range. In the upper register, flutter tonguing becomes more of a challenge.\textsuperscript{26} Above G5 it is increasingly difficult to flutter tongue quietly

\textsuperscript{21}Gardner Read, \textit{Contemporary Instrumental Techniques}, 136.

\textsuperscript{22}Philip Rehfeldt, \textit{New Directions for Clarinet}, 63.

\textsuperscript{23}Ibid.

\textsuperscript{24}F. Gerard Errante, “Contemporary Aspects of Clarinet Performance,” 7.

\textsuperscript{25}Gardner Read, \textit{Contemporary Instrumental Techniques}, 135.

\textsuperscript{26}F. Gerard Errante, “Contemporary Aspects of Clarinet Performance,” 7.
and to begin notes without creating a sub tone. For me, flutter tonguing in the altissimo is only effective at a loud dynamic. Flutter tonguing in the high register is facilitated if the flutter tonguing is started in a lower register and then continued as the pitch ascends. Rehfeldt contends that it is possible to flutter tongue up to C7, but I find this range almost impossible to achieve with a pure single pitch without subtones.

Teaching flutter tonguing can be challenging because there is a genetic component to tongue flexibility. Most tongue motion, unlike hand motion, is unconscious; you don’t need to think about how to move your tongue when speaking or eating. Therefore, consciously learning how to move the tongue in a new way can feel unnatural and difficult to explain. Flutter tonguing comes more easily for clarinetists whose native language contains a rolled r and is more difficult for those whose native language contains no r sound at all. The first step is to pronounce the rolled r using the air flow and the embouchure of the clarinet, but without the instrument in the mouth. When applying the syllable to the clarinet it may be necessary to adjust the position of the tongue so that it does not touch the reed and stop its vibration. Since forming an embouchure can interfere with the fluttering, Linda Merrick suggests introducing the mouthpiece very gradually – fluttering first on the tip of the mouthpiece and then with a very relaxed embouchure, initially ignoring the flatness of the pitch. The student should begin flutter tonguing in the low register at a forte dynamic and then gradually expand the range upwards and into quieter playing. It is important to keep the tongue as high in the mouth as possible to prevent the pitch going flat and/or sub tones in the upper register.

27Philip Rehfeldt, *New Directions for Clarinet*, 64.
30Linda Merrick, interview by Rebecca Danard, 3 December 2008, Cincinnati.
Learning and Teaching “flutterby”

Because we were both in Cincinnati I was able to explain and demonstrate flutter tonguing for Hoffman before he started writing the piece. The piece is pedagogically excellent because it allows the student to practice the various types of flutter tonguing in different idiomatic contexts. The range of notes to be flutter tongued, from E3 to F#5, is well within the capabilities of the novice flutter tonguer. Hoffman also provides the performer with a clear breathing plan. Flutter tonguing requires increased air flow, irrespective of the dynamic the player is trying to achieve. Therefore the breaths in “flutterby” are closer together than might otherwise be expected. He always indicates which type of flutter tonguing (TR, DR, or GR) to use, which is very helpful for the student and the teacher.

Since the sections of this piece may be used as reflective intermezzi between other active pieces, most of the piece is in piano dynamic range. Example 9.3 shows the typical use of flutter tonguing in sections 1, 3, and 5 of the piece.

Example 9.3: “flutterby” mm. 1–6 slurs into flutter tongued notes

\[
\text{mysteriously } (\mathcal{J} = 72) \quad \text{GR} \quad \text{GR} \quad \text{GR} \quad \text{sim.},
\]

Because the flutter tongued notes in these sections range from mp to ppp and are approached from a slur, it makes sense to use the GR articulation. In example 9.4 (mm. 28–32) it would have been possible to use a TR or DR articulation for the E if a precise attack was called for, but the GR is best for the pianissimo dynamic.

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33Ibid.

34Joel Hoffman, flutterby, 1.
Example 9.4: “flutterby” mm. 28–32 starts a flutter tongued note after a rest.\textsuperscript{35}

Section 5 begins with forte flutter tongued notes which are separated from the notes around them (Example 9.5).

Example 9.5: “flutterby” mm. 72–6 has forte separated flutter tongued notes.\textsuperscript{36}

The DR articulation is best for this type of precise, but not accented attack. Sections 2 and 4 are more active and also contain louder dynamics; therefore the TR articulation dominates. Example 9.6 (mm. 67–9) shows Hoffman use of the TR articulation for accented notes.

Example 9.6: “flutterby” mm. 67–9 has accented flutter tongued notes.\textsuperscript{37}

Example 9.7 (mm. 62–3) mixes the TR flutter tonguing with rapid and staccato “normal” tonguing.

Example 9.7: “flutterby” mm. 62–3.\textsuperscript{38}

\textsuperscript{35}Ibid.

\textsuperscript{36}Ibid., 3.

\textsuperscript{37}Ibid., 2.

\textsuperscript{38}Ibid.
The challenge of this passage is that the tongue needs to be in different places to execute these two articulations. Even though TR places the tongue more forward than DR or GR, for rapid staccato it needs to be even closer to the reed. The key is to move the tongue enough to correctly articulate the passage, but not some much that it becomes cumbersome or belaboured. Example 9.8 contains consecutive flutter tongued notes, some of which are slurred together, but others that are separated.

Example 9.8: “flutterby” mm. 24–5 has consecutive flutter tongued notes.\(^{39}\)

![Example 9.8: “flutterby” mm. 24–5 has consecutive flutter tongued notes.](image)

The TR articulation is used throughout the passage. Once the flutter tonguing is started, slurring between notes only requires finger movement. To articulate notes (the F# and the Eb) requires the player to move the tongue forward from the flutter tonguing position to touch the reed and then immediately return to the flutter tongue position. In this case, the articulation is facilitated by the forte dynamic and the TR articulation. One context that “flutterby” does not present is adding or subtracting flutter tonguing to a sustained note. There are however many instances of slurring into a flutter tongued note, which is very similar from an articulation standpoint.

Flutter tonguing is not only used in standard clarinet repertoire of the such as Alban Berg’s *Vier Stücke für Klarinette und Klavier*,\(^{40}\) it is one of the few extended techniques frequently employed in orchestral music. Strauss,\(^{41}\) Mahler,\(^{42}\) and Stravinsky\(^{43}\) all use flutter tonguing in their symphonic works. Therefore learning to flutter tongue is not only important for contemporary music specialists but necessary for those considering an orchestral career.

\(^{39}\)Ibid., 1.


\(^{41}\)For example, Richard Strauss, *Don Quixote*, 33.


\(^{43}\)For example, Igor Stravinsky, *Le sacre du printemps* (New York: Kalmus, 1933).
Chapter 10: Double Tonguing, Jérôme Blais’s “VAV”

Jérôme Blais: the Composer and Compositional Process

Perhaps one of the most innovative solutions to this commission is “VAV”\(^1\) by Jérôme Blais. Although originally from Montreal, Blais currently teaches composition at Dalhousie University in Halifax. His piece “Plugged 1.3”\(^2\) for amplified solo bass clarinet convinced me that he would be an asset to this project. Blais has several pieces for amplified solo instrument in the “Plugged” series including works for marimba, harpsichord, voice, double bass, alto flute and electric guitar. In “Plugged 1.3”, Blais explores and encourages the performer to discover timbral variation outside the standard bass clarinet sound through improvisation.

Example 10.1: The beginning of “Plugged 1.3” uses a variety of subtle timbres.\(^3\)

These sounds – key pops, subtones, soft harmonics (overtones) and wind alone – are all on the quieter and subtler end of the timbral spectrum. The amplification is needed to capture the subtleties of these effects. The proposed realization of VAV also begins with wind only and subtones, but this time they are coloured by his chosen extended technique of multiple articulation (double and triple tonguing).

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\(^1\)Jérôme Blais, “VAV,” score, 2008, Rebecca Danard personal collection, Ottawa.

\(^2\)Jérôme Blais, “Plugged 1.3 pour clarinette basse solo amplifiée,” score, 2003, Canadian Music Centre, Toronto.

\(^3\)Ibid.
Example 10.2: The beginning of “VAV” also uses a variety of subtle timbres as well as multiple articulations.4 This superficial similarity is interesting, but to focus on it would be to miss something much more fundamental to Blais’s music: improvisation. At the 2010 Canadian University Music Society conference held at the University of Regina, Blais was the keynote speaker. He spoke about the relationship between the composer and the performer and how this gap is bridged by improvisation. The separation of composer and performer, which predominates Western concert music of the last few centuries, is not so prevalent in music from other times or other genres.5 In popular music, non-Western music and in earlier eras, the composition and performance of a piece was done by the same person or group of people. Through his improvisational music, Blais seeks to bring the composer and the performer one step closer together.6 For his presentation at CUMS, Blais used VAV as one example of this process. It was fascinating for me to discover his point of view about improvisation and the process of creating VAV.

A performer knows his or her instrument with a depth and intimacy that a composer cannot ever achieve; Blais strives to exploit this knowledge as spontaneously as possible. There are of course compositional idioms that can give the impression of fake spontaneity, but this is not the effect he is

4Jérôme Blais, “VAV.”

5Jérôme Blais, 3 Improvisations, keynote address presented at the Canadian University Music Society conference, University of Regina, Saskatchewan, June 3-6 2010, transcript obtained from the author for personal use, 4. An article in the journal Intersections is forthcoming.

6Ibid., 4.
trying to achieve. Close collaboration between the composer and performer can achieve a work that is tailored to that performer at that time, but once this music is fixed in the score the piece will never be as good a match for another performer. When, as in VAV, choices are left open to the performer, then each individual musician can create or recreate the piece to suit themselves. Having choices is particularly apt in a pedagogical piece for a developing student. Blais asks,

Why not let the teacher decide on certain parameters of the work in a way that satisfies the pedagogical goals that could be very different from one student to another or even could be very different for the same student at different stages of their learning. For this reason VAV is the one of the more open works that he has written. He refers to it as “IKEA music”; the performer is given a kit and a set of instructions, but has to put the piece together themselves.

VAV exists in two formats: a lead sheet and a proposed realization. On the lead sheet, the performer can choose virtually everything: the pitches, the rhythm, the dynamics, the timbre and the articulation. Blais provides the following instructions:

Improvise on the material found in the lead sheet. Most phrases should feature fast repeated notes. Each segment of repeated notes can be of various lengths and should feature any combination of given rhythmic and articulation figures. Pitch content for each phrase should be derived from “VAV” or “___”. Choose one pair of notes or more. You may combine any notes from the chosen pairs in any order. You may use the material on the lead sheet as the basis for exercises on various aspects of clarinet playing. For example, you could give your students exercises that would feature … cells using big leaps or not, articulation with “TKK” or “TKTK”, fast or slow rhythms for repeated notes, different dynamic levels for various register, etc.

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7Ibid., 6.

8“Pourquoi ne pas laisser le professeur décider de certains paramètres de l’œuvre, de façon à satisfaire des objectifs pédagogiques qui peuvent être très différents d’un étudiant à l’autre, ou même qui peuvent être différents pour le même étudiant, à différents stades de son apprentissage?” Ibid., 16.

9Ibid., 17.

10Jérôme Blais, “VAV.” 5.

11Ibid.
Furthermore he suggests that material from the lead sheet could be used for group improvisation or warm-ups for a group of clarinets. These exercises are one of the most exciting aspects of this piece. For example, each student in the class could choose a pair of notes and then imitate the rhythm, dynamic, timbre and articulation of the instructor, using those notes. One could experiment by maintaining some of these variables while changing others or even overlapping one cell with another. This exercise would work with students of all levels. The less experienced players could do slower articulations in a comfortable register while the more advanced players would practice faster articulation in the more extreme registers. It would even work with a mixed instrumentation – provided that somebody was willing to transpose.

Example 10.3: The lead sheet of VAV.

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The pitch selections of the lead sheet (Example 10. 3) are meticulously constructed and idiomatic for
the clarinet. By call it a “lead sheet” Blais suggests connections with jazz, popular music and
improvised traditions. There are 19 segments, each containing a pair of notes, which are arranged to
form “/ / \” or the letters “VAV” and rearranged to form an underline “——”. The structure of the
“——” is most readily apparent. Segment 1 consists of Bb4 and B4, the notes that divided two
principal registers of the clarinet. From this minor second, the interval expands and contracts by
stepwise contrary motion so that the sequence of intervals is: 3rd, 5th, 7th, 9th, 11th, 13th, 17th, 19th, 21st,
23rd, 20th, 18th, 16th, 14th, 12th, 10th, 6th, 4th, 2nd. The sequence stops on the 23rd, because the scale has
descended to E3, the lowest note on the clarinet. The 8ve, 15th and 22nd are omitted because they
represent intervals between two notes of the same pitch class. In the “/ / \”, the segments from the
“——” are rearranged. Each vertical stroke (“/” or “\”) contains only dyads made up of the same two
pitch classes. The top of the stroke has the smallest interval which expands as the stroke descends.
Only permutations of the intervals that are found in “——” are included. The first \ contains
transpositions and inversions of the minor second (B and Bb, E and F), the \ contains transpositions
and inversions of the minor third (A and C, F# and D#) and the second \ contains transpositions and
inversions of the perfect fifth (G# and C#, G and D). Read horizontally from left to right each line of
“/ / \” gives the same tone row: Bb, B, F, E, A, C, F#, D#, G#, C#, G, D (10, 11, 5, 4, 9, 0, 6, 3, 8, 1,
7, 2). The pitches from each of the “/” s form the set class 0167, which divides the octave evenly into
two tritones. The \ is set class 0369 which divides the octave into evenly into four minor thirds. The
solid and dotted lines linking lines in the “——” reflect the connections between the cells found in the
“/ / \”. Blais frequently uses these lines as an easy and intuitive way to suggest other secondary
connections to the performer.

Blais writes:

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14Jérôme Blais, 3 Improvisations, 17.

15Ibid., 14.
After the lead sheet is a “proposed realization” of VAV: this realization can be used by those who do not feel at ease with the freedom offered by the lead sheet, or it can serve as a point of departure for those who want to construct their own version but want to use an existing version as a source of inspiration.16

The danger of providing proposed realization for the performer is that the student or the teacher will jump directly to it without closely examining the lead sheet. I plead guilty to this myself and would re-evaluate some of my performance choices based on the information on the lead sheet. Nevertheless, I am very glad that Blais did provide a proposed realization. The lead sheet provides so much information to draw from, but it is up to the performer to present and organize the music so that this information is transmitted to listener. For a student who has not improvised before, this could be a significant challenge.

Blais finds that there are many advantages to using elements of improvisation in his music.

Improvisation allows for real time exploration of instrumental gesture and sound. It also allows for real-time introspection, and it can be a powerful pedagogical tool. It gives my music a personal and spontaneous feel, unique to each performer I have the privilege to work with. ... My experience working with them has taught me that, as the “main” composer of a work, I can trust them, I can let them make decisions, without fearing that they will ruin my work!17

As a performer I find it particularly rewarding to play music of composers who trust me to make musical decisions. A piece that is overly notated leaves no room for the performer in the creative processes and therefore quickly becomes a mechanical task in which the performer blindly obeys the orders of the composer. A piece such as VAV requires more initial investment by the performer, but is ultimately more satisfying. Blais writes:

In effect, if certain decisions much be taken by the performer in real time, on

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16“À la suite du lead sheet se trouve une « réalisation suggérée » de VAV : cette réalisation peut être utilisée par ceux qui ne se sentent pas à l’aise avec la liberté offerte par le lead sheet, ou encore elle peut servir de point de départ à ceux qui ont envie de construire leur propre version mais qui aimerait s’inspirer d’une version existante comme source d’inspiration.” Ibid., 18.

17Ibid., 20.
stage, in front of the public, my works demand that the musicians effectuate a much broader reflection, and which has to be done over the long term, not only in the moment of playing the piece. I am seeking in fact to delegate part of my creative work to them, not out of laziness, but because I have found that when the performer appropriates part of the creative responsibility for the work, when he or she invests personally not only in the interpretation but also the development of a work, there results an unparalleled expression, there is something going on. Something unique, indescribable, and, for me, vital. 18

It is this vital thing that VAV offers to the clarinetist, the student and the teacher.

**Double Tonguing: the Technique**

Initially I was dubious about whether double tonguing changed the sound of the clarinet enough to be included in this project. Sometimes the goal of double tonguing is to be indistinguishable from incredibly fast single tonguing. On the other hand, double tonguing naturally produces different sounding attacks than single tonguing. If a piece were to emphasis these differences rather than minimizing them, double tonguing would qualify for this project. This approach is also pedagogically sound. A student may be able to double tongue, but is inhibited because this articulation does not match single tonguing. In traditional repertoire, until this challenge is overcome, the student will probably choose or be advised not to use double tonguing. In VAV on the other hand, the student is encouraged to experiment with the timbre and attack of single and double tonguing. Thus students can practice multiple articulation to the best of their ability without fear of making mistakes.

The way Jérome has constructed VAV makes it an ideal first step into learning to double tongue. Robert Spring suggests starting to double tongue using the air alone, not trying to form an embouchure and produce a sound. This allows the player to concentrate on the air and the tongue in isolation

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18“En effet, si certaines décisions doivent être prises par l’interprète en temps réel, sur scène, devant public, mes œuvres exigent des musiciens qu’ils effectuent une réflexion beaucoup plus large, et qui doit se faire à long terme, et non seulement au moment de jouer la pièce. Je cherche en fait à leur déléguer une partie de mon travail créatif, non pas par paresse, mais parce que j’ai constaté que lorsque l’interprète s’approprie une partie de la responsabilité créatrice de l’œuvre, lorsqu’il ou elle s’investit personnellement non seulement dans l’interprétation, mais aussi dans l’élaboration d’une œuvre, il en résulte une expression sans pareil, il se passe quelque chose. Une chose unique, indescriptible, et, pour moi, vitale.” Ibid., 21.
without thinking about embouchure and tone production. Interestingly, Blais includes “wind only” as a sound option on the lead sheet and chooses to begin his proposed realization with this effect. (See Examples 10.2 and 10.3 above.)

The challenges of double tonguing include, matching the T and K articulations, maintaining a steady rhythm, moving into the upper registers and coordinating fingers and articulation. The improvisational nature of \textit{VAV} allows the clarinetist to confront and overcome these challenges one at a time. Sometimes using the “K” articulation causes too much disturbance in the air flow causing a squeak. In this case a hard “G” makes a good alternative.\footnote{Michele Gingras “Mastering New Sounds: A Beginner’s Guide,” \textit{The Clarinet} 15, no. 2 (February/March 1988): 58.} Blais includes “D G D G” as an articulation choice. There is a tendency to use less air for the K than for the T creating a lopsided sounding articulation.\footnote{Robert S. Spring, “Multiple Articulation for Clarinet,” \textit{The Clarinet} 17, no. 1 (November/December 1989): 44.} Since variation in timbre is encouraged, matching T and K is not required to successfully perform this piece. On the other hand, for a performer who wishes to practice balancing T and K, \textit{VAV} offers the perfect opportunity. Similarly, since rhythmic choices are left up to the performer, there is no need for metronomic tempos or absolute rhythmic precision. On the other hand, striving for faster tempos and more controlled rhythm in \textit{VAV} will improve the player’s double tonguing technique. Multiple articulation is easier in the low register because the resistance of the reed and the mouthpiece is not as great as in the high register.\footnote{Michele Gingras “Mastering New Sounds: A Beginner’s Guide,” 58.} Robert Spring suggests not moving double tonguing into the clarion register until it is fully mastered in the chalumeau.\footnote{Robert S. Spring, “Multiple Articulation for Clarinet,” 47.} Multiple articulation in the altissimo register is even more challenging.\footnote{Ibid., 49.} Fortunately Blais offers the option of single tonguing (T T T) as one of the articulations to choose from. This allows the performer to only double tongue in comfortable registers. With experience more and more of the upper register becomes available for multiple articulations.\footnote{Ibid., 49.}
articulation. Even if the performer chooses not use multiple articulation over the break, there is still plenty of opportunity to practice the technique. The final challenge of double tonguing is the coordination of the fingers and the tongue. Since the articulated notes in the proposed realization are always repeated, the performer must turn to the lead sheet to practice this aspect of the technique. Spring suggests starting with a diatonic scale, because of the familiarity with the finger pattern and the small intervals. With experience the intervals can be increased.\textsuperscript{24} Practicing the ascending and descending stepwise motion in the “___” would be a good place to start finger and tongue coordination, first in the low register and then in the high register. With more practice the clarinetist can experiment with larger intervals and moving between registers.

\textit{Learning and Teaching \textit{“VAV”}}

As Blais points out the “adjustable level of difficulty applies to the proposed realization, since the performer can choose between faster or slower rhythmic values, as well as between a variety of possible articulations.”\textsuperscript{25} In the realization, the timbre, dynamics, and pitches are specified, but the rhythm and the articulation are still left up to the performer. This gives clarinetists great freedom to create a piece which favours their strengths, but also a responsibility to make something musically interesting and expressive.

Although \textit{VAV} may be used as a exercise, in performance it is vital that musical considerations are as important as technical ones. When performing this work for the first time, I suggested starting with the proposed realization rather than the lead sheet alone. The realization contains enough structure to create a coherent composition, while still allowing plenty of opportunity for creative improvisation. A performance from the lead sheet could be in a totally different style from Blais’s realization, but should be as well thought through and considered. Despite the wealth of information found on the lead

\textsuperscript{24}Ibid.

\textsuperscript{25}Jérôme Blais, \textit{“VAV,”} 5.
sheet, working from it alone the performer must make many more decisions and therefore has a lot more work to do before the playing begins. Working from the realization makes the piece more immediately accessible to the performer.

Despite the improvisatory nature of the realization, there are structural elements which guide the clarinetist through the piece; awareness of this structure will improve the performance. The larger formal structure is in three unequal parts delineated by dynamics. The A section (mm. 1–31) is a crescendo from wind alone (no reed vibration) to fortissimo and features only repeated articulated notes. The B section (mm. 32–39) is also a crescendo from wind alone to fortissimo, but features primarily slurred and sustained notes. The C section (mm. 39–47) is an overall decrescendo from forte to niente and features contrasting sustained notes played quietly and articulated notes at varying dynamics. Although there are many swells up and down in all of the sections, maintaining the overall dynamic trajectory will make the structure audible.

Another significant structural component is the E3-F6-E3 cell that reoccurs throughout the piece. This cell has special structural significance in VAV. It is the largest interval and the middle turning point of the “___”. It is also the fourth iteration of the E-F dyad found on the lead sheet; due to the range of the clarinet, all of the other dyads only occur three times. These properties are no doubt why Blais chose this interval for such a prominent role in his realization. One of the challenges of the realization is to make a logical musical progression in these cells. Jérome uses the measures to outline the dynamic framework of the realization; it is up to the performer to choose rhythms and articulations that enhance the musical line. For example in the last section of the piece (mm. 39–47), the volume of this cell is less every time it appears.

Example 10.4: The end of Blais’s proposed realization of “VAV” mm. 39–47.26

26Ibid., 7.
In performance I chose to use more interesting and varied rhythms for the louder cells which become more and more simple. While m. 40 and m. 42 were complex mixtures of rhythm and articulation, mm. 44–47 had consistent rhythms of decreasing speed and complexity as show in Example 10.5.

Example 10.5: My rhythmic interpretation of the VAV mm. 44–7.

Of course this is not by any means the only effective solution to ending the piece, but it is necessary for the performer to consider the treatment of this repeating musical idea throughout the realization.

Just as the repeating cells must form a coherent musical line, the material between these cells must also have independent musical integrity. In practicing this piece, I would sometimes leave out the punctuating repeated cells to get a better idea of how the lines connected. In addition to rhythm and dynamics a powerful musical tool is the length of the pauses between bars and the amount of time spent on each note. Jérome uses this strategically in the build up to the climax of the A section.

Example 10.6: Build up to the climax of the A section of “VAV” mm. 23–31.27

27Ibid.
By shortening the pauses and making each segment shorter, the piece builds momentum to fortissimo fermata at the end of the line. This dictation of segment length is unusual in Blais’s realization; mostly this variable is left up to the performer. In my experience, it is tempting to spend too much time on each pitch. This detracts from the overall line of the piece and makes any melodic content difficult to hear; it also makes the piece too long for the audience and the performer. Another trap is to make all the segments too similar in length. Obviously a longer segment emphasizes the pitch, but a short, even a single note, segment also stands out from the texture. The placement of these long and short segments should be strategically planned to make the piece interesting and to reflect the structure of the realization. While it is worthwhile to experiment with rhythms and articulations on each note, this should be done in the practice room not on stage. By the time I performed this piece, I had a planned rhythm and articulation for almost every note as shown in Example 10.7.

Example 10.7: “VAV” m. 22 with my performance notes.

I didn’t slavishly adhere to every detail, but the plan gave me the confidence that the piece would be interesting and coherent and that the structure would not be lost in the heat of the moment. Thus a successful performance of VAV relies on a technical knowledge of multiple articulation, a musical understanding of piece, and advance planning and preparation balanced with instantaneous spontaneity.

Practicing multiple articulation reinforces good basic concepts of tongue placement on the reed.

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28Ibid., 6.
and in the mouth. Incorrect tongue position, such as anchor tonguing where the tongue is fixed behind the bottom teeth, makes multiple articulation virtually impossible.\textsuperscript{29} To double tongue successfully, the tip of the tongue must touch the tip of the reed – also the correct position for single tonguing. Correct tongue position, high in the mouth “EEE” vowel, also facilitates double tonguing. Allowing the tongue to drop, TAH-KAH rather than TEE-KEE, results in too much tongue movement which interferes with the multiple articulation, particularly in the clarion register.\textsuperscript{30} Finally, multiple articulation requires consistent air support and therefore builds good habits for articulation of any kind.

\textsuperscript{29}Robert S. Spring, “Multiple Articulation for Clarinet,” 44.

\textsuperscript{30}Ibid., 47.
Chapter 11: Playing Pieces of the Clarinet, Elma Miller’s “Duo for one (hand)”

Elma Miller – the Composer and Compositional Process

Elma Miller was among the first women to graduate with a Master’s degree in composition from the University of Toronto where she studied with composition with Walter Buczynski, John Beckwith and John Weinzweig and media with Marshall McLuhan. In 1980 she received the Els Kaljot-Vaarman Prize for chamber music jointly with Arvo Pärt. She has been President of the Association of Canadian Women Composers and her compositions have been performed in North and South America, Europe, Estonia and India.¹ Miller’s primary instrument is the clarinet and she has written many works for it. Her piece for this collection is “Duo for one (hand).”² which uses the upper joint of the clarinet alone.

The first piece of Miller’s that I played was “La nuit s'ouvre”: for solo clarinet commissioned by Stephen Pierre and premiered in 1998. Although there are relatively few extended techniques used in the piece – only flutter tongue and glissandos – Miller's descriptive language and colourful writing style suggest sound colours beyond the conventional. Trills are used to “Create a surround sound effect as of insects buzzing everywhere”, a melodic passage is “Eerie and subdued. Pale Mauve.”, a rhythmic section is “Beetles dancing on the pavement – hollow tone” and the virtuosic conclusion begins “With lots of expression – like large shaggy, swaying cedars” and concludes with “water reflections, ripples”.³ Miller's vivid imagination and interest in timbre was an ideal fit for this project.

Miller is also interested in writing pedagogical works for young musicians. Her “Let's Play

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²Elma Miller, “Duo for one (hand),” score, 2009, Rebecca Danard personal collection, Ottawa.

Canada! is a setting of seven Canadian folk songs for elementary level clarinet quartet. Miller is sensitive to the needs of young players. Each of the parts is interesting and gets to play the tune at some point, but the range, register and rhythms are suitable for inexperienced players. Most of the folk songs have at least one part that does not go over the break, making them accessible even to beginners. Miller was one of a number of composers from across Canada commissioned by the CMC as part of the millennium New Music for Young Musicians project. This project, funded by the Canada Council for the Arts' Millennium office, addressed the lack of high-quality contemporary music suitable for young performers. The result is a collection of over 100 works of durable, usable, educational music for a variety of ensembles and levels of difficulty. Miller's “Windwalker” for solo clarinet perfectly fulfills the mandate of this project and her “Duo for one (hand)” is also in this genre.

As her extended technique, Miller chose to write for the top joint of the clarinet alone. This technique is perhaps more of a challenge for the composer than the performer because of the limited range and differently tuned scale of the resulting instrument. There were two reasons why I particularly wanted to include this technique. First, it is relatively easy to master; once you figure out how to hold it and some alternate altissimo fingerings, the top joint plays like a “normal” clarinet. Second, because it is unusual, it encourages students to think outside the box and to try new things. I was delighted that Miller wanted to take on this challenge because I knew she would write something not only playable and idiomatic, but musically interesting.

As an example of this creative thinking, I will demonstrate how one passage of Miller’s piece developed. It began as a series of trills as in Example 11.1a.

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Example 11.1a: “Duo for one (hand)” using trills (December 1st 2008).\(^7\)

Then we came up with the idea of using the free hand to open and close the hole at the bottom of the joint. This produces an effect that you cannot get on a “normal” clarinet as in Example M1b. Finally we thought about actually inserting a finger up the tube and moving it around. This creates and even wider assortment of sounds.

Example 11.1b: “Duo for one (hand)” using the hand to open and close the bottom hole. (February 26\(^{th}\) 2009).\(^8\)

By opening the sound palate to the student, I believe this piece will encourage them to try even more colours and effects.

**Playing Pieces of the Clarinet: the Technique**

Changing the length of the bore of the clarinet is not an idea that is frequently used by composers. It is a worthwhile technique because it can significantly change the sound of the instrument and create new and interesting sounds without the player having to deviate much from his/her standard embouchure and fingerings. Although it is not the goal of this piece, the modified instrument can be used to play other extended techniques, resulting in an even greater sound pallet. There are three ways in which the bore can be modified: shortening it by removing sections of the instrument, lengthening it with extensions, and assembling the pieces in an unconventional way.

The standard clarinet is made of five segments, four of which can be removed to make the tube shorter: the bell, the lower joint, the upper joint and the barrel. Removing the bell has the least effect on

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\(^7\)Elma Miller, “Duo for one (hand),” score, 2008, Rebecca Danard personal collection, Ottawa. 3.

\(^8\)Elma Miller, “Duo for one (hand),” 2009, 3.
the clarinet’s range, tuning and sound quality; it only significantly affects E3 and B4 – the notes that use the whole tube. Removing the lower joint and bell, leaving the upper joint, barrel and mouthpiece combination creates the shortened instrument with the most potential. This is the instrument that “Duo for one (hand)” uses and will be discussed in detail below. Removing the upper joint, leaves the barrel and mouthpiece alone. Since there are no longer any keys or tone holes, the pitch can only be adjusted with the embouchure or covering the end of the tube. The range of this combination is remarkable, from F#5 down to Bb4 (concert pitch), although the control is not very precise. A similar principle applies to the mouthpiece alone; the pitch starts at C#6 and can be lowered to C#5. The lower pitches are achieved by inserting a finger inside the tube, which naturally depends on the size of one’s fingers. If the bore is completely blocked, the sound stops, so small fingers are an advantage. It is possible to use an object, such as a pencil, but this lacks the sensitivity of touch. As the bore becomes more and more obstructed, the sound quality goes from shrill and piercing to soft and muffled.

The best known work for the shortened clarinet is Adolf Schreiner’s (1841-1894) “Immer kleiner” for clarinet and piano (c.1888). The piece is subtitled “A humorous Clarinet-Fantasy, which should only be played during a waning moon.” As might be expected, during the course of this piece the clarinetist removes pieces of the instrument sequentially until all that remains is the mouthpiece. Schreiner notes that “the disassembly of the clarinet should be very obvious for the audience.” Although the music is not stunningly original – an Andante and Alla polacca reminiscent of Weber – the idea of playing pieces of the clarinet was quite novel for the time. Pieces with stage directions that required dramatic performance were not commonplace in the nineteenth century, at least in the clarinet literature. In addition to “Immer Kleiner” Schreiner also wrote humorous works for bassoon, trumpet


10“Das Abnehmen der einzelnen Teile der Klarinette muss recht auffallend gemacht werden.” Ibid., 2.
and trombone.\textsuperscript{11} Perhaps because he wrote light rather than serious works, there is almost no biographical information about him, and “Immer Kleiner” is his only work in the standard repertoire today.

Measures 1–38 are for the whole instrument, mm. 43–86 only remove the bell, mm. 102–53 remove the lower joint, mm. 163–72 are for the barrel and mouthpiece only, while the last four measures (mm. 177–80) are for the mouthpiece alone. Schreiner is prudent with the deconstruction of the clarinet; much of the piece uses the whole clarinet or the clarinet without the bell, and there is plenty of time during piano interludes for disassembly. Since this is a work with piano, which obviously has a fixed tuning, Schreiner chooses to avoid pitches which are most likely to cause range and tuning problems when using the smaller sections of the clarinet. Removing the lower joint creates a gap in the middle of the clarinet register. As shown in example 11.2, Schreiner uses the notes above and below this gap to create the effect of two voices in duet.

Example 11.2: Schreiner uses the two registers of the upper joint of the clarinet (mm. 137–42)\textsuperscript{12}

Miller’s title “Duo for one (hand)” is also a reference to this effect and she uses it frequently, as in Example 11.3.


\textsuperscript{12}Adolf Schreiner, \textit{Immer kleiner}, 8.
Example 11.3: Miller’s use of the two registers of the upper joint of the clarinet in “Duo for one (hand)”.\footnote{Elma Miller, “Duo for one (hand),” 2009, 1.}

As shown in Example 11.4, Schreiner writes only two pitches when using the barrel and mouthpiece combination, and only one for the mouthpiece.

Example 11.4 Schreiner’s use of barrel and mouthpiece and mouthpiece alone (mm. 163–80)\footnote{Adolf Schreiner, \textit{Immer kleiner}, 9.}

As he notes, the pitch on the barrel is lowered from written Ab to G by partially closing the barrel. What is not indicated is that to achieve the written Db the opening on the mouthpiece must also be partially closed.

While Schreiner's piece uses smaller and smaller pieces of the clarinet, Donald Martino's \textit{B,a,b,b,it,t for Clarinet in C with extensions}, does the opposite. Martino composed this piece in honour of Milton Babbitt's fiftieth birthday and performed the premiere on May 21st, 1966. Rather than taking the clarinet to pieces, Martino replaces the bell with a series of extensions. Interestingly, these extensions create some of the same tuning, fingering and practical challenges as playing pieces of the
clarinet. The first issue is notational. Since the length of the instrument is constantly changing, it no
longer makes sense to write the score transposed for a Bb instrument. Therefore, Martino decided to
notate the entire score in C. The piece can be played on the Bb clarinet, but the sounding pitches should
be those that Martino writes. Martino uses a total of nine different extensions which to lower the
clarinet pitch from a semitone (to concert C#3) to major tenth (to concert Bb1). Martino specifies the
length and the bore diameter of each extension to within a sixteenth of an inch; the longest is 37¼
inches with a half inch diameter.

Some of the extensions have slides so that the pitch can be changed while playing. The next
challenge involves inserting, removing and adjusting different extensions used in the piece. Martino
writes:

Before the performance pre-set the slides. Perform in a seated position. Place
the extensions arranged in performance order on a table to your right. Note that
whenever only the left hand is in use, the extensions can be inserted and
removed while playing. A slide is extended during performance by grasping it
between the knees and moving back in the chair. A slide is drawn in by
catching it on the rim of the shoe and raising the leg.  

Although Martino’s system of extensions is ingenious and entertaining to watch, it does not have
much musical potential. The extensions only affect the lowest notes and can only be changed when one
hand is free to make the switch. There are no possible special effects, such as covering or partly
covering the end of the tube and making the extensions is extremely labour intensive compared with
playing pieces of the clarinet. It is not worthwhile to use extensions on the Bb clarinet to do anything
that would more easily be accomplished on the standard bass or Bb clarinet; therefore, there are only a
few instances where extensions are useful, as shown in Example 11.5.

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Example 11. 5: Martino used extensions on the Bb clarinet to achieve effects not idiomatic on the bass clarinet.\(^\text{16}\)

One is for a smooth glissando in the low register, which is done by extending or retracting moveable slides within the extension. Another is to accomplish extremely large leaps, from the lowest extension to the high altissimo. Concert A6 on the bass clarinet, is no doubt possible, but stratospherically high. On the Bb clarinet, however, this note is within normal range.

Yet another way to alter the clarinet is to assemble it in an unconventional way by attaching the mouthpiece directly to the lower joint. Using only regular fingerings on this instrument produces a limited range, and an odd, but interesting scale. By using unusual finger combinations however, almost the entire chromatic range from C4 to G5 is available on the Bb clarinet.\(^\text{17}\) The disadvantage of this instrument, as compared to the upper joint/barrel/mouthpiece combination is that the fingerings are often awkward and unfamiliar. As with the upper joint instrument, the sound can be altered by covering the bell with the free hand. Because the opening of the bell is larger, more subtle gradations of pitch and timbre can be generated by opening and closing it. Since most professional clarinetists own both and A and Bb clarinet, Rehfeldt suggests that one clarinet, usually the A, be “prepared” for this technique to facilitate switching between a full instrument and the lower joint.\(^\text{18}\) We came up with a

\(^{16}\)Ibid., 5.

\(^{17}\)Philip Rehfeldt, *New Directions for Clarinet*, 73.

\(^{18}\)Ibid.
similar solution when buzzing into the barrel of the clarinet in Evan Ware’s “Leaving.”

Perhaps because of the difficulties and limitations of the instrument, there are not many example of composers using the mouthpiece/lower joint combination. One example occurs in Sylvia Rickard’s “With Every Breath You Take” (Example 11.6).

Example 11.6: Rickard’s use of the lower joint in “With Every Breath You Take”

Rickard has chosen to primarily notate the fingered pitches rather than the sounding ones. This is easier for the clarinetist to read, but limits the pitches to those that can be produced with regular fingerings. It also causes a certain amount of cognitive dissonance when a passage that appears to be stepwise sounds very different. This technique is frequently used in an improvisational context, when the actual pitches are less important than the timbre of the instrument and the scale it naturally produces.

Learning and Teaching “Duo for one (hand)”

The most significant challenge of playing the top joint alone, is holding the instrument in a way that is relatively comfortable and allows access to all the necessary keys. The solution I found was to hold the clarinet by the cork between the thumb and middle finger. This allows the index finger to be used for the side keys and the ring finger to cover the opening of the tube as needed. The top joint alone has a different tuning than a regular clarinet. In “Duo for one (hand)” this is not a major concern for the performer since Miller's piece is fingered as written. For example when she writes C4, the clarinetist

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uses the regular C4 fingering and she expects to hear C4 ¼ flat not the concert Bb3 that one would get on a full clarinet. It is nevertheless interesting to examine the tuning of the top joint alone as shown in Example 11.7.

Example 11.7: The range and tuning of chalumeau register of the upper joint alone. The numbers in square brackets are the number of eighth-tones between the pitches.

When playing the upper joint alone, the lower the pitch, the more distorted the tuning becomes. The range of the upper joint may be expanded upwards by using alternate fingerings (Example 11.8). For these notes, the pitch tendencies are identical to the full Bb clarinet.

Example 11.8: Expanding the register with alternate fingerings

Miller does not use any written C5, but she does use B4 on several occasions. My choice of fingering was more related to what was convenient rather than the tuning tendencies. In m. 16 (Example 11.9), I chose the slightly low R+A+S2 fingering in order to facilitate motion to the Bb (fingered A+R).
Example 11.9: “Duo for one (hand)” m. 16.\(^{21}\)

\[
\begin{array}{c}
\text{R+A} \\
\text{+S2}
\end{array}
\]

On the other hand, in m. 27, m. 29, m. 32, and m. 53 I chose the A+S1 fingering to move smoothly to the subsequent A\(^\natural\), as shown in Example 11.10.

Example 11.10: “Duo for one (hand)” m. 27–30.\(^{22}\)

The chalumeau register can also be extended lower by a semi-tone to sounding B ¼ flat. This is achieved by shading the opening of the tube with the ring finger. Although Miller does not write any notes below C4, this technique is useful in m. 54. As shown in Example 11.11, this passage begins with the written interval C to Eb; the interval decreases microtonally until it is almost a unison.

Example 11.11: Fingerings for m. 54 of “Duo for one (hand)”\(^{23}\)

Because the written D and Db sound higher than on a full Bb clarinet, these fingerings produce a smooth microtonal progression.

As shown in Example 11.12, the clarion register on the upper joint has similar tuning tendencies to the chalumeau.

\(^{21}\)Elma Miller, “Duo for one (hand),” 2009, 1.

\(^{22}\)Ibid., 2.

\(^{23}\)Ibid.
Example 11.12: The range and tuning of clarion register of the upper joint alone. The numbers in square brackets are the number of eighth-tones between the pitches.

![Diagram of clarion register]

Just as with the chalumeau register, the clarion can be extended downwards to sounding E5 by shading with the ring finger. Miller only makes use of this extension once: the written F# in m. 7 which is possible to obtain with maximum shading.

The altissimo register is obtained primarily with alternate fingers (Example 11.13).

Example 11.13: Altissimo register alternate fingerings for the upper joint.

![Diagram of altissimo register]

There are high and low alternatives for all of these notes depending on if the register key (R) is used. For two reasons, I have chosen to use the high alternatives (using the register key) throughout Miller's piece. First the upper clarion on the top joint alone tends to be sharp, so these fingerings are a better match for the prevailing pitch. Secondly, these fingerings are more reliable and have less of tendency to drop to a lower partial. These alternate fingerings can also be used on the full Bb clarinet with the same results, but they are generally avoided because the regular fingerings are less awkward and more stable.

It is worth noting that on the upper joint alone, even if the “regular” altissimo fingerings are available (for E and F, for example) the alternative fingerings give better continuity to the scale. While it is
certainly possible to obtain notes above F with the top joint alone, they are not used in Miller's piece.

Perhaps the most interesting section of the piece is m. 55 to the end of the piece. As discussed above, Miller uses the top joint in this section to obtain sounds that are not possible to achieve on a full clarinet. One new sound is achieved by opening and closing the opening of the tube. Like a trill, this effect can be performed at different and variable rates depending on the musical context. Higher in the register the effect is quite subtle, but it increases in audibility as the pitch descends. The sound can also be modified by only covering part of the tube. For example, covering the whole tube on a chalumeau C stops the sound completely, so it is preferable to only partly cover the tube. It is important to touch the tube gently so as not to jar the mouthpiece against the embouchure. To master this technique requires some planning and practice. Two hands must perform three tasks: support the clarinet, open and close the tube, and put down the correct fingering. For almost all the notes, the left hand fingers and supports while the right hand opens and closes the tube. This doesn't work, however, if there are too few left hand fingers to support the clarinet: F and G in the chalumeau, C in the clarion, and D in the altissimo. In this case, the right hand supports the clarinet while the left fingers and opens and closes the tube. A variation on this effect involves inserting the little finger into the tube and moving it up and down. This effect is only possible on notes where the clarinet can be held securely with the left hand alone. It is also of course dependent on having a little finger that will fit up the tube. I found that sliding the finger up the back of the tube, away from the tone holes gives the greatest possible variation in pitch without blocking the sound completely.

Playing pieces of the clarinet encourages the student to consider it not as a fixed immutable instrument, but as a more varied and versatile musical tool. This technique encourages performers to seek out new sounds and develop new ways to play the instrument. Changes and improvements to instrument design occur when composers and/or performers can imagine sounds that the current instrument cannot produce. Playing pieces of the clarinet nurtures this type of imagination.
Chapter 12: Buzzing into the Clarinet, Evan Ware’s “Leaving”

Evan Ware: the Composer and Compositional Process

Evan Ware is a composer, music theorist, teacher, trumpet player, and contemporary music advocate who is currently a Rackham Regent’s Fellow working towards a joint Ph.D. in Composition and Music Theory at the University of Michigan. A native of Ottawa, Ware is the founder of ONMC-CMNO (Ottawa New Music Creators/Créateurs de musique nouvelle de l’Outaouais), a non-profit organization dedicated to nurturing the development of a sustainable infrastructure for new music creation in Canada’s capital. I am currently president of this organization and have worked with Ware on several new music concerts in Ottawa. Ware’s music has been performed by the University of Michigan Symphony Orchestra, the Arraymusic Ensemble, members of the National Arts Centre Orchestra, the Windsor Symphony Orchestra, the Nouvel Ensemble Moderne, cellist Paul Dwyer, cellist/dancer Anne Davison, and violinist Philippe Djokic, at such venues as the Midwest Composers’ Symposium, Music08 Festival in Cincinnati, the Ottawa International Chamber Music Festival, and the Mad Air Project in New York city. Ware’s composition teachers include Bright Sheng, Erik Santos, Steven Gellman, Alan Belkin, Michel Longtin, and John Armstrong. Many influences, from minimalism to modernism, cognitive psychology to Zen Buddhism, Tango, and Medieval organum, inform Ware’s creative process. His works seek, through their intense and personal explorations, balance between the worlds we live in and the worlds which live within us.¹

Ware has written three significant works for clarinet: “Here and Now” (2007) for clarinet, violin and viola,² “Leaving” (2008) for solo clarinet which uses the extended technique of buzzing,³ and


²Evan Ware, “Here and Now,” score, 2007, Rebecca Danard personal collection, Ottawa.

³Evan Ware, “Leaving,” score, 2011, Rebecca Danard personal collection, Ottawa.
“Syntaxis” (2010) for bass clarinet and piano. “Here and Now” was the first piece of Ware’s I heard; “Leaving” and “Syntaxis” were both written for me. If there is a common thread between these pieces it is Ware’s metric modulation and constantly changing subdivisions of the beat. In “Here and Now”, Ware explores cross rhythms by, for example, having the viola in 4, the violin in 3 and the clarinet in 5.

Example 12.1: Cross rhythms in “Here and Now” mm. 30–7.

The melodic material is very sparse, which draws the listener to the internal rhythms of the instruments. As with many minimalist pieces, it requires either deep intellectual engagement from the listener to understand the process or a more meditative approach in which the music is enjoyed moment by moment, not for a narrative structure. “Syntaxis” also explores the cross rhythms between the instruments. The bass clarinet and piano begin completely separated with alternating eighth notes and end with unison eighth notes at double the tempo. Throughout the piece the length of time in each measure remains the same, but the instruments add more notes: 2/4, 5/8/6/8, 7/8, 4/4. These metric changes do not occur at the same time in both instruments which creates interesting cross rhythms. In the passage shown in Example 12.2 the bass clarinet is in seven while the piano is still in six.

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4 Evan Ware, “Syntaxis,” score, 2010, Rebecca Danard personal collection, Ottawa.

5 Evan Ware, “Here and Now.”
Example 12.2: “Syntaxis” mm. 133–7 has the piano in six and the bass clarinet in seven.\(^6\)

The melodic lines of “Syntaxis” are more defined which makes the piece more dramatic than “Here and Now” but the metric changes are less audible.

Because “Leaving” is a solo piece, it’s changing subdivisions cannot rely on contrast with another instrument to be audible. Sometimes the metric changes are clearly apparent as in Example 12.3.

Example 12.3: “Leaving” mm. 46–51 has audible metric changes.\(^7\)

Here the repetitive pattern of the notes draws attention to the beat and how the groupings change. In other places, the changing subdivision is less audible as in Example 12.4

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\(^6\)Evan Ware, “Syntaxis.”

\(^7\)Evan Ware, “Leaving,” 2011, 3.
Example 12.4: “Leaving” mm. 22–6.

In this section there is no clear pulse and the meandering stepwise motion does not help to reveal the underlying structure. The notes speed up and slow down, but playing or hearing clear sixteenth notes, septuplets and triplets is difficult and not necessary to achieve the intended effect. I encouraged Ware to mark this passage “freely” so that the performer would not struggle to obtain perfect rhythmic precision.

Although “Leaving” was composed in 2008, Ware made substantial changes to the piece in 2011. In 2008, both Ware and I were working to a deadline: a premiere performance at the Ottawa International Chamber Music Festival in August 2008. In the interests of time, we decided that Ware should write the piece he wanted to write rather than being too concerned about length and technical difficulties. This resulted in a piece that is longer and harder than many others in this collection. It also contains other extended techniques such as glissando, vibrato and flutter tonguing, as shown in Example 12.5.

Example 12.5: Snapshot 5 of “Leaving” uses additional extended techniques.

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8Ibid., 2.

9Ibid., 6.
We always intended to revise the piece to make it more appropriate for students, but did not execute this plan until the spring of 2011. Some aspects of the piece we did not change: it is still long and it still contains other techniques. Having performed the complete piece, making permanent cuts simply to satisfy the requirements of the project did not seem like a good idea. The compromise we arrived at was to allow the performer to omit some of the Snapshots if they proved too difficult or had extra techniques. (This was also the solution used for Chan Ka Nin’s “Speak Out.”) Since the extra techniques are contained only in Snapshot 5 and the technical difficulties are mostly in Snapshots 1 and 3, omitting some or all of these movements would greatly lessen the demands on the student. If one or more of the Snapshots is omitted, the performer should play the remaining Snapshots in order.

Most of the revisions to the 2011 version clarified the notation and made it more intuitive and user friendly. The musical ideas did not change significantly, only the notation, as in the subdivisions in Snapshot 4. In the 2008 version, the division of the beats did not correspond to the number of notes in the group, as shown in Example 12.6a.

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The septuplets and pentuplets had groups of six events (five notes plus one rest), the sextuplets had groups of seven, and the eighth notes were in groups of five. This was needlessly difficult to count. In the 2011 version, the division of the beat matches the number of events, as shown in Example 12.6b.

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Example 12.6a: The 2008 version of Snapshot 4 of “Leaving”.

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Example 12.6b: The 2011 version of Snapshot 4 of “Leaving”.

Snapshot 4 – quiet

Clarinet in B♭ (2-5, buzz)

\[\text{pp cresc. poco a poco}\]

Clarinet in A

\[\text{pp} \rightsquigarrow \text{p} \rightsquigarrow \text{mf} \rightsquigarrow \text{p}\]

\[\text{mf}\]

\[\text{ff} \rightsquigarrow \text{pp}\]

\[\text{12} \text{Evan Ware, “Leaving.” 2011, 5.}\]
In the new version, most of the groups start on the beat. The performer can set the metronome to a half-note pulse and easily play the entire snapshot with rhythmic accuracy.

Another clarification to the subdivisions was to add ratios to them. In the original version this was not always clear, as shown in Example 12.7a.

Example 12.7a: The 2008 version of “Leaving” m. 42.\(^{13}\)

![Example 12.7a](image)

In looking at this example, it might appear that the groups of seven, three and five all take place over a quarter note. Since there is no time signature, it is not possible to determine over how many beats this passage should take place.

Example 12.7b: The 2011 version of “Leaving” m. 62–3.\(^{14}\)

![Example 12.7b](image)

In the revised version (Example 12.7b) Ware makes it clear that the group seven and the group of five both take place over two beats. In the technical notes he writes:

Tuplets are displayed in integers or ratios in reference to the quarter note. Thus a group of eighth notes with 7:2 above the beam indicates 7 eights in the space of 2 quarters. Eighth note triplets, since they are 3:1 are simply notated as 3.\(^{15}\)

He also indicates that, in this passage there are five quarter notes per measure. This makes it much easier to determine where the beats fall in this passage.

“Leaving” is also different from Ware’s other clarinet works in that it is clearly programmatic.

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\(^{13}\)Evan Ware, “Leaving,” 2008, 3.

\(^{14}\)Evan Ware, “Leaving,” 2011, 4.

\(^{15}\)Ibid., iii.
Since Ware is a trumpet player, buzzing into the clarinet seemed like an obvious choice of technique for him. While I immediately saw the humorous potential of this technique, Ware wanted the challenge of taking it in a completely different direction. He begins the work with a quotation from Rilke.

"Is it still I, who there past all recognition burn?  
Memories I do not seize and bring inside.  
O life! O living! O to be outside!  
And I in flames. And no one here who knows me."\(^\text{16}\)

Though it is not shared with the audience, except perhaps in a programme note, the quotation does inform the performance of the clarinetist. The piece is dedicated “for Lily Hockman and in memory of John Fyles.” In the program note Ware writes:

"Leaving” refers to the long emotionally fraught, heartbreaking, perversely amusing, and ultimately final passage that is Alzheimer’s disease or dementia (the two are sometimes impossible to distinguish from each other). I have tried to capture these aspects in a series of seven snapshots and an epilogue entitled, respectively: lively, introspective, with unbearable lightness, quiet, coming apart, confusion, losing, and memories. This piece is dedicated to Lily Hockman, who was walking this road when I knew her and who knew she no longer remembered. “Leaving” is also dedicated to John Fyles, who walked this road and forgot that he was afraid of dancing. Shortly before he died, he danced with his wife for the first time.\(^\text{17}\)

The first Snapshot, “lively,” is characterized by a vigorously leaping melody with Stravinsky like dance rhythms. There is only one memory loss moment when the music grinds to a halt as shown in mm. 29–32 of Example 12.8.


\(^\text{17}\)Evan Ware, “Leaving.” 2011, iii.
In mm. 32–4 the music picks up speed again and is able to return to the opening style for the concluding measure. The second snapshot introduces the clarinet buzzing sound for the first time. As the piece progresses, this timbre becomes associated with increasing memory loss and difficulty communicating. For example “Snapshot 4 – quiet”, shown in Example 12.6, begins with a long passage of buzzing that ultimately ends with the same figure it started with. Only with the clarinet sound can the music break out and actually progress to a conclusion. In “Snapshot 6 – confusion” the clarinet sound appears only in short and increasing frantic bursts, until the last event seems to express resignation to the ever shrinking world. The final Snapshot “loss” consists of buzzing only one note with microtonal variation; the three octave range explored in the first snapshot has collapsed into a single pitch. In this movement, Ware was inspired by Giacinto Scelsi’s revolutionary *Quattro Pezzi su una nota sola* (1959) which is based around only one pitch that is altered by microtonal oscillations and changes in timbre and dynamics. In “Leaving” changes in duration, articulation, dynamics and the dramatic nature of the work, maintains the interest of the listener in this final variation.

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18 Ibid., 2.

Buzzing into the Clarinet: the Technique

Because only the fundamental register is available, the range of notes that can be produced by buzzing into the clarinet is more limited than that of the “normal” clarinet. The best results are achieved by buzzing into the barrel through all of the clarinet except the mouthpiece: Ware refers to this as “2-5, buzz” meaning sections 2 to 5 of the clarinet. As show in Example 12.9, the pitch when buzzing these parts of the Bb clarinet is relatively close to concert pitch.

Example 12.9: Range and pitches for buzzing the Bb clarinet sections 2-5.

Because of the differences in lip size, the exact pitches obtained may vary from player to player, but the relative distance between pitches will be constant. The buzzed pitches are flexible and can be raised or lowered by as much as a semitone through changes in the embouchure. As the buzzing tube gets shortened, the sound quality becomes less focused and the pitch tends to be sharper than concert pitch. Richards only recommends using the fingers of the right hand to adjust pitch, thus limiting the range to

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approximately E3 to A3.\textsuperscript{21} Rehfeldt, on the other hand, gives the range as E3 to A4.\textsuperscript{22} Although I have found it possible to buzz up to A#4, the highest buzzed note that Ware uses is F#4.

Buzzing directly into the upper joint (“3-5”) is not particularly effective. It is more difficult because it involves buzzing directly into the tube rather than into the cup that is formed by the barrel or the lower joint. Since it does not significantly increase the range or available sound pallet, there are no benefits to using this combination. “4-5, buzz” refers to buzzing through only the lower joint and the bell. The available pitches on this instrument are shown in Example 12.10.

Example 12.10: Range and available pitches for buzzing Bb clarinet sections 4-5

As when playing the lower joint plus mouthpiece combination (see chapter about playing pieces of the clarinet), the correlation between the fingered pitch and the note is not intuitive. Furthermore moving between these notes can be problematic because they all use keys operated by the fifth fingers. The fingerings for low G and G# creates a very short tube for buzzing. These notes are unreliable because it requires a very tight buzzing embouchure and a lot of air pressure to get these notes to speak. I have not been able to produce a buzzing sound above fingered G#. In “Leaving” Ware only used the Eb4 (written as Eb4) adjusted up or down microtonally. Here again he made changes to his notation to make it easier for the performer. In the 2008 version, the precise microtonal intervals are notated (Example 12.11a).

\textsuperscript{21}Ibid.

\textsuperscript{22}Philip Rehfeldt, \textit{New Directions for Clarinet}, 2d ed. (Berkeley: University of California Press, 1994), 78.
Example 12.11a: The 2008 version of “Leaving” mm. 115–7.23

Unless the performer is used reading microtonal music, this notation requires some thought to understand and interpret. Furthermore, the microtonal adjustments are done with the lips while buzzing, so the intervals achieved are not exact.

Example 12.11b: The 2011 version of “Leaving” mm. 158–64.24

In the revised version, Ware uses arrows to indicate whether the pitch is raised or lowered from the primary pitch of Eb. This is not only easier to read, but also more accurately reflects the performance practice of this technique.

The embouchure for buzzing into the clarinet is fundamentally the same as playing any brass instrument. While brass players spend hours learning to control and strengthen their embouchure, this level of refinement is not necessary to buzz into the clarinet. The clarinet is not acoustically designed to create a typical brass sound, nor is the tube long enough to reliably produce harmonic pitches above the fundamental; therefore these considerations, central to brass technique, are not a concern for the clarinetist. As long as the pitch is audible, the timbre of the note is open to individual interpretation. Unless taken to extremes, there is no danger of damaging the clarinet embouchure by buzzing. Indeed a practicing a brass instrument in moderation may strengthen and help with control of the clarinet embouchure. With the same fingering, the pitch can be raised or lowered by tightening or loosening the embouchure, as shown in Example 12.11. The looser embouchure, however, tends to produce the best

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projected sound. Similarly higher fingered pitches require a tighter embouchure than lower ones; the lips need to relax to produce the lower pitches and tighten to produce the higher ones. This means that for large leaps, as in Example 12.12, the performer must adjust embouchure as well as fingerings to achieve the buzzing sound.

Example 12.12: Large leaps while buzzing in “Leaving” mm. 130–2.

In “Leaving” Ware requires several styles of articulation while buzzing: slurs, very soft attacks, tenuto, staccato, two kinds of accents, and flutter tonguing. Fortunately, “normal” clarinet articulation and techniques transfers very well to buzzing.

Learning and Teaching “Leaving”

Ware’s piece is the only one in the collection that requires both an A and a Bb clarinet. The reason for this choice is purely practical. His concept for the piece involved both buzzing into the clarinet and “normal” clarinet playing. Given the limitations of the buzzing clarinet and performer endurance, this was certainly a wise decision. One of the most appealing aspects of the piece is the contrast between the buzzing and the “normal” sound. Having both buzzing and playing in the same piece however, creates the practical problem of switching from an instrument with a reed and mouthpiece to an instrument without. Taking the mouthpiece on and off the same instrument is not the ideal solution. It is time consuming, the reed often needs adjusting, and there is the question of what to

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28 Gerald Farmer, *Multiphonics and Other Contemporary Clarinet Techniques*, 143.
do with the mouthpiece while it is not in use. In a solo piece, unlike in chamber or orchestral music, there is no way to cover these transitions with other instruments. The best solution seemed to be to use two clarinets: the Bb clarinet without the mouthpiece for buzzing and the A clarinet with the mouthpiece for normal playing. We certainly could have used two Bb clarinets (or two A clarinets) but one A and one Bb is the combination than most clarinetists have readily available.

Even using the two instruments transitions between buzzing and playing must be carefully considered so that they do not interrupt the flow of the piece. This is particularly true when they occur within a movement as they do in Snapshots 2, 4 and 6. Improving these transitions was a significant part of the 2011 revision. In the 2008 version, the transition in Snapshot 2 is quite abrupt, as shown in Example 12.13a.

Example 12.13a: The buzzing to playing transition in Snapshot 2 of “Leaving” mm. 30–1, 2008 version.\(^\text{29}\)

\[
\begin{align*}
\text{Example 12.13b: The buzzing to playing transition in Snapshot 2 of “Leaving”, 2011 version.}\text{30}\end{align*}
\]

The pause needed to move from buzzing to playing does not fit particularly well in the context of the music.

In the 2011 version (Example 12.13b), Ware adds more rests and a decrescendo to the end of the

\(\text{\textsuperscript{29}}\)Evan Ware, “Leaving,” 2008, 2.

\(\text{\textsuperscript{30}}\)Evan Ware, “Leaving,” 2011, 3.
buzzing section so that the pause to switch instruments sounds more natural. In Snapshot 4, the buzzing sound builds from pianissimo to fortissimo; this dynamic shape is then imitated by the clarinet in the second half. Eliminating the diminuendo in the 2011 version (see Example 12.6) makes this transition more dramatic. The most significant revision was to what is now “Snapshot 6 – confusion.” In the 2008 version this musical material was divided in two: “Snapshot 7 - tension” and “Snapshot 8 - confusion,” as shown in Example 12.14a.

Example 12.14a: Snapshot 6 and 7 from the 2008 version of “Leaving.”

Because of all the changes within these movements, it was difficult to differentiate the end of the Snapshot from the other transitions. In the 2011 version, Ware combines these Snapshots and makes the “confusion” about the instrument changes as shown in Example 12.14b.


**Snapshot 6 – confusion**

Instrument changes are to be as fast as possible

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In the technical notes Ware writes:

Pauses to change instruments in Snapshot 6 are meant to be as short as possible. With apologies, this is intended to be inconvenient to the player, further expressing the tension and confusion of the music.

Rather than trying to disguise the transitions, the frequent instrument changes enhance the state of mind this Snapshot portrays.

The dramatic nature of this work lends itself to a staged performance. When I have performed the 2008 version, I have either begun standing tall and gradually collapsing on to the floor or I have left the stage during the final variation. I have not yet performed the 2011 version, but performing Snapshot 6 while seated would be an effective intermediate step between standing and collapse. It would also facilitate the rapid instrument changes. To make this work, it would necessary to be able to see the music on the stand from all three positions (standing, chair and floor) or to adjust it discretely during the piece. I always try to place the music stand in a way that it does no impair the audience’s view of the performance. Because it reduces the need to read, memorizing parts of the piece (the last Snapshot for example) enhances the drama of the performance. A completely memorized performance of “Leaving” would be stunning, but it is not something I have yet attempted. The final significant change that Ware made was to add an “Epilogue – memory” at the end of the piece.

Example 12.15: Epilogue – memory of “Leaving.”

Ibid., 3.
The 2008 version is dramatic and moving but ends in a very depressing way. The Epilogue (Example 12.15), recalls earlier movements and brings a more hopeful ending to the work. It should be memorized and performed either off stage or while leaving the stage.

In “Leaving,” Ware has created a piece that requires absolute commitment from the performer. The clarinetist must have the assurance to use the new and perhaps strange sounds to reach an audience. A successful performance of this piece is deeply moving, but cannot be achieved without the engagement of the performer. By performing “Leaving” hopefully students will come to appreciate how rewarding a fully committed performance can be and never settle for anything less in their other work.
Melissa Hui: the Composer and Compositional Process

Melissa Hui was born in Hong Kong and immigrated to North Vancouver, BC, at the age of eight. She received degrees from the University of British Columbia, California Institute of the Arts and Yale University where she received a DMA. Her composition mentors include Jacob Druckman, Martin Bresnick, Earl Kim, Morton Subotnick and Mel Powell. Her commissions include works for the Oregon Symphony, National Arts Centre Orchestra, Vancouver Symphony Orchestra, Winnipeg Symphony Orchestra, Kitchener-Waterloo Symphony, St. Lawrence String Quartet, Kronos Quartet, Ensemble Antipodes (Switzerland), Manitoba Chamber Orchestra, New Music Concerts (Toronto), SMCQ and the Nouvel Ensemble Moderne (Montréal), New Millennium Ensemble (NYC), Dogs of Desire (of Albany Symphony), Tapestry New Opera Works, Hong Kong Arts Festival, and soundtracks for the National Film Board of Canada. She has received performances by the American Composers Orchestra at Carnegie Hall, San Francisco Contemporary Music Players, Esprit Orchestra, Taiwan Symphony Orchestra, and at International Gaudeamus Music Week (Amsterdam), ISCM festivals in Switzerland and Croatia, Théâtre de la Ville (Paris), Festival Sons d'Hiver (France), Merkin Hall, Focus Festival, and Music at the Anthology in New York City, Festival Internacional Cervantino (Mexico), Pacific Music Festival (Japan), Spoleto Festival, and L.A. Philharmonic's Green Umbrella series, among others. Hui is a founding member of the Common Sense Composers Collective. With compositions released on CRI, Naxos, UMMUS, Santa Fe New Music, and Nisapa, her solo disc, And blue sparks burn, appears on the Centredisc label. Recent projects include commissioned works for the Ensemble Contemporain de Montréal, the Cecilia String Quartet, and an opera, Pimooteewin, based on a Cree myth and sung in the aboriginal language for Soundstreams Canada. She is the recipient of a Guggenheim fellowship (1997) and a Fromm Foundation commission (2000) as well as the grand prizewinner of the CBC Radio Young Composers Competition and the du Maurier/Winnipeg
Symphony Orchestra competition. In addition to composer residencies at Marlboro and Yellow Barn Music Festivals, she served on the composition faculty at Stanford University (1994–2004) before relocating to Montreal. She joined the Schulich School of Music of McGill University as Associate Professor of Composition in 2010. Initially inspired by the haunting music of the African pygmies and Japanese gagaku court orchestra, Hui strives to create a personal music of ethereal beauty, intimate lyricism and raucous violence. She is also guided by her interests in the perception of time and the function of memory.¹

I approached Melissa Hui to be part of this project on the recommendation of Joel Hoffman. Much of her work is for orchestra, choir, large chamber ensembles or multimedia, so a solo clarinet piece was outside of her usual genre. On the other hand, “One Voice” for solo flute, her only piece for a solo wind instrument, uses many extended techniques such as pitch bends, whistle tones, harmonics, microtones, and multiphonics.² I was confident that she would create something equally interesting for this project. Like the other composers, Hui agreed to participate in this project in October of 2007, but unlike the others she did not immediately choose a technique. This delay meant that the more standard and the more versatile techniques were already claimed by other composers. The techniques that remained on my initial list, such as hand pops, teeth on the reed, and slap tongue, were not easy inspirations for a whole piece. Because of other commitments, including having her second child, Hui still had not chosen a technique in November 2008. I had recently become acquainted with the work of the stunning Swedish clarinetist Martin Fröst. In addition to his virtuosic clarinet playing Fröst incorporates, movement, acting, costumes and dance into many of his performances.³ In his video performance of the concerto “Peacock Tales” by Anders Hillborg, Fröst creates something comparable


to a popular music video. There are costume changes, fades in and out, special effects as well as dynamic and expressive movement. This inspired me to want a piece for clarinet and movement in my collection, so I asked Hui if she would consider this technique. Fortunately she agreed to write “Nimbly” for this project.

The idea of clarinet and movement gives the composer great freedom, but also a great challenge to set the parameters of the piece. For most other techniques it is easy for the composer to imagine or the performer to demonstrate all of the possible sounds, but movement covers such a wide range of possibilities that the composer must make important decisions before beginning to write. Among other things, the composer must consider: how movement changes the sound of the clarinet; the limits of what a performer – relatively untrained in movement – can do; and how to notate movement clearly and accurately. In December 2008, I met with Hui in Montreal to discuss these issues and demonstrate some movement.

Hui chose to notate the movement of “Nimbly” as rhythms below the clarinet stave. This creates in effect a duet in counterpoint between the clarinet and the movement. About the movement part she writes:

X’s = steps with feet. Interpret the 'pitch' levels as you like. Feel free to use all manners of stepping, hopping, foot-dragging, turning, lunging, tiptoeing and skipping to execute the rhythms of the movement staff while keeping the patterns coherent.  

Her notation was effective, but also left many decisions up to the performer including how to move about the stage, how to interpret the pitches and how to move the rest of the body in coordination with the feet. My own training in musical movement was both a help and a hindrance in learning this piece. I was introduced to musical movement in a masterclass about the Delsarte System of Expression with Joe Williams which took place in the spring of 2007 at CCM. Using very simple musical examples, Joe

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5Melissa Hui, “Nimbly,” score, October 2009, Rebecca Danard personal collection, Ottawa, 1.
demonstrated empirically that the movement of a performer significantly changed many aspects of the performance, from the tone quality to the musical phrasing. I was so inspired by Delsarte, that I took a course in Delacroze Eurhythmics at CCM with Allen Otte in the fall and winter of 2007-08. Eurhythmics begins with a basic set of rules for expressing rhythm and meter in music. For example, downbeats are stronger than upbeats, duple rhythms imply running or walking, triplets are circles. These principles work well for simple rhythms and meters, but become almost impossible to follow strictly when applied to a piece like “Nimbly”. Much of my early communication with Hui involved my trying to change the piece into something I could apply these rule to and her trying to maintain the complexity and nuance she wanted in the movement. Eventually I realized that, while I could use eurhythmics to inform my performance, the piece was ultimately more important than slavish adherence to Dalcroze principles. Like most of the pieces in this collection, “Nimbly” underwent a number of drafts and modifications before the final product was realized. The changes that we made were to clarify Hui’s intentions, not to make the movement more rule-bound. The result is a synthesis of her musical inspiration and my practical considerations.

The first change we made was to the motive that occurs in the first measure of the piece and comes back on several other occasions. In the first draft long notes in the clarinet is ended by a movement on the last 16th of the measure, as shown in Example 13.1a.

Example 13.1a: “Nimbly” mm. 1–2 in the first draft.6

This is not a strong place for a movement. It reads like an anacrusis but is not fulfilled by a downbeat. The duration of a 16th note also seems arbitrary. How can the performer differentiate with movement

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between the last 16th or the last 8th or the last 32nd of the measure? In the final version, Hui changes this to a quarter note on the downbeat of the next measure, as in Example 13.1b.

Example 13.1b: “Nimbly” mm. 1–2 in the final version.\(^7\)

This makes a much stronger gesture and there is no question about where the downbeat occurs.

The second important change was to fill in many of the rests in that were in the first drafts: for example, in the passage shown in Example 13.2a.

Example 13.2a: “Nimbly” mm. 34–8 in the first draft.\(^8\)

This passage is difficult because the performer's movement should show the beginning and end of the rests between the quarter notes as well as the triplets. The rests call for starting and stopping the motion, whereas the triplets imply a continuous circular flow. We fixed this problem by writing the triplet as sustained notes rather than with rests, as shown in Example 2b.

\(^7\)Melissa Hui, “Nimbly,” October 2009, 1.

\(^8\)Melissa Hui, “Nimbly,” September 2009, 1. The half filled circles indicate turning the head.
Example 13.2b: “Nimbly” mm. 34–8 in the final version.  

This movement is easily interpreted as a slow sustained triplet, which is more in character with the piece. Replacing rests with sustained notes in the movement part was a change we made throughout the piece.

**Moving while Playing: the Technique**

Unlike some of the more standard techniques, it is not immediately obvious why moving while playing should be included as an extended technique in this collection. Movement is a natural part of music making: the violinist pulls the bow across the strings, the pianist reaches for a high note, the percussionist raises his hand to strike the drum. Wind instruments perhaps require the least motion, but nevertheless the body moves with breath and the fingers move precisely to play the music. Much of the motion involved in music making is, however, not purely for sound production. In ensembles we use body language to communicate entrances, tempo, dynamics and expression. The spontaneous movement of the performer can either enhance or detract from the audience’s enjoyment; therefore, it is important to become aware and be in control of how we move while performing.

Motion, whether deliberate or unconscious, expressive or distracting, does change the sound of the music and its dramatic effect. The idea of choreographing the movement of musicians to exploit this is not a new one for composers. For example in Haydn's “Farewell” Symphony, the performers leave the stage one by one until only a small ensemble remains.  

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if, for example, the players simply stopped playing and remained on stage. An example from nineteenth-century orchestral music is the practice of raising the bell of the clarinet, as in, for example Mahler’s *Symphony No. 3*.

Example 13.3: The instruction “Schalltricher auf” in Mahler’s *Symphony No. 3* tells the clarinets “bells up.”

![Example 13.3: The instruction “Schalltricher auf” in Mahler’s *Symphony No. 3* tells the clarinets “bells up.”](image)

This motion not only gives the clarinet a brighter sound, it also draws dramatic attention to the section of the orchestra that Mahler wants to highlight.

In the twentieth century, expressive motion and stage directions become more elaborate, most notably perhaps in the music of Karlheinz Stockhausen. Stockhausen uses and notates movement in a variety of ways in clarinet his music. In *Bassetsu*, he uses colors to indicate direction of playing and to differentiate the characters from his larger work *Licht*: Michael segments are in blue and played predominantly to the left, Eve segments are in green and played while slowly rotating in the middle, Lucifer segments are in red and played predominantly to the right. (Example 13.4).

Example 13.4: *Bassetsu* mm. 59–61.

![Example 13.4: *Bassetsu* mm. 59–61.](image)

In *Freia*, the clarinetist performs sitting, then kneeling, then standing on a podium. In *Harmonien*, the

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13Karlheinz Stockhausen, *Friea* (Küten: Stockhausen Verlag, 1997).
performer walks in a large ellipse around the stage, occasionally pausing to turn in a circle, as shown in Example 13.5.

Example 13.5: Stockhausen’s diagram of the movement in *Harmonien*. The numbers represent the fluctuating tempo of the piece.  

![Diagram of movement](image)

Perhaps Stockhausen’s most detailed choreographed work is *Der Kleine Harlekin*. The movements required include dancing in circles, bending forward, “racy dance movements,” standing stiffly, up and down motions of the head while playing, slapping the clarinet, leg lifts and bends, opening and closing the eyes, jumping on tip toes, moving in different directions, standing on one leg, stamping the feet, thrusting the rear end from side to side, pivoting on the spot, making large circles with the clarinet while playing, and shaking the body. These actions are described in detail in the score. As shown in Example 13.6, *Der Kleine Harlekin* uses a rhythmic notation for foot movement that is most similar to what Hui uses in “Nimbly.”

Example 13.6: Excerpt of *Der Kleine Harlekin* with translation of directions by Suzanne Stephens.

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14 Karlheinz Stockhausen, *Harmonien* (Kürten: Stockhausen-Verlag, 2008), II.

Unlike Hui, Stockhausen specifies the type of foot motion he wants and the direction of travel of the performer. In some ways, this makes the piece easier because the clarinetist does not have to figure these things out for him or herself. On the other hand, the performer must remember exactly what type of movement Stockhausen wants at all times. Furthermore, unlike “Nimbly”, it is not possible to alter the movement of *Der Kleine Harlekin* to suit individual performers or performance spaces. Unlike Stockhausen, “Nimbly” uses different lines of the stave for the movement part. Although Hui leaves the interpretation of these “pitches” entirely up to the performer,¹⁶ they should be considered in preparing the movement part.

In addition to movement, all of these works by Stockhausen require special costumes, staging and/or lighting. A Canadian example of a similarly costumed and choreographed works is R. Murray Schafer’s *Wizard Oil and Indian Sagwa* for clarinet and narrator. The clarinetist, costumed “like a cigar-store Indian,” plays the part of Chief Sam Padoopi who collaborates with the narrator (Johnny Mailloux) to swindle the audience into buying their snake oil.

Example 13.7: R. Murray Schafer’s *Wizard Oil and Indian Sagwa* (excerpt).¹⁷

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As shown in Example 13.7, the clarinetist dances, bows and moves his playing to help with the swindle.

Advances in technology have allowed composers to use movement to directly produce sounds or to process them electronically. Using sensors and accelerometers the performer's motion on stage can be used to affect an entire sound world. My experience with this was “Water Birds” a collaboration with Mara Helmuth on a piece for clarinets and an infrared sensor system. In this piece, my movement around the stage triggers four different sensors which control how my sound is processed.

What makes motion such an interesting technique is the variety of purposes for which composers use it. For Stockhausen it is allegorical, for Schafer it is narrative, for Mara it controls a musical instrument, for Hui it provides a rhythmic counterpoint. There are no doubt many other ways to use movement in music, but to explore them all thoroughly is beyond the score of this project. It is my hope that by learning “Nimbly” clarinetists will become interested in exploring other ways to use movement in their performance.

**Learning and Teaching “Nimbly”**

Learning any new technique can be intimidating, particularly something like choreographed movement that is very foreign to most musicians. It is a key principle of Delsarte that balance creates beautiful, harmonious and sustainable movement. Fortunately, it is not necessary to have a dancer’s body or a yoga instructor’s flexibility to achieve this balance. With a relatively small amount of training anyone can learn to move musically. Naturally, more training and practice in movement increases comfort levels and broadens the expressive range, but any able-bodied clarinetist should be able to perform “Nimbly.” Because I have never been naturally athletic or expressive with my body, it was particularly empowering for me to learn this piece.

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I am deliberately not providing a detailed choreography for “Nimbly”. First because it is almost impossible to describe accurately, but more importantly because the process of realizing the movement part is a necessary step to learning the piece. With a video recording and some verbal explanation, I could teach another clarinetist my movements for “Nimbly.” What I have chosen to do, however, will never be as natural or comfortable for another performer as it is for me or as what they could come up with on their own. In working out my interpretation of the score, I had to engage much more intensely and creatively with the music, than I would have if Hui had given me detailed instructions about how to move during the piece. Because of this investment of time and energy, the piece has become much more interesting, personal and rewarding to play. By not including a detailed choreography, I hope that other clarinetists explore “Nimbly” in their own way.

I will however offer some general guidelines and specific examples of how I prepared this piece, that may help others to interpret this work. Because Hui has notated the movement part as rhythms, I used Dalcroze Eurhythmics and the Delsarte System of Expression to inform my performance. Both of these practices give a musician the opportunity to internalize rhythm and meter physically as well as intellectually. Moving to a notated rhythm is not a familiar concept for most musicians, but it is a core principle of Dalcroze. In “Nimbly” rhythms first expressed in the movement line are then transferred to the clarinet line, as shown in Example 13.8:

Example 13.8a: “Nimbly” mm. 7–8 introduces a rhythm through movement.20

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Examples 13.8b: “Nimbly” mm. 53–4 brings back a similar rhythm in the clarinet part.²¹

By expressing rhythm through motion the performer gains a better understanding of how it should be played in the music. Because it is an established system created by musicians, for musicians, using Dalcroze helped not only my comfort in moving, but also my rhythmic skills as a musician. My Dalcroze teacher Allen Otte was able to make a number of very useful suggestions that improved my performance of the piece. In most traditional music the clarinet is only required to read one line of music. In “Nimbly” the movement is notated as a duet in counterpoint with the clarinet. The performer must read and interpret both parts simultaneously. The movement affects the clarinet playing and the clarinet playing affects the movement. Therefore the performer must make interpretive choices that work for both parts. The performer must simultaneously be aware of the movement rhythm, the direction to face, the position on stage and, of course, the clarinet playing. This degree of multitasking is excellent practice for performing any complex music.

There are three aspects to the movement in this piece: executing the rhythms, moving while playing and the overall staging of the piece. In this piece, the rhythmic figures and the subdivision of the beat are more important than the meter. According to the Dalcroze system, duple divisions are walking or running, triplets are circles, dotted rhythms are skipping, and rests are stillness. On the other hand, it is more important to create a performance that works physically and artistically, rather than to be dogmatic about these principles. Dalcroze should be used to interpret the piece, rather than using the piece to demonstrate the principles of Dalcroze.

I found that both starting and stopping movement or clarinet playing required preparation.

²¹Ibid., 2.
Sometime I could express the stillness of a rest, but at other times I needed to move the clarinet into playing position, for example. Movement should not be restricted to the feet only; toes, heels, knees, hips, elbows, shoulders, head and clarinet should all be used to expressively. Since there are many long passages of movement without playing, it is not necessary to keep the clarinet held in playing position. I found it useful to move the clarinet from hand to hand and sometimes to hold it up, down, away and/or horizontally. In this piece, the movement should be stealthy and fox-like. Leading with the toes expresses this better than leading with heels. I choose to perform this piece in bare feet, sacrificing a certain crisp articulation for a better balance between heel and toe sounds. The piece is for clarinet and movement, not clarinet and shoe noise. Sounds made by the movement are fine, but not the goal of the piece. Sometimes moving silently is most effective.

I looked for gestures that were the same and interpreted them in the same way to give my performance unity and cohesion. For example, I always interpreted the dotted-eighth plus sixteenth gesture with a drag and tap with the same foot – like a horse pawing the ground. In the passages with tied and dotted triplets (mm. 28–30, 56–58, 78–80) I subdivided into triplet beats and then figured out how many subdivisions each note should have. In Example 13.9, the triplets between the movement and the clarinet in m56 help to set up this subdivision.

Example 13.9: “Nimbly” mm. 56–8 with my subdivisions added.

[Music notation]

22Allen Otte, interviewed by author, 1 April 2010, University of Cincinnati College-Conservatory of Music, Cincinnati.

23Joe Williams, interviewed by author, 2 October 2010, University of Cincinnati College-Conservatory of Music, Cincinnati.

Because of the triplets and the sustained notes, I wanted to make these passages graceful and waltz-like.

Moving while playing does affect the sound of the clarinet. Although it is not indicated in the part, I allowed myself the freedom to change the angle of my clarinet quite radically. For example in the long notes in mm. 1, 10 and 21, I started with the clarinet low and angled it up and out with the crescendo (See Example 13.1) At the end of the note the clarinet thrusts up and away while the foot comes down. This opposing movement is stronger than moving them both in the same direction.\(^{25}\) In the passages with head turning while playing but not moving, as in Example 13.10, I turned around almost 180° and crouched down before coming back to facing front and upright.

Example 13.10: “Nimbly” mm. 70–3 involves a head turn while playing, but no foot movement.\(^{26}\)

\[\text{Example 13.10: “Nimbly” mm. 70–3 involves a head turn while playing, but no foot movement.}\]

Gestures like this do not greatly affect the sound from the perspective of the performer; after all the performer's ears remain in the same place relative to where the sound is coming from. From the audience's perspective however, the change is significant as they hear the sound coming from different places relative to where they are. In performing “Nimbly”, I used all three dimensions of motion – up and down, side to side, and back and forth.

In considering the staging of this piece, it is important to think about the performance venue. Obviously it is important to include equal amounts of movements to the right and left as well as front and back to avoid running into walls or off the stage. I thought about balancing time, distance and

\(^{25}\)Joe Williams, interviewed by author.

energy both physically and musically. For example, the movement in Example 13.8a begins with long rhythmic values and ends with much shorter ones. To maintain the same energy throughout and to keep time, I needed to cover longer distances (big steps) at the beginning and shorter distances (small steps) at the end. When I premiered this work, it was semi-memorized. This meant that I could move relatively freely, but on occasion had to get back to place where I could read the music. Of course a completely memorized performance would be preferable to avoid these issues. For two reasons I decided to begin and end the piece off stage, or at least off centre: it avoids any movement (walking on, bowing) that is not part of the piece; and it clarifies for the audience when the piece is over. Many pieces that involve movement such as Stockhausen’s Der Kleine Harlequin, Harmonien, and Freia, Schafer’s Wizard Oil and Indian Sagwa and Mara Helmuth’s Water Birds, have similarly staged entrances and exits.

Finally, interpreting Hui’s “Nimbly” is an exercise in losing inhibitions. It is a piece that requires complete commitment on the part of the performer. To reach an audience, the performer must be self-aware, but not self-conscious, and execute the movement with total conviction. Any piece would benefit from the degree of mental and physical preparation needed for “Nimbly”. In his program notes to Der kleine Harlekin Stockhausen writes,

> THE LITTLE HARLEQUIN is a roguish, exuberant dance musician and a bubbly performing artist, who could inspire a more versatile kind of musician for the future.  

“Nimbly” could be a clarinetist’s first step to becoming such an inspiration.

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27Karlheinz Stockhausen, Der Kleine Harlekin.

28Karlheinz Stockhausen, Harmonien, II.

29Karlheinz Stockhausen, Freia.

30R. Murray Schafer, Wizard Oil and Indian Sagwa.

31Mara Helmuth and Rebecca Danard, “Water Birds.”

32“ist DER KLEINE HARLEQUIN ein schalkhafter, ausgelassener Tanzmusiker und sprudelnder Vortragskünstler, der für die Zukunft einen beweglicheren Typ des Musikers inspirieren könnte.” Karlheinz Stockhausen, Der Kleine Harlekin, 1.
Learning to use expressive movement in performance has many benefits for the contemporary clarinetist. The most obvious application is in being able to choreograph and perform works, such as those described above, in which the composer requires the performer to move. The concept that movement is an integral part of the performance, however, has far broader implications. By concentrating on movement in pieces such as “Nimbly,” performers become more aware of their movement on stage and how it affects their sound. Hopefully this will allow them to eliminate movements, such as nervous pacing or excessive swaying, that are often detrimental to the performance. A performer who can control when and how to move has much more power to create a dramatic performance. This is often subtle, as in remaining still after a quiet ending, but it can also be very overt. Performers such as Martin Fröst use their talent for expressive movement and choreography to take traditional repertoire and transform it into something new and different. It is not my intention to argue that any music needs to be enhanced by choreography, but it can make a memorable performance.
Chapter 14: Conclusion

The concept of extended techniques is in some ways outdated. Some techniques, such as glissando or flutter tonguing, have become standard for any advanced player. Others, such as buzzing into the clarinet or playing pieces of the clarinet, are so rarely used that most performers will never need to master them. With so much standard repertoire and techniques to learn and so little time, why should the clarinet student or teacher bother with extended techniques and the pieces in this collection? As I have illustrated throughout this document, I believe that studying extended techniques and these pieces provides some fundamental insights that will ultimately improve the performer as a clarinetist and as a musician.

One concept that may be addressed through extended techniques is a greater understanding, appreciation and control of timbre. A good acoustic instrument can produce a wide variety of interesting sounds, but some performers are unwilling or unable to explore this territory. Many clarinetists have a culturally predetermined idea of what a “good” sound should be and are unwilling to deviate from it under any circumstances. This insistence on timbral consistency can be boring and limits the expressive power of the performer. On the other hand, a laissez faire attitude towards timbre is also problematic. Performers who cannot decide upon, create and modify their sound quality have lost a musical tool. Timbre should not always be consistent, but it should be controlled; this is particularly true of extended techniques.

Extended techniques often break through or simply ignore the rules of what a particular instrument’s timbre should be. This does not mean that timbral considerations should be abandoned; on the contrary, even more attention should be paid when asking the instrument make unusual sounds. Many extended techniques, including multiphonics, singing while playing, timbre trills, glissando, vibrato and flutter tongue, deliberately alter the timbre of the clarinet. With these techniques, the timbre should be modified to be suitable for the musical context in which they appear. While it is partially the
responsibility of the composer to use these techniques appropriately, the performer should not be satisfied by merely producing the effect. Just as playing the correct notes and rhythms is only the first step in preparing a piece for performance, making the correct sound for an extended technique is not the end of the musical process. Other extended techniques, such as double tonguing, quarter tones, playing pieces of the clarinet and movement, allow the performer a degree over control how much the timbre of the clarinet is affected. Depending on the context, alteration in the sound may be a deliberate effect that the composer is trying to achieve or an unwanted side effect that the performers should do their best to minimize.

A third type of extended technique, such as key noises, air sounds or lip buzzing, use the clarinet to make sounds that bear no relationship to the normal clarinet timbre. The clarinet has been developed and refined over approximately 300 years to make the sound of a single reed resonating within a cylindrical chamber. It is only rational to raise the question of why it should be used to make sounds it was never designed to make. There are several answers to this question. While normal uses of the instrument may be more versatile, using the clarinet in unusual ways produces timbres that are not available in any other way. Furthermore, when combined with “normal” clarinet playing it makes it possible to achieve several quite different sounds with one instrument and one performer. Finally, expanding the available sounds can be a source of creative inspiration for the composer, the performer and even the audience. Leading an audience to expect one thing and delivering something else is a familiar compositional tool. Having the audience see a clarinet, but hear an unexpected timbre, continues this tradition.

Another aspect common to several of the pieces in this collection is the idea of improvisation. Any performance is a collaboration in decision making between a composer and a performer. It is easy to mistakenly think of the composer as making all the decisions and the performer following orders as well as possible. In fact, it is impossible for the composer to notate every aspect of the music; therefore,
even in standard repertoire decisions must be made and improvised by the performer. In some cases, including several pieces in this collection, the composer deliberately leaves some decisions up to the performer. In this case, I am using the term “improvised” to mean any aspect of the music that is not notated by the composer. The performer will make some of these decisions spontaneously during the performance and some ahead of time in rehearsal and some a combination thereof. Sometimes the aspects of improvisation are very subtle, such as the varying speed and dynamics in Elma Miller’s “Duo for one (hand)” (Example 14.1), the long passages of grace notes in Sylvia Rickard’s “Teco-Teco” (Example 14.2) or the “vamps” in Don Ross’s “Almost There” (Example 14.3).

Example 14.1: Elma Miller “Duo for one (hand)” rehearsal 6.¹

Example 14.2: Sylvia Rickard “Teco-teco” second movement mm. 14–8.²

Example 14.3: Don Ross “Almost There” mm. 82–3.³

Others are more overt such as the indeterminate time and repeats in Robert Lemay’s “Clap” (Example 14.4) or the improvised notes in Chan Ka Nin’s “Speak Out” (Example 14.5).

¹Elma Miller, “Duo for one (hand),” score, 2009, Rebecca Danard personal collection, Ottawa, 2.
³Don Ross, “Almost There,” score, 2009, Rebecca Danard personal collection, Ottawa, 2.
Example 14.4: Robert Lemay “Clap” (excerpt).  

Example 14.5: Chan Ka Nin “Speak Out” mm. 6–7.

Joel Hoffman’s “flutterby” does not have any improvisation within the sections, but the performer is encouraged to decide the order of the segments and insert them spontaneously into a concert program. Obviously Jérôme Blais’s “VAV” has the most significant amount of improvisation, which is fully

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discussed elsewhere. Allowing the performer to make even small decisions for themselves encourages creativity. The performer must experiment to discover what works best for them and for the music. It can be liberating, but also somewhat intimidating to discover that there is no “right” way to play a piece of music. Maintaining this attitude and looking for opportunities to make decisions in standard repertoire can lead to a more considered and unique performance.

These pieces also provide the clarinetist with experience reading different types of notation. Writing the fingered pitches rather than the sounding ones is certainly the most practical approach to notating any unusual sounds. Within my collection this approach is used by Evan Ware to notate buzzed notes in “Leaving” and Elma Miller to notate her piece for the top joint of the clarinet “Duo for one (hand)” Chan Ka Nin’s “Speak Out” and Richard Désilets’s “A Micro Tale” both rely on the clarinetist reading fingerings. Although it would be possible to memorize the fingerings for each of the multiphonics and microtones, having the fingerings included in the score makes these piece much easier to learn. This system is analogous to including tablature as well as the chords in guitar music. The fingerings do not replace the notes, they simply remind the performer how to play the multiphonic or microtone.

Both Robert Lemay and Doss Ross use a percussion notation system for key clicks and air sounds respectively. Rather than corresponding to pitches, the lines and spaces of the staff represent different unpitched percussive sounds. When Ross wants a key click, he uses the middle space and writes in the desired note, as shown in Example 14.6a.

Example 14.6a: Pitched key clicks in mm. 16–20 of “Almost There.”

If Robert Lemay were writing the same passage it would probably appear as in Example R.6b.

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6Don Ross, “Almost There,” 1.
Both notations are clear, but one might argue that, within one collection, a particular technique such as key clicks should be notated the same way. This however, does not reflect the reality of contemporary music. Particularly when it comes to extended techniques, notation is not standardized. Each composer finds a system that suits their needs and it is up to the performer to figure out each system. The student of contemporary music should get used to the idea of having the same techniques notated in different ways by different composers.

Reading and interpreting more than one line of music is another challenge of these pieces for the clarinetist. In “All Good Children” Lori Freedman uses x shaped note heads to indicate sung pitches. Although much of the piece has the clarinet in unison with the voice, there are times when the clarinetist must perform two different lines simultaneously as shown in Example 14.7.

Example 14.7: The sung and played lines of Lori Freedman’s “All Good Children” mm. 14–9.

A much more complex example of this is Melissa Hui’s “Nimbly” in which she uses a percussion-like notation to write the movement part. In this piece the performer must sometimes interpret three lines simultaneously: the clarinet playing, the foot movement and the head turning, as shown in Example 14.8.

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This degree of multitasking is excellent practice for performing any complex music.

In addition to the extended techniques they were meant to teach, these pieces address other aspects of contemporary performance that are unrelated to the clarinet. Don Ross’s “Almost There” and Robert Lemay’s “Clap”, both use spoken text. “Clap” and Evan Ware’s “Leaving” both lend themselves to dramatic staging, while Shane Krepakevich’s “Sometimes Doing Nothing Leads to Something” relies on the acting ability of the performer. The movement part in “Nimbly” presents a challenge beyond clarinet playing. All of these pieces present opportunities for the clarinetist to consult non-musicians about their performance. For Krepakevich’s piece I worked with Richard Hess, who is the Dolly, Ralph and Julia Cohen Chair in Drama at CCM. For Hui’s piece I worked with Joe Williams, a specialist in the Delsarte System of Expression and with Allen Otte, a percussion professor and Dalcroze eurhythmics instructor at CCM. Because these people were experts in their own field, but not professional clarinetists, they were able to offer valuable insights about the overall performance. I would encourage others who plan to play these works, use the resources that other artistic disciplines have to offer.

Like much contemporary music, the success of these pieces are highly performance dependent. With standard repertoire by established composers it is much easier to differentiate between a bad performance and a bad composition. Since new music is unfamiliar to most of the audience, even the most brilliant writing can be tarnished by a poorly prepared or ill-

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8Melissa Hui, “Nimbly,” score, October 2009, Rebecca Danard personal collection, Ottawa, 2.
informed performance. On the other hand, a mediocre composition can be elevated by a sensitive and insightful interpretation by a performer. Putting their work in the hand of students is a risk that all of the composers in this project have taken. It should be empowering for the students to realize that the fate of these pieces lies in their performances.

These pieces have yet to be tried and tested by clarinet students and teachers. I certainly hope that these pieces will be studied and played by other clarinetists, but for me this project is already a success because of what I have learned in carrying out this project. These pieces have taught me extended techniques. In playing these pieces and writing this paper, I have had to think about not only how to execute the techniques, but also how to explain them to someone else. Even relatively simple techniques are more effective if they are considered seriously. For example, anyone can make a key click, but to choose the best key click requires a knowledge of the possibility and judgement to make a good choice. Another benefit for me was to develop a real commitment to make a piece work. In most situations, performers get to choose their repertoire and therefore can avoid doing pieces that go beyond what they are comfortable with. Because these pieces were written for me, I needed to try my very best to do what the composer wanted, even if they challenged my limitations. Since I also wanted to make these pieces accessible to students, I also sometimes had to ask the composer to make changes. Maintaining the balance between the artistic integrity of the composer and the need of an inexperienced performer was sometimes a struggle. In most cases, I chose to emphasize the wishes of the composer, which means that several pieces in this collection are more difficult than I had hoped. These pieces, particularly those that involve movement, acting or staging, allowed me to become comfortable doing almost anything on stage. Because I had to learn to perform these pieces, I have been able to take on other challenging and dramatic works. For me personally, the most important result of this project was getting to work closely
with composers. Before this project, I had never asked a composer to write a piece for me. After initiating this project, I have worked on new pieces with many composers including Maya Badian, T. R. Beery, Ted Goldman, Mara Helmuth, Ben Irwin, Lindsey Jacob, Jennifer Jolley, Frédéric Lacroix, Jay Lin, Nebojsa Macura, David McDonnell, David Schneider and Evan Ware. Because of my contributions to their creative development, I am credited as co-composer on Mara Helmuth’s “Water Birds”\textsuperscript{9} and Jennifer Jolley’s “Sounds from the Grey Goo II.”\textsuperscript{10} The collection of extended technique pieces paved the way for these subsequent projects.

The next steps for this project is to perform, publish and record all of the pieces in this collection. Although I have learned all of the pieces, at the time of writing there are five pieces that I have not yet been able to perform in public. Unfortunately my career does not yet allow me to schedule performances and decide what to play. Furthermore, despite the variety of the pieces in this collection, the idea of programming more than a few of them on a single concert would be a challenge both for me and for the audience. I am going to be presenting a paper about this project at Clarinetfest at California State University Northridge in August 2011. I plan to play some of the as yet unperformed works at this event. I am also planning to publish these pieces in collaboration with the Avondale Press. The challenge with the publication is to achieve some consistent formatting, while maintaining a composer’s individual notation language. Not all of the composers used the same size and orientation of pages; clearly these will have to be changed for publication in book format. On the other hand, it is more ambiguous whether details such as titles, performance notes, dedications, fonts and typefaces should be standardized. It has always been my intention to include an audio recording with the

\textsuperscript{9}Mara Helmuth and Rebecca Danard, “Water Birds,” score, October 2010, Rebecca Danard personal collection, Ottawa.

\textsuperscript{10}Jennifer Jolley and Rebecca Danard, “Sounds from the Gray Goo,” score, 2009, Rebecca Danard personal collection, Ottawa.

184
publication. Hearing what a technique sounds like is often more useful than any amount of
verbal explanation. I was not anticipating that several of the pieces would also have important
visual components. Melissa Hui’s “Nimbly” and Shane Krepakevich’s “Sometimes Doing
Nothing Leads to Something” would be more effectively represented by a video recording. A
video recording would also be useful to show staging in Evan Ware’s “Leaving” and Robert
Lemay’s “Clap” and to show how the half-clarinet is held in Elma Miller’s “Duo for one
(hand).” For the remaining pieces however, there is no particular advantage to a video
recording. Since a video recording is much more complex and expensive to produce, I am still
struggling to decide whether to use this medium for all of the pieces, none of the pieces, or
only those one that would be significantly improved by including the visual component.

The collaborative relationship between composer and performer is very exciting and can
lead to musical masterpieces. Composition is one of the most solitary pursuits in the music
field, so working with a performer gives the composer an opportunity to participate in an
exchange of ideas and information during the creative process. For performers, it is an
opportunity to have more artistic input and help to create something that will use their talent to
best advantage. Both composer and performer get immediate feedback about their work and
can modify it accordingly. There is however, as significant risk for the composer in working
too closely with one performer. The piece may become so personalized, that other performers
may not be willing or able to play the work. For example, Stockhausen’s collaborations with
Suzanne Stephens would no doubt be performed more frequently if they were not so
specifically written for her. In my personal experience of working with composers outside this
project, I have found that it is much easier to develop a mutual understanding of the piece than
to notate it in a way that is reproducible by another performer. If there is true understanding
and trust between a composer and performer very little needs to be written down to be
effective. I appreciate pieces that take advantage of my particular skill set as a performer, but this was not the goal of this particular project. Since the pieces in this collection are not only for me, but also for students, I hope that none of the works are overly personalized. I believe that the combination of clear notation and performance notes, together with a flexibility on the part of the composers to accept alternate interpretations, will allow these pieces to be played successfully by other clarinetists. I look forward to enjoying these pieces as a performer, a teacher and as an audience member.
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Appendix A: Scores

Richard Désilets – “A Micro Tale” ................................................................................................................ 198
Shane Krepakevich – “Sometimes Doing Nothing Leads to Something” ................................................... 203
Chan Ka Nin – “Speak Out” .......................................................................................................................... 216
Lori Freedman – “All Good Children” ......................................................................................................... 223
Robert Lemay – “Clap” ................................................................................................................................. 224
Don Ross – “Almost There” .......................................................................................................................... 226
Joel Hoffman – “flutterby” ........................................................................................................................... 229
Jérôme Blais – “VAV” .................................................................................................................................... 232
Elma Miller – “Duo for one (hand)” ............................................................................................................ 238
Evan Ware – “Leaving” ................................................................................................................................. 241
Melissa Hui – “Nimbly” ................................................................................................................................. 251
Richard Désilets – “A Micro Tale”

A Micro Tale

\[ \text{\textcopyright Richard Désilets} \]

\[ \text{Musique © Richard Désilets} \]

\[ \text{Clar. Sib} \]

\[ \text{Follow the vibrato wave} \]

\[ \text{Expressive} \]

\[ \text{\textcopyright Richard Désilets} \]

\[ \text{Clar. Sib} \]

\[ \text{Follow the vibrato wave} \]

\[ \text{Expressive} \]

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\[ \text{Clar. Sib} \]

\[ \text{Follow the vibrato wave} \]

\[ \text{Expressive} \]

\[ \text{\textcopyright Richard Désilets} \]
Montréal, 24 août 2008
Shane Krepakevich – “Sometimes Doing Nothing Leads to Something”

Sometimes Doing Nothing Leads to Something  
for Bb Clarinet

Shane Krepakevich  
2008
**Sometimes Doing Nothing Leads to Something**

*for* Bb Clarinet

**Program Notes**

*Sometimes Doing Nothing Leads to Something* acts both as a pedagogical work with a specific focus on the technique of portamento and as a work examining notions of perfection and reproducibility in the context of instrumental scholarship and performance.

**Performance Notes**

- The piece is approximately 4 ½ minutes in duration.
- The score is NOT in C; the Bb Clarinet appears in its relevant transposition.
- Accidentals are valid only in the measure in which they appear within one octave, unless notes are tied to subsequent measures. Some redundant accidentals have been added for clarity.
- Pauses on certain notes and rests have been included as a means of creating smooth transitions between passages. These pauses can be shortened or lengthened if it is thought that the transitions can be made more musical.
- The portamento indications are meant to indicate a smooth slide between the indicated pitches, as with violin or trombone. This is to be differentiated from glissando, a rapid chromatic or diatonic movement over an interval, as with piano.
Sometimes Doing Nothing Leads to Something
for Bb Clarinet

Section A*:

1. The performer should come out onto the stage normally, approach the music stand, accept the applause and bow. If the performer does not leave the stage prior to beginning this work, he/she should accept the applause from the previous piece, allow a long pause and proceed to the next point. Actions 2-9 should be performed naturally though with some tension.

2. Open the score and turn to page 1. (slight pause) Flip forward a couple of pages as if examining the score (pause). Flip back to page 1 (pause).

3. Moisten reed (slight pause).

4. Fine-tune mouthpiece - adjust to make sure that it is as it should be.

5. Moisten reed again (pause).

6. With both hands on Clarinet, bring the instrument near your mouth as if to begin playing. Hold position - (long pause).

7. Adjust your footing/stance.

8. Moisten reed.

9. Slowly lower clarinet away from your mouth (long pause).

10. In a more relaxed manner, swab your clarinet (as if to give yourself a break)

11. Turn to page 2 and begin section B.

* This section should take approximately 30 seconds to complete. If it takes a significantly greater amount of time to complete all of the actions, some actions should not be performed so that the section's duration can be brought closer to 30 seconds. Ideally, this should be done in consultation with the composer. If the actions take less than 30 seconds to perform, longer pauses should be taken, while still remaining natural.
Awkward, nervously

Confident - a bit harsh

Again a bit awkward...

A bit more confident

(a bit silence and stillness)

quiet and shy
* Section G should be performed so that each segment is almost the same, as if you are trying to perfectly perform the passage, over and over. My intention is to show that such notions of reproducible perfection are misguided and outdated. Section G should not be performed ironically. A gradual increase in loudness/intensity towards the end of the piece may be added at the performer's discretion.

** This action should be done with different timing, loudness, and/or emphasis each time
1 clear throat (*slight pause*),
turn page noisily and quickly
I clear throat (*slight pause*),
turn page noisily and quickly
1 clear throat (*slight pause*),
turn page noisily and quickly
I clear throat (slight pause),
turn page noisily and quickly
1 clear throat (*slight pause*),
turn page noisily and quickly
I clear throat (*slight pause*),
turn page noisily and quickly
I clear throat (slight pause), turn page noisily and quickly
1 still and silent
Speak Out

A piace \( \frac{4}{4} \) \( \text{ca. 108} \)
for Solo Clarinet

Chan Ka Nin

6

Improvise on given notes.

7

8

pp legato

9

pp legato

13

Improvise on given notes.

14

mf

© Copyright Chan Ka Nin 2008
Improvise on given notes.

42

\[ \text{pp distanza} \]

43

\[ \text{simile} \]

47

\[ \text{dolce} \]

48

\[ \text{mf} \]

50

\[ \text{p} \]

53

\[ \text{mp} \]

56

\[ \text{bend} \]

attaca (optional)
II. Audacity

A trill between "A" and multiphonics.

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Lori Freedman – “All Good Children”

All Good Children
for Bb clarinet with female voice

Lori Freedman
(b. 1958)

Performance Notes:
From beginning to end sound becomes increasingly breathy. From beginning to end all “normal” notes should, at the performer’s discretion, be in “unison” with voice i.e. half played, half sung. Voice should be fragile and breathy creating slight disturbances to the bass clarinet sound.

Special notations:
Notes with an “X” indicate sung pitch and duration. All sung notes are transposed to Bb.
Example measure 1: second note to be played as a C and sung as Bb
Example measure 10: sing Eb and F (concert Db and Eb)
Notes within brackets indicate hint of bass clarinet pitch.
Example measure 14 & 16: sing F (concert Eb) while slightly sounding Bb (Concert Ab) above on the bass clarinet

July 2009, Montreal

© Lori Freedman, 2009
Robert Lemay – “Clap”

Clap
for solo clarinet

Senza tempo

Spoken

And Action

Key noise only

\[ j = 108 \]

Key noise (k.n.)

\[ \text{Senza tempo} \]

f

ppp

p

ff

f

ppp

p

ff

f

ppp

p

f

ppp

p

\[ \text{Movement of fingers only} \]

Key noise only (2)

\[ \text{Key rattles} \]

(1) Tr with side key
(2) ad lib: choose a unpitched key noise.
(2 a) ad lib: choose different unpitched key noises.
(3) alternate 2 or more fingerings for the same note
(4) foot step on the floor
(5) blow air through instrument

©Robert Lemay
Socan 2008
As fast as possible
Poco a poco
Key slaps (only)
Legato sempre

As fast as possible
Key slaps (only)
(normal)
Legato sempre

\( \frac{1}{2} \text{ accent} \)

Key noise (k.n.) (2)
k.n.

Senza tempo
accel.

Vibr. acc

Key rattles
Take off mouthpiece

Leaving the stage

\( \frac{1}{2} \text{ accent} \)

Hand pops (3)

Back stage
Spoken

And
Cut!

(1) foot step on the floor
(2) ad lib: choose different unpitched key noises.
(3) hit the barrel across its opening with the fingers (without mouthpiece !!)

©Robert Lemay
Socan 2008
Don Ross – “Almost There”

Almost There
for Rebecca Danard

Clarinet in B♭

\( \text{tongue clicks, high, medium, low} \)
\( \text{key clicks} \)
\( \text{whisper} \)
\( \text{air sound} \)

\( \text{o is mouth open} \)
\( \text{+ is mouth closed} \)

\( \text{sf on E1} \)
\( \text{on E2} \)
\( \text{sf} \)

\( \text{E1 E2} \)

\( \text{air} \)

\( \text{G2 E1 G2 E1 G2 E1 E2} \)

\( \text{oh} \)

\( \text{E1 (retake)} \)

\( \text{all} \)

\( \text{sst sst sst sst sst sst} \)

\( \text{fingered pitches, no air} \)

\( \text{sst sst sst sst sst E1} \)

\( \text{most there!} \)

© 2008
Almost There

46 - (no air)

tongued air with fingering

add air

vamp

add fast ad lib toneless F+ scales

keep scales, o + ad lib, rhythm ad lib

almost there

add fingers, no pitch
Almost There

Performance notes

In 2008 Rebecca Danard, then a doctoral candidate at the University of Cincinnati, presented me with the challenge of writing a piece for clarinet using only unpitched sounds—no notes allowed! Clarinet is an instrument particularly gifted in its palette of alternate sounds, but even still, creating a coherent story out of only clicks, pops and whooshes was diverting and mind-stretching project. At the time I was working on a show with a dancer at Amber's Brewery in Edmonton, which involved manipulating sampled recordings of their big malty machines. All that rhythmic hissing and clanking gave me a starting point for this piece. My sampling of Amber's fine products may also have influenced some of my choices. The title plays on the dual meaning of a feeling of pending arrival, and a piece whose sound doesn't quite exist. The text is entirely derived from sounds in the words Almost There.

In trying to come up with a notation scheme, it occurred to me that Almost There is basically a specialised percussion piece. I borrowed from drum world the idea of putting the different sounds on different lines of the staff. The bottom space is always toneless air going through the instrument. The second space is whispering, which always has a text attached in rounded bold font. The third line is key clicks, which usually have a fingering attached. I've called the low E E1, first line E E2, and open G G2. The top two spaces and the A line above the staff are three approximately pitched tongue clicks, produced by pulling a tensed tongue quickly away from the roof of the mouth. These rules always hold, even when other activities are happening on neighbouring lines and spaces. (The only fudge is the A in in measure 62, which is part of the blown and fingered line. The next A in m63, which has text, reverts to whispering). I use a plus sign + to denote mouth closed around the clarinet and a circle ° for open mouth. Mouth remains open or closed until the next symbol.

notes on particular bars:
m16 close all fingers hard for the loudest possible pop and click, on both notes
m36 with no air, these will be finger pops, changing fingerings as in normal playing. Notes on tongue click lines remain tongue clicks throughout.
m44 here air is moving through the clarinet without producing clarinet tone, but the pitch of the whoosh will change with the fingering.
m50 in the key clicks: keep the holes for low G closed, all we'll hear is the thud of the low E key closing and maybe a click when it opens.
m65 since there's no air here, nothing audible happens on 2 and 4; it sounds like half note finger pops.
m67 now that toneless air is moving through the instrument we will hear the pitch change in quarter notes.
m70 gradually bring the air speed up until you flirt with the threshold of actual tone, then back down. Repeat as often as it takes to make a nice arc, then proceed.
m72 the note on the end of 4 is just caused by the click of the E key opening. The G on the following beat is an active finger pop.
m85-86 once this going don't worry much about maintaining the written rhthym, go nuts

A lot of the stuff here is not an intuitive product of clarinet training, especially the bars where you have to co-ordinate tongue clicks, finger pops and air bursts. It can be a pain to learn, but it comes with some drill.
One of the rules on repertoire choice for my own group, Saint Crispin's Chamber Ensemble, is that a piece must say something profound about human experience, or it must be short. I hope you enjoy this short piece!

Don Ross
Edmonton, December 2009.
flutterby

section 1
mysteriously (\( \dot{=} 72 \))

Joel Hoffman (2009)

Clarinet in B\( \text{b} \)

section 2
tempo rubato (\( \dot{=} \text{ca.} 63 \))

21

22

23

24

25

26

27

28
The five sections of this piece are designed to be played in either of two ways:

1. in this order, with brief pauses separating them.

2. Alternatively, they can all be played separately, interspersed before and/or after other pieces or movements of pieces ("fluttering by", as it were, during the concert). If performed in this second manner, the order of the sections should be chosen by the clarinetist.

JH
Jérôme Blais – “VAV”

For solo clarinet (Bb)
For solo clarinet (Bb)
Elma Miller – “Duo for one (hand)”

Duo for one (hand)
for Rebecca

Elma Miller

B♭ Clarinet

Elegaic \( \frac{\text{d}}{\text{4}} = \text{ca. 60} \)

A Tempo

\( \text{poco a poco crescendo} \)

slower to very slow

\( \text{poco a poco decrescendo} \)

A Tempo

Cantabile

Rubato

\( \text{ff non dim.} \)

© 2009 Elma Miller
Swing with a lilt

Floating

Ad lib. - noodle  Vary speed, dynamic, imagine something spiraling downward

Top note gradually descends to almost the lower note.
Notes:

○  Eerie sound produced by covering and moving finger into the instrument.

▲  Shorter fermata than:  ❐

A sense of flow and ease should characterize the performance. Barlines are dotted to aid the eye and to evoke a sense of free improvisation contrasting with sections more strict rhythmically.
Evan Ware – “Leaving”

Evan Ware

Leaving

Solo Clarinet

© Evan Ware, 2008
Is it still I, who there past all recognition burn?
Memories I do not seize and bring inside.
    O life! O living! O to be outside!
And I in flames. And no one here who knows me.

-Rainer Maria Rilke, "Death" (1926)
Program Note

"Leaving" refers to the long emotionally fraught, heartbreaking, perversely amusing, and ultimately final passage that is Alzheimer’s disease or dementia (the two are sometimes impossible to distinguish from each other). I have tried to capture these aspects in a series of seven snapshots and an epilogue entitled, respectively: lively, introspective, with unbearable lightness, quiet, coming apart, confusion, losing, and memories. This piece is dedicated to Lily Hockman, who was walking this road when I knew her and who knew she no longer remembered. "Leaving" is also dedicated to John Fyles, who walked this road and forgot that he was afraid of dancing. Shortly before he died, he danced with his wife for the first time.

Many thanks to Rebecca Danard for commissioning this work, for her collaboration, and for her friendship.

Technical Notes

Leaving requires both a clarinet in B♭ and a clarinet (which is partially disassembled) and one in A. It could conceivably be played only on the B♭ instrument but the changes would become long and so a clarinet allows the performer to switch between an assembled and disassembled instrument quickly. The B♭ is pulled apart and buzzed into with the lips like a trumpet. Since the clarinet consists of five sections, I have numbered them 1-5 starting with the mouthpiece. Thus "B♭ clarinet (buzz, 2-5)" refers to buzzing through sections 2-5 of the instrument (the barrel through to the bell), while "(buzz, 4-5)" means buzz into the lower key segment and the bell only.

Tuplets are displayed in integers or ratios in reference to the quarter note. Thus a group of eighth notes with 7:2 above the beam indicates 7 eights in the space of 2 quarters. Eighth note triplets, since they are 3:1 are simply notated as 3. Half-note triplets are also notated as 3 because their value is obvious.

Accidentals are notated in front of every note.

Pauses to change instruments in Snapshot 6 are meant to be as short as possible. With apologies, this is intended to be inconvenient to the player, further expressing the tension and confusion of the music.

Flutter tongue is notated in full or as "Ft."

They player should either leaving the stage during snapshot 7 and play the epilogue from backstage or, perhaps more practically, the performer can play the epilogue as they leave.
for Lily Hockman and in memory of John Fyles

Leaving
(2008, revised 2011)

Evan Ware

Snapshot 1 - lively

Clarinet in A

Copyright © Evan Ware, 2008
Snapshot 2 – instrospective
Clarinet in B♭ (2-5, buzz)

36 4 | Freely

PP

attacks start very softly
becoming normal after tenuti

39 7:2

41 7:2

44

Clarinet in A

46

48

Snapshot 3 – with unbearable lightness
Clarinet in A

52 4 | p

55 7:2

subito | f

f
Snapshot 4 – quiet
Clarinet in B♭ (2-5, buzz)

PP cresc. poco a poco

Clarinet in A

mf – p

mf

ff – PP
Snapshot 5 - coming apart

Clarinet in A

fff dim. poco a poco

Wide but narrowing
flutter tongue
wide but narrowing

mp ff

PPP

Snapshot 6 - confusion

Instrument changes are to be as fast as possible

Clarinet in Bb (2-5, buzz)

p

f

subito f

Clarinet in A

3 2 4 5

p f

5 2

ff

Clarinet in Bb (2-5, buzz)

3 subito 7 2

PP

ff

7 2

Clarinet in A

5 2

ff

4 6 4

f ff pp ff pp ff f

sfz pp

Clarinet in Bb (2-5, buzz)
Melissa Hui – “Nimbly”

 设置音速
 Duration: approx. 6 minutes

 Nimbly
 for Bb Clarinet with movement

\[ \frac{1}{4} = 108 \text{ Fleet of foot, sly as a fox} \]

B-Clarinet

Movement

X’s steps with feet. Interpret the pitch levels as you like. Feel free to use all manners of stepping, hopping, foot-dragging, turning, hopping, leaping and skipping to execute the rhythms of the movement staff while keeping the patterns coherent.

Cl.

Mvt.

16

Cl.

Mvt.

25

Cl.

Mvt.

33

Cl.

Mvt.

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I, Rebecca J. Danard, hereby submit this original work as part of the requirements for the degree of Doctor of Musical Arts in Clarinet.

It is entitled:
Études in Performing Extended Techniques: Twelve Newly-Commissioned Canadian Works for Solo Clarinet

Student's name: Rebecca J. Danard

This work and its defense approved by:

Committee chair: Joel Hoffman, DMA
Committee member: Ronald Aufmann, BM
Committee member: Mary Sue Morrow, PhD