

A Performer's Perspective on Double Clarinet Music: Pieces by William O.  
Smith, Eric Mandat, and Jody Rockmaker with Interviews and a Recording

by

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## ABSTRACT

This final research paper provides both a performer's perspective and a recording of double clarinet literature by William O. Smith (b. 1926), Eric Mandat (b. 1957), and Jody Rockmaker (b. 1961). The document includes musical examples, references to the recording, and interviews with the composers. The first chapter contains a brief literature review of sources on world double clarinets, biographies of the above-mentioned composers, and other pertinent information. Chapters 2-4 include the performer's perspective on the following works: *Epitaphs for Double Clarinet* by William O. Smith, *Double Life for Solo Clarinet* by Eric Mandat, and two compositions by Jody Rockmaker, *Half and Half for demi-clarinet in A*, and *Double Dip*. The final chapter examines how double clarinet music has evolved, the challenges and limitations of the repertoire, and the future of the double clarinet genre.

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## CHAPTER ONE

### INTRODUCTION AND BACKGROUND LITERATURE

#### *Introduction*

Images of single-reed double-piped instruments, also referred to as double clarinets, are the first records of an instrument that has influenced contemporary clarinet literature. In their search for innovative, fresh ideas, modern clarinet virtuosi have developed contemporary techniques in order to perform new compositions. Many of these techniques can be related to historical double clarinets, some of which are still used in vernacular music. This chapter will briefly discuss historical double instruments, which led William O. Smith to compose for double clarinet. These compositions have helped to inspire future composers to compose for the medium.

#### *History of Double Instruments*

Single-reed double-piped instruments are portrayed on images found in Mesopotamia circa 2700 BCE.<sup>1</sup> Other hand-made double clarinets are still constructed and used today; over 100 separate instruments presently exist in this category alone.<sup>2</sup> Although a detailed examination of multiple single-reed double-piped instruments is beyond the scope of this paper, a few are worth mentioning due to their historic impact,

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<sup>1</sup> Eric Hoeprich, *The Clarinet* (New Haven, CT: Yale University Press, 2008), 12.

<sup>2</sup> David E. Ross, "A Comprehensive Performance Project in Clarinet Literature

<sup>2</sup> David E. Ross, "A Comprehensive Performance Project in Clarinet Literature with an Organological Study of the Development of the Clarinet in the Eighteenth Century, Volume I." (D.M.A. diss., University of Iowa, 1985), 4, in ProQuest Dissertations and Theses, <http://proquest.umi.com.ezproxy1.lib.asu.edu> (accessed 18 October 2009).

uniqueness, and common appearance in present-day cultures. The Middle Eastern *mijwiz*, the Sardinian *launeddas*, and the Spanish *reclam de xeremies* can still be found in the mentioned regions. The *mijwiz* and the *reclam de xeremies* are both double-piped instruments while the *launeddas* is a triple-piped instrument. Other instruments that are not found presently but had a historic role are the Greek *aulos* and the *pibgorn* (a precursor to the bagpipe). As mentioned previously, detailed examinations of these instruments are beyond the scope of this paper, however, below are sources with further information on the instruments.

Ancient Greek paintings depict players of the *aulos* and images of the instrument can be found in Anthony Baines's book, *Woodwind Instruments and Their History*.<sup>3</sup> This book provides a brief chapter about antiquity double-piped instruments, including the *aulos*. Kathleen Schlesinger authored a book titled, *The Greek Aulos*, which focuses on recreating the *aulos* to better determine how the instrument was made.<sup>4</sup>

The *mijwiz* was an instrument found near Greece in the East Mediterranean area. Ali Jihad Racy wrote a detailed article about the *mijwiz* in the journal, *Ethnomusicology*, in 1994. Racy examines how double reedpipes “express their local musical idioms and ... display considerable cross-cultural and historical consistency in matters of playing technique, musical style, and even musical symbolism.”<sup>5</sup>

Sardinia, an island to the west of Italy, is home to an instrument called the *launeddas*. In 1969, Andreas Fridolin Weis Bentzon wrote, *The Launeddas: A Sardinian*

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<sup>3</sup> Anthony Baines, *Woodwind Instruments and their History* (London: Faber and Faber Limited, 1977).

<sup>4</sup> Kathleen Schlesinger, *The Greek Aulos* (London: Methuen & Co., 1939).

<sup>5</sup> Ali Jihad Racy, “A Dialectical Perspective on Musical Instruments: The East-Mediterranean *Mijwiz*,” *Ethnomusicology*, 38, no. 1 (Winter 1994): 41.

*folk-music instrument volume 1*, which contains information on how the *launeddas* functions and how it used in the Sardinian culture.<sup>6</sup>

The *reclam de xeremies* is found on the island of Ibiza, off the coast of Spain. A great resource for this particular instrument is a recording titled *The Spanish Recordings Ibiza & Formentera: The Pityusic Islands*.<sup>7</sup> The recording notes, by Esperanca Bonet Roig and Judith Cohen, contain useful information about the instrument.

The *pibgorn*, the final instrument that will be mentioned, is thought to be a predecessor of the bagpipe.<sup>8</sup> *The Journal of the Anthropological Institute of Great Britain and Ireland* published an article by Henry Balfour with more information on the *pibgorn*. A single pipe version of the *pibgorn* can still be found today in the Welsh areas of Great Britain, while the Basque hornpipe is still occasionally heard in select parts of Spain and France.<sup>9</sup>

#### William O. Smith

The breakthrough of multiple sounds on the clarinet can be attributed to clarinetist and composer, William O. Smith. In 1959, Smith composed *Five Pieces for Clarinet Alone*, which originally ended with a multiphonic sonority. A multiphonic is the result of

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<sup>6</sup>Andreas Fridolin Weis Bentzon, *The Launeddas: A Sardinian Folk-music Instrument* (Copenhagen: Akadsmisk Forlag, 1969).

<sup>7</sup> Esperanca Bonet Roig and Judith Cohen, Notes for *The Spanish Recordings Ibiza & Formentera: The Pityusic Islands*. Various performers. Rounder CD 1161-1770-2, 2006.

<sup>8</sup> Henry Balfour, "The Old British 'Pibcorn' or 'Hornpipe' and Its Affinities," *The Journal of the Anthropological Institute of Great Britain and Ireland*, 20 (1891): 149, published on behalf of the Royal Anthropological Institute of Great Britain and Ireland: available online at <http://www.jstor.org/stable/2842233> (accessed on 27 October 2009).

<sup>9</sup> Baines, 196-197.

playing multiple pitches simultaneously on the clarinet. Performers have many options for producing multiphonics including singing and playing, using new fingerings, and manipulating their tongue and throat. The first published version of *Five Pieces for Clarinet Alone* did not include the multiphonic, but Smith did perform and record the it.<sup>10</sup>

Over the next two decades, Smith continued incorporating multiphonics in many works. In 1977, he wrote a groundbreaking piece titled *Five Fragments for Double Clarinet*, the first piece to incorporate playing two tubes at the same time. This multi-movement work requires the player to disassemble the clarinet between the upper and lower joints and add a mouthpiece to the lower joint so both joints can be played simultaneously. Smith was inspired to write for double clarinets when he drove through Greece and “repeatedly [saw] images of the aulos.”<sup>11</sup> He thought he could apply playing a double-piped instrument to the clarinet by adding an extra mouthpiece to the bottom half of the instrument.<sup>12</sup>

Not only did he mention the inspiration of seeing images of the aulos, he also mentioned hearing the launeddas on a trip to Sardinia. While this trip took place after he had composed his first work for double clarinet, he described the sound of the instrument as “reedy” and “loud ... like a bagpipe.”<sup>13</sup> By exploring new ways the clarinet is played, Smith bridged together two instruments that were invented thousands of years apart.

A detailed biography on Smith can be found in Deborah Bish’s DMA research

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<sup>10</sup> Deborah F. Bish, “A Biography of William O. Smith: The Composition of a Life” (D.M.A. diss, Arizona State University, 2005), 50, in ProQuest Dissertations and Theses, <http://proquest.umi.com.ezproxy1.lib.asu.edu> (accessed 15 November 2009).

<sup>11</sup> William O. Smith, interview by author, 9 June 2013.

<sup>12</sup> Ibid.

<sup>13</sup> Ibid.

paper titled, “A Biography of William O. Smith: The Composition of a Life.”<sup>14</sup> *The Clarinet*, the official magazine of the International Clarinet Association, also published an article by Isla Hejny in 1991 about Smith’s first double clarinet composition, *Five Fragments*, in 1991.<sup>15</sup>

### *Other Composers*

While the genre of double clarinet literature is still quite small, two of the composers who have written for the medium have one thing in common: the influence of William O. Smith. In 2007, the composer and clarinetist Eric Mandat composed *Double Life*, which will be discussed in depth later in this paper, in honor of Smith. Rebecca Tout d’Alessio wrote a biography on Mandat.<sup>16</sup> A 2013 edition of *The Clarinet* contains an article on Mandat’s solo clarinet works, in which *Double Life* is mentioned.<sup>17</sup>

Jody Rockmaker is a composer and professor at Arizona State University. He has composed two works that use single-reed and are double-piped. One of the works, *Half and Half* (2011), is for demi-clarinet and the other work, *Double Dip* (2011), is for double clarinet. Both of these compositions will be discussed in depth later in the paper.

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<sup>14</sup> Bish, 2005.

<sup>15</sup> Isla Hejny, “Five Fragments for Double Clarinet by William O Smith: An Introduction,” *The Clarinet*, 18 , no. 2 (February 1991): 22-24.

<sup>16</sup> Rebecca Tout d’Alessio, “Eric Mandat (B. 1957): A Multiphonic Meditation on a Composer, Clarinetist, and Teacher” (D.M.A. diss., Arizona State University, 2012), in ProQuest Dissertations and Theses, <http://proquest.umi.com.ezproxy1.lib.asu.edu> (accessed 10 August 2012).

<sup>17</sup> Amanda R. Morrison, “The Solo Clarinet Music of Eric Mandat,” *The Clarinet*, 39, no. 2 (March 2013): 73-75.

Rockmaker mentioned in an interview that his inspiration was hearing works by Mandat and Smith performed by students and faculty at Arizona State University.<sup>18</sup>

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<sup>18</sup> Jody Rockmaker, interview by author, 11 May 2013.

## CHAPTER TWO

WILLIAM O. SMITH

### *Epitaphs for Double Clarinet*

In 1992, William O. Smith composed *Epitaphs for Double Clarinet*, which is divided into eight short movements. Each movement has a dialogue intended for reading before the performance. The text is by Anyte of Tegea (early 3<sup>rd</sup> century BCE), an ancient Greek writer who wrote the text when the *aulos* was still widely used. An epitaph is a brief poem in praise of a deceased person; the theme of death creates a melancholy atmosphere.

Playing two complete clarinets simultaneously is a simple concept. The clarinet that is on the player's left side is played normally, since the left hand controls the notes on the upper joint during normal operation. The clarinet on the right side must have corks placed in the upper joint in order for the right hand to facilitate note changes through covering holes in the lower joint, otherwise, changing fingerings would have no effect. To hold both instruments, neck straps can be used or the knees can support the instrument bell on the left side. The embouchure is very similar to normal, single clarinet playing though the middle of the lips should create a seal between the two mouthpieces. Though cane reeds can be used, a high-quality synthetic reed can eliminate inconsistencies between traditional cane reeds, due to factors such as hydration.

## I. “Antibia”

"I mourn the maiden Antibia, through the fame of whose beauty and wisdom

Many eager young men came to her father's house, Fate, the destroyer, rolls hope far away from all. "<sup>19</sup>

The first movement of the work is entitled “Antibia” and is described as a slow movement. None of the movements have measures but are instead divided into sections with breath marks or rests. This particular movement contains eleven sections divided by breath marks. The right B-flat clarinet contains an almost drone-like figure while the left B-flat clarinet moves one or two pitches. The movement’s slow motion, drastic dynamic shifts, and drone create an eerie mood. An especially dramatic section occurs between section seven and eight, which can be heard on the accompanying recording in track 1 at 0:53 and seen in figure 2.1.

**Figure 2.1. William O. Smith, *Epitaphs for Double Clarinet*, I. “Antibia.” between sections seven and eight.**



These two sections not only shift dynamics but the right side B-flat clarinet also ascends a half step to an F3 compared to the E3 that has been played in every prior section.<sup>20</sup>

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<sup>19</sup> William O. Smith, *Epitaphs for Double Clarinet*, (Seattle, WA: Ravenna Editions, 1992) I. “Antibia.” Each movement contains a dialogue that should be read aloud before performing the music.

<sup>20</sup> All pitch references are written, not sounding.



## II. "The He-Goat"

"The children give you reins, O goat, and set a purple bridle around your shaggy mouth; they imitate the horse-contests around the God's temple and you carry them along gently and happily."<sup>21</sup>

The second movement is the only movement that contains a metronomic marking. Although there is still no time signature, the movement can be divided into ten sections based on placement of the quarter and eighth rests. The piece begins on the unison C4; due to mouthpiece placement, embouchure, or other small differences in the two instruments, the C4 may not be in tune. This pitch, C4, has a continuous presence throughout the work. For example, section two (figure 2.2) contains C4 either in the left or right side (track 2, 0:19).

**Figure 2.2. William O. Smith, *Epitaphs for Double Clarinet*, II. "The He-Goat," section two.**<sup>22</sup>



This pattern continues until section nine (figure 2.3, track 2, 0:35), where each clarinet briefly leaves C4, though C4 is still the central focus.

<sup>21</sup> Smith, II. "The He-Goat."

<sup>22</sup> All musical examples for this document are in treble clef.

**Figure 2.3. William O. Smith, *Epitaphs for Double Clarinet, II. “The He-Goat,”* section nine.**



The musical dialogue between each clarinet reinforces the image of a goat mentioned in the dialogue spoken before the movement. An image of a goat carrying playful children encourages the performer to keep the energy alive while the spurts of dissonance suggest the goat's braying.

### III. "A Soldier"

"The earth of Lydia holds Amyntor, Philip's son; he gained many thing in iron battle.

No sickness led him to the house of night; he died, holding his round shield before his friend."<sup>23</sup>

The soldier of the movement's title is Amyntor, who was a soldier who died a hero's death, saving his friend. Smith uses the descriptive term "bold" at the beginning of the work.<sup>24</sup> This movement is the first to require the register key to be open on the right B-flat clarinet. Opening the register key switches the roles of the instruments, making the highest pitch usually occur on the right side rather than the left. The register key is kept open by inserting a slim wedge under the key. The intervals that occur repeatedly in the

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<sup>23</sup> Smith, III. "A Soldier."

<sup>24</sup> Ibid.

movement are the major second, minor seventh, and minor third.

**Figure 2.4. William O. Smith, *Epitaphs for Double Clarinet*, III. “A Soldier,” section one.**



The major second and minor seventh intervals, inversions of each other, are sounded within the first two pitches (figure 2.4, track 3). As mentioned previously, the right side B-flat clarinet is usually the top voice for this movement.

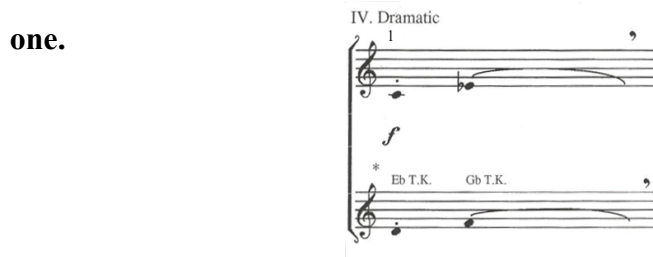
#### IV. “A Bird”

"You will never rise up again with a flutter of thick wings and rouse me from my bed in the morning;  
For a thief came silently upon you in your sleep and killed you, pressing his finger into your throat."<sup>25</sup>

Smith uses the descriptive word “dramatic” to characterize the fourth movement.<sup>26</sup>

Through the combination of these vivid opening words, the opening two pitches, and constant dynamic shift, a sense of drama is created (track 4, 0:16).

**Figure 2.5. William O. Smith, *Epitaphs for Double Clarinet*, IV. “A Bird,” section one.**

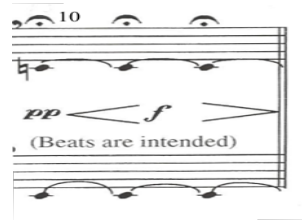


<sup>25</sup> Smith, III. "A Bird."

<sup>26</sup> Ibid.

This opening section (figure 2.5) uses atypical fingerings in the right B-flat clarinet to create pitches close to D4 and F4. The dissonances that result almost sound like a flutter.

**Figure 2.6. William O. Smith, *Epitaphs for Double Clarinet, IV*. “A Bird,” section ten.**



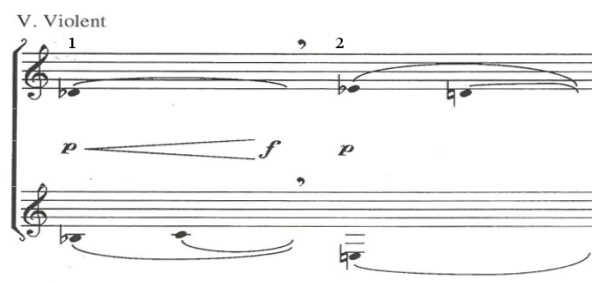
As seen in figure 2.6, Smith wrote, “beats are intended” at the end of the movement.<sup>27</sup> Even though both the left and right B-flat clarinets are on unison pitches, a small clash occurs due to embouchure pressure and the dynamic changes with the crescendo and decrescendo (track 4, 1:20).

#### V. “Erato”

“Erato, clasping her father with her hand and shedding tears spoke these last words:

‘O my father, I am yours no longer, for now black death lays the dusk of the grave upon my eyes,’<sup>28</sup>

**Figure 2.7. William O. Smith, *Epitaphs for Double Clarinet, V*. “Erato,” between sections one and two.**



<sup>27</sup> Ibid. Smith refers to the acoustic phenomenon resulting from two sound waves of slightly differing frequencies.

<sup>28</sup> Smith, V. “Erato.” This movement is named for one of the Greek muses.

Smith uses the descriptive word “violent” to characterize this movement.<sup>29</sup> The violence occurs with the dramatic opening and closing crescendos, clashing pitches, and dynamic shifts (figure 2.7). The two best examples of these musical characteristics are the opening (track 5, 0:15) and closing (track 5, 1:24) sections of the movement.

#### VI. “Pan of the Fields”

“O Pan of the fields, why do you sit by this lonely shaded wood, playing on your shrill-sounding pipe?”

‘So that my young flocks may feed on these dewey hills, nibbling the fair haired plants.’<sup>30</sup>

Smith uses the descriptive word, “playful” for the sixth movement of *Epitaphs*.<sup>31</sup> The playfulness can come from varying the amount of time the breath takes in each short section and also from exaggerating the dynamics (track 6, 0:15).

**Figure 2.8. William O. Smith, *Epitaphs for Double Clarinet*, VI. “Pan of the Fields,” between sections one and five.**



One of the most difficult sections to coordinate is shown in figure 2.9. Each hand is

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<sup>29</sup> Ibid.

<sup>30</sup> Smith, VI. “Pan of the Fields.” Pan refers to the Greek god of shepherds and flocks.

<sup>31</sup> Ibid.

working independently but must synchronize, much like two hands on the piano (track 6, 0:29).

**Figure 2.9. William O. Smith, *Epitaphs for Double Clarinet*, VI. “Pan of the Fields,” section fifteen.**



#### VII. “A Horse”

"Damis placed this stone to his horse after blood-red Ares struck his breast.  
And the dark blood seethed through his tough hide and soaked the heavy  
turf."<sup>32</sup>

This movement again requires the right side B-flat clarinet register key to be open. Smith describes this movement as “singing.”<sup>33</sup> A continuous drone, G, in either the left or right side clarinet is the recurring idea throughout this work. Voicing these notes is especially challenging when both clarinets are close in pitch (track 7, 0:40). The term voicing refers to the tongue position in the mouth, which changes slightly for each pitch. Playing two pitches simultaneously in the same register can generate response issues if not voiced correctly.

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<sup>32</sup> Smith, "A Horse."

<sup>33</sup> Ibid.

**Figure 2.10. William O. Smith, *Epitaphs for Double Clarinet*, VII. “A Horse,”  
between sections five and six.**



The A5, in section seven on the right side clarinet, is played by adding the Eb/Bb trill key. The challenge of this movement is balancing the sound of each clarinet, voicing each pitch at a soft dynamic level, and while the melodic line.

#### VIII. “A Dolphin”

“No more, exulting in the calm sea, shall I rise from the depths and thrust through the waves;

No more shall I rush past the beautiful prow of a fair-rowlocked ship, delighting in the figure-head.

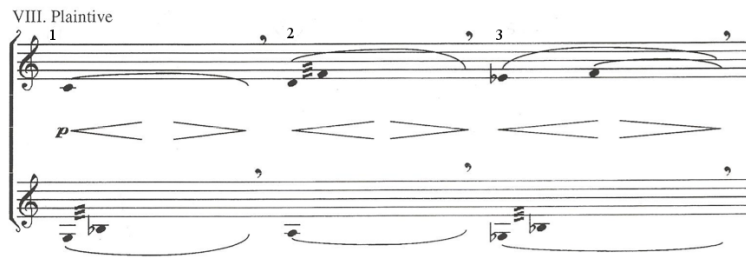
The dark waters of the sea dashed me to land and I lie here upon this narrow shore.”<sup>34</sup>

The final movement of *Epitaphs* concludes with these somber words. Smith then describes the movement at “plaintive.”<sup>35</sup> A continuous tremolo occurs throughout the movement with a slight swell creating an imagery of waves washing ashore.

<sup>34</sup> Smith, VIII. “A Dolphin.”

<sup>35</sup> Ibid.

**Figure 2.11. William O. Smith, *Epitaphs for Double Clarinet, VIII. “A Dolphin,”* between sections one and three.**



The opening ideas, in figure 2.11, exchange the tremolos in each clarinet while incorporating the swells of crescendos and decrescendos, much like a wave lapping at the sand (track 8, 0:22).

**Figure 2.12. William O. Smith, *Epitaphs for Double Clarinet, VIII. “A Dolphin,”* section 5.**



The minor third and major sixth intervals, which are inversions of each other, reoccur throughout this movement (figure 2.12, track 8, 0:38).

**Figure 2.13. William O. Smith, *Epitaphs for Double Clarinet, VIII. “A Dolphin,”* section sixteen.**





The final notes of the piece imply a G minor seventh chord using tremolo and double clarinet (figure 2.13, 2:17).

With *Epitaphs*, Smith influenced future composers to experiment with double clarinet in their compositions. One such composer, Eric Mandat, described the sounds produced in this piece as “so beautiful, so evocative.”<sup>36</sup> Smith’s use of double clarinets creates a variety of distinctive timbres that are unique to this genre. These tone colors enhance the words of the epitaph, producing an aural representation of the prose.

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<sup>36</sup> Eric Mandat, interview by author, 7 June 2013.

## CHAPTER THREE

### ERIC MANDAT

#### *Double Life for Solo Clarinet*

Eric Mandat wrote *Double Life for Solo Clarinet* in 2007 in honor of William O. Smith. Mandat mentioned in an interview that he composed for double clarinet “solely from my experiences with the compositions of William O. Smith.”<sup>37</sup> A piece that particularly inspired him to explore and perform double clarinet literature was Smith’s *Epitaphs for Double Clarinet*, which is discussed in the previous chapter. Mandat described the sounds as, “so beautiful, so evocative.”<sup>38</sup> *Double Life for Solo Clarinet* consists of three movements; this chapter will focus on the first movement, since only that movement incorporates double clarinet. The piece is for B-flat clarinet on the left and A clarinet on the right.

The opening movement, “Double Life,” appropriately alternates between Smith’s two predominant styles; jazz on the left B-flat clarinet side and an avant-garde, free section on the right A clarinet side. Mandat writes, “the first movement, ‘Double Life,’ juxtaposes short jazz licks with slow, free two- or three-note cells, then combines them as the performer plays both motives simultaneously on a B-flat and A clarinet.”<sup>39</sup> The

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<sup>37</sup> Eric Mandat, interview by author, 7 June 2013.

<sup>38</sup> Ibid.

<sup>39</sup> Eric Mandat, *Double Life for Solo Clarinet*, (Carbondale, Illinois: Cirrus Music, 2007) I. “Double Life.”

instructions also mention the fast sections of the work are “to be played with a jazz feel.”<sup>40</sup>

**Figure 3.1. Eric Mandat, *Double Life*, mm. 1-3.**



The first three measures (figure 3.1, track 9) provide an excellent example of the opposing styles that alternate throughout the piece. This section can be heard in the opening moments of the recording.

The challenge of this movement is understanding and portraying both styles effectively while simultaneously controlling the sound of both clarinets. In measure six (figure 3.2), the performer should have both clarinets in the mouth but the tongue should dampen the left side so the sound does not begin until slightly later than the A clarinet entrance. This controlled, delayed entrance on one clarinet also occurs later in the piece in measure 20.

**Figure 3.2. Eric Mandat, *Double Life*, m. 6.**

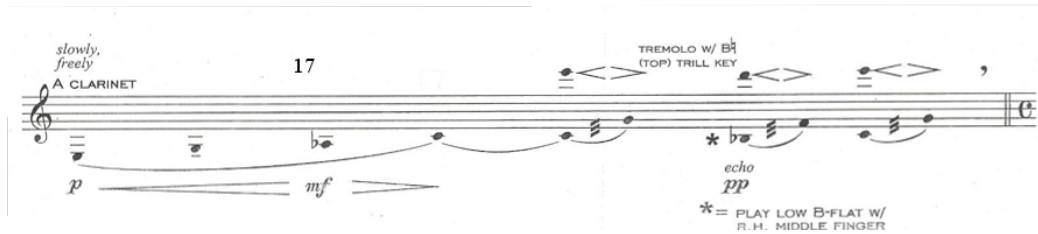


This first instance of double clarinet sonority then leads into a short sample of both clarinets playing a jazz duet. (track 9, 0:30)

<sup>40</sup> Ibid.

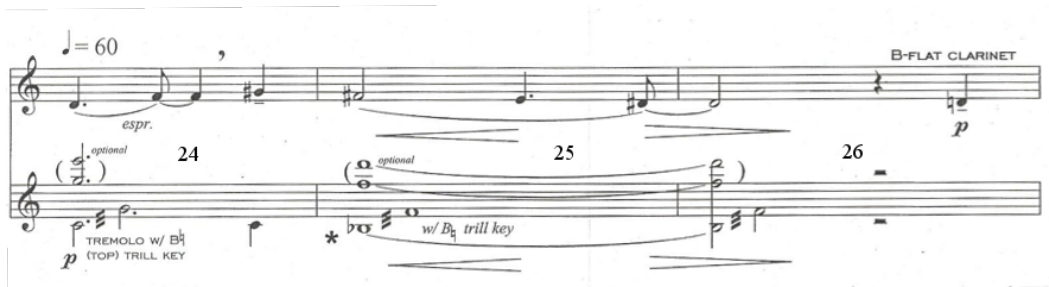
The piece then briefly returns to the slow, free style on one clarinet versus the swing, jazz style of the other. Mandat then incorporates multiphonics within the slow, free section.

**Figure 3.3. Eric Mandat, *Double Life*, m. 17.**



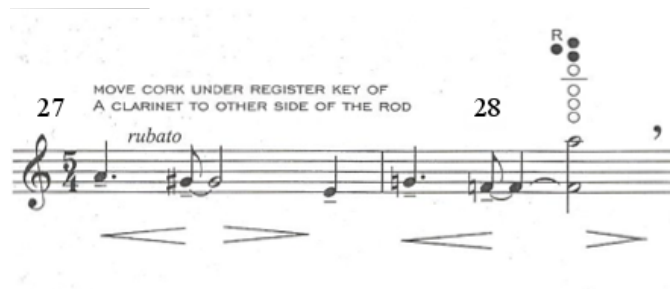
The brief use of multiphonics in figure 3.3 (track 9, 1:10), demonstrates another way, in addition to writing for double instruments, that the clarinet can create multiple pitches. The piece then briefly returns to a jazz section on the B-flat clarinet before a brief jazz duet between both instruments. Mandat creates the potential for triple sonority in measures 24-26 (figure 3.4, track 9, 1:32) by having double clarinet and an option for multiphonics simultaneously.

**Figure 3.4. Eric Mandat, *Double Life*, mm. 24-26.**



The next few measures are for B-flat clarinet alone, but the performer must open the register key of the A clarinet while playing this passage. The simplest way to accomplish this feat is to insert a wedge of cork or old reed under the top portion of the register key.

**Figure 3.5. Eric Mandat, *Double Life*, mm. 27-28.**



These two measures (figure 3.5) require planning, balance, and coordination on the part of the performer. In order to place an object under the register key, the performer must let go of the A clarinet while continuing to play the B-flat clarinet. This process can be accomplished in multiple positionings of the A clarinet: laying it across the lap, propping it between legs, or even briefly placing it on a peg. If the performer opts to use a neck strap to perform the piece, propping the A clarinet between the legs makes the most sense.

The final passage opens with the slow tempo of quarter note at 60 BPM before closing with the quick, swung jazz section of quarter notes at 176 BPM (track 9, 2:05). Mandat also incorporates key clicks and short articulations (figure 3.6), which require control and precision.

**Figure 3.6. Eric Mandat, *Double Life*, mm. 31-34.**



The first movement of *Double Life for Solo Clarinet* is both a challenge to the performer and entertaining to the audience. Though the movement is only slightly longer

than two minutes, the clarinetist employs a variety of techniques. Mandat presents many challenges to the performer including contrasting styles, double clarinet in multiple registers, and multiphonics for a single clarinet and double clarinet. The piece continues incorporating many new clarinet techniques that show the instrument in an innovative way from a performer and audience perspective.

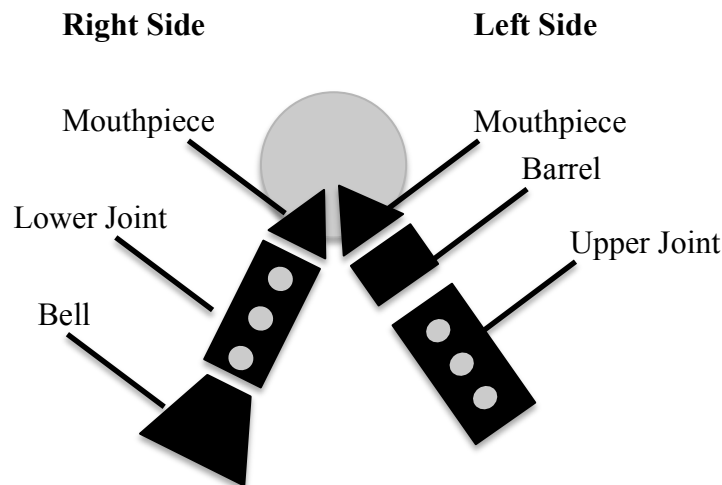
## CHAPTER FOUR

### JODY ROCKMAKER

#### *Half and Half for demi-clarinet in A*

Jody Rockmaker composed *Half and Half for demi-clarinet in A* in 2011 for Richard Nunemaker. This piece is the only example in this document of demi-clarinet, the performer separates the upper and lower joint of one clarinet, places a mouthpiece on the lower joint and plays both the top and lower joints simultaneously (see figure 4.1). Rockmaker mentioned in an interview for this document that his inspiration to write *Half and Half* came from Robert Spring's performances at Arizona State University. Rockmaker stated, "Bob's mesmerizing performances of William O. Smith and Eric Mandat were the main impetus to try out this technique, which evolved into *Half and Half*."<sup>41</sup>

**Figure 4.1. Diagram of demi-clarinet.**



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<sup>41</sup> Rockmaker, interview.

The piece is repeated three times during performance: first with the top half of the instrument being played, then with the second the bottom half, and ending with both parts combine. Before performing the piece, the performer should tune both halves of the instrument to a concert B3 (fingered D on the upper half and fingered F-sharp/C-sharp on the lower half of the instrument). Adjust the lower joint pitch by changing the amount of mouthpiece that is inserted into the lower joint. To help with response of both sides of the instrument, good quality synthetic reeds are recommended.

For the first repetition of the piece, the upper half of the instrument should be supported with the right hand under the top joint. Performers should avoid closing the open end of the joint, which could distort the pitch and timbre.

The lower joint is used for the second repetition. Rockmaker provides special fingerings, taken from Phillip Rehfeldt's, *New Directions for Clarinet*, on the performance directions page.<sup>42</sup>

**Figure 4.2. Jody Rockmaker, *Half and Half for demi-clarinet in A*, fingering chart.**

(b) Fingering possibilities (using A clarinet; B-flat pitches are approximately a quartertone higher, concert pitch).

The chart displays two musical staves. The first staff contains 13 notes with fingerings: E (1, 2, 3), F (1, 2, 3), F# (1, 2, 3), G (1, 2, 3), E (1, 2, 3), (F) (1, 2, 3), G (1, 2, 3), F# (1, 2, 3), F (1, 2, 3), E (1, 2, 3), (F) (1, 2, 3), G (1, 2, 3). The second staff contains 13 notes with fingerings: F (1, 2, 3), E (1, 2, 3), G (1, 2, 3), B<sup>b</sup> (1, 2, 3), G (1, 2, 3), B<sup>b</sup> (1, 2, 3), B<sup>b</sup> (1, 2, 3), B<sup>b</sup> (ring only), E (1, 2, 3), B<sup>b</sup> (1, 2, 3).

<sup>42</sup> Jody Rockmaker, *Half and Half for demi-clarinet in A*, (Tempe, Arizona: Jody Rockmaker, 2011).



The final repetition combines both halves of the instrument. The fourth finger of the left hand should support the top half of the instrument, while the right hand thumb supports the lower half. Both instruments should be played in a ‘V’ shaped angle away from the mouth; the angle may vary from person to person.

Air control is especially important when playing two clarinets. Although there are many rests placed throughout the work, breaths should be added at the end of slurs while keeping the line moving forward as much as possible. When taking a breath, the instruments should stay stationary; maintaining the ‘V’ shaped angle will prevent response issues that could occur.

The first section of the piece, for upper joint alone, can be heard in the recording, track 10, 0:00-2:50. Rockmaker indicates that the piece should be “mysterious and flowing;” the mystery is aided by the composer's structural usage of the tritone.<sup>43</sup> This affect should be maintained, regardless of the subtle crescendos and decrescendos in the opening moments.

**Figure 4.3. Jody Rockmaker, *Half and Half for demi-clarinet in A*, mm. 5-9.**



Rockmaker's writing for the top half of the instrument is centered on D natural minor. Each half of the instrument plays a triplet figure throughout the work with the top half playing an eighth-note triplet. The excerpt shown in figure 4.3 demonstrates the

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<sup>43</sup> Ibid.

opening passage centering on D4, the flow of dynamics, and the eighth-note triplet. These opening ideas last for the first seventeen measures of the work (track 10, 0:00-1:04).

The next section begins at m. 18 with a sudden burst of sound and shift in registers (track 10, 1:04). The timbre reflects a shift to the clarion register. The central note for this section is A5.

**Figure 4.4. Jody Rockmaker, *Half and Half for demi-clarinet in A*, mm. 21-23.**



As in the beginning, mm. 21-23 contain the eighth-note triplet figure. The piece then imitates the opening section but uses a new register incorporating the slight swell of dynamics and occasional accents at the beginnings of short groupings. The first repetition ends with a *ritardando* and fades out on D4 to set up the entrance of the lower half of the instrument, which opens a perfect fourth above the final pitch of the upper joint on E4.

The second repetition can be heard on the recording in track 10 from 2:50-5:30. The lower half of the instrument has a bright timbre and uses many quarter-tones.<sup>44</sup> Rockmaker compresses the triplet figure into sixteenth notes rather than the eighth-note triplets he used in the top half of the instrument. The performer must learn a new fingering system to play this part of the piece. Although the fingering chart is included before the piece in the performing notes, the performer should consider drawing in the

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<sup>44</sup> Quarter-tones are intervals of half a semitone, dividing the Western Scale into 24 tones.

music some of the unusual fingerings as references while they practicing and performing the work.

**Figure 4.5.** Jody Rockmaker, *Half and Half for demi-clarinet in A*, mm. 1-3.



The bottom half of the clarinet uses the same dynamics that the top half performed in the first repetition. Figure 4.5 shows the use of dynamics, quarter-tones, and triplets (track 10, 2:50).

As mentioned earlier, m. 18 marks a shift in timbre with the top half of the clarinet shifting register. The bottom half also has a shift to higher pitches (figure 4.6, track 10, 3:45). The quarter-sharp F5 in m. 19 is fingered open (no keys are depressed). This note then moves up to the highest pitch for the bottom half in the composition, the G5-flat, which is created by pressing the B/F-sharp key. After the rapid ascent, the contour quickly falls to the lowest pitch on the bottom half of the instrument, B3-flat.

**Figure 4.6.** Jody Rockmaker, *Half and Half for demi-clarinet in A*, mm. 18-21.



Many instances throughout the piece require the fourth finger of the right hand to slide from key to key in order to connect the musical line. Occasionally, a slight break may be necessary to avoid playing extra notes or squeaking.

**Figure 4.7.** Jody Rockmaker, *Half and Half for demi-clarinet in A*, mm. 21-23.



An example of this break occurs in mm. 22-23 (figure 4.7), in which the bottom half moves from B3-quarter flat to a C4. The B3-quarter flat is fingered with all holes covered and the fourth finger pressing the E/B key. C4 is fingered similarly except the fourth finger must move to the F/C key. The typical use of the left fourth finger keys is not possible; the player is forced to move quickly from one key to the next. If the performer's fingers are long enough, it may be possible to use the top of the fourth finger to press the F/C key and the middle of the fourth finger to press the E/B key.

The piece continues with sustained lower pitch notes for several measures. Measure 32 marks a point in which the bottom half begins an ascent into its higher, piercing range (track 10, 4:29). The melodic contour beginning in m. 32 makes an arch peaking at m. 37 before returning to the lower pitches at m. 40. Measure 37 (figure 4.8) contains the highest written pitch on the bottom joint, F5-sharp that quickly descends to E5 before sustaining a C5-quarter sharp. The E-natural on the lower half of the clarinet has a unique fingering by depressing the B/F-sharp key and ring keys only.

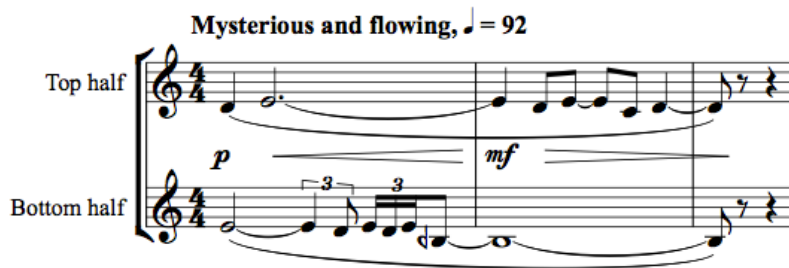
**Figure 4.8.** Jody Rockmaker, *Half and Half for demi-clarinet in A*, mm. 37-38.



The second repetition ends with long, sustained pitches emphasizing on the stretched minor-seventh interval that moves between the pitches, B3-quarter flat and A4-flat.

The final repetition of the work is performed with both halves of the instrument played simultaneously (track 10, 5:30-8:25). The opening begins with both lines exchanging melodic motion as seen in figure 4.9.

**Figure 4.9.** Jody Rockmaker, *Half and Half for demi-clarinet in A*, mm. 1-3.



This exchange of motion occurs for most of the work. One of the greatest challenges when playing two halves at the same time is air control. More planning for breathing is necessary since the air stream is divided into two separate air columns. The break between slurs and when both halves are accented are important places to take a quick breath.

**Figure 4.10.** Jody Rockmaker, *Half and Half for demi-clarinet in A*, mm. 11-14.



As marked in figure 4.10, a breath can be added in the middle of the triplet figures to help accentuate the accents.

The timbre changes in mm. 18-20 (track 10, 6:29) through the upper half of the instrument ascending into the clarion register while the lower half of the instrument continues in its lower range. Soon, the upper voice plays the melody from mm. 22-31, the melody moves to both halves with similar motions in measure 31-37 (figure 4.11).

**Figure 4.11.** Jody Rockmaker, *Half and Half for demi-clarinet in A*, mm. 31-36.



Although no fermata is written in m. 31, a slight elongation of the F4 and D4 can occur before a slight pause or caesura during the written quarter rest. This brief pause can help the performer draw moisture from the mouthpieces before finishing the remainder of the work.

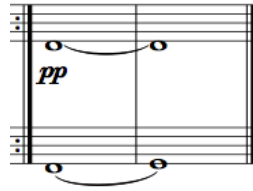
Measures 31-43 is an interesting section of the piece. Rhythms are similar in each voice and both are also in the upper parts of their ranges (track 10, 7:10). The piece then descends, returning to the melodic exchange movement and an echo of each voice.

**Figure 4.12.** Jody Rockmaker, *Half and Half for demi-clarinet in A*, mm. 43-46.



The C4 to B4-flat is imitated in the bottom half with the B3-quarter flat to A4-flat (figure 4.12). The final imitation occurs in mm. 48-49, creating an elongated dissonance between the two voices that then resolves to a minor third interval in measure 51 (track 10, 7:58).

**Figure 4.13. Jody Rockmaker, *Half and Half for demi-clarinet in A*, mm. 52-53.**



The final two measures of the work create a resolution between the two voices (figure 4.13). The top half of the instrument is sustaining D4 while the bottom half resolves up from a D4 to an E4.

At first glance, *Half and Half* seems quite short, but with the repetitions, new fingering system, and incorporation of double clarinet playing the work can hold the listener and performer's interest. The work can be purchased through American Composers Alliance and the complete recording is included with this document.

### *Double Dip*

Jody Rockmaker composed *Double Dip* in 2011 for the present author. The piece is for one B-flat clarinet, played with the left hand, and one A clarinet, played with the right. The open tone holes of the A clarinet's upper joint are plugged with corks so that the chalumeau register will respond. The overall piece description is “playfully” but first notes should be played “raucously.”<sup>45</sup> The opening statement is a jarring *forte* featuring the B-flat side playing up to F6 (figure 4.16). Both instruments contain a C4 as their first sustained pitch; this dissonance contributes to the raucousness. Since the F6 can only be performed with the left hand, the fingering that seemed most accessible and in tune was

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<sup>45</sup> Jody Rockmaker, *Double Dip*, (Tempe, Arizona: Jody Rockmaker, 2011).

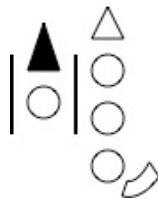
thumb, one, two, three, C-sharp/G-sharp key with left fourth finger, and A-key with the left index finger (figure 4.14).

**Figure 4.14. Diagram of F6 fingering.**



The F6 then dropped abruptly to a D6 (figure 4.15), which is fingered with only the register key.

**Figure 4.15. Diagram of D6 fingering.**



Although accents are on F6, the articulation must be very light; otherwise, the lower notes on the A clarinet will jump registers (figure 4.16).

**Figure 4.16. Jody Rockmaker, *Double Dip*, section one.**

The musical score shows two staves. The top staff is for Clarinet in Bb, starting with a first-measure rest and then playing a series of eighth notes with accents. The bottom staff is for Clarinet in A, starting with a first-measure rest and then playing a series of eighth notes. The tempo is marked 'Playfully, ♩ = 96' and the dynamics are 'f raucously'. The score includes various musical notations such as accents, slurs, and dynamic markings.

The opening three notes are pick-ups, which occur multiple times throughout the piece. The minor third interval between the F6 and D6 and the rhythm on this particular spot are both ideas that will be re-visited throughout the work.



The next section (track 11, 0:09) is described as “more subdued,” a marking that occurs quite naturally with both voices being in the same register and the dynamic being *piano*.<sup>46</sup> Although a rest divides each section, sections two through five contain similar, connecting ideas. Sliding from key to key with the right fourth finger is necessary at the beginning of the 2<sup>nd</sup> staff (figure 4.17) to connect E3, F3-sharp, and G3-sharp.

**Figure 4.17. Jody Rockmaker, *Double Dip*, section two.**



An extra note could occur when playing the F3-sharp to G3-sharp due to the challenging fourth-finger slide.

The third section, which occurs halfway through on the second staff, maintains the soft dynamic but the B-flat side suddenly ascends into the clarion register. Rockmaker indicated that the performer should play “with a sense of longing.”<sup>47</sup> The music portrays sigh-like descending figures in both voices that then have a slight accent and build up to a *forte* dynamic (track 11, 0:28). A brief pause occurs before the fourth section repeats a similar idea to the preceding section. The main difference between these two sections is the third section builds to forte before the sound stops, while the fourth section (figure 4.18) drastically fades to *pianissimo*.

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<sup>46</sup> Ibid.

<sup>47</sup> Ibid.

**Figure 4.18. Jody Rockmaker, *Double Dip*, section four.**



The performer should maintain the *forte* dynamic for the indicated two beats before a four-beat decrescendo to *pianissimo*. Section five continues to fade away and the B-flat clarinet returns to a lower register.

The next two sections continually build to the loudest section of the work (track 11, 1:08). Section six starts at a *piano* dynamic and Rockmaker wrote, “with growing energy,” on the fourth staff.<sup>48</sup> The piece grows to a *forte* dynamic before quickly dropping to *piano* and restarting the energy growth (figure 4.19). This section is one of the longest sections without a rest. Breathing opportunities are plentiful, particularly when both voices contain an accent.

**Figure 4.19. Jody Rockmaker, *Double Dip*, section six.**



Figure 4.19 indicates the quick change in dynamic and an opportunity for a breath on the accented A4-flat in the upper voice, and accented G3-sharp in the lower voice.

Section seven contains many challenges for the performer, including aligning rhythm between voices, register changes, and right hand fourth finger movement.

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<sup>48</sup> Ibid.

**Figure 4.20. Jody Rockmaker, *Double Dip*, section seven.**



Figure 4.19 illustrates several of these challenges. Rockmaker wrote “growing more frenzied” for this particular section; the musical line should continue to move forward with little pause.<sup>49</sup> When examining this excerpt, a constant rhythm of sixteenth notes can be seen in figure 4.18 and heard at 1:33. Reminiscent of the opening figure, section eight is the high point of the piece and should be played “aggressively.”<sup>50</sup>

The final sections of the piece are related back to previously presented ideas but with slight variation. Section nine (figure 4.21) returns to the “subdued” ideas from the earlier sections. The left hand, B-flat clarinet voice moves repeatedly from B5-flat to G5, which requires the third finger to slide. Sliding downward between these two notes is fairly simple, while the reverse motion takes some practice.

**Figure 4.21. Jody Rockmaker, *Double Dip*, section nine.**

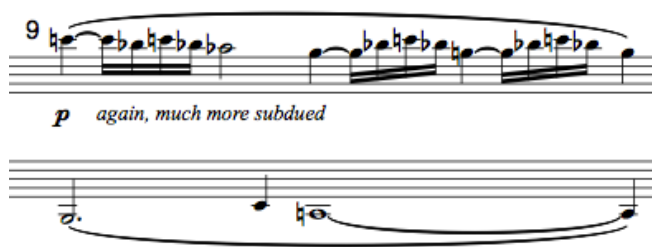


Figure 4.22 is a rhythmic augmentation of the previous stated idea.

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<sup>49</sup> Ibid.

<sup>50</sup> Ibid.

Figure 4.22. Jody Rockmaker, *Double Dip*, section ten.



Rockmaker's melodic contour and rhythmic elements are similar to the second section of the piece except the voices are switched.

Though the voices are switched and the rhythm is augmented, section eleven (figure 4.23) is related to the ideas presented from earlier in the piece, during section six (figure 4.24).

Figure 4.23. Jody Rockmaker, *Double Dip*, section eleven.



Figure 4.24. Jody Rockmaker, *Double Dip*, section six.



Rockmaker labels the twelfth section as “plaintively” which can be applied to the fourth section.<sup>51</sup> The final sections are “slowly dying away,” with large leaps and sustained notes, similar to section five.<sup>52</sup>

The final note of the work (figure 4.25) presents many challenges to a performer including precision of the initial attack, sustaining the pitch, and fading gradually. Though the final dynamic is *pianissimo*, the performer can begin slightly louder in order to guarantee response of the final notes. F6 uses the same fingering as in the beginning. Voice favoring the higher note is necessary in order for the pitch to respond.

**Figure 4.25. Jody Rockmaker, *Double Dip*, section sixteen.**



The opening and closing pitches of *Double Dip* represent the wide range of the clarinet’s register played simultaneously. This piece challenges the performer to control both registers at a many dynamic levels. Rockmaker’s use of each voice exchanging the melodic movement before combining movement in both voices can be seen in both *Half and Half* and *Double Dip*. Both of these compositions incorporate a wide range of timbres through the use of range, length of instruments, and harmony.

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<sup>51</sup> Ibid.

<sup>52</sup> Ibid.

## CHAPTER FIVE

### CONCLUSIONS

#### *Introduction*

To date, the amount of music composed for double clarinet repertoire is very limited. The music begins with the first work by William O. Smith in the 1970s and extends to a recent composition by Jody Rockmaker. Although the repertoire is small, this particular sub-genre of clarinet music is an important innovation in clarinet literature and has the potential to continue to grow. While a detailed discussion of world single-reed double-piped instruments is beyond the scope of this paper, an important observation is that many cultures throughout antiquity have had some kind of double-piped instrument within their society. William O. Smith referred to the *aulos*, an ancient Greek instrument, as “the most important instrument of ancient music.”<sup>53</sup> This chapter will briefly discuss the development of double clarinet literature, limitations of the double clarinet, and the future of the double clarinet.

#### *Development*

William O. Smith’s trip to Greece in 1977 inspired him to compose double clarinet music. He said in an interview with the present author, “[I] repeatedly [saw] images of double piped instrument, the *aulos*, [and] thought I can do that with my clarinet.”<sup>54</sup> *Five Fragments* for demi-clarinet was soon composed after this experience.

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<sup>53</sup> Smith, interview.

<sup>54</sup> Ibid.

Smith has since written many other demi-clarinet and double clarinet works. The genre has expanded through Smith's own continuing additions to the genre, which, in turn, has inspired other composers to compose works utilizing double clarinet.

While Smith was the main catalyst for developing double clarinet music, other composers such as Mandat and Rockmaker have contributed to the literature as well. Mandat affirmed that, “hearing [Smith's] music for double clarinet, and especially watching him perform using two clarinets, inspired me to explore writing for double clarinet.”<sup>55</sup> He described the sound of Smith’s *Epitaphs* as, “so beautiful, so evocative, and not just a gimmick or a lot of edge noise.”<sup>56</sup> Eric Mandat is well known in the clarinet community as a performer and contemporary clarinet composer. The focal point of his compositions is “a single instrument in the mouth.”<sup>57</sup> Nonetheless, he did write a short movement in *Double Life for Solo Clarinet* that incorporates double clarinet in a new way. Mandat’s use of multiphonics within a double clarinet passage is innovative.

**Figure 5.1. Eric Mandat, *Double Life*, mm. 24-26.**

The image shows a musical score for a B-flat Clarinet, spanning measures 24, 25, and 26. The tempo is marked as quarter note = 60. The score is written on two staves. The upper staff is labeled 'B-FLAT CLARINET' and features a melodic line with a dynamic marking of *espr.* (espressivo) and a *p* (piano) dynamic at the end of measure 26. The lower staff contains multiphonic markings, including 'optional' and 'TREMOLLO W/ B $\flat$  (TOP) TRILL KEY' in measure 24, and 'optional' and 'w/ B $\flat$  trill key' in measure 25. A star symbol (\*) is placed above the lower staff in measure 25. The score is enclosed in a rectangular frame.

Although the multiphonics are optional, as illustrated in figure 5.1, this additional challenge stretches the genre to a new level of virtuosity.

<sup>55</sup> Mandat, interview.

<sup>56</sup> Ibid.

<sup>57</sup> Ibid.

Rockmaker's inspiration was similar to that of Mandat; he heard performances of both Smith's and Mandat's works and was inspired to write for demi-clarinet and later double clarinet. Rockmaker attributes his main inspiration to write for demi-clarinet to "hanging out at ASU [Arizona State University]."<sup>58</sup> Rockmaker goes on to state, "Bob's [Robert Spring] mesmerizing performances of William O. Smith and Eric Mandat were the main impetus to try out this technique, which evolved into *Half and Half*."<sup>59</sup>

A unique technique that Rockmaker incorporated in his piece *Half and Half* was the independent lines of each clarinet that later become a duet. Rockmaker wrote, "the form... stems from an exercise I give my composition students: compose a duet for two instruments. Each instrument's part should be interesting enough that, when played alone, would work as a solo composition."<sup>60</sup> The piece triples in length, and the performer plays on two mouthpieces for a longer period of time, compared to the other works presented in this document. The length of the demi-clarinet section requires the player to build endurance while also demonstrating the various timbres of each joint independently, then combined.

Double clarinet literature has developed over the past forty years into a valid compositional style for contemporary clarinet literature. Mandat and Rockmaker have both affected the ways double clarinet can be used through the addition of multiphonics and exploring a variety of sounds the clarinet can produce. Smith continues to impact double clarinet literature through his compositions inspiring other composers and performers.

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<sup>58</sup> Rockmaker, interview.

<sup>59</sup> Ibid.

<sup>60</sup> Ibid.

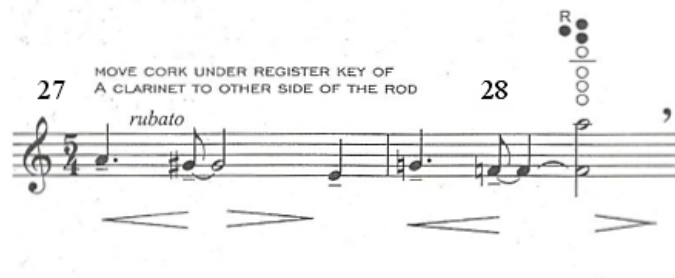


## Limitations

As was discussed in previous chapters and heard in the recording, double clarinet music allows a single clarinet player to perform two parts simultaneously. This freedom to play duets with oneself also has limitations due to the limited ranges of both clarinets. Mandat wrote, “there are of course some technical limitations I need to be aware of when writing for double clarinet, both in pitch content and in dynamic and articulation control.”<sup>61</sup> Rockmaker also wrote, “you have limitation on both halves of the instrument. The tuning and timbre are unique. You have to think of the issues the performer will have to confront.”<sup>62</sup>

These range limitations force the composers to find creative solutions to obtain their desired result. For example, Mandat composed a melodic line to keep the piece moving forward on the B-flat side of the clarinet, while the right hand inserts an object on the right hand side of the instrument in order to change registers (figure 5.2).

**Figure 5.2. Eric Mandat, *Double Life*, mm. 27-28.**



Another example is in *Double Dip*: Rockmaker began and ended the piece on one of the highest possible pitches for the B-flat clarinet when it is played with one hand, F6.

<sup>61</sup> Mandat, interview.

<sup>62</sup> Rockmaker, interview.

This choice creates a piece in which the B-flat clarinet can play in the chalumeau, clarion, and altissimo registers.

**Figure 5.3. Jody Rockmaker, *Double Dip*, section one.**



The B-flat clarinet has more pitch options due to the register key, but the challenge of controlling the sound in the upper register while playing in the chalumeau simultaneously is difficult.

Another creative solution used by these composers includes exploring various timbre options available within the pitches that are accessible to the instrument. Smith utilized the possible timbres of the double clarinet to portray the specific epitaph words to music. For example, the third movement, titled “A Soldier,” requires the register to be open on the right B-flat clarinet (figure 5.4). Smith used the word “bold” to portray the desirable style.<sup>63</sup> The change in timbre from opening the register key helps enhance the bold tone that Smith wants to come out in this movement.

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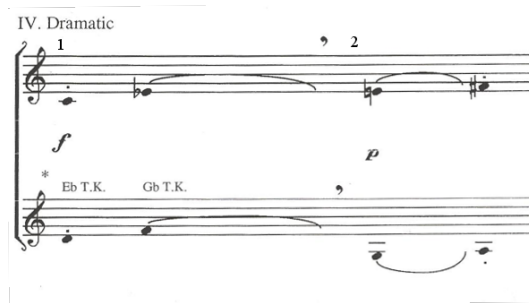
<sup>63</sup> Smith, *Epitaphs for Double Clarinet*, III. “A Soldier.”

**Figure 5.4. William O. Smith, *Epitaphs for Double Clarinet*, III. “A Soldier,” between sections one and two.**



In contrast, the next movement, “A Bird,” kept each side of the instrument in the chalumeau register. The dramatic aspect of this movement comes from the dynamic contrast and dissonance created from the two instruments clashing in pitch (figure 5.5).

**Figure 5.5. William O. Smith, *Epitaphs for Double Clarinet*, IV. “A Bird,” between sections one and two.**



Both of these movements use the various timbres of the clarinets to enhance the descriptive words assigned to the movement while also creating an aural representation of the epitaphs.

While the previous paragraphs focus on compositional limitations of the medium, the performer also encounters practical challenges. One challenge is voicing two different notes simultaneously, which is especially evident when both instruments are in the clarion registers. The performer should focus on the higher pitch when practicing and experiment with tongue position to control both voices. Another challenge was the final

sonority of Rockmaker's piece, *Double Dip* (figure 4.25). The dynamic indicated for these notes were *pianissimo*, but in order to guarantee response of both pitches and have a controlled decrescendo, the initial sound needed to be at a louder dynamic level. A final challenge is the placement of mouthpieces on the bottom lip, which can affect the endurance of a performer. Every player has different mouth structures, some performers may encounter an initial pain when the mouthpieces are placed over the bottom canine teeth.

Every instrument has some type of limitation or obstacle that either the composer or performer must creatively find a solution to overcome. A French instrument maker, Buffet Crampon, made a modified clarinet for Smith without drilled holes in the upper joint and an extra, extended register key that the right thumb could operate.<sup>64</sup> These innovations would allow both instruments to change registers with ease. All three composers found innovative techniques to expand on available pitches through using multiphonics or altissimo pitches. These creative solutions allow for timbres to be explored in new ways on the clarinet.

#### *Future of Double Clarinet Literature*

As mentioned earlier, single-reed double-piped instruments have existed in cultures worldwide for centuries. In an interview, Smith stated,

The interesting thing to me is that the double clarinet is an interesting possibility that we don't even explore in modern times. It is a valid way to play a wind instrument, to hold one half of the instrument in one hand and one in the other. Makes a lot of sense. And it's not hard on your embouchure...it's very little explored.<sup>65</sup>

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<sup>64</sup> Smith, interview.

<sup>65</sup> Ibid.

Although the instrument is designed to play Western pitches, this method allows the performer to play multiple notes. Smith went on to say, “my interest in it firstly – it interests me to be able to play the two pipes at the same time so I could play duets with myself... in a broader perspective, I would like other instrumentalists, on whatever instrument, to think it is a possibility.”<sup>66</sup>

While the contemporary technique of playing the double clarinet might not be for every player, it is important for musicians to be aware of this sub-genre and experiment with the capabilities and limitations of performing this type of music. Mandat wrote:

We cannot un-experience something, and the musical insight gained by allowing one’s self to be directly touched through performing pieces utilizing extended techniques becomes a valuable piece of the extensive fabric which is our creative voice as performers.<sup>67</sup>

Playing double clarinet can stretch a performer to new territory, allowing a clarinetist to independently control a polyphonic composition.

When asking Rockmaker about the future of double clarinet he stated, “I am especially interested in composing for multiple double clarinets, or double clarinet and other instruments. This technique presents yet one more prospect for the expanding palette of sounds out there.”<sup>68</sup> While this paper only focused on four works, other pieces have also been written for multiple double clarinets. One example that Smith mentioned was a recent composition commissioned by Robert Spring for two pairs of demi-clarinets.<sup>69</sup>

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<sup>66</sup> Ibid.

<sup>67</sup> Mandat, interview.

<sup>68</sup> Rockmaker, interview.

<sup>69</sup> Smith, interview.

An innovative recent invention that Smith mentioned was a saxophone double piped instrument.<sup>70</sup> This instrument is called the *aulochrome* and “it resembles two soprano saxophones bodies and uses a revolutionary mechanism, allowing the keys of both pipes to be played either separately or together over the entire range.”<sup>71</sup> While a detailed discussion of this particular instrument is beyond the scope of this paper, it is worth noting the existence of an instrument that could perhaps be a model for development of a similar double clarinet. A clarinet designed with two pipes could open up a new realm of possibilities that are not possible with the current instrument, though the compositions for this fictional instrument would not be as readily available due to performers having to purchase an additional instrument.

### *Conclusion*

The possibilities for double clarinet literature and development have only recently begun to be explored. The invention of an instrument similar to the *aulochrome* would open a new world of possible sounds. Current double clarinet compositions are accessible to nearly every clarinetist who cares to explore the possibilities of multiple sounds. While the repertoire is still quite small, performers and composers can both explore the medium to expand on the literature and sounds the clarinet can create.

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<sup>70</sup> Ibid.

<sup>71</sup> Francois Louis, “Aulochrome,” <http://www.aulochrome.com/aulochrome> (accessed 14 June 2013).

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APPENDIX A

INSTITUTIONAL RESEARCH BOARD DOCUMENTATION

**To:** Joshua Gardner  
MUSIC BUIL

**From:** Mark Roosa, Chair  
Soc Beh IRB

**Date:** 10/30/2012

**Committee Action:** **Exemption Granted**

**IRB Action Date:** 10/30/2012

**IRB Protocol #:** 1210008476

**Study Title:** An examination of the influences, evolution, and future role of demi-clarinets and double clarinets literature, interviews with composers, review of single-reed double piped instruments, and performance comparisons.

The above-referenced protocol is considered exempt after review by the Institutional Review Board pursuant to Federal regulations, 45 CFR Part 46.101(b)(2) .

This part of the federal regulations requires that the information be recorded by investigators in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects. It is necessary that the information obtained not be such that if disclosed outside the research, it could reasonably place the subjects at risk of criminal or civil liability, or be damaging to the subjects' financial standing, employability, or reputation.

You should retain a copy of this letter for your records.

APPENDIX B  
CONSENT TO INTERVIEW FORMS

Permission

This form explains the nature, demands, benefits and any risk of the project. By signing this form you agree for your responses and identity to be used in the final document. Remember, your participation is voluntary. You may choose not to participate or to withdraw your consent and discontinue participation at any time without penalty or loss of benefit. In signing this consent form, you are not waiving any legal claims, rights, or remedies. A copy of this consent form will be given (offered) to you.

Your signature below indicates that you consent to participate in the above interview.

William O Smith      WILLIAM O SMITH      5/3/13  
Subject's Signature      Printed Name      Date


Thank you for your time and I look forward to hearing from you soon.

Kimberly Endel  
1927 Lee Creek Dr.  
Van Buren, AR 72956  
kendel84@gmail.com  
479-651-7109

Permission

This form explains the nature, demands, benefits and any risk of the project. By signing this form you agree for your responses and identity to be used in the final document. Remember, your participation is voluntary. You may choose not to participate or to withdraw your consent and discontinue participation at any time without penalty or loss of benefit. In signing this consent form, you are not waiving any legal claims, rights, or remedies. A copy of this consent form will be given (offered) to you.

Your signature below indicates that you consent to participate in the above interview.

 ERIC P. MANDAT 9 APR. 2013  
Subject's Signature Printed Name Date

Thank you for your time and I look forward to hearing from you soon.

Kimberly Endel  
1927 Lee Creek Dr.  
Van Buren, AR 72956  
kendel84@gmail.com  
479-651-7109

Permission

This form explains the nature, demands, benefits and any risk of the project. By signing this form you agree for your responses and identity to be used in the final document. Remember, your participation is voluntary. You may choose not to participate or to withdraw your consent and discontinue participation at any time without penalty or loss of benefit. In signing this consent form, you are not waiving any legal claims, rights, or remedies. A copy of this consent form will be given (offered) to you.

Your signature below indicates that you consent to participate in the above interview.

 Judy Rocknecker 5/11/2013  
Subject's Signature Printed Name Date

Thank you for your time and I look forward to hearing from you soon.

Kimberly Endel  
1927 Lee Creek Dr.  
Van Buren, AR 72956  
kendel84@gmail.com  
479-651-7109

APPENDIX C

WILLIAM O. SMITH INTERVIEW TRANSCRIPT

William O Smith Interview Transcript

9 June 2013

Interviewer - Kimberly Endel (KE)

Interviewee - William O Smith (WS)

KE - You were talking about the launeddas - do you remember when you heard it?

WS - I think it was probably late 70s

KE - So it was after you wrote *Five Fragments* and other double clarinet works?

WS - Oh yeah

KE - Can you describe how it sounded?

WS - I went to the home of launeddas player. I had been directed there by a priest who ran a museum of musical instruments and I told him I was interested in the launeddas. And he gave me the name of this fellow and it turns out he is a stone mason by day and a launeddas player by night. There are a couple of dozen launeddas players in Sardinia and I had the pleasure of hearing one of them. And he had a sense for teas and cookies, my son and wife were along. And he said well let me go get my launeddas and I'll play for you. And so he played for us and it was loud, it was like a bagpipe. Very reedy and well just like a bagpipe. And that was my first experience hearing a launeddas.

KE - How would you compare the launeddas sound to the demi-clarinet or double clarinet sounds?



WS - Much different - well I don't know. I suppose if he played the double clarinet - all his life, since he was a little kid, he had played double pipe instruments. But when he played, his cheeks puffed out, like the bag on a bag-pipe. Using giant cheek air and that's something I don't have. I didn't try to play double instruments until I was well along in years. So he has more power and it could be if he played double clarinet, he could play it with the same force as the launeddas.

KE - Did they circular breathe on the launeddas?

WS - Oh yeah - he played for 20 minutes without taking a breath. And just really loud. And at one point I sat in with him, played a little along with him, played clarinet along with him. It was (chuckles) he was like the big dog and I was like a puppy that was just in his way. He didn't even notice - he just kept on playing. But it was an interesting experience. And the interesting thing to me is that the double clarinet is an interesting possibility that we don't even explore in modern times. It is a valid way to play wind instrument, to hold one half of the instrument in one hand and one in the other. Makes a lot of sense. And it's not hard on your embouchure. To play the two reeds is not tricky. It's very little explored. In ancient times it was the most important wind instrument. Well, the aulos, the double piped instruments were the most important instrument of ancient music. Along with the lyre. Or lyre like instruments and aulos like instruments. But in Greece they called them aulos and lyre and that became the general terms we use. But each country has a different name for like in Italy there called tibia. And it's a double piped instrument. My interest in it firstly - it interests me to be able to play the two pipes

at the same time so I could play duets with myself. And then in a broader perspective, I would like other instrumentalists, on whatever instrument, to think it is a possibility. Why not play double oboes or even better there is a saxophone maker who make soprano saxophones that are double piped saxophones. I think that is great, I would like to see more people explore that.

KE - I was reading about the aulos and other double piped world instruments and wrote a paper a few years ago on a select few. When I read about these instruments, they were very simple instruments that I believe shepherds carved out in a field. Is that similar to how the launeddas was made?

WS - Oh yeah - the launeddas virtuoso talked to me that afternoon said when he was four his grandfather took him out into the marshes and they looked at reeds and said this piece of cane looks like it is perfect for an instrument and this would be another one. And he made his own instruments from the time he was a little kid. There is a reed part that is separate - I mean it is a single reed instrument like the clarinet is not a double reed like an oboe. It is just a piece of cane with the vibrating part is a little tongue in the piece of cane that he cuts into it.

KE - Would he need to create a whole new instrument every time the reed wore out?

WS - Oh no, it is like a mouthpiece and a reed combined that sits on top of the fingering part of the cane. Well you wouldn't want your reed to wear out too much because it still is hard. But I don't that's the tricky part. The launeddas, not only does it have double pipes, it also has a drone pipe that is in the middle which is another thing that makes it

similar to the bagpipe. In Sardinia it goes back to Carthage, ancient times. It is probably that this instrument has a history going back to ancient Carthage. And that's how they played it - one pipe is a drone, you played two pipes with your hands, and later the bagpipe took over. The church banned pagan instruments and of course the launeddas was a pagan instrument. So in the 4th or 5th century, when Christianity took over, they did away with launeddas players or double pipes in the Western world so they sort of disappeared. They still have them of course in world culture, in other countries, in Egypt and third world countries. But in western countries, in Europe when Christianity took over, in the 5th century, the launeddas was no longer popular.

KE - You mentioned these are ancient instruments and very simply made. How do you think taking today's 'technologies' and combining that with the ancient concepts could fit together?

WS - Well you might look up saxophone double piped instruments because there is a manufacturer that makes them. And they are fabricated to be played as double piped instruments. When I played two clarinets at once, it was the closest I could get to what it would be manufactured. As a matter of fact, they did make a set of double clarinets for me and a pair for my friend Paolo Ravaglia that has some extra keys so it facilitates the high register. The left hand clarinet is like a normal clarinet. The right hand clarinet has all the holes stopped in the upper part of the range. And so I asked Buffet to put an extra octave key, an extension of the octave key that goes down to the right hand thumb that could manipulate the octave key and could open up the upper register, the clarion register. I realize that double clarinet is limited unless it is reconstructed. But it seems

like saxophone is one that has been developed as a double piped instrument.

KE - You had been using and documenting ways to obtain multiphonics on the clarinet and possibly wanted to explore different ways to get multiple pitches. Is that correct, is that what led to you experimenting with double clarinet?

WS - Well yeah, when I was exploring multiphonics, it sort of opened my mind. Up until that time, 1959 and 1960, I tried to play with a pure symphonic, what we accepted as a pure clarinet tone. After that I wanted to experiment with other possibilities so what would be like a string instruments, the violin, there are all kinds of sounds, other than a normal violin sound. Like pizzicato, con legno. I was interested in broadening the new sounds that the clarinet could produce. I went to Greece for a month in 1977, I saw repeatedly images of double piped instruments, the aulos. Well I thought I can do that with my clarinet. I have two halves, get an extra mouthpiece and put it on one of them. So I wrote the *Five Fragments* for clarinet liked it and thought it opened possibilities. In later years I experimented with using two full clarinets. Just recently, Bob Spring commissioned me to write a piece for two pairs of demi-clarinets that were Buffets. My experiments were all with Selmer clarinets until recent years when Buffet has been courageous enough to help me design a double clarinet that would function better.

KE - In my research, I came across the name Rishand Roland Kirk, a jazz saxophonist who was known for playing multiple saxophones at once. Had you heard of him, was he an influence?

WS - Oh sure, I heard him, I knew of him. It really didn't lead me to try to experiment with that on the clarinet. It was the Greek clarinetist and aulos that inspired me to experiment with the clarinet. But it probably influenced me because I had heard Roland Kirk.

KE - What do you find most challenging when performing on multiple clarinets?

WS - The fingerings, you have to get your hands used to working separately. Of course that is what you do on the piano all the time. Aside from fingering, the upper register, since we aren't used to playing double clarinets, the upper register takes practice. If you play down in the chalumeau it is quite easy. But if were little kids and we started, like the launeddas player he was four when he started playing double pipes. It was nothing, it was the normal thing. He probably thought it was weird to just play a single pipe.

APPENDIX D  
ERIC MANDAT INTERVIEW

Eric Mandat Interview

7 June 2013

1.) After looking at your output of pieces, I noticed that many of your works are for solo clarinet. Which parts of your background and training do you believe led you to composing for double clarinet?

Composing for double clarinet came solely from my experiences with the compositions of William O. Smith. Hearing his music for double clarinet, and especially watching him perform using two clarinets, inspired me to explore writing for double clarinet.

2.) In *Double Life*, you open with the performer playing two clarinets simultaneously, as a tribute to William O. Smith. Do you remember the first time you heard double clarinet/demi-clarinet? Were they Smith's works? Can you describe the influence it had on you?

I'm not sure I remember exactly when I heard double/demi-clarinet, but it was certainly Smith performing. While I was not unfamiliar with people who played multiple instruments simultaneously – I knew several recordings of jazz woodwind star Rashaan Roland Kirk – I was not particularly interested in exploring the realm myself until I heard Smith's *Epitaphs* for double clarinet. The context of the sounds in *Epitaphs* was so beautiful, so evocative, and not just a gimmick or a lot of edgy noise. I have always been attracted to the beautiful sounds a clarinet can make, and so I quickly acquired and performed *Epitaphs* to gain a first-hand feel of these sounds.

3.) Does your process for writing double clarinet compositions differ significantly from that of solo clarinet pieces? Are they similar to all your chamber pieces? Does your composition method vary when writing for identical instruments, as opposed to clarinet and oboe, for example? If so, in what ways?

There are of course some technical limitations I need to be aware of when writing for double clarinet, both in pitch content and in dynamic and articulation control. Otherwise the process is essentially the same as with my other pieces. Since my chamber music compositions are exclusively for clarinets, I have neither experience nor any thoughts on how my compositional method might change if I were to write for other woodwind instruments with clarinet.

4.) You have written many solo clarinet works that incorporate many innovative, contemporary techniques. What would it take to interest you in writing more works for double clarinet – or do you have a sort of “once and done” feeling about the medium?

Because Smith has written so well and so frequently for double/demi-clarinet, as the more limited pitch resources of the medium complement his compositional style, I feel as though this is his realm. The elements of clarinet I tend to want to explore require full attention on a single instrument in the mouth.



5.) Should double clarinet compositions become a standard repertoire for all professional clarinetists to learn? Why or why not?

I think all professional clarinetists should learn any technique which pushes the boundaries of what is capable on the instrument. While it may not be particularly enhancing to one's orchestral chops to play a work for double clarinet, we cannot un-experience something, and the musical insight gained by allowing one's self to be directly touched through performing pieces utilizing extended techniques becomes a valuable piece of the extensive fabric which is our creative voice as performers.

6.) What role might double clarinet compositions have in the future?

It is very difficult to speculate on the future of double clarinet compositions. I do believe that Smith's work in this medium is unique, and development of works for double clarinet will probably necessitate a composer-clarinetist whose compositional style complements the technical limitations of the medium, as I've noted above.

APPENDIX E

JODY ROCKMAKER INTERVIEW

Jody Rockmaker Interview

11 May 2013

1.) Many of your clarinet works are written for Richard Nunemaker. Was he your main influence to write for demi-clarinet? If not, what/who was your influence?

I've written 5 pieces for Dick Nunemaker: *Multiplicities*, *Magical Place of My Dreams*, *Rothko Landscapes*, *Bottom Dog*, and *Half and Half*. I have a 6<sup>th</sup> piece for bass clarinet quartet using multiphonics somewhere in the back of my brain.

Dick has been my main reason to compose anything new for clarinet because he is so willing to play the music and give the pieces multiple performances. (Not to mention he is a phenomenal player!) I never heard him play a piece for demi-clarinet. I would say the interest in writing for demi- came from hanging out at ASU. You hear a great deal of new music for clarinet that uses extended techniques because of Bob Spring and his fantastic students. Bob is such a great champion of the new and interesting. You get to hear these works performed at the highest level. Bob's mesmerizing performances of William O. Smith and Eric Mandat were the main impetus to try out this technique, which evolved into *Half and Half*.

2.) Does your process for writing double clarinet compositions differ significantly from that of solo clarinet pieces? Are they similar to all your chamber pieces? Does your composition method vary when writing for identical instruments, as opposed to clarinet and oboe, for example? If so, in what ways?

The initial approach to any new work is the same: What materials are available for this composition? I consider pitch, timbre, techniques (traditional or extended) usually applied to the instrument, performance restrictions, etc. In the case of double clarinet, you have pitch limitations on both halves of the instrument. The tuning and timbre are unique. You have to think of the issues the performer will have to confront. For instance, how contrapuntal can the music get so the player is not overwhelmed. The player has two instruments stuffed in her mouth, so what articulation works? You don't sit there wishing your instruments could do something they can't. If that is the case, find a situation where you can apply these missing elements. This preliminary process would be the same for a work for clarinet and oboe.

3.) In your piece, *Half in Half*, you introduce each voice separately then combine them. Did you have a model for this procedure? Did you choose it because you were writing for identical instruments?

The form of *Half and Half* stems from an exercise I give my composition students: compose a duet for two instruments. Each instrument's part should be interesting enough that, when played alone, would work as a solo composition. So my hope is that the audience will hear first two beautiful solo works (or perhaps, one very long solo) and then a duet that combines each half of the instrument.

I did not think of the two halves as identical: each half has a distinct timbre and tuning, as well as pitch and technique possibilities. I was faced with a different set of issues when writing for each half, so my approach was slightly different when working on the parts. In fact, I felt there were actually three different elements that I needed to consider for any gesture written: how did this music effect the upper or lower parts, and also the combination of the two when played as a duet. Each part has its limitations, but combined you have a pretty impressive set of possibilities to consider. So when composing for the upper part, I had to figure out how the gesture would combine and effect the music immediately preceding or continuing in that part, but also the music that would eventually play in the lower part.

4.) Should double clarinet compositions become a standard repertoire for all professional clarinetists to learn? Why or why not?

I leave the answer to the performers. To me it is another extremely interesting opportunity for composers to explore sound. Perhaps clarinetist will find the music intriguing. I think there will always be (a need for?) traditionalists for any instrument, both performers and composers. There's lots of great music to play and compose in C Major. But there are also those that wish to explore and expand their world, and try to discover or experiment with the new. Any performer interested in contemporary performance should try and master these techniques.

5.) What role might double clarinet compositions have in the future?

I have heard many works for double clarinet at this point. I am especially interested in composing for multiple double clarinets, or double clarinet and other instruments. This technique presents yet one more prospect for the expanding palette of sounds out there. How very exciting!

APPENDIX F  
RECORDING

Recording 10 June 2013

Performed by: Kimberly Michelle Endel

Produced by: Robert Spring

Recording Engineer: Clarke Rigsby

Mastering Engineer: Dave Shirk

1-8. *Epitaphs for Double Clarinet*

William O. Smith

- I. "Antibia"
- II. "The He-Goat"
- III. "A Soldier"
- IV. "A Bird"
- V. "Erato"
- VI. "Pan of the Fields"
- VII. "A Horse"
- VIII. "A Dolphin"

9. *Double Life for Solo Clarinet*

Eric Mandat

- I. "Double Life"

10. *Half and Half for demi-clarinet in A*

Jody Rockmaker

11. *Double Dip*

Jody Rockmaker