EXTENDED PERFORMANCE TECHNIQUES AND COMPOSITIONAL STYLE IN THE SOLO CONCERT VIBRAPHONE MUSIC OF CHRISTOPHER DEANE

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Vibraphone performance continues to be an expanding field of music. Earliest accounts of the presence of the vibraphone and vibraphone players can be found in American Vaudeville from the early 1900s; then found shortly thereafter in jazz bands as early as the 1930s, and on the classical concert stage beginning in 1949. *Three Pieces for Vibraphone*, Opus 27, composed by James Beale in 1959, is the first solo concert piece written exclusively for the instrument. Since 1959, there have been over 690 pieces written for solo concert vibraphone, which stands as evidence of the popularity of both the instrument and the genre of solo concert literature.

Christopher Deane has contributed to solo vibraphone repertoire with works that are regarded as staples in the genre. Deane's compositions for vibraphone consistently expand the technical and musical potential of the instrument. Performance of Deane's vibraphone works requires a performer to utilize grips and specific performance techniques that are departures from standard performance practices. Many of the performance techniques needed to successfully execute these pieces are not routinely found in either percussion pedagogy courses or performance ensemble situations. As a result, most

percussionists are not familiar with these techniques and will require additional assistance, instruction, or demonstrations.

The impetus of this document is to present explanations and solutions for performance areas that require extended performance techniques, to offer recommendations on the creation, choosing, and manipulating of special implements, and to propose varied choices related to artistic interpretation of three of Deane's vibraphone pieces: *Mourning Dove Sonnet* (1983), *The Apocryphal Still Life* (1996), and *Dis Qui Etude* (2004).

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CHAPTER 1

INTRODUCTION

Vibraphone performance continues to be an expanding field of music. Earliest accounts of the presence of the vibraphone and vibraphone players can be found in American Vaudeville from the early 1900's; then found shortly thereafter in jazz bands as early as the 1930's, and on the classical concert stage beginning in 1949. *Three Pieces for Vibraphone*, Opus 27, composed by James Beale in 1959, is the first solo concert piece written exclusively for the instrument. Since 1959, there have been over 690 pieces written for solo concert vibraphone, which stands as evidence of the popularity of both the instrument and the genre of solo concert literature.

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A Brief History of the Vibraphone

The modern vibraphone is a keyboard percussion instrument found in the percussion family, and is similar in construction to the marimba, xylophone, crotales, glockenspiel, and chimes (tubular bells). While vibraphones from two and a half octaves up to four octaves exist, the standard range of the instrument is three octaves, from *f* to *f ”’*. Like other keyboard percussion instruments, the vibraphone has bars that are chromatically arranged similar to a piano, has resonators that are suspended underneath each bar to aid in resonation and projection of overtones, and is commonly played with mallets constructed from cord or yarn wrapped rubber cores fastened to the end of a shaft of wood or rattan.

Unique characteristics of the vibraphone include bars that are made of an aluminum alloy. Unlike the high-carbon steel chrome-plated bars of the glockenspiel, the vibraphone bars, when struck, produce a distinctive mellow metallic sound. The vibraphone also has a sustain pedal which, on most vibraphones, connects to a strip of felt that presses against the bars to inhibit ring

or sustain. When the sustain pedal is pressed down and the felt, or damper bar, is pulled away from the bars, the bars are allowed to sustain. In addition to these characteristics, another unique feature of the vibraphone concerns the motor operated paddles, or revolving-disc pulsators, located in the top of each resonator. When engaged, these paddles spin in the open areas at the top each resonator, thereby, constantly changing the size of the opening. This repetitive opening and closing of the top end of the resonators changes the intensity, and not the pitch, of each sustaining bar tone by way of altering the amplitude of the vibrations.[1] On most models of vibraphones, the motor controlling these paddles can be set to variable speeds of rotations from slow to fast.

Popularity in Public Music

James Blades states that "Vaudeville it seems was responsible for the introduction of the vibraphone. In this field of entertainment, the xylophone, marimba, and numerous novel percussion instruments were popular features. There was, not unnaturally, constant experiment to provide the extraordinary. Bar-percussion provided a useful medium."[2] During the early 1900's, the Leedy Drum Company of Indianapolis, Indiana (USA) was producing a three octave instrument called the Steel Marimbaphone.[3] In 1916, Herman Winterhoff, then vice president of the Leedy Drum Company, applied a mechanical vibrato to this

[1] Gary Cook, *Teaching Percussion*, (Belmont, California: Thomson Schirmer, 2006), 98.
[2] James Blades, *Percussion Instruments and their History*, (Westport, Connecticut: Bold Strummer, LTD., rev. 1992), 408.
[3] Harold Howland, "The Vibraphone: A Summary of Historical Observations with a catalog of Selected Solo and Small-Ensemble Literature", *Percussionist* Vol. 14, No. 3 (Summer 1977), p. 80.

steel marimba, thus creating a *vox humana* effect by lowering and raising the resonating chambers.[4] It was in 1921, after refinements to the instrument, when this vibrato effect was achieved by way of the revolving-disc pulsators method. It was also at that time when George H. Way, then Sales Manager and Advertising Manager for Leedy Drum Company, christened Winterhoff's instrument as a vibraphone.[5] Also in the 1920's, John C. Deagan and Henry Schluter of J. C. Deagan, Inc., Chicago, Illinois (USA), were working on a similar instrument called the vibraharp.[6] Today, the terms vibraphone, vibraharp, or vibes all refer to the standard concert vibraphone.

The spread of vibraphone popularity is a direct result of the first commercial recording of the instrument, which occurred around 1924. At that time a popular vaudeville circuit artist named Louis Frank Chiha (also known as "Signor Friscoe") recorded *Aloha Oe* and *Gypsy Love Song* using the Leedy vibraphone with revolving-disc pulsators. The popularity of *Aloha Oe* produced an influx of orders for the Leedy vibraphone.[7] By the middle 1920's, the vibraphone was an integral part of the dance orchestra.[8]

In his dissertation "Vibraphone Concerti", Sean Daniels states that the vibraphone's second appearance in American music entertainment occurred with

[4] James Blades, 408.
[5] Ibid, 409.
[6] Ibid.
[7] Harold Howland, "The Vibraphone", *Percussionist* Vol. 14, No. 3 (Summer 1977), p. 81.
[8] James Blades, 409.

the jazz bands of the late 1920's.[9] Early jazz percussionists who adopted the vibraphone as their primary instrument include Red Norvo, Milt Jackson, and Lionel Hampton. Hampton is credited with the first jazz vibraphone recording on a work entitled *Memories of You* in 1931 with Louis Armstrong's Sebastian New Cotton Club Orchestra.[10] Beginning in the 1950's and 1960's, Terry Gibbs and Gary Burton not only continued this jazz vibraphone tradition but propelled it to new heights of popularity and esteem. Gibbs performed with such players as Tommy Dorsey, Buddy Rich, Woody Herman, Louie Bellson, and was a member of Benny Goodman's band.[11] Burton, in addition to developing an original style of improvisation quite distinct from those of his predecessors, also refined a playing style that made use of four mallets at once. In many ways he created a compromise between contemporary jazz wind and piano styles.[12]

Solo Concert Repertoire

Shortly after the establishment of jazz vibraphone performance, solo concert vibraphone repertoire began to emerge with *Concerto for Marimba, Vibraphone and Orchestra* by Darius Milhaud. This work was written in 1947 and premiered February 12, 1949 by the St. Louis Symphony Orchestra with Jack Conner playing the solo part. Through this work, Milhaud focused a proverbial spotlight on the vibraphone by placing it in an orchestral setting, thereby

[9] Sean Errec Daniels, "Vibraphone Concerti: Published and Unpublished Works from 1947-2001." D.M.A. Dissertation, The University of North Carolina at Greensboro, 2004, p. 10.

[10] Hal Trommer, "Encyclopedia of percussion", John G Beck, ed. p. 339-345.

[11] Gary Theroux and Barry Kernfeld, 'Gibbs, Terry [Gubenko, Julius]', Grove Music Online, accessed 15 February, 2008.

[12] Mark C. Gridley 'Burton, Gary', grove music online accessed 15 February, 2008.

"establishing the vibraphone as a serious concert instrument."[13] While Milhaud had scored for vibraphone in an earlier work, *L'annonce faite à Marie (Claudel)*, op.117 (1932),[14] his *Concerto for Marimba, Vibraphone and Orchestra* was the first concerto written for the instrument. Many scholars cite other notable composers who have included the vibraphone in their music. These composers include Alban Berg in his opera *Lulu* (1929–35, 1937), Benjamin Britten in *Spring Symphony* (1949) and *A Midsummer Night's Dream* (1960), Pierre Boulez in *Le marteau sans maître* (1955), and Siegfried Fink in his *Concerto for Vibraphone and* Strings (1958) which contains the first solo cadenza written for the vibraphone.[15]

As mentioned earlier, James Beale composed the first solo work for vibraphone in 1959; *Three Pieces for Vibraphone*, Opus 27. Other early examples of concert vibraphone solos include Boguslaw Schaffer's *Constructions for Vibraphone Solo* (1962, not premiered until 1971), Serge de Gastyne's *Prelude No. 1* (1963), Werner Heider's *Katalog fur einen Vibraphonspieler* (1965), George Crumb's *Madrigals, Book I* (1965), Siegfried Fink's *Improvisation and Umkehrung* (1966), Rene Leibowitz's *3 Caprices for Vibraphone*, Opus 70 (1966), John Bergamo's *Three Pieces for the Winter Solstice* (1968), Gitta Steiner's *Four Bagatelles* (1970), and Stuart Sanders Smith's *Links* (1974). Although it is a chamber work, *Madrigals, Book I* (1965) by George Crumb is included in this list.

[13] Igor Lesnik: *Milhaud's Concerto for Marimba, Vibraphone and Orchestra*, Percussive Notes June 1997, 58.
[14] Sean Errec Daniels, p. 11.
[15] Ibid., p. 32.

Throughout *Madrigals, Book I*, Crumb requires the vibraphonist to perform with a variety of mallets and implements, as well as to incorporate a wide range of performance techniques including pitch bending of certain bars and producing harmonics. Regarding this vibraphone-focused work from such a distinguished composer, William Moersch, Professor of Percussion at the University of Illinois at Urbana-Champaign, states that *Madrigals, Book I* is the piece that "really put 'Classical/Concert' Vibraphone on the map."[16]

In the time since the first solo piece by Beale, the body of repertoire for solo concert vibraphone literature has expanded greatly. In 1974, the Percussive Arts Society (PAS) initiated the PAS Percussion Composition Contest, which was designed to "encourage and reward those who create music for percussion instruments and to increase the number of quality compositions written for percussion."[17] Throughout the thirty-five years since its inception, the PAS Composition Contest has focused on one different solo instrument each year such as: timpani, snare drum, and marimba. PAS has chosen the vibraphone as the featured solo instrument three separate years: 1980, 1990, and 2004. Aside from this contest, the PAS *Siwe Guide to Solo and Ensemble Percussion Literature* listed 694 pieces written for solo vibraphone, as of May 2008. Such an increase in this body of literature stands as evidence of the significance of this musical genre.

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[16] William Moersch, "PAS Discussion Forum," http://www.pas.org, (accessed 16 November, 2008).

[17] Percussive Arts Society website http://www.pas.org/About/Contests.cfm, (accessed 16 February, 2008).

The vast majority of concert vibraphone literature requires a percussionist to utilize standard performance practices with regards to manipulating two or four mallets. With standard four mallet technique, (two mallets in each hand), a performer has three grip choices: Traditional cross-grip, Burton grip (named after jazz vibraphonist Gary Burton), and Musser (Stevens) grip (named after performers Clair Omar Musser and Leigh Howard Stevens). With both Traditional cross-grip and Burton grip, the mallet shafts cross over one another in a performer's hand. With Musser (Stevens) grip, both of the mallets are held by separate groups of fingers and are not brought in contact with each other. While Burton grip is most commonly used by today's vibraphone players, the performance of Deane's vibraphone works requires a performer to utilize grips and performance practices that are uncommon to most vibraphonists. The characteristics of these extended grips and performance techniques are discussed later in this document.

CHAPTER 2

CHRISTOPHER DEANE

Christopher Deane is currently Associate Professor of Percussion at the University of North Texas in Denton, Texas (USA). In addition to experiencing a successful teaching and performing career, Deane has proven himself a substantial composer in the world of percussion literature. Deane has composed for solo vibraphone, solo marimba, and percussion ensemble, as well as chamber works that blend percussion instruments with wind and string instruments. Throughout his years as a composer, Deane has received numerous commissions from institutions such as: the University of Oklahoma Percussion Department, the University of North Carolina in Greensboro, the Percussive Arts Society, Smith Publications, Berklee College of Music, Louisiana State University, and the University of Kentucky.

Many of Deane's works have experienced a healthy level of performances throughout the United States. A recent survey of submitted concert and recital performance programs to the PAS Programs archive reflects 147 performances of Deane's pieces.[18] Keeping in mind that the submission of concert and recital programs is not a requirement from PAS, it is safe to assume that actual numbers of performances of Deane's works are far greater than is indicated in the archive. Additionally, Deane has had works premiered at various PAS

[18] Percussive Arts Society Programs archive, <www.pas.org>, (accessed 16 February 2008).

International Conventions as well as The National Gallery of Art Chamber Series in Washington D.C. (USA). Deane's solo marimba piece *Etude for a Quiet Hall* received first place in the 1982 PAS Composition Contest, and his solo marimba piece *Three Shells* received second prize in the 1992 PAS Composition Contest. A number of Deane's works appear on professional recordings such as Peter Sadlo's *Xenakis: Rebonds and other Works for Percussion Solo*, Gilmar Goulart's *World of Marimba*, and Mark Ford's *Polaris*. Table 1 reflects selected compositions by Christopher Deane.

Title	**Year**	**Instrumentation and Comments**
Etude for a Quiet Hall	1982	Marimba Solo; first prize winner in the 1982 PAS Composition Contest; Dedicated to Massie Johnson. Premiere: February 1983, Coastal Carolina Community College, Mark Shelton, soloist; self-published and distributed by Innovative Percussion, Inc.
Mourning Dove Sonnet	1983	Vibraphone Solo; Dedicated to Sherwood Shaffer. Premiere: Spring 1984, North Carolina Day of Percussion, composer as soloist; self-published and distributed by Innovative Percussion, Inc.
The Manes Scroll	1984	Percussion Ensemble for 10 percussionists; Commission: University of Oklahoma Percussion Department; Dedicated to Richard Gipson and the University of Oklahoma Percussion Ensemble. Premiere: Spring 1984; Published by OU Percussion Press
Prelude I	1984	Timpani Solo; Dedicated to Carol L. Stumpf. Premiere: November 1984, Gilford Technical College, composer as soloist; self-published and distributed by Innovative Percussion, Inc.
Octet: The Adumbration	1988	Cimbalom solo with Percussion octet. Premiere: March 1988, composer as soloist; Commission: University of North Carolina, Greensboro
Song of the Violet	1991	Violin and Marimba duo
Three Shells	1992	Marimba Solo; Second prize: 1992 PAS Composition Contest; Dedicated to the composer's sister. Premiere: January 1994, Campbell University, Mark Ford, soloist; self-published and distributed by Innovative Percussion, Inc.
Prelude No. 3	1994	Timpani and African Percussion; Composed for John Feddersen
The Process of Invention	1995	Marimba Solo; Dedicated to Mark Ford. Premiere: January 1996, Campbell University, Mark Ford, soloist; self-published and distributed by Innovative Percussion, Inc.

Table 1, continued

Title	Year	Instrumentation and Comments
The Apocryphal Still Life	1996	Vibraphone Solo; Commission: Percussive Arts Society; Dedicated to Jon Metzger. Premiere: 1996PAS International Convention (PASIC); self-published and distributed by Innovative Percussion, Inc.
Scavenger Music	1996	Percussion Ensemble for 5 percussionists; Commission: North Carolina PAS chapter. Premiere: 11 November 1996; Published by C. Alan Publications
The Ives in the Back of Their Heads	1998	Percussion Ensemble. Premiere PASIC 1998
Sea of Clouds	2000	Marimba Solo; Commission for the collection "Marimba Concert", Smith Publications, Sylvia Smith, editor. Premiere PASIC 2000, Nanae Mimura soloist; Published by Smith Publications
The Bones of Chuang Tzu (Prelude No. 4)	2002	Timpani Solo; premiere: I-Jen Fang
The Auricular Object	2002	Flute, Oboe, Cello, Percussion. Premiere: The National Gallery of Art Chamber Series, Washington D.C., Mellarmé Chamber Players
Corinthian Variations	2002	Trombone and Timpani duo
Vespertine Formations	2003	Percussion Quartet. Premiere: Bain Percussion Quartet
The Flowering	2003	Marimba Solo; Commission from Berklee College of Music
Dis Qui Etude	2004	Vibraphone Solo. Premiere: 28 October 2004, Lexington, Kentucky, Robert Parks, soloist; publication pending
Laughing at the Moonlight	2004	Vibraphone and Almglocken (or Glockenspiel)
The Birth of Prometea (Prelude No. 5)	2004	Percussion Ensemble
A Robe of Orange Flame	2005	Thundersheet and Spoken Voice. Premiere: PASIC 2005, Gerg Secor, soloist
A Fleeting Revenants	2006	Percussion Ensemble; Commission from Louisiana State University
The Long September Morning	2006	Percussion Ensemble; Commission from Cameron University
Pyriphlegethon	2007	Percussion Ensemble; Commission from the University of Kentucky

Table 1. Selected compositions by Christopher Deane. All compositions are in manuscript form and unpublished unless indicated.

Vibraphone Compositions

In three of Christopher Deane's solo concert vibraphone pieces, *Mourning Dove Sonnet* (1983), *The Apocryphal Still Life* (1996), and *Dis Qui Etude* (2004), the performer is required to utilize not only standard four-mallet performance techniques, but also extended /performance techniques in an effort to produce distinctive sounds and aural effects. These techniques include bending pitches, producing harmonics, and bowing vibraphone bars with contrabass bows. Additionally, each one of the three concert vibraphone pieces chosen for this study requires the performer to either prepare the vibraphone for specific aural effects, or to prepare and utilize special implements and equipment that are not generally considered part of standard solo concert vibraphone performance. In *Mourning Dove Sonnet* the performer must make a special mute to lie across certain bars to be struck. In *The Apocryphal Still Life*, two of the bars (*d'* and *e'*) must be prepared in a way that they are out of reach of the damper bar, and thus allowed to resonate throughout the work. In *Dis Qui Etude*, the performer must construct special mallets made out of wooden paint stirrers, as the piece requires one to use these mallets to strike and bow bars in rapid succession, and perform cluster chords.

CHAPTER 3

MOURNING DOVE SONNET

Mourning Dove Sonnet (1983) is Deane's second published composition and his first for solo concert vibraphone. In this work, Deane requires a performer to employ both standard performance techniques, as well as progressive procedures such as bowing of the bars with bass bows, producing harmonics of certain notes, and bending the pitches of bars. Deane states that the impulse to compose for such a variety of performance techniques and playing implements arose from the very nature of the vibraphone bars. "The bars themselves produce a very static sound; tonally crystal clear. The choice for different playing implements and techniques becomes paramount when the desire is to compose a vibraphone piece with timbral interest."[19] It was this attitude that led Deane to compose what he calls "an art song without words . . . a song for the vibraphone comprised of many techniques amalgamated into a linear expression."[20]

It is worthy to mention the nature of influence that the compositions of George Crumb had on Deane's work. Deane expressed that *Madrigals, Book I* by Crumb was a revelation in that it "opened the door to the thought of the vibraphone as an instrument containing many modes of expression: an inner voice waiting to be found."[21] In this piece, Crumb calls for the production of

[19] Christopher Deane, interview by author, Denton, TX, March 20, 2008.
[20] Ibid.
[21] Ibid.

harmonics and pitch bending, and is the first time in published music that vibraphone pitch bending appears. Where Crumb utilized pitch bending and the production of harmonics sporadically in *Madrigals, Book I*, Deane composed for these techniques throughout *Mourning Dove Sonnet*. Crumb is quoted referring to *Mourning Dove Sonnet* as "one of the greatest vibe pieces I've ever heard. . . . Astonishing piece."[22] During summers between 1982 and 1989, both Crumb and Deane taught together at Bowdoin International Music Festival held at Bowdoin College in Brunswick, Maine (USA). It was during one of these summers that Deane performed *Mourning Dove Sonnet* for Crumb. Upon hearing this performance, Crumb stated that Deane was the "Paganini of the vibraphone."[23] Crumb's reaction to *Mourning Dove Sonnet* is not surprising, due in large part to the wide array of performance techniques required from the vibraphonist and the assimilation of these techniques into the compositional whole.

Performance Considerations

Bowing

The most compelling aspect of *Mourning Dove Sonnet* is that the vibraphonist must hold a combination of two bass bows and two mallets at the same time. Because of the need to manipulate both a bow and a mallet in each hand, the best choice of grip for a performer of *Mourning Dove Sonnet* is the Musser (Stevens) grip. With this grip, a performer can hold bass bows with his or

[22] Deviney, Chris. "Interview with George Crumb," *Percussive Notes* Vol. 28 No. 4 (Summer 1990), p. 62.

[23] George Crumb, telephone interview by author, March 18, 2008.

her pinky and ring finger while holding the other mallet with his or her remaining fingers, as illustrated in figure 1.

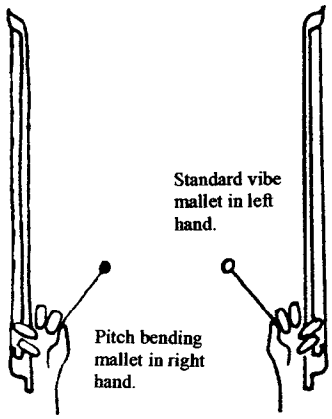


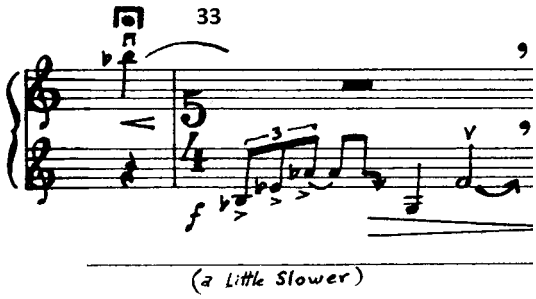
Figure 1, Illustration of grip, *Mourning Dove Sonnet* performance notes, © Copyright 1983 by Christopher Deane. Used by permission

Through using Musser (Stevens) grip, a performer can keep the bows and mallets from touching each other, thus, gaining full independence over each performance implement. Due to the need for independence and control, it is best for a vibraphonist to use bass bows rather than cello or violin bows, which are too small for use in this adapted grip technique. Deane uses standard bowing indications (up-bow and down-bow) for notes that are to be bowed. However, in the performance notes, Deane states that these indications are only suggestions, and the direction of the bow is left up to the performer and his or her specific needs.[24] Concerning performance notes for *Mourning Dove Sonnet*, it should be noted that Deane has produced two slightly different versions; one published and

[24] Performance notes, *Mourning Dove Sonnet*, Christopher Deane, 2002.

distributed beginning in 1983 and one published and distributed beginning in 2002. Examples of Deane's use of standard bowing indications can be seen in mm. 32-33 on the notes *B*♭ and *F*, as illustrated in figure 2.

Figure 2, *Mourning Dove Sonnet* mm. 32-33, © Copyright 1983 by Christopher Deane. Used by permission



By bowing a vibraphone bar across its outer edge, a performer can produce a tone with an exceptional amount of length and volume, as compared to a tone produced by striking a bar with a vibraphone mallet. Concerning specific bowing techniques, it is best for a performer to place the bow perpendicular to the outer edge of the vibraphone bar at an angle of 90^{o}, as illustrated in figure 3. This angle will offer the greatest success in exciting the bar to a point of maximum vibration and resonation.

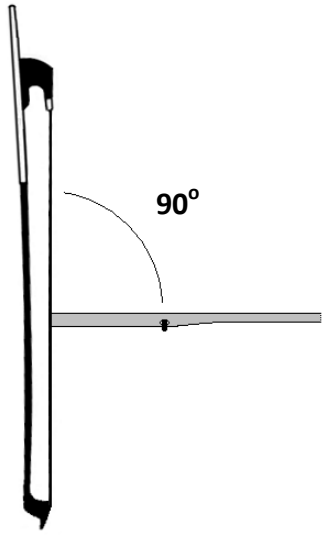


Figure 3. Optimal Angle of Bow to Vibraphone Bar

Throughout most of the piece, a performer should bow across the edge of the bar and lift the bow away in accordance with the rhythmic length of the note. However, there are instances where Deane requires a performer to keep the bow in contact with the bar and stop the bow movement, thereby producing an articulated cessation of resonance. Throughout *Mourning Dove Sonnet*, Deane uses bowing as an integral part of the harmonic and melodic language, rather than including the technique as simply a sound effect or novelty. In this piece, bowing is one essential way that Deane expands the technical and musical potential of the vibraphone.

Harmonics

Deane includes multiple instances in this piece where the performer is required to produce a harmonic on given pitches. In the performance notes, Deane writes "When bowed harmonics are asked for, touch the bar in the very center, very lightly at the time indicated by the rhythm. Practice will allow the hand to leave the bar with the harmonic still sounding."[25] While bowing, this finger contact in the center of the bar from the other hand disturbs the antinode, which is the point of maximum amplitude of vibration for the bar.[26] In contrast to the same technique used on a guitar string or violin string, which produces a pitch one octave higher, the pitch produced on a vibraphone bar sounds two octaves higher than the written pitch, which is the fourth harmonic in the fundamental harmonic series. James Moore describes this note as one that vibrates at a 4:1 frequency ration of the fundamental pitch.[27] Deane indicates harmonics with a small circle (^{o}) either above or below a notehead. As with bowing, Deane uses harmonics in a melodic fashion and in a way that enhances the unique character of this piece.

Dead Strokes

Dead strokes on a vibraphone bar are achieved by pressing the striking mallet on the bar and keeping it there after the initial contact. Striking the bar in this fashion effectively disallows the bar to resonate, thereby deadening the

[25] Performance notes, *Mourning Dove Sonnet*, Christopher Deane, 1983.

[26] Guy Oldham/Murray Campbell, C. Greated, 'Harmonics', *Grove Music Online* ed. L. Macy (Accessed 30 January 2008), http://www.grovemusic.com.

[27] Moore, James, *Acoustics of Bar Percussion Instruments*, The Ohio State University, Ph.D., (1970), 10.

sound. Deane primarily utilizes the performance of dead strokes to articulate the termination of a bending pitch. Deane notates dead strokes with a plus symbol (+) either above or below a notehead.

Pitch Bending

In addition to bowing, Deane requires the performer to employ a technique known as pitch bending. Since the early 1960's, pitch bending on the vibraphone has been a performance procedure utilized by performers and composers alike. As previously stated, George Crumb requires a performer to bend the pitches of various vibraphone notes in his 1965 composition, *Madrigals, Book I*. The effect achieved in this work is one that propels the notes on a downward descent, as if resonating in the distance. George Crumb characterized these pitch bending, or glissando, moments with the descriptor "hauntingly."[28] Jazz vibraphonist Gary Burton is well-known for his use of pitch bending during performances and recordings.[29] In his article *Evolution of Improvisation on the Vibraphone*, Steven Rehbein gives credit to Burton for devising this performance method, however, he is incorrect. Rehbein states that Burton "adapted the guitar technique of pitch bending to the vibraphone, creating a provocative textural dimension within his improvisational style."[30] While Rehbein accurately described the aural effect of Burton's use of pitch bending, it was vibraphonist and Hollywood Studio musician

[28] George Crumb, *Madrigals, Book I*, Copyright 1971, C. F. Peters Corporation.

[29] Clifford Bevan, / Barry Kernfeld, 'Vibraphone', *Grove Music Online* ed. L. Macy (Accessed 13 February 2008), http://www.grovemusic.com.

[30] Steven Rehbein, "Evolution of Improvisation on the Vibraphone: Red Norvo, Milt Jackson and Gary Burton," *Percussive Notes* Vol. 37, No. 4 (August 1999), 63.

Emil Richards that showed the technique to Burton while Burton was playing with Jazz pianist George Shearing.[31] Through pitch bending, a vibraphone performer can lower a pitch of a bar by almost as much as one semitone. While this amount of alteration is less than what is achievable by a guitar player on a guitar string, the resulting outcome on a vibraphone is audible and quite effective when performed correctly.

The procedure for pitch bending on a vibraphone requires a performer to incorporate the use of a mallet made of either hard rubber or hard nylon. With this type of mallet, a performer can press against a vibraphone bar at its nodal point (where the suspension cord runs perpendicular through the bar) and move, or slide, the mallet away from the nodal point, thereby bending the pitch downward. This movement away from the nodal point should occur after the bar is struck in a standard playing area with another vibraphone mallet. Richards created this technique after collaborating with composer Harry Partch in the early 1960's. Richards' goal was to bend the pitches of the vibraphone bars in an effort to produce pitches that exist between semitones.[32] This act of exploiting pitches between semitones was a practice utilized widely in the instruments and compositions of Partch. It is worthy to mention that Richards also discovered that "by using the same technique with a 'super ball' in place of a traditional mallet head, the pitch on the vibraphone would bend upward."[33] After learning the

[31] Emil Richards, e-mail message to author, March 1, 2008.
[32] ibid.
[33] Emil Richards, e-mail message to author, March 1, 2008.

downward pitch bending technique from Richards, Gary Burton went on to show it to composer and performer John Bergamo while the two collaborated at the Tanglewood Festival in Boston, Massachusetts (USA) in the early 1960's.[34] Bergamo subsequently showed the technique to George Crumb while the two were both in residence together in Buffalo, New York (USA) in 1964.[35] Crumb subsequently included the technique in *Madrigals, Book I* in 1965.

In the performance notes of *Mourning Dove Sonnet*, Deane offers various suggestions to assist a performer in achieving the pitch bending technique. Specifically, Deane recommends that a performer experiment with a variety of paths with which to move the bending mallet across the vibraphone bar.[36] It is important to observe that due to different manufacturers and physical properties of vibraphone bars, not all bars respond in the same manner to a certain path of movement from the bending mallet. In figures 4 through 8, various paths of movement for a bending mallet are offered as possibilities.

Figures 4 and 5 illustrate paths of movement for the bending mallet in a straight line away from the performer, i.e., towards the center of the vibraphone bar. It can prove equally effective to pull the bending mallet in a straight line towards oneself, as illustrated in figure 6. Deane also suggests that a path of a semi-circular motion could be effective for pitch bending,[37] which is illustrated in

[34] Janet Bergamo, wife of John Bergamo, telephone interview by author, April 11, 2008.
[35] George Crumb, telephone interview by author, March 18, 2008.
[36] Performance notes, *Mourning Dove Sonnet*, Christopher Deane, 2002.
[37] Performance notes, *Mourning Dove Sonnet*, Christopher Deane, 2002.

figures 7 and 8. Note that all paths of movement begin at the nodal point, which is indicated by an **X**.

Mallet placed in the center of the bar and pushed away from the performer in a straight line

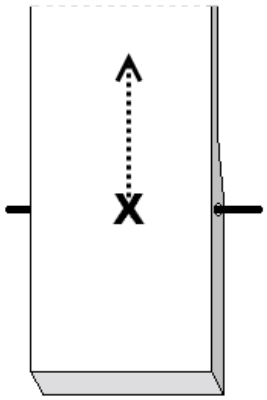


Figure 4

Mallet placed at one edge of the bar and pushed away from the performer in a straight line

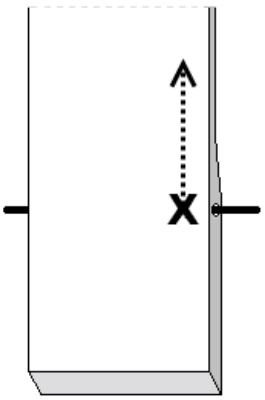


Figure 5

Mallet placed at one edge of the bar and pulled toward the performer in a straight line

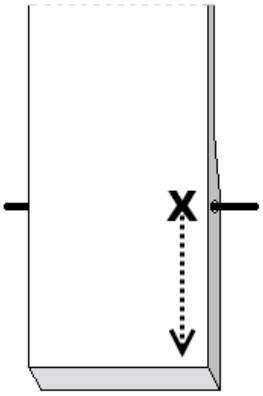


Figure 6

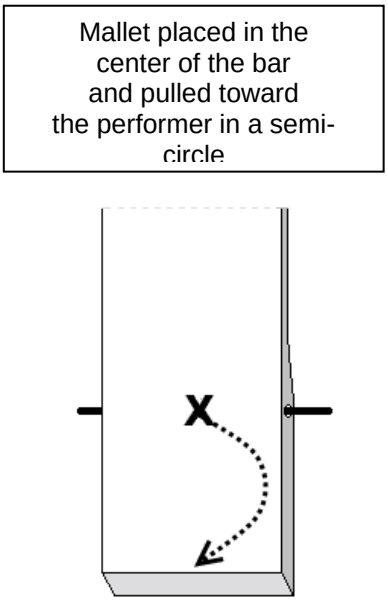


Figure 7

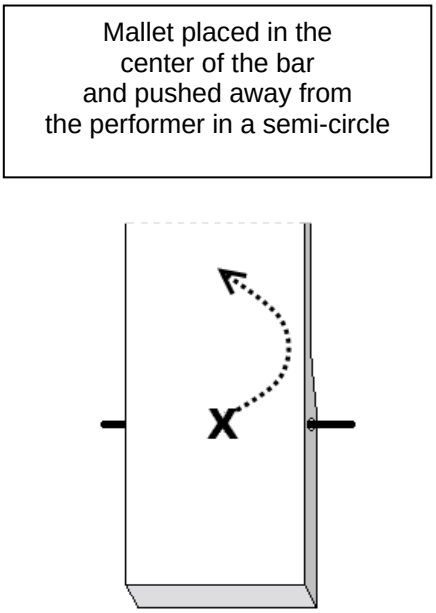


Figure 8

Deane states that “pitch bending can be one of the most demanding technical aspects of the piece.”[38] When utilizing and refining the pitch bending technique, one should be aware of the inherent challenges that exist with such a performance method. One of the first points of consideration deals with the type of mallet to use when performing pitch bending. With a multitude of mallets at a percussionist’s disposal, a performer should choose between two types of mallets; either those made of very hard rubber or those made of a harder material such as a hard plastic or nylon. Because of the nature of pressing a mallet against a bar to bend a pitch, and with the risk of a traditional birch, maple, or cedar mallet shaft breaking, a mallet with a rattan shaft should be used. Rattan

[38] Performance notes, *Mourning Dove Sonnet*, Christopher Deane, 2002.

is more flexible than birch and can withstand the force and stress of being bent as it is pressed against a vibraphone bar.

Whether using either a hard rubber mallet or hard nylon mallet for vibraphone pitch bending, each style of mallet still presents the performer with certain challenges. With a hard rubber mallet, the density and material of the mallet head could absorb the vibrations of the smaller bars on the higher end of the vibraphone, thus decreasing the amount of time a bar can resonate. The risk therein lies in the note's vibration terminating before the effect of a pitch bend is achieved. Conversely, while a mallet head made of hard nylon does not easily absorb the vibration of a bar, there is an increased possibility of an audible contact sound of the mallet as it is placed on the bar.

Deane states that when performing this piece, he chooses to use a hard nylon mallet with a rattan shaft, such as an IP902 xylophone mallet from Innovative Percussion Inc., James Ross Series of keyboard mallets.[39] To minimize contact sound of a hard nylon mallet with a vibraphone bar, it is advised that one attempts to initiate contact with the bar from a small distance above the bar in conjunction with minimal velocity. Additionally, it is beneficial for a performer to experiment with placing the nylon mallet on the bar simultaneously while the bar is struck with another vibraphone mallet. Deane also suggests that a small circle of a soft material such as Dr. Scholl's® moleskin be placed at the

[39] Performance notes, *Mourning Dove Sonnet*, Christopher Deane, 2002.

top of the bending mallet to minimize contact sound with bar.[40] Deane continues to suggest that a performer place the mallet against the bar at the point where the material is affixed to the mallet and then roll the mallet down to the point where no material exists.[41] While this technique can prove effective in some situations, the speed and frequency of pitch bending that occurs in *Mourning Dove Sonnet* deems this a cumbersome and, at times, unattainable solution.

Concerning the contact angle of the mallet being used to bend a pitch, a performer should begin to press the bending mallet onto the vibraphone bar at an angle ranging from 55^{o} to 70^{o}. This increased angle will allow one to press with enough force to bend the shaft of the mallet while pushing or pulling the mallet head away from the nodal point, which is illustrated in figures 9 and 10.

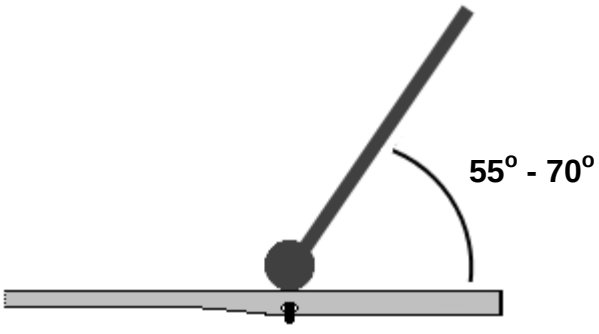


Figure 9. Optimal Angle of Bending Mallet

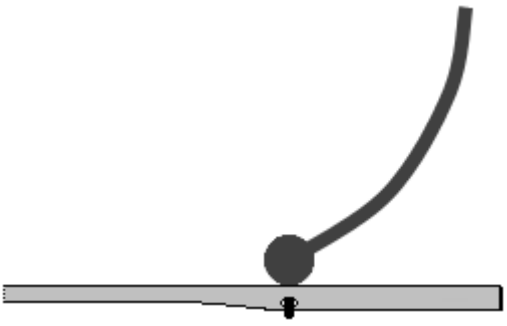


Figure 10. Bent Shaft of Bending Mallet

While pitch bending is an interesting effect found in the jazz performances of Gary Burton, as well as an effective sonic moment in George Crumb's

[40] Performance notes, *Mourning Dove Sonnet*, Christopher Deane, 2002.
[41] Ibid..

Madrigals, Book I, Deane uses pitch bending in *Mourning Dove Sonnet* as an integral part of the melodic language throughout the entire piece. In *Mourning Dove Sonnet*, Deane calls for a downward pitch bending performance technique extensively. Deane states that the driving force behind placing such a focus on pitch bending came from the actual song of the bird called a Mourning Dove, which has a distinctive call that ends with downward bends of the final pitch (sounding like "oo-ah - coooo-coo-coo").[42] Concerning the creation of *Mourning Dove Sonnet*, Deane states that "I had all of the ideas together, but realized the piece had no soul; no direction. I was sitting outside and heard this extremely gifted Mourning Dove calling in a tree next to me. I went inside and wrote down the pitches. From then on, the song of that Mourning Dove was always in the piece in some form or fashion."[43] Deane replicated the song of the Mourning Dove in his music, which is discussed later in this document.

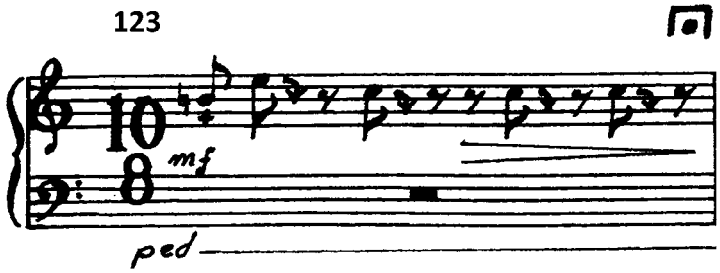
Integration of Performance Techniques

As stated previously, Deane does not include extended performance techniques as mere special effects, but completely integrates them into the melodic and harmonic language. Through Deane's pervasive inclusion of these techniques, he produces a work that speaks with an imaginative dialect and a fresh voice, resulting in an enhanced aural experience for both the performer and listener. Additionally, the method by which Deane deploys these extended performance techniques projects, at times, the structure of the whole.

[42] Christopher Deane, interview by author, Denton, TX, March 20, 2008.
[43] Ibid.

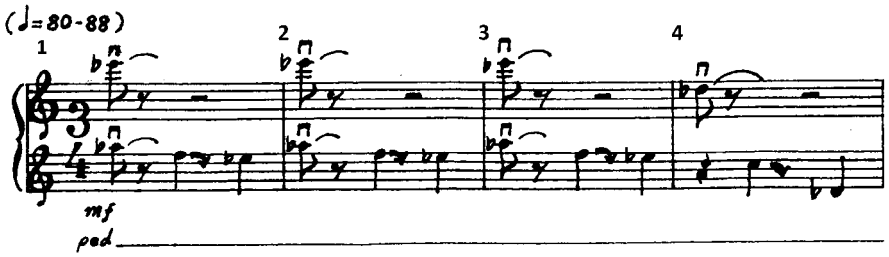
This song of the actual Mourning Dove that Deane heard when composing this work is found in m. 123, and can be seen in figure 11. This figure shows how Deane indicates a downward pitch bend in the music with a downward pointing arrow, as well as notating a dead stroke with a plus symbol (+) below the notehead. In this literal transcription of the Dove's call, the starting pitch, *b'*, is clearly the primary pitch as it functions as both the dominant of *e''*, as well as a *tonal magnet* that seems to pull the bent *c''* down a half-step to the *b'*. In this example, Deane uses pitch bending to indicate direction of focus, or more specifically, to focus a listener's attention towards primary pitches of importance. Focusing listener's attention, however, is only one way Deane treats pitch bending.

Figure 11, *Mourning Dove Sonnet* m. 123, © Copyright 1983 by Christopher Deane. Used by permission



Deane also uses pitch bending as a passing tone. In m. 1, the *f ''* is bent down to create a passing tone (*e''*) to the *e♭''* in the next beat, as illustrated in figure 12. By utilizing pitch bending as a passing tone, Deane successfully interweaves two performance techniques together; notes that are bent with notes that are struck in a traditional manner.

Figure 12. *Mourning Dove Sonnet* mm. 1-4, © Copyright 1983 by Christopher Deane. Used by permission



The presence of pitch bending in m. 1 is significant in that Deane presents a prominent performance technique early in the piece, as well as presenting one of its melodic functions. Throughout this work, the motive of an ascending or descending second (major and minor) serves as a unifying feature, and is found between the *F* and the *E*♭ in m. 1.

In addition to pitch bending, Deane includes bowing in the opening measures of the piece. Through bowing the first two notes of the piece, Deane presents these pitches with a great deal of resonation and sustain, thereby reinforcing *A*♭ as a tonic pitch with *E*♭ acting as a dominant pitch. The importance of this tonal focus is buttressed further by two repeated statements of this measure. By stating material three consecutive times, Deane is able to convey a sense of unity and importance of the selected musical material. This repetition is in reference to the final three repetitions of the “coo” in the song of a Mourning Dove. By successfully interlacing three distinctive performance techniques (pitch bending, vibraphone bar bowing, and striking bars in a traditional manner) in the

opening measures of the work, Deane achieves a musical parlance that the listener accepts as commonplace as the work progresses.

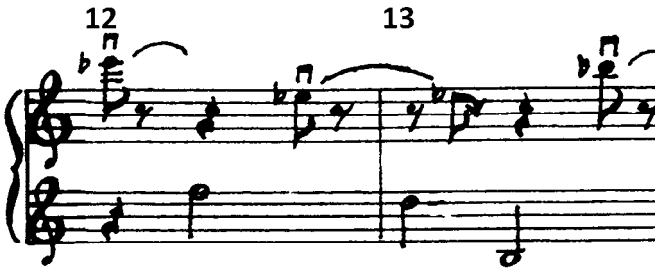
In m. 4, also illustrated in figure 12, the *c''* is bent after the *D♭* a semitone away (*d♭''*) is played. This creates a sonic effect of the *D♭* pushing away the *C*. This effect is heightened by the fact that the *D♭* is bowed, thus producing a resonation of greater volume and duration than a single note struck with a mallet. This example illustrates how Deane creates melodic dissonance through pitch bending.

Deane cast the music of *Mourning Dove Sonnet* into an A-B-A' form, framed the B section with transitional material, and ended the entire piece with a coda. The three large sections of the work can be divided into sub-sections according to new, returning, and fragmented quotes of thematic material and motives, as well as the presence of extended performance techniques. For example, Deane articulates the first of these sub-sections in m. 11, where a performer is required to produce bowed harmonics for the first time. This bowed harmonic technique is repeated in the music that follows and is even incorporated into a descending line that occurs in mm. 20-32. This articulation of the beginning of a sub-section with a new performance technique is just one example of Deane's compositional use of extended performance techniques.

In mm. 12-13, the *e♭''* that is bowed at the end of m. 12 is bent after the *d''* is struck on beat one of m. 13, as illustrated in figure 13. Here, Deane again utilizes pitch bending to create melodic dissonance; another compositional

treatment of the technique. The effect achieved here is one of the *D* absorbing the previous *E*♭ into itself. The initial bowing of the *E*♭ should be bowed with enough pressure, speed, and volume to keep the note resonating long enough to overlap with the sound of the *D*, which is struck three eighth-notes later.

Figure 13. *Mourning Dove Sonnet* mm. 12-13, © Copyright 1983 by Christopher Deane. Used by permission.

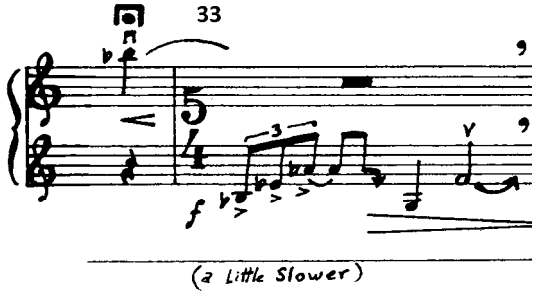


In m. 21, Deane introduces the first instance where the performer must simultaneously bow a note while playing additional notes in the traditional manner of striking with mallets. To properly achieve the timing of this effect, a performer should begin moving the bow slightly before the rhythm of the additional notes is played. This is primarily due to the fact that bowed notes do not produce as immediate of a response when compared to notes that are struck.

At m. 33, and its repeat at m. 160, Deane presents the only two occurrences of pitch bending where the performer must alter the pitch down then back up to the fundamental pitch while simultaneously bowing the vibraphone bar. Here, Deane represents the effect with an arrow that curves downward then upward, as illustrated in figure 14. This effect is achieved by starting the bending

mallet on a nodal point, moving to the center of a bar, and continuing to a nodal point on the opposite end of the bar. This effect can only be achieved through bowing the bar, due to the rhythmic length of the note and subsequent increased amount of time the bending mallet must remain on the bar. This effect is achieved easily after a performer has determined the best physical placement of his or her body, mallet, bow, and bow direction on the *f '*. Deane does not explain this technique in the program notes.

Figure 14. *Mourning Dove Sonnet* m. 33, © Copyright 1983 by Christopher Deane. Used by permission.

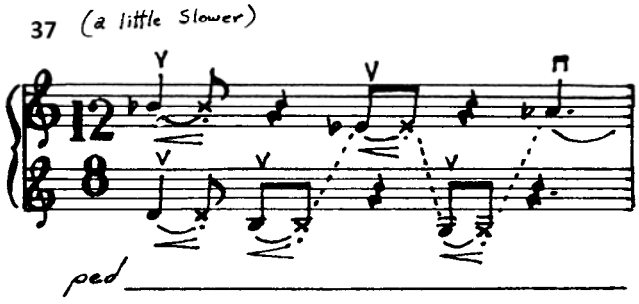


In mm. 36 and 37, Deane introduces two important motives that eventually serve as focal points in the B section of the piece. In m. 36, Deane introduces a fragment of one important motive, which is entirely made up of pitch bending and dead strokes in this measure. This fragmented motivic statement foreshadows the beginning of the B section (m. 50) when the motive appears in its full form. It should be noted that a majority of the B section is played without the use of bows. During the transitional sections of music, Deane allows time for a performer to

replace bows with two standard vibraphone mallets, as is the case before the B section, and vice versa when moving out of the B section into the A' section.

In m. 37, Deane scores a second motive that, in this measure, is meant to sound like "an electronic effect of playing sounds backward on a tape recorder."[44] Deane directs the performer to "increase bow motion then stop the bow motion so that the sound abruptly stops with an implied accent."[45] Deane indicates the stopping of notes with an "x"-symbol (x) in place of the notehead, as is illustrated in figure 15. With this measure, Deane communicates harmonic continuity through lower stave notes that reference the same cadence preparation found in m. 7, and upper stave notes that are identical to the tonal focus on *A*♭ and *E*♭ found in m. 1.

Figure 15. *Mourning Dove Sonnet* m. 37, © Copyright 1983 by Christopher Deane. Used by permission.



In m. 42, Deane directs a performer to place a mute on the lower bars of *f*, *g*, *a*, and *b*. In the program notes, Deane states that the mute could resemble a method book or note pad, and that the performer should play the notes by

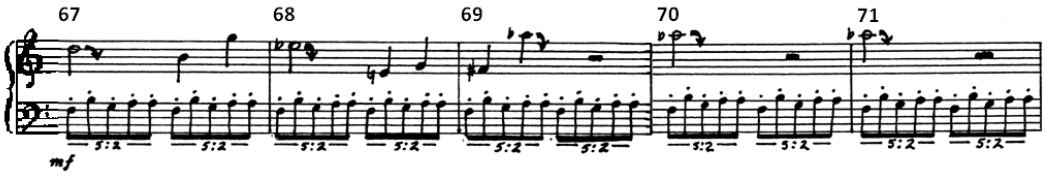
[44] Performance Notes, *Mourning Dove Sonnet*, Christopher Deane, 1983.
[45] Ibid.

striking the mute, thus producing both the tone of the bars, as well as the slap of the mallet hitting the mute.[46] Instead of using a method book, a performer can make a mute out of ten pages of heavy card-stock paper, stapled together, with adhesive felt (moleskin) secured around the staples to eliminate any buzzing from metal on metal contact. The mute should be heavy enough to remain on the bars through repeated sections of the performer striking it with mallets. A mute of lighter construction will have a tendency to shift, and possibly fall off the instrument, when played upon with mallets. The first time the mute is played on occurs in m. 43, which is the beginning of the transitional music before the B section. It should be noted that the mute is utilized only in the first transition and in the B section, which serves as another example of Deane articulating formal structure through the inclusion of extended performance techniques.

Figure 16 illustrates a technical challenge found in mm. 67-71, where the performer is required to strike and bend notes with the same hand while the other hand continues to play an ostinato figure. Here, a performer must coordinate the rapid movements from the standard vibraphone mallet to the bending mallet in one hand, and also properly execute the playing of two note groupings in conjunction with five note groupings.

[46] Performance Notes, *Mourning Dove Sonnet*, Christopher Deane, 2002.

Figure 16. *Mourning Dove Sonnet* mm. 67-71, © Copyright 1983 by Christopher Deane. Used by permission.



An additional technical challenge that a performer must overcome in this piece is found in mm. 108-111. Here, Deane presents an augmented version of the motive from m. 38, but indicates that it should be bowed. Since, at this point in the piece, the performer is holding two mallets in his or her right hand, there are two performance options to choose from. The first option is that the performer can drop the two right hand mallets during mm. 103-104 and replace them with a bow. The second option is that the performer can pick up a bow with his or her inside fingers (middle and ring finger) while still holding two additional mallets. While the second option might seem intimidating at the onset, with practice and proper finger placement, it can be a viable solution.

CHAPTER 4

THE APOCRYPHAL STILL LIFE

The Apocryphal Still Life (1996) was commissioned by the Percussive Arts Society to be used as a "test piece" performed by all the contestants involved in the 1996 PAS Vibraphone Competition. This Vibraphone Competition, which premiered *The Apocryphal Still Life*, was held at the 1996 PAS International Convention in Nashville, Tennessee (USA). *The Apocryphal Still Life* is a four mallet (two mallets in each hand) vibraphone piece that requires a performer to execute multiple performance techniques such as one handed rolls, dead strokes, and one handed harmonics. Concerning the motivation behind this piece, Deane wanted to reflect the idea of "a still-life study in motion - which is a contradiction."[47] Out of this thought came Deane's title of an apocryphal, or "fictitious" still-life, as well as the special vibraphone bar preparations that are required from a performer.

In addition to the aforementioned performance techniques, one significant performance aspect concerns the special preparations of two of the notes. Deane composed this piece so that two notes, *d'* and *e'*, would sustain throughout, regardless of the position of the damper bar, thus replicating the still-life. To achieve this effect, a performer must make special preparations to these bars and their suspension cord. By exploiting these prepared notes, Deane

[47] Scott H. Harris, "Christopher Deane", *Percussive Notes* August 1997, 58.

composed a piece that successfully juxtaposes layers of varied rhythmic durations and densities with layers of notes that are sustained throughout the composition with effortless continuance. By combining these different layers throughout the piece, Deane effectively portrays the contradiction of a still-life study in motion.

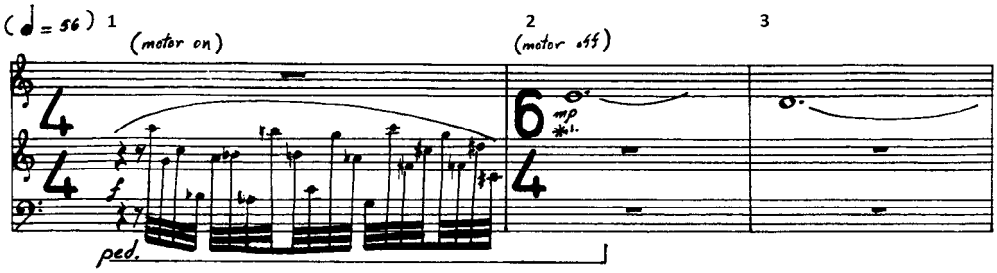
Performance Considerations

Special Preparations

To enable the *d'* and *e'* to sustain throughout the composition, special modifications must be made to the suspension cord that supports these bars on the frame of the instrument. Deane encourages performers to "lift the cord that runs through the nodal points of the two pitches around the hook support so that the cord is on top of the hook. Lifting the cord allows these two pitches to ring when struck regardless of the damper bar position."[48] Since vibraphone bars in the same register are all supported by the same cord, it is possible for adjacent notes (in this case *c'* and *f'*) to be affected by such a cord preparation, in that they will not dampen fully when the damper bar is engaged in the "up" position. If adjacent notes are adversely affected, then a performer should fasten additional padding to the damper bar at the point where it comes in contact with the notes *c'* and *f'*. Deane states that "the proper effect of the piece relies on these bars (*d'* and e') ringing fully." Deane introduces these prepared pitches in mm. 2-3, as illustrated in figure 17.

[48] Performance Notes, *The Apocryphal Still Life*, Christopher Deane, 1996.

Figure 17. *The Apocryphal Still Life* mm. 1-3. © Copyright 1996 by Christopher Deane. Used by permission.



One Handed Roll

Another method by which Deane merges rhythmically complex notes with notes of sustain is by requiring the performer to utilize a one handed roll where each of the two mallets respectively strike the bar on opposite sides: the top side and bottom side. This technique is borrowed from marimba performance and regularly referred to as a mandolin roll, as it emulates the hand movement that is used to sustain a pitch on a mandolin string. Deane states that "It has been a commonly held attitude that the mandolin roll is an antiquated technique, and was only used historically because the technique of one handed rolls with both mallets on the top side of a bar had not been perfected."[49] Deane goes on to state that "The mandolin roll is not the same as rolling on the top side of a bar. A mandolin roll can be more aggressive and immediate as compared to other forms of one handed rolls. It is a different technique and should not be discounted."[50] To aid in the success of producing a one handed roll, Deane suggests that "the

[49] Christopher Deane, interview by author, Denton, TX, April 22, 2008.
[50] Ibid..

roll be played by having the two mallet heads straddling the upper and lower faces of the *f'* bar."[51] This technique is illustrated in figure 18.

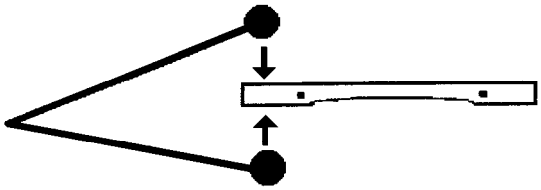
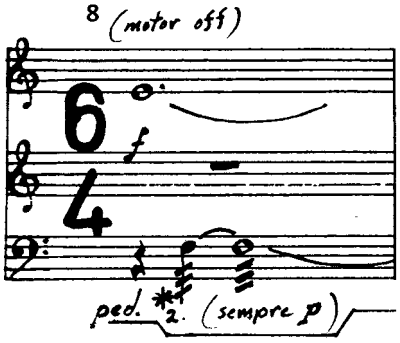


Figure 18, One Handed Roll Suggested Playing Position, *The Apocryphal Still Life* performance notes, © Copyright 1996 by Christopher Deane. Used by permission.

To ensure that the *f'* sustains with a consistently balanced sound, it is imperative that a performer roll on the extreme outside edge of the bar. By rolling on the edge of the *f'*, a performer can successfully avoid rolling close to the nodal point of the bar, which will produce an unbalanced roll sound. The first time Deane calls for this performance technique is in m. 8, as illustrated in figure 19.

Figure 19. *The Apocryphal Still Life* m. 8. © Copyright 1996 by Christopher Deane. Used by permission.

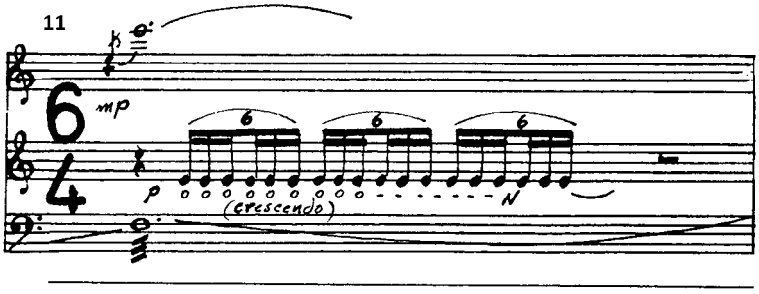


[51] Performance Notes, *The Apocryphal Still Life*, Christopher Deane, 1996.

One Handed Harmonics and Dead Strokes

As in *Mourning Dove Sonnet*, Deane requires the performer to execute dead strokes and harmonics in the performance of *The Apocryphal Still Life*. Deane notates these instances the same as in *Mourning Dove Sonnet*, with a small circle (^{o}) above or below noteheads for harmonics and a plus symbol (+) above or below noteheads for dead strokes. While the method of performing dead strokes is the same in both of these pieces, vibraphonists must perform harmonics in *The Apocryphal Still Life* with only one hand. Deane introduces both of these techniques for the first time in m. 11, as illustrated in figure 20.

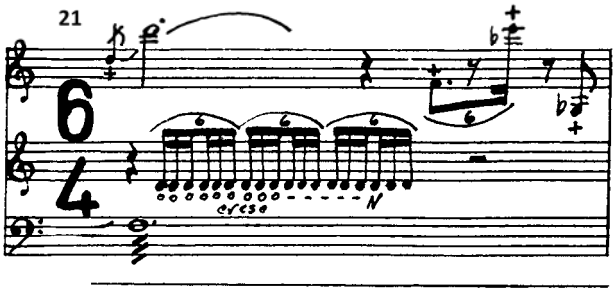
Figure 20. *The Apocryphal Still Life* m. 11. © Copyright 1996 by Christopher Deane. Used by permission.



The Apocryphal Still Life is the first published piece that requires a performer to execute one handed harmonics. Deane anticipated a lack of familiarity with such a technique from the percussion community and, resultantly, included extensive instructions in the performance notes. As previously stated, harmonics are produced when a vibraphone bar is touched in the center with very light pressure and struck with another mallet or bowed with a bow. In

Mourning Dove Sonnet, a performer can use his or her finger to touch the center of a bar, however, in *The Apocryphal Still Life*, it is necessary to use one mallet while the other mallet in the same hand strikes the bar. Deane states that this is achieved by placing and resting the inside or outside mallet head directly in the center of the bar and striking the node of the same bar with the remaining mallet head.[52] Concerning the production of this technique, the decision of touching the bar via the inside or the outside mallet head is left up to the performer.[53] When deciding which mallet to use, one needs to take into account the particular four mallet grip he or she is using, as both Burton grip and Musser (Stevens) grip produce varied degrees of ease and success for individual performers. Figure 21 illustrates an occasion where Deane requires a performer to execute isolated dead strokes, a series of harmonics, and a one handed roll in the same measure.

Figure 21. *The Apocryphal Still Life* m. 21. © Copyright 1996 by Christopher Deane. Used by Permission.



[52] Performance Notes, *The Apocryphal Still Life*, Christopher Deane, 1996.

[53] With the various four mallet grips, it is widely accepted in the percussion community to number mallets from left to right with the numbers 1, 2, 3, and 4. In this system, mallets 1 and 4 are the “outside” mallets while mallets 2 and 3 are the “inside” mallets.

There are multiple instances throughout this piece where Deane includes harmonic articulation markings that combine circles, dashes, and the letter “N”, as also illustrated in figure 21. Concerning these markings, Deane states that “The note phrases that have circles below the noteheads that change to dash marks ending in an “N” should be played by beginning the grouping with the harmonic being produced.”[54] Deane continues on to state that “at the point when the dash marks appear, the player should begin moving both mallets in the same direction thus transforming the sound of the note from a pure harmonic to a normal (“N”), pure bar tone.”[55]

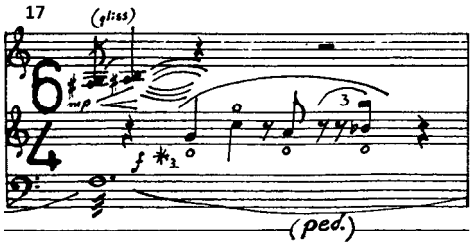
When performed successfully, musical passages such as these portray an effect of a normal tone emerging from the harmonic as illustrated in figure 21. Observe that in m. 21, the harmonic passage is played on *d’* and produces a sound two octaves higher. This harmonic production begins after the *D* two octaves above (d*’’’*) is struck in a normal fashion on beat one. By moving the mallets on the *d’* from the harmonic production to a normal production, a performer can effectively convey a sense of pitches effortlessly transforming to pitches two octaves lower. It is also worthy to mention that beginning in m. 107, Deane introduces musical figures that begin on normal notes and progress to harmonics; a reverse order from prior passages.

It is also worthy to mention that Deane requires a performer to execute one handed harmonics in an isolated fashion on different notes, which is

[54] Performance Notes, *The Apocryphal Still Life*, Christopher Deane, 1996.
[55] Ibid..

illustrated in figure 22. This is in opposition to harmonics that are played in a repeated manner on the same note, as was discussed previously. Performance of one handed harmonics on either isolated notes or with a continuous rhythm on the same note should prove unproblematic once a performer has mastered the appropriate performance techniques.

Figure 22. *The Apocryphal Still Life* m. 17. © Copyright 1996 by Christopher Deane. Used by permission.



Gliss

In m. 17, Deane introduces a musical example that requires the performer to play notes together in the manner of a glissando. As illustrated in figure 22, Deane begins this musical example with the *f* ♯ and *g*, and ends with the *a*♯ and *b*. The most effective method for executing this type of example is to strike the mallets across the proper vibraphone bars in a sweeping movement that makes contact with only the notes encompassed chromatically between the *f* ♯ and the *b*. Essentially, through the performance of this sweeping movement, one of the mallets will contact only the “natural” notes while the other mallet will contact only the “accidental” notes. In various places throughout this piece, Deane requires a performer to execute this sweeping movement in all three octaves of the

instrument. It is vital for a performer to position his or her body, arm, and mallets in a way that effectively allows for clear articulation of these musical passages.

CHAPTER 5

DIS QUI ETUDE

Dis Qui Etude (2004) was commissioned by and dedicated to Robert Parks, then Doctoral candidate at the University of Kentucky in Lexington, Kentucky (USA). The title of the piece was written as a play on the word "disquietude", which means anxiety or agitation. Throughout the piece, Deane requires a performer to convey a sense of angst through the performance of fragmented thirty-second notes, repeated five-note groupings, cluster chords performed at a rapid pace, and notes that are struck with specially constructed wooden mallets.

Special preparations for this piece center on the construction of these wooden mallets, which are made from wooden paint stirrers. With these mallets, a performer must strike the vibraphone in a normal manner, as well as bow the edges of vibraphone bars, strike the bars with various sides and edges of the mallets, and perform cluster chords. Deane chose to use the word "etude" in the title because he thought of this piece as a "first study in the use of these multi-faceted mallets."[56] As with a majority of Deane's works, *Dis Qui Etude* was written for a specific occasion or person, and since the original composition date, Deane has focused his energies to performing and teaching rather than making final editing revisions. As a result, this piece is currently pending publication.

[56] Christopher Deane, interview by author, Denton, TX, April 22, 2008.

Performance Considerations

The most compelling aspect of this piece deals with the special mallets a performer must construct and use. Deane chose wooden paint stirrers for these mallets so that a performer could use mallets with a shape that would enable cycling between striking notes in a normal manner, bowing notes in rapid alteration, and striking with various edges of the mallets. Deane's inspiration to use wooden paint stirrers came from the wooden mallets commonly used with Tibetan singing bowls, which are instruments used in ceremonies for meditation and relaxation. By rubbing wooden mallets around the rim of a Tibetan singing bowl, a sustained tone is produced. It was this wood-on-metal contact sound that Deane was trying to replicate with the use of wooden paint stirrers on the vibraphone. Throughout the piece, Deane requires one to strike the vibraphone bars with various corners and sides of the wooden paint stirrer. Additionally, the flat face of the mallet provides a large plane that a performer can rub across the edges of vibraphone bars, thereby, exciting the bars in the same manner as a bass bow.

The materials involved in mallet construction include wooden five-gallon bucket paint stirrers, rubber stoppers,[57] padding such as moleskin, and masking tape. It should be noted that five-gallon paint stirrers are to be used, as opposed to one-gallon paint stirrers. Paint stirrers used for five-gallon containers of paint

[57] The solid rubber stoppers used are commonly referred to as solid #4 (size number, measuring one inch tall by twenty-five thirty-seconds of one inch wide) rubber stoppers, and are typically used to plug bottles, pipes, or scientific laboratory vials and beakers.

are thicker, wider, and more durable than those used for one-gallon containers of paint, and will better serve the purposes of a vibraphone performance implement. Additionally, the length of the finished mallet should be approximately eighteen inches long, which is shorter than the five-gallon paint stirrer in its original twenty-one inch form. Therefore, one will have to remove approximately three inches of the original paint stirrer before constructing the rest of the mallet.[58]

The pertinent components of each mallet consist of a portion to bow across vibraphone bars, and a portion with which to strike the bars in a normal manner. One half of a rubber stopper glued near the top of one side of the wooden stirrer serves as an alternative to the mallet head of a standard vibraphone mallet.[59] Down the length of the opposite side of the wooden stirrer, a strip of moleskin covered with masking tape serves as the portion that is bowed across the vibraphone bars. It is worthy to mention that successful bowing can also be achieved with the unaltered wooden face of the paint stirrer, without additional moleskin or masking tape. Deane experimented with these various forms of padding in an effort to reduce the initial contact sound of the wooden face touching the vibraphone bar.

With regards to the motivation behind the construction of these mallets, Deane's goal was for a performer to have and use mallets that were unique, homemade, and that could functionally provide a wide spectrum of performance

[58] The dimensions of the completed mallet should be eighteen inches long, one and one-sixteenth inches wide, and one-fourth of an inch thick.

[59] This stopper should be glued three-eighths of an inch down from the tip of the wooden stirrer.

options.[60] An illustration of the side view and bottom view of the completed mallets is shown in figure 23.

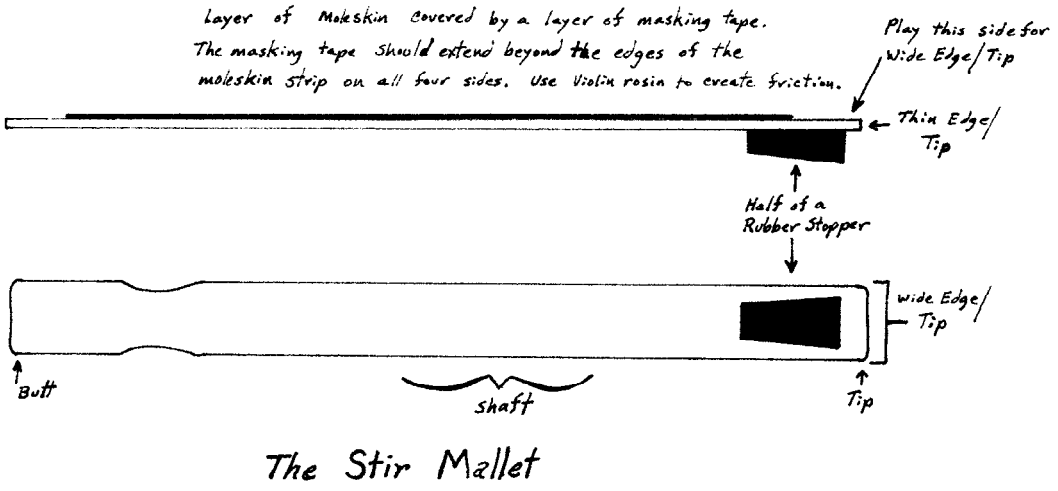
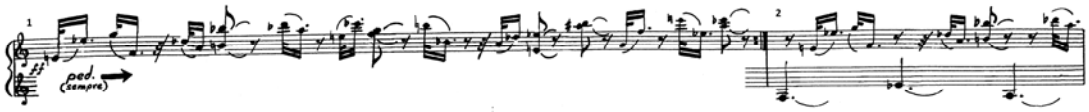


Figure 23, Illustration of constructed mallets for use in the performance of *Dis Qui Etude*, © Copyright 2004 by Christopher Deane. Used by permission.

From the onset, *Dis Qui Etude* has a sense of uniqueness, due to the opening notes being played with the bottom, or butt ends of the mallets. In the printed music, Deane visually separates notes that are played with the rubber stopper from notes played in an alternative method by placing the two sets of notes on separate staves. In mm. 1-2, as illustrated in figure 24, notes that are played with the butt end are shown on a top staff while notes performed in a traditional manner are shown on the bottom staff.

[60] Christopher Deane, interview by author, Denton, TX, April 22, 2008.

Figure 24. *Dis Qui Etude* mm. 1-2. © Copyright 2004 by Christopher Deane. Used by permission.



The first time Deane calls for bowing is in m. 14. In this example, as shown in figure 25, Deane calls for a bowing motion with an articulated cessation of sound, which is indicated with an “x” symbol (x) in place of the notehead. While in m. 14 Deane presents bowings mixed with stopped sounds, there are instances in this piece where Deane requires the bowed notes to resonate. Deane notates these bowing methods in an identical way to the notations used in *Mourning Dove Sonnet*. Since the mallets used in *Dis Qui Etude* are considerably shorter than contrabass bows, a performer must properly master the bowing technique to avoid running out of room on the mallets before the bowed sound is fully produced.

Figure 25. *Dis Qui Etude* m. 14. © Copyright 2004 by Christopher Deane. Used by permission.

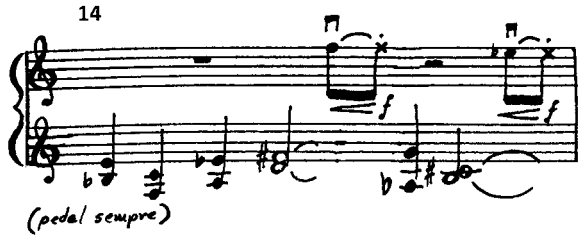
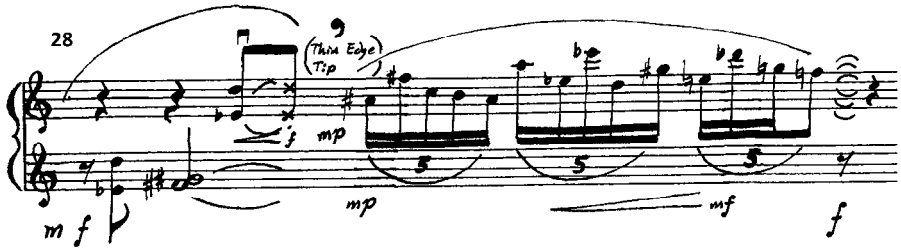


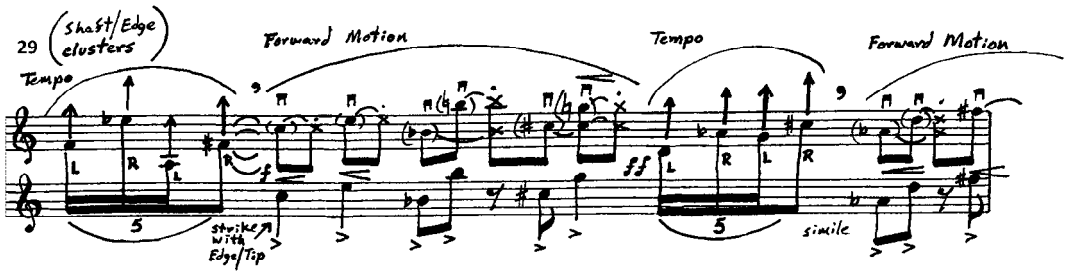
Figure 26 illustrates that in m. 28, Deane calls for a performer to play the bars in the normal playing areas with the “thin edge tip” of the mallet, which is the upper corner of the paint stirrer. By striking the bars in this manner, a performer can produce a more articulated sound, as compared to the sounds produced from bowing or striking with the rubber stopper. Deane first establishes this sound in conjunction with repeated five-note groupings. By introducing this articulated sound coupled with dense rhythmic groupings, Deane creates a musical gesture that properly serves the anxious character of the piece.

Figure 26. *Dis Qui Etude* m. 28. © Copyright 2004 by Christopher Deane. Used by permission.



To further contribute to the agitated character of this piece, Deane calls for a performer to perform cluster chords with the long edge, or shaft, of the wooden paint stirrer. This is accomplished by turning the mallet sideways in one’s hands and striking the vibraphone bars with the full length of the mallet edge. This first appears in the second portion of m. 29 and is illustrated in figure 27.

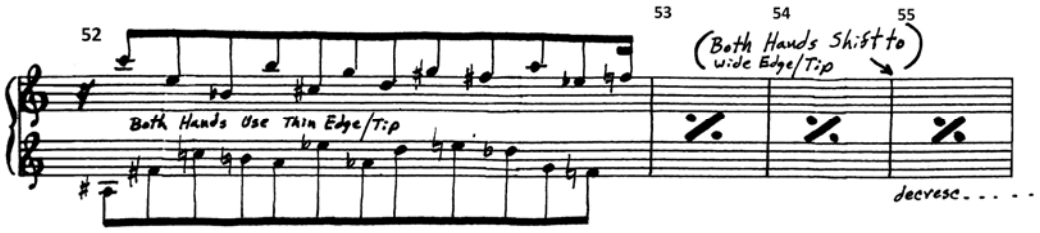
Figure 27. *Dis Qui Etude* m. 29. © Copyright 2004 by Christopher Deane. Used by permission.



Here, Deane notates the cluster chords with emphasis on the lowest note to be played, and with an arrow pointing up, indicating where the remainder of the wooden shaft should be positioned. This performance technique stands in contrast to the music that surrounds it, and further contributes to the disturbed spirit of the piece. Throughout this piece, a performer must have full command of the ways to properly manipulate the mallets through striking or bowing the vibraphone bars, as well as how to quickly and effortlessly transition between these techniques.

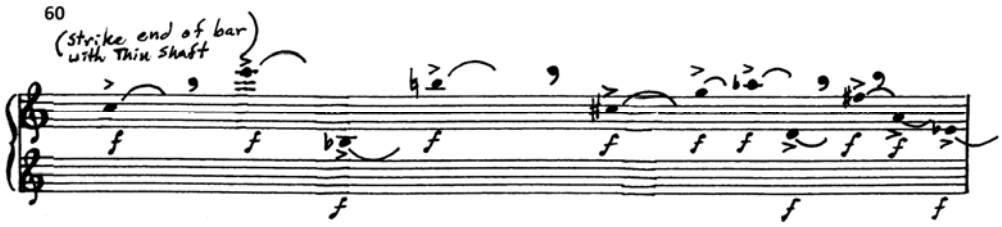
In m. 55, a performer is directed to shift the striking portion of the mallet from the “thin edge tip” to the “wide edge tip”. A performer can easily achieve this technique by turning his or her hands over while playing, which will alter the striking surface from the corner of the mallet to the wide tip of the mallet. This shift dramatically changes the sonic properties of the notes being played. This section of music is illustrated in figure 28.

Figure 28. *Dis Qui Etude* mm. 52-55. © Copyright 2004 by Christopher Deane. Used by permission.



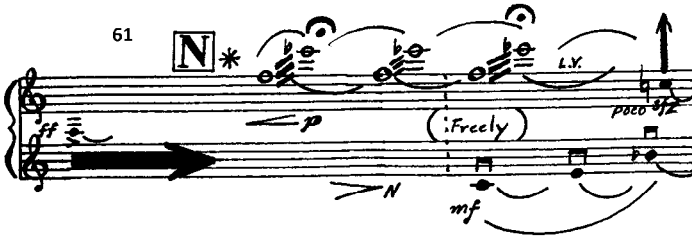
As the piece comes to a close, Deane introduces three additional performance techniques. The first of these techniques appears in m. 60, where the performer is required to strike the outside edges of vibraphone bars with the thin shaft of the mallet, and is illustrated in figure 29. This performance technique produces a very thin sound as the upper harmonics of the note ring more prominently. This sound stands in contrast to the sound that results from striking the middle of the bars, as is required earlier in the piece. Through this performance method, a vibraphonist is able to articulate sounds that have dynamic presence while lacking the timbral depth that comes from the presence of the fundamental frequencies of the note.

Figure 29. *Dis Qui Etude* m. 60. © Copyright 2004 by Christopher Deane. Used by permission.



In m. 61, as seen in figure 30, Deane exploits the shape of the mallets by requiring a performer to produce a one handed trill. This is accomplished by holding the middle of the mallet and “see-sawing”, or rocking the mallet so that the “thin edge tip” of both ends strike the two pitches indicated. By using the mallets in this way, Deane achieves a double-note sustain with only one mallet.

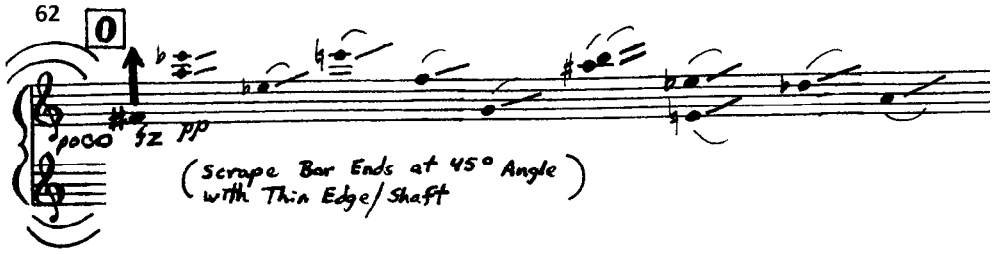
Figure 30. *Dis Qui Etude* m. 61. © Copyright 2004 by Christopher Deane. Used by permission.



The piece concludes with the performer scraping the bar ends at a 45^{o} angle with the “thin edge shaft” of the mallet, which begins at m. 62 and is illustrated in figure 31. This technique is similar to bowing the bars in that the performer must slide a portion of the length of the mallet across the edges of the bars. However, differences exist between this technique and the bowing techniques found earlier in the piece. By positioning the mallet at an angle of 45^{o}, as opposed to a 90^{o}, a performer is not able to produce the same amount of volume when sliding the mallet across the bar edge. Equally, the markedly smaller section, the “thin edge shaft”, that bows across the vibraphone bar does not allow for as much volume as does the wide face of the mallet that is used earlier in the piece. As a result, the sounds produced by this performance

method are faint and ethereal in character. Deane presents these notes in opposition to the music that exists in the beginning of the piece. Through this ending, Deane is able to produce a musical sensation of calm from a work that predominantly conveys a musical sense of unrest and tension.

Figure 31. *Dis Qui Etude* m. 62. © Copyright 2004 by Christopher Deane. Used by permission.



CHAPTER 6

CLOSING

Christopher Deane has contributed to solo concert vibraphone repertoire with works that reflect both his creativity as a composer and his ingenuity as a performer. Deane has not only built upon various extended performance techniques utilized by George Crumb and Emil Richards, but also contributed to vibraphone performance with techniques of his own invention.

With regards to his solo vibraphone works, Deane states that as a composer he is consistently driven to expand the appreciation of the vibraphone as a serious concert instrument.[61] By integrating extended performance techniques into his compositions, Deane effectively contributes to the voice of the vibraphone by showcasing unique features of the instrument. Deane states that "the strength of any instrument lies in its unique features, of which the vibraphone has in abundance."[62] As a composer, Deane treats the vibraphone's unique features with maturity and depth, and in a way that expands the technical and musical potential of the vibraphone.

Deane's sophisticated treatment of extended performance techniques ensures that they are not perceived as superfluous or gimmicky. As a result, these techniques do not just enhance the character and purpose of his solo vibraphone works; they define them. Through intelligent structure and effective

[61] Christopher Deane, interview by author, Denton, TX, April 22, 2008.
[62] Ibid..

integration of these extended performance techniques, Deane's solo concert vibraphone works stand out among a virtual ocean of literature, and demonstrate how Deane has contributed to the genre with repertoire that highlights a voice of the vibraphone that is fresh, imaginative, and progressive.

APPENDIX A

MOURNING DOVE SONNET ERRATA

MOURNING DOVE SONNET ERRATA

Measure Numbers	**Correction / Explanation**
6	Beat 4: staccato mark on symbol above *F* (as indicated in the performance notes)
25	Beat 3: accent on *D*
33	Beat 4: start on nodal point, move to center of bar, on to opposite nodal point
34	Beat 1: *mezzo forte*
36	Dead stroke on second note (*B*)
38	Dead stroke on second note (*B*)
45	Dead stroke on second note (*B*)
45	Beat 1: *mezzo forte*
48	“5:2” underneath each note group
50	Dead stroke on second note (*B*)
56	“pedal” after third note (*E*)
57	9/8 time signature
84	Beat 1: *forte*
84	Dead stroke on second note (*B*)
85-86	Should be played as a 9/8 measure, similar to m. 51
93	“ped” at the end of the measure
125	Dead stroke on the sixth note (*E*♭)
125	closing parenthesis on (distant)
128	Beat 1: *mezzo forte*
128	Beat 1: “Motor Off”
160	Beat 1: *forte*
160	“and” of beat 2: begin decrescendo to the end of measure (similar to m. 33)
161	Beat 1: *mezzo forte*
164	Dead stroke on second note (*B*)
165	Up-bow symbols on *B*, *G*, and *A*♭ (similar to m. 39)
168	Beat 1 only: 8*vb* (one octave lower)
169	Dead stroke on second note (*B*)
170	Beat 1 only: 8*vb* (one octave lower)
171	up-bow symbols on *B* and *G*
172	Beat 1 only: 8*vb* (one octave lower)
173	Dead stroke on second note (*B*)

APPENDIX B

MOURNING DOVE SONNET 1983 PERFORMANCE NOTES, PAGES 1 AND 2

Performance Notes for "Mourning Dove Sonnet"

General Notes

This piece is for solo vibraphone, using techniques that are unique to the instrument. This piece should not be performed unless the player uses the techniques indicated. The player should take time to allow the effects to work in performance, never projecting the feeling of being rushed or frantic. Movement should be fluid, to serve both the music and the visual aspect of the music. Since the combination of bows and mallets presents problems beyond the harmonic understanding of the piece, it may be helpful to learn the work using mallets before working with the bows.

Bowing

Double Bass bows are to be used. Because of the length of the bows, place the music stand a safe distande from the vibraphone. Memorizing the work is recomended. Bow direction is indicated with standard string instrument markings(see diagram 1). Harmonics are also indicated with standard markings(see dia. 2) A sound that imitates an electronic effect of playing sounds backward on a tape recorder is indicated in dia. 3. If no bow marking is indicated, play with mallets.

Grip

See dia. 4 for the grip used between bar 1-49, and bar 128-end. The hard mallet for bending pitches is held in the right hand throughout the entire piece.

Bending Pitches

All pitch bending indications work, provided the correct mallet is chosen. A very hard nylon or very hard rubber mallet is best. If the rubber mallet is too soft, it will absorbe the sustained bar sound.

Mallets

Medium to hard mallets are suggested. Note that the hard pitch bending mallet is used to strike the bars at times. This is indicated as in dia. 5.(see bar 6 and bars78-82, 120-121)

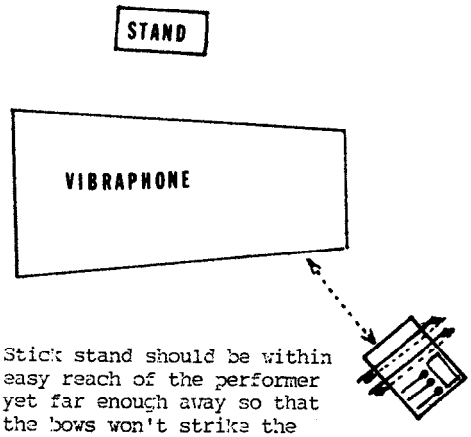
Special Effects

Dead stroke notes are indicated by dia. 6. The improvised passages at bars76-83, 118-122, should be in random order as if computer generated. When Bowed harmonics are asked for, touch the bar in the very center very lightly at the time indicated by the rhythm. Practice will allow the hand to leave the bar with the harmonic still sounding. The Motor is only used where indicated. The muted effect is produced by placeing a rather thin method book or paper pad on bars indicated. This should sound similar to a marimba, providing a non sustaining ostinato for the sustaining upper notes. See dia. 7 for muted pitches.

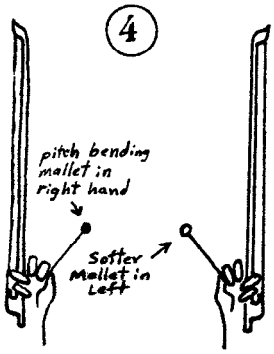
(Special Effects cont.)
Where the bend indication appears (dia.9) without a note head preceeding the arrow, simply bend the already sustaining pitch on the rhythmic beat indicated.

This work has a quasi programatic title. Contained within the piece is a literal transcription of a mourning dove song on the exact pitches. The term Sonnet was borrowed from the Renaissance use of the term for certain instrumental solos.

Performance Diagram



Stick stand should be within easy reach of the performer yet far enough away so that the bows won't strike the stand while they are in use.



① * = up bow = down bow

②

③ = Increase bow motion then stop the bow motion so that the sound abruptly stops with an implied accent.

⑤ or

⑥ = dead stroke = open

⑦

⑧ = Shorter length
= Longer length

⑨

* As with stringed instruments, up bow is towards the tip of bow, down bow is towards the frog.

APPENDIX C

MOURNING DOVE SONNET 2002 PERFORMANCE NOTES, PAGES 1 AND 2

Performance Notes for Mourning Dove Sonnet
By Christopher Deane

Introduction

Mourning Dove Sonnet was composed as a concert vibraphone solo in which the musical material was focused on an integration of traditional and non traditional performance techniques. It is, in it's essence, a wordless art song for vibraphone. The performer is musically free to be flexible with the tempo, however, a sense of pulse and forward motion is necessary for this piece to "sing" as intended. The piece should never feel rushed to the point that the special sounds such as harmonics, pitch bends and bowed notes are sacrificed. It is recommended that the melodic and harmonic material of this piece be learned initially with the standard four mallet combination by the performer. Once the notes are learned and understood, it becomes much easier to convert the notes practiced with mallets to the more challenging bow and mallet combination required by the piece.

Bow Technique

Double bass bows are the most effective type of bows to use. (the composer uses French style bows) It is recommended to memorize this work. The standard bowing indications (as used by string players) were originally written based on preliminary performances by the composer, however, these indications are only suggestions and should be changed, if necessary, to meet the needs of each performer. The success of the bowing in this piece is affected by many variables including quality of bow hair, quality of rosin, humidity in the environment, bow hair tension, and pressure of bow stroke and bar cord tension. It is recommended to clean the bow hair and only lightly rosin the hair before the performance to maximize bow effect. Angle of the bow to the bar also affects the response and stability of the notes produced.

Grip

The grip used by the composer is a modified Stevens style grip. A cross grip has also been used by some performers. The diagram shows the Stevens type grip with the hard bending mallet in the right hand and the standard vibraphone mallet in the left.

Bending Notes

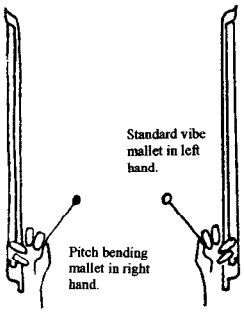
Pitch bending can be one of the most demanding technical aspect of this piece. The usual mallet used by vibraphonist is a hard rubber mallet. This type of mallet works well in that the rubber minimizes the contact sound that can occur when the mallet first arrives on the bar. The composer uses a harder mallet of a nylon or dalron material with a rattan shaft. (one example is the Innovative Percussion Co. product IP902) This type of mallet allows for bending over a greater range of the instrument because of it's decreased absorption of the bar vibration. The down side of this type of stick is that there is an increased danger of contact sound. It is recommended to place the mallet on the bar on the nodal point (place where the cord goes through the bar) with the mallet shaft at about a 70 degree angle, press down so the shaft bends significantly, and move the mallet head in the direction of the bar center.

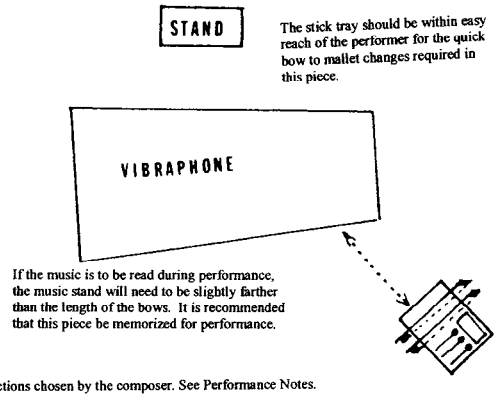
Christopher Deane (1957-) Assistant Professor of Percussion, University of North Texas

(Bending cont.)
Some bars work well with a motion that stays near one side of the bar. Some notes bend well with a semi circular motion from the bar edge towards the bar center or towards one end of the bar, away from the center. The performer should experiment with each bar that is played using this technique to decide which motion works best. To minimize contact, a small circle of a soft material such as moleskin may be placed at the top of the mallet to provide an arrival point. Once on the bar, the performer rolls the mallet head off the soft area to the exposed mallet head material and activates the note bend.

This piece contains a literal transcription of a Mourning Dove song. The performer should try to hear either a live rendition or a recording of this bird's song to help attain the best inflection of interpretation.

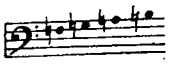
Mourning Dove Sonnet was written in Greenville, NC and was first performed by the composer at the 1983 North Carolina Percussive Arts Society chapter Day of Percussion.






These markings indicate the original bow stroke directions chosen by the composer. See Performance Notes.


This notation means to produce a harmonic on the given pitch.


The muted vibraphone effect is produced by placing a method book or note pad on the bars and striking the pad. The sound should be tuneful but have a slap to the quality of tone.


This notation represents a bow stroke that ends with an immediate halt of the stroke with the bow still on the bar. The bar sound will stop.

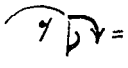
This notation of dots direct the performer to play these notes with the pitch bending mallet.


=Dead stroke notation


=Open tone notation (used when dead stroke notation is used)


=Shorter length


=Longer length


This notation directs the performer to bend a note that has been sounded on a previous beat. The bend should occur on the rhythmic beat indicated without being sounded a second time.

Mourning Dove Sonnet, 2002 performance notes, page 2,

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