

Performance Practice and Compositional Structure in Relation to Recital Preparation

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By

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## Abstract

This paper examines the author's graduate percussion recital program; *?Corporel*(1985) by Vinko Globokar (b. 1934), *Child of Tree* (1975) by John Cage (1912-1992) *Rebonds b.* (1989) by Iannis Xenakis (1922-2001) *Ilijas* (1996) by Nebojša Jovan Živković (b. 1962), *Mourning Dove Sonnet* (1983) by Christopher Deane (b. 1957) and *e-home* (2015/2017) by Elisabet Curbelo (b. 1984). The author offers an examination of performance practice and compositional structure as it relates to the author's performance of the material.

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## Chapter One: *?Corporel* (1985)

Vinko Globokar (b. 1934) is a French avant-garde composer and trombonist of Slovenian descent. Though Globokar was born in France, he spent much of his adolescence in Ljubljana (of Slovenia, then Yugoslavia) where he studied jazz trombone. He returned to France to study composition with René Leibowitz (1913-1972) and trombone with Andre Lafosse (1890-1975) at the Paris Conservatory from 1955 to 1965. (Brahms 2010)

*?Corporel* was written in reaction to Globokar's distaste for what he calls "badabum," a manner of writing for percussion in which each instrument is used only for a single timbre.

"This philosophy implies an accumulation of sound materials, for according to this logic of unique sound one must, for every new timbre to be obtained, use a different instrument. With a large number of instruments, a stereotyped kind of virtuosity can be developed based on the joy of striking with an emphasis on physical activity, the aim being to play faster and faster and louder and louder. It not only builds up the muscles and activates the sweat glands, but also suggests the idea of man as machine-especially a rhythm machine" (Globokar 1992, 77).

Globokar argues that this process restricts timbre and sonic capability of instruments that are otherwise capable of producing numerous sounds and timbres. In his composition *?Corporel*, Globokar features a myriad of timbres with a single instrument: the performer's body, through vocalizations, percussive strikes, and speech.

Globokar expands upon sounds that have a preexisting cultural context: snoring, humming, kissing, tongue clucking, an inhaled hissing (as if in pain), and spoken text, all of which carry specific connotations. For instance, tongue clucking may imply impatience while snoring is representative of sleep, the "kiss" sound; connotes a form of endearment and interpersonal affection. However, the repetitive use of the "kiss" sound throughout *?Corporel* creates a depersonalizing effect. In doing so, the composer creates an eerie yet familiar pattern of speech through the repetition of sounds with preexisting cultural context.

Table 1. Globokar's instructions for vocalizations throughout the piece

<b>Sounds Produced by Breath</b>	<b>Consonant Sounds Produced while inhaling</b>	<b>Miscellaneous Sounds</b>	<b>Comprehensive Sounds</b>
H	T	Kiss	Teeth clacking
F	P	Cluck Tongue	Hum
S	K	Tongue drawn back on palate	Snore
Sch	G	Ts while inhaling	Sing-Ah
Rolled R	D	Open throat inhale	Spoken Text

(Hills 2010, 56)

In addition to the vocalizations, Globokar calls for both percussive strikes and kinetic gestures throughout *Corporel*. Though the composer uses graphic notation to indicate the placement and movement across the body, individual percussive strikes are notated with traditionally stemmed notehead. The performer must decide the precise point that produces the clearest sound on their body.

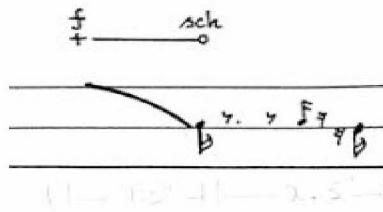
Table 2. Percussive Sounds

<b>Struck Sounds</b>	<b>Slide Sounds</b>	<b>Miscellaneous</b>
Fleshy body part	Groping/caressing with hands over body	Clap
Bony body part	Rubbing with hands over body	Snap

(Hills 2010, 57)

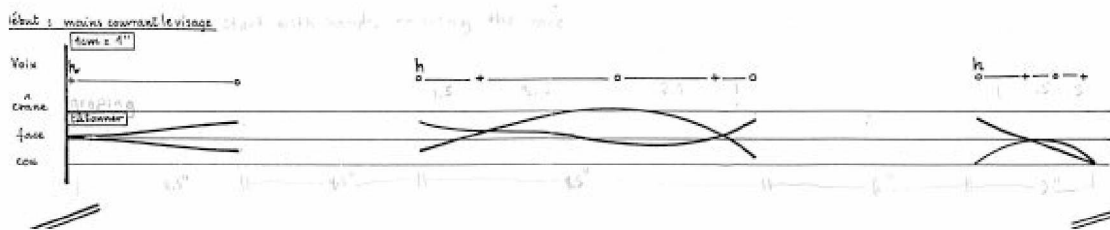
Several sections of the piece call for both fleshy and bony sounds to be produced upon the performer's face. For example The location of each notehead upon the staff correlates to the relative striking point on the body. For example, the performer may choose from the cheek and jaw bone and experiment with opening and closing one's mouth to produce louder or softer tones in order to achieve the clearest sound. The decision is left entirely to the performer.

Figure 1. Fleshy and bony sounds to be performed on the face.



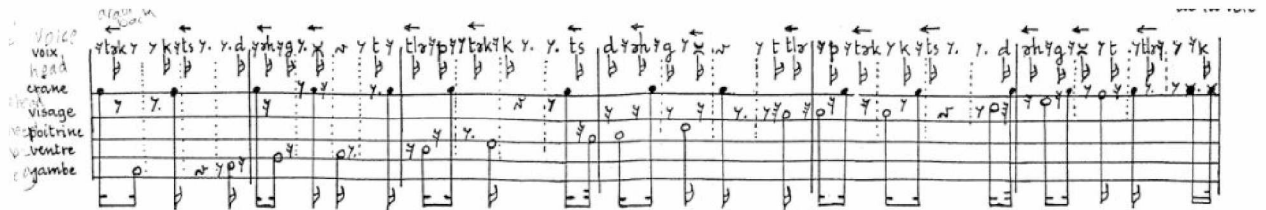
(Globokar 1985)

Figure 2. Section 1



(Globokar 1985)

Figure 3. Section 24



(Globokar 1985)

When choosing to perform *Corporel*, the percussionist must take several issues into consideration: performing from memory, amplifying the body, and the innate extramusical implications of the human body. The writer chose to perform the piece primarily from memory, supplemented with cue cards for personal accuracy in Sections 10 and 24. These sections

included simultaneous vocalizations and percussive sounds organized in precise rhythmic patterns, whereas Section 1 offers comparatively more freedom in gesture.

Though Globokar leaves no instructions to the performer regarding the use of amplification, some of these sounds do not project as well as others depending on the performance space. Sounds such as caressing, groping, and rubbing become exclusively visual elements when inaudible. For example, Section 1 begins with the performer's hands covering their face and producing a sustained exhalation of the letter "h". As the section continues, the performer slowly opens and closes their mouth to create dynamic and timbral variety. While producing the exhaled "h" sound, the performer continues to caresses their face, neck and head.

The performer found amplification necessary so that the audience could hear the full range of timbres created. For example, vocalizations performed in Figure 3 are aided by amplification. The exhaled "h" offers a wide variety of timbre that are unheard by the audience when performed acoustically creating a stark contrast to the theatrical nature of the hand gestures. The performer dramatically reveals their face, groping their face, neck and head. These dramatic visual acts would dominate the opening sequence if amplification were not used.

The first instruction given by Globokar in *?Corporel* reads, "In canvas pants, barechested, barefoot, sitting on the ground facing the audience." (Globokar 1985, 1). As indicated by the composer, performing barechested allows the range of fleshy and bony sounds to be produced without the hinderance of fabric. However, Globokar makes no distinction regarding male or female performers in his extensive program notes. The author feels that perhaps Globokar left this distinction to the performer as a way to mitigate the objectification of one's body during the performance.

If Globokar explicitly stated that only men may perform *?Corporel*, he would exclude half the population from performing his work. If he dictated men to perform the piece barechested and women to perform clothed, he would have two compositions with differing timbres. By withholding this distinction Globokar allows the performer to make critical decisions about the work, while normalizing however much of their body they see fit. A barechested woman on stage is a politically charged image and a deeply personal choice. Percussionist Bonnie Whiting writes:

“*?Corporel* is a complicated and personal ritual, suddenly on display. It is understood deeply for moments at a time as the work travels from one action to another. The story is presented as a series of vignettes as the performer passes from one gesture or utterance to another. ...For this particular version of the story to work in the United States of America in the twenty-first century, it needs to find a way to transcend our culture’s objectification of the female, without ignoring it” (Whiting 2014, 104-105).

The writer chose to perform the piece in a black unpadded sports bra. In doing so the majority of her chest and the entirety of her stomach were bare. Compared to a heavier fabric, the unpadded bra does not mute the prescribed fleshy sounds when playing rhythms on the chest and stomach. The author also found that the use of an unpadded sports bra reduced the sexualization of her body that may occur if she were to choose a heavily padded and lifted bra. Women wear sports bras to gain mobility in athletics, it is a form of function rather than fashion. Heavily padded bras were created to aid women in attracting partners. If *?Corporel* had been composed during the 1950s women would choose between a conical bra or braless as heavily padded bras were not yet in fashion.

Though Whiting performs the piece barechested, one must be true to their character in every performance. Whiting states, “A woman performing a carefully considered version of this piece is in fact a break from the default reliance on formats and contexts of communication. I



like the discomfort such a performance causes; it is empowering” (Whiting 2014, 105). Women and men alike empower and normalize their bodies through *Corporel*.

## Chapter Two: *Child of Tree* (1975)

*Child of Tree* is an eight-minute composed improvisation for plant materials. The score is five pages in length. Comprised of text descriptions and no standardized notation, it functions as a guide rather than an explicit set of instructions. Instead, Cage’s intentionally untidy scrawl guides the performer through a series of suggestions, some of which are crossed out, written in different colored ink, and organized in a manner that intentionally confuses the performer. In doing so, Cage removes his influence from the performance, enabling each performance to be uniquely inspired by the *I Ching*. (Jensen 2009, 97)

The *I Ching*, an ancient Chinese manual for divination is based on the relationship and symbolism of eight trigrams and sixty-four hexagrams interpreted by the principles of yin and yang. (Jensen 2009, 98) *I Ching* scholar and translator Richard Wilhelm (1873-1930) states in his introduction to the text:

“The Book of Changes -- I Ching in Chinese -- is unquestionably one of the most important books in the world's literature. Its origin goes back to mythical antiquity, and it has occupied the attention of the most eminent scholars of China down to the present day. Nearly all that is greatest and most significant in the three thousand years of Chinese cultural history has either taken its inspiration from this book, or has exerted an influence on the interpretation of its text. Therefore it may safely be said that the seasoned wisdom of thousands of years has gone into the making of the I Ching. Small wonder then that both of the two branches of Chinese philosophy, Confucianism and Taoism, have their common roots here. The book sheds new light on many a secret hidden in the often puzzling modes of thought of that mysterious sage, Lao-tse, and of his pupils, as well as on many ideas that appear in the Confucian tradition as axioms, accepted without further examination” (Iging 2004).

These chance operations determine into how many sections the prescribed eight minutes are to be divided, as well as the length and instrumentation of those sections.

The author chose to consult the *I Ching* by flipping a quarter twice. The first flip determined which group of instruments would be used to begin the improvisation. The second flip determined the duration of time spent within each group. In preparation of multiple performances the author chose to predetermine two options for group duration depending on the second coin flip (Table 3).

Table 3. Coin Flip Two

<b>Heads</b>	<b>Tails</b>
Group One: One Minute	Group One: Three Minutes
Group Two: Three Minutes	Group Two: One Minute
Group Three: Three Minutes	Group Three: Three Minutes
Group Four: One Minute	Group Four: One Minute

The author did not seek to diminish the consultation of the *I Ching* by predetermining group durations, she sought to decrease the amount of time spent adjusting calculations for duration. Cage considered the possibility of a coin flip that would result in a performance longer than eight minutes in his score. This consideration has been analyzed by Cage scholar Christopher Shultis in his analysis of *Child of Tree*:

“In a phone conversation with Cage...Cage told me there could be no more than four parts... ‘Divide the eight minutes into parts by means of the coin oracle of the *I Ching*’ He then, as you can see, divides the *I Ching* into four: ‘If the first 2 or 3 parts total seven minutes, the last part, of course will be one minute. If the addition of the 3d or 4th part makes a length of 9, or 10, reduce it to a number making a total length of 8’” (Shultis 2014, 571-572).

Shultis’ analysis summarizes that *Child of Tree* should be divided into five sections, rather than four as Cage suggests. He details a lengthy analysis of the proposed five sections that in the author believes does more to remove the *I Ching* from the process than include it. (Shultis 2014 573-574).

Prior to the performance the author organized her instruments into four groups: Group One branches, twigs, leaves, and birch bark; Group Two seed pods and rocks; Group Three Cacti; Group Four pine and spruce needles as well as large branches; assembled in a semi circle. This orientation enabled a variety of timbres to be produced as she progressed through the piece. For example, regardless of the *I Ching* consultation, the amplified cacti would always be plucked toward the middle of the improvisation.

Cage specifies amplified cactus and seed shakers as two of ten instruments that are to be chosen by the performer. Due to the questionable nature of Cage's score performers may doubt Cage's true instrumental intentions. Should his specification for amplified cactus and seed shakers be taken as fact? The author chose to research Cage's use of cacti and found that though *Child of Tree* was Cage's first published work for amplified cactus, he continued to compose for *Branches*, 1976, and use them in live performances on *Good Morning Mr. Orwell*, 1984 (Open Culture 2017). Therefore it has been accepted in performance practice that each rendition of the piece must include these instruments, particularly the cactus. Due to the climate in Fairbanks, the author purchased cacti from an online realtor, Mountain Crest Gardens, and had them shipped to Alaska. She chose an Echinopsis hybrid Hedgehog Cactus, as well as Mammillaria Mammillaris for their long dense needles. Seed pods were already within the percussion department inventory.

The author chose to only purchase cacti for her performance of *Child of Tree*. However, it was difficult to find plant materials during the winter, as heavy snowfall buried branches, leaves, and brush that had fallen to the ground. The author spent several weeks noting plants materials on her walks and compiled a list. She gathered a large supply of plant materials and allowed them to dry inside.

Cage does not leave instructions regarding the amplification of instruments other than cacti. Contact microphones were placed on the side of each cacti container, due to their small stature the author could not attach the microphone directly upon the plant matter. Two additional microphones were placed on boom stands with one directed towards the pine needles on the stage floor, the other placed above the plant materials so that the author could move objects towards it. Amplification aided the plant materials timbre rather than drastically increasing the volume produced.

### Chapter Three: *Rebonds b.* (1989)

Iannis Xenakis (1922-2001) was a Greek-French composer, architect, and engineer. Born to a Greek family in Romania, he was sent to an elite boarding school in Greece after his mother's death in 1927. He remained in Greece into adulthood and studied engineering at the Athens Polytechnic. (Iannis Xenakis 2014)

During the devastation of World War II, the Polytechnic was closed. Xenakis remained in Greece, and joined the Greek Resistance Army (against his father's wishes) later the Communist Party. He participated in violent protests against the Greek government in 1944 until he was struck by a shell, resulting in the loss of an eye and a severe facial disfigurement. During his recovery, Xenakis decided that he desired to study composition. Given that Xenakis' ties to the communist party made him a potential target, his father helped him quickly finish his engineering degree and flee to France where he would not be persecuted by the new anti-communist government. (Iannis Xenakis 2014)

In France Xenakis began to work as an architect, and drew parallels between architecture and music. However, Xenakis felt that this relationship was beneficial to neither composers nor architects:

“For example, musicians learn at the Conservatory that they must begin by choosing a theme, and from it they create a form, by juxtaposition, expansion, reduction and so on. In architecture the starting point is the terrain, and then appears the program, and within it the necessary functions and forms; then come the materials. So we work from the global to the detail. To me, this movement in architecture, as with music, did not seem entirely natural. I thought it was possible to do it differently.” (Iannis Xenakis 2014)

Xenakis chose to compose starting with the details of a work, prior to establishing a larger foundation. This compositional technique flourished within the heavily rhythmic structure of percussive music.

Table 4. Structure within *Rebonds b.*

Section	Statement	Transition	Reply	Dominant Voice
1:Ostinato A. Ostinato B. Ostinato C.	A.Eighth notes on all skin drums B. Eighth notes on all skin drums	Wood block interlude after Ostinato C	none	Ostinato, skin drums
2:Ostinato D.	None	Skin drum interlude after Ostinato D.	none	Skin drums, ostinato begins its decline
3:Ostinato E.	Fortissimo, double accented roughs in the ostinato	Woodblock interlude after Ostinato E.	Rolls on woodblocks and skin drums signal disintegration of ostinato	None
4: Finale-Homogeneous Voices	Breakdown of structure	Woodblock interlude	Skin drum interlude	Ends with homogenous use of voices.

*Rebonds b.* is scored for five temple blocks, high and low bongos, tumba, tom-tom, and bass drum. The piece may be divided into four large sections consisting of smaller units. (Table 4.) The recurring eighth note ostinato in the right hand form the foundation of first half of the

piece. This groove-orientated relationship continues for two cycles, both separated by short passages of alternating eighth notes on all skin drums, until the first woodblock interlude.

This passage serves to interrupt the ostinato pattern and groove that the listener has become accustomed to. The passage ends with a long, piercing roll on the high bongo, connecting the ostinato to the wood block passage, and immediately transitions into the next ostinato passage.

Figure 4. Rhythmic Ostinato m. 1

(Xenakis 1989)

Xenakis manipulates this instrumentation by creating a rhythmic ostinato, a succession of eighth notes played on the high bongo. This ostinato is started and interrupted by a rough. This two note rough weaves throughout the piece disorienting the listener's sense of time and structure. The rough begins its climax in measures 48 to 53 where each rough is given a fortissimo dynamic and double accent. and completely disintegrates in measures 60 to 61. The ostinato, once clear and precise will no longer be heard throughout the piece. This climax singles the disintegration of the ostinato and the interjection of further interruptions on the woodblocks.

(Xenakis 1989)

Figure 5: Disintegration of the Ostinato



(Xenakis 1989)

An understanding of the piece's development (Table 4) assists the performer in creating a sense of perpetual motion within *Rebonds*. The writer found their rough draft of Table 4 particularly helpful once the majority of the piece was within their grasp. The identification of Sections 1-3, with subsequent Ostinatos A-E helped the performer to set a dynamic range for each section. For example, Ostinatos A-C gradually increase in dynamic, not intensity. The writer chose to withhold the height of intensity for Section 3 with the disintegration of the ostinato.

The writer chose to perform *Rebonds b.* using natural rubber mallets with rattan shafts due to their advantage over wooden mallets in producing rebound on temple blocks. The flexibility of the mallets' rattan shafts also enabled the performer to quickly move throughout the instruments.

## Chapter Four: *Ilijas* (1996)

Nebojša Jovan Živković (b. 1962) is a German based Serbian composer. He describes his compositions as "new music with sparks and soul." (Zivkovic 2013) *Ilijas*, his solo scored for five-octave marimba, is titled after a small town in the former Yugoslav Republic of Bosnia. The Yugoslav republic of Bosnia-Herzegovina declared its independence from Yugoslavia in 1992.

As a result, Bosnian Serb military forces targeted both Bosniak (Bosnian Muslim) and Croatian civilians. Ilijas civilians were pulled from their homes, classrooms, and lives to be brutalized and subjected to over two months of torture. (Balkan Insight 2007) Nearly 200 civilians were murdered in Ilijas during these attacks, and the remains of 54 individuals have yet to be found 25 years later. By 1995 the death toll loomed over 100,000, the worst act of genocide since the Nazi regime. (History 2017) *Ilijas* was inspired by survivors accounts of the genocide.

*Ilijas*' opening, a mournful rhapsody rooted in g dorian, features continually accelerated and decelerated phrases in the left hand paired with steady octave rolls in the right. Twelve declarative statements are performed throughout *Ilija's* opening, each of which function as an extension of the g dorian mode's development through each scale degree.

Table 5: Modes in *Ilijas*' Opening

Statement	Mode	Accented Note
1.	g/dorian	b-flat
2.	b-flat/lydian	a-natural
3.	g/dorian	g-natural
4.	g/dorian	b-flat
5.	b-flat/lydian	a-natural
6.	g/dorian	g-natural
7.	g/dorian	f-natural
8.	g/dorian	e-natural
9.	g/mixolydian	d-natural
10.	a/locrian	c-natural
11.	g/dorian	b-flat
12.	a/lociran ends in g tonal center	g-natural



Živković outlines the g dorian mode throughout the opening, by means of accented notes in each statement. This pattern is realized by arranging the opening statements by scale degree: Statement 3 (g-natural), Statement 2 (a-natural), Statement 1 (b-flat), Statement 10 (c-natural), Statement 9 (d-natural), Statement 8 (e-natural), Statement 7 (f-natural), Statement 12 (g-natural).

The second section opens with a rhythmic ostinato in the left hand that forms the foundation for groove throughout the piece. Additionally, the frequent meter changes and increased tempo both add a dance-like, lilting quality to the piece. For example, the second section's opening ostinato alternates between two measures of 5/8 and one measure of 7/8. (Balkan 2014) These time signatures are used in traditional dance music found in the Balkans such as the Pajduško Horo (Bulgarian), and Rustemul (Romanian). Similar to the Afro-Cuban Rumba, each rhythm is set to various songs and is unified by its metric pulse (Phantomranch 2014). Živković seems to move through these changes in a through-composed manner as the melody requires. The section is divided by two fluid and lyrical interruptions labeled *Sempre molto vivo*, always very lively. The section ends in g dorian with a ritardando.

Figure 6: Ilijas Ostinato

The musical score for 'Ilijas Ostinato' is presented in a grand staff format. The tempo is marked as  $\text{♩} = 156 - 160$  and the performance instruction is *(tremolo)*. The score consists of two staves: a treble clef staff and a bass clef staff. The treble staff features a melodic line with a tremolo effect, indicated by a dashed line above the notes. The bass staff features a rhythmic ostinato pattern, consisting of eighth notes and rests, with a dynamic marking of *p* (piano) at the beginning. The time signature changes from 5/8 to 7/8 and back to 5/8.

(Živković 1996)

Harkening back to the mournful rhapsody of section one, the composer elaborates upon previous material. Živković utilizes the thematic development heard in the first section of the piece. However, as the piece draws to a close, the unmetered patterns in the left hand soften in dynamic and lessen in tempo. The section alternates between g minor and g harmonic minor. The raised leading tone is included as the descending accents in the right hand draw closer to the tonic. Živković directs the performer “*poco rubato e molto espressivo, con dolore*” (Živković 1996) as the piece comes to a close, ending in g harmonic minor.

The rhythmic structure helped inform the author’s interpretation of the piece. By placing the driving right hand ostinato (Figure 6) above the resonators and moving the mallets closer to the nodal points as the pattern was repeated, the performer was able to create a dramatic dynamic shift. The same effect was used throughout the piece particularly in mm. 48-88.

## Chapter Five: *Mourning Dove Sonnet* (1983)

Christopher Deane (b. 1957) is an American composer and percussionist currently based in Denton, Texas. (Music.UNT 2017) Inspired by the call of a mourning dove, Deane utilizes extended vibraphone techniques to create a beautiful, yet haunting soundscape that unfolds in a traditional ABA format. Deane draws a variety of timbres from the vibraphone through his use of pitch bending, bowing, and harmonics. Deane was compelled to compose for vibraphone because “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.” he considers the piece “an art song without words...a

song for the vibraphone comprised of many techniques amalgamated into a linear expression.”  
(Smith 2009, 27)

Figure 7. m. 123



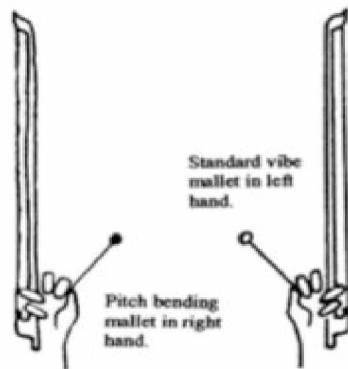
(Deane 1983)

Deane utilized pitch bending to mimic the call of a mourning dove. The original mourning dove call is heard once in m. 123 and is elongated in the proceeding measures. Pitch bending can be achieved by pressing a mallet with a rattan shaft and hard rubber or nylon head against a vibraphone bar at the nodal point and sliding the the mallet away from the nodal point and towards the center of the bar. As a result the bent pitch drops a half step, mimicking the call of a mourning dove. While Deane gives some instruction as to how the performer should achieve proper pitch bending technique, the performer has several choices once technique is attained. Each performer may use a different model of mallet; the author choose Mallettech Bob Becker BB34 Medium, finding that attack could be minimized while allowing for purity in pitch bending.

Bowing is a significant extension of the timbral language of *Mourning Dove Sonnet*. Due to the need to hold both a bow and mallet in each hand, the performer followed Deane's

suggestion and used Steven's Grip. Steven's Grip allows the performer to hold a bow with their ring and pinky fingers while their mallet is held with the remaining three.

Figure 8.



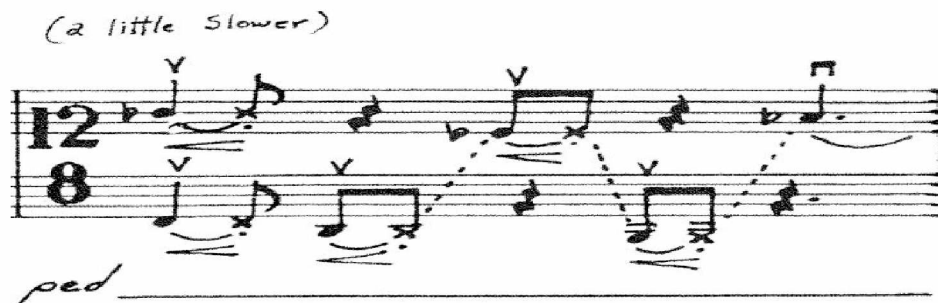
(Smith 2009, 27)

This technique allows for the independence of each implement, circumventing the need to cross as is necessary with other standard four-mallet grips. This independence is necessary throughout *Mourning Dove Sonnet*. Holding a bow in each hand, between their respective ring and pinky finger, with mallets in the remaining three allows the performer to play melodic passages with their “inner” mallets, and hold their “outer” mallets away from the playing area until they are desired. If the performer attempted to utilize any other four-mallet grip they would be forced to cross the bow and mallet between their thumb and index finger. In doing so the performer would eliminate the possibility of starting bowings from the frog, and be forced to twist their entire hand to performer bowings. Additionally the performer would forsake a considerable amount of “inner” mallet independence required to perform melodic passages.

Deane provides standard bowing instructions, up and down bow, for the performer. However, the performer may change their bowing direction if they find it benefits the piece. The

writer found that using a down bow for all harmonics allowed her to consistently achieve necessary bow pressure and speed due to the bows angle as the vibraphone bar is bowed. A bowing change may also be desirable in m. 37, in which bowed dyads marked with crescendi are subsequently muted by the performer's bow. The writer also found that the desired effect could be consistently attained with down bows rather than up bows.

Figure 9. m.37



(Deane 1983)

Harmonics increase timbral variety and vibraphone pitch range throughout *Mourning Dove Sonnet*, occurring in sections A and A' (A mm.1-50, A' mm. 128-167). On the vibraphone, harmonics are produced by placing a fingertip (either thumb or index) near the center of the vibraphone bar as it is activated, resulting in the pitch sounding two octaves higher. The author found this extended technique to be quite challenging. Due to the low rate of vibration frequency, the vibraphone's lower octave proved to be extremely difficult to consistently produce harmonics. As previously stated, the pressure and speed produced by a down bow may be helpful, however, additional preparations were needed to produce consistent and quality harmonics.

The author found that after a period of experimentation, harmonics could be more easily produced in the lower octave when her finger was placed slightly to the left, thus not directly in

the center of the vibraphone bar. The author drew small circles in pencil on the desired section the vibraphone bars. In doing so, she was able to consistently produce the desired harmonic effect.

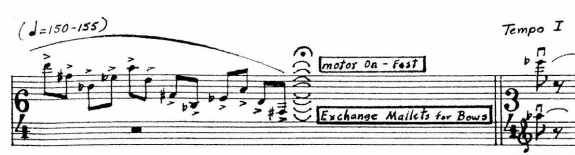
There are several discrepancies throughout Deane's *Mourning Dove Sonnet* score. The most glaring occurs at the start of A'. Deane does not give an indication as to when, or if, the performer should turn the vibraphone's motor off during A'. Previously, in A, the motor is turned off after the performer has completed their mallet and bow exchange. Though Deane instructs the performer to exchange their mallets in A', m. 127, he does not call for the motor to be turned off afterwards, contrary to A.

Figure 10. m. 49



(Deane 1983)

Figure 11. m.127



(Deane 1983)

The author chose to leave the motor on throughout the full restatement the opening theme during A' (m. 128-137). In doing so she was able to contrast the previous A section and create renewed interest in A'. The addition of the motor in A' produced a new timbre while utilizing the same thematic material. The pedal mark between measures 137 and 138 seemed an opportune moment to stop the flow of sound, and recommence with the harmonic in m. 138.

## Chapter Six: *e-home* (2015/2017)

Written for one percussionist, sensors, and electronics, *e-home* is composed by Spanish composer Elisabet Curbelo (b. 1984). Curbelo writes:

“Due to my profession, I live a nomadic life. For me the feeling of home is necessary to nurture my creativity and be able to compose. In my case certain objects carry a meaning and make me feel at home. The piece *e-home* represents my approach to this feeling.” (Curbelo 2017, 1)

*e-home* was commissioned by percussionist Carlota Caceres during her time as a visiting artist at UCSD. Caceres asked that the piece included sensors, gestures, and percussion.

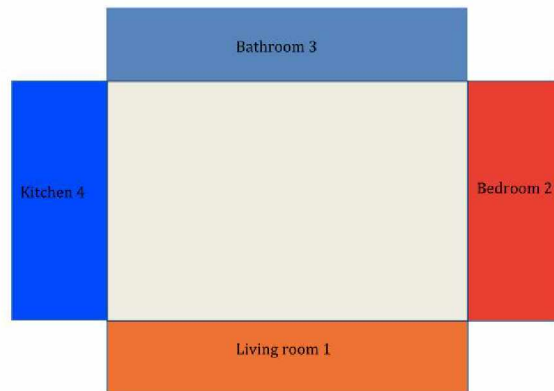
The gestures Curbello prescribes are meant to visually represent the objects used throughout the piece, such as a stone-filled vase, telephone, hairdryer, and cooking utensils. These gestures trigger sampled sounds compiled and modified by the composer, which are then combined with other looped electronic samples and acoustic percussion performance. The structure of *e-home* is delineated by different rooms found within one’s home: the living room, the bedroom, the bathroom, and the kitchen. Each room is assigned a particular location on stage and specified lighting, as seen in Figure 12.

Curbelo reworked the original 2015 score for the author’s 2017 performance stating that the 2015 version had too many objects, and little structure. For example, the original score called for all gestures to be performed first, under white light in the center of the stage, the performer would then move through their “home” and interact with the corresponding objects. Unlike the 2017 score where gestures are performed in correlation to the object they are describing, and then immediately performed with said objects.

By altering the progression of events, Curbelo directly relates each gesture to its corresponding object, in effect guiding the audience through the structure of the piece. For

example during the first movement, “Living Room,” a series of gestures are performed first outlining the shape of a box, then shaking and moving objects within the box, triggering samples with each motion. Upon completion of these gestures the lights transition to black as samples are played on loop and the performer kneels in front of a clear, glass container filled with stones. The previous gestures are now similarly performed with the objects that had been alluded to.

Figure 12. *e-home* stage and light orientation



(Curbelo 2017, 3)

The objects used throughout *the-home* hold a special significance in Curbelo’s life.

Table 6. Household Items

Living Room	Bedroom	Bathroom	Kitchen
Clear glass vase round or cubic	Vintage phone with a rotary dial	Hairdryer or electric shaving machine	Stone mortar, wooden cutting board
Color or clear glass stones	Table	Table	Metallic salad bowl, frying pan and wooden utensils

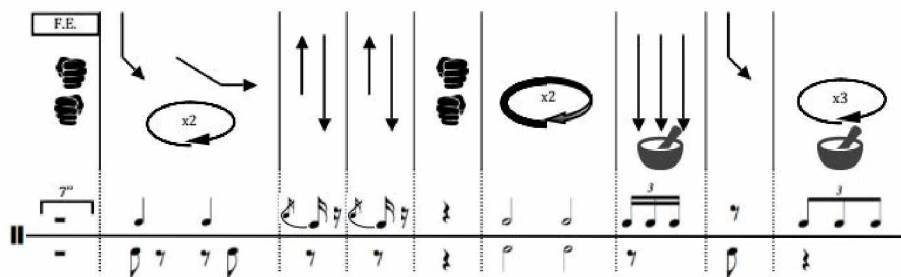
“The glass vase with glass stones represents the objects that entertain me and amuse me. The vintage phone represents my attraction for objects with history and the need of communication with family and friends when they are far. The hair drier (sic) represents the need for specific objects for personal care. The kitchen objects are more numerous due to my hobby to cook and the need of certain utensils to make my favorite meals.” (Curbelo 2017, 3)



The majority of Curbelo’s household objects can be easily attained, with the exception of the rotary dial phone. Curbelo only recently acquired her personal rotary dial phone, a friend and visual artist gifted it to her nearly a year ago when they left San Diego. Objects such as glass vase with glass stones, a representation of simplicity in entertainment and amusement are reflected in her choice of pets, two turtles. Curbelo exclaimed her fondness for her pets stating “Whenever I’m stressed I just look at them. Moving slowly, then stopping for several minutes, content to just be. And I think, yes that’s how I should be, calm and simple.” (Curbelo 2017) The author found the “Kitchen” to be the most difficult room to create. A compact setup can be attained by turning one’s cutting board sideways, and arranging the objects from low to high pitches.

In addition to revealing the underlying structure of the piece, Curbelo utilizes sensors to add to the musical texture. The sensors used are modified wii remotes, however Curbelo has yet to release the specifications required for their construction. She is considering adding a modification manual with each score so that the piece may be performed without her, which is the only current method of performance.

Figure 13. *e-home* the “Kitchen” excerpt



(Curbelo, 2017)

Triggering the pre-recorded samples requires precise movements. Curbelo directs the percussionist to move like a robot; sharp, crisp and without emotion. As a result, the performer's body must remain as still as possible to contrast and clarify the various large, acute gestures. The gestures including circular motion easily trigger electronics and produce a diverse range of sounds depending on the speed and intensity of the movement. However, rapid gestures followed by circular gestures can cause samples to be prematurely triggered, as seen in the second measure of Figure 13. The performer is asked to trigger three samples in succession throughout the same measure. In order avoid preemptively triggering multiple samples at once, the author and composer found success by implementing two swift outward movements to the left and right, and creating a small and slow circular gesture.

Currently, Curbelo must be present for performances of her works involving sensors due to their unavailability. Though she enjoys traveling to new locations and collaborating with multiple musicians, she is working towards a future where her works can be performed without the aid of a sound or light technician. Curbelo hopes that eventually the performer can trigger pre-programmed lights, samples, and loops with sensors. She is working to make her scores and information regarding sensors accessible to musicians around the world.

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