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our figures though they recur they go around: an aesthetics of recurrence articulated through a multimodal portfolio of compositions, 2015-2018

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UNIVERSITY OF CALIFORNIA SAN DIEGO

our figures though they recur they go around: an aesthetics of recurrence articulated through a  
multimodal portfolio of compositions, 2015-2018

A dissertation submitted in partial satisfaction of the requirements for the degree

Doctor of Philosophy

in

Music

by

Kefei Kevin Zhang

Committee in charge:

Professor Roger Reynolds, Chair

Professor David Borgo

Professor Sarah Creel

Professor Mark Dresser

Professor Amelia Glaser

2018



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Chair

University of California San Diego

2018

## TABLE OF CONTENTS

Signature Page.....	iii
Table of Contents.....	iv
List of Supplemental Sound Recordings.....	v
List of Figures.....	vi
Acknowledgements.....	vii
Vita.....	viii
Abstract.....	ix
Introduction.....	1
Chapter One: <i>while twigs make minor adjustments</i> .....	6
Chapter Two: <i>new true mirrors, furrowed, flooded, extended quite far</i> .....	18
Chapter Three: <i>The Human Body Time Machine</i> .....	31
Conclusion.....	50
Bibliography.....	52
Appendix A: libretto and score for <i>while twigs make minor adjustments</i> .....	53
Appendix B: libretto and score for <i>new true mirrors, furrowed, flooded, extended quite far</i> .....	75
Appendix C: documentation for <i>The Human Body Time Machine</i> .....	102

## LIST OF SUPPLEMENTAL SOUND RECORDINGS

### Zhang\_whiletwigs.mp3

Live archival recording of *while twigs make minor adjustments*, performed on March 4, 2015 at UCSD's Conrad Prebys Concert Hall by:

Kirsten Ashley Wiest, soprano

Michael Matsuno, flute

Curt Miller, clarinet

Batya MacAdam-Somer, violin

T.J. Borden, cello

Todd Moellenberg, piano

Steven Schick, conductor

Joe Kucera, recording engineer

### Zhang\_newtruemirrors.mp3

Live archival recording of *new true mirrors, furrowed, flooded, extended quite far*, performed on December 4, 2016 at UCSD's Mandeville Auditorium by:

The La Jolla Symphony and Chorus

David Buckley and Peter Clarke, violins

Steven Schick, conductor

David Chase, chorus master

Andrew Munsey, recording engineer

### Zhang\_hbtm\_wallmix.mp3

Representative stereo mixdown of looped sound played back against the glass wall in the courtyard outside of Weiss Forum

### Zhang\_hbtm\_headset.mp3

Representative choreography instructions played back in the infrared headsets on the balcony outside the Weiss Forum; Aurora Lagattuta, narrator

### Zhang\_hbtm\_stagemix.mp3

Representative stereo mixdown of looped sound played back inside the Weiss Forum

## LIST OF FIGURES

Fig. 1.1: mm. 4-6 of <i>while twigs make minor adjustments</i> .....	11
Fig. 1.2: mm. 77-89.....	12
Fig. 1.3: continuing from m. 90.....	12
Fig. 2.1: detail of mm. 2-4 of <i>new true mirrors, furrowed, flooded, extended quite far</i> , Violin I and Violin II lines, (both excerpts located in treble clef).....	20
Fig. 2.2: detail of mm. 125-126 of <i>NTMFFEQF</i> , Violin I and II.....	21
Fig. 2.3: detail of mm. 74-80 of <i>NTMFFEQF</i> , French Horns 1-2 and 3-4. Both staves are placed in treble clef and at sounding (concert) pitch.....	22
Fig. 2.4: detail of brass section in mm. 68-71 of <i>NTMFFEQF</i> . Horns and trumpets are contained in the top 5 staves (treble) while the trombones and tuba are in the bottom 3 (bass). All notes are sounding pitch.....	23
Fig. 2.5: detail of mm. 72-80 of <i>NTMFFEQF</i> , sopranos and altos.....	23
Fig. 2.6: detail of mm. 92-95 of <i>NTMFFEQF</i> , woodwinds section.....	25
Fig. 2.7: detail of mm. 157-160 of <i>NTMFFEQF</i> , containing sopranos, altos, harp, and strings.....	27
Fig. 3.1: PaulStretch steps.....	35
Fig. 3.2: Detail of map of Weiss Forum space given to audiences in their program booklet.....	37
Fig. 3.3: View of Predock’s wall from the interior of the Forum’s courtyard.....	38
Fig. 3.4: Close view of a mounted speaker.....	39
Fig. 3.5: Far view of the balcony protrusion.....	41
Fig. 3.6: Close view of cabinet taken during technical rehearsal.....	42
Fig. 3.7: View of headset stations from the balcony. The headsets themselves are in the foreground and the infrared audio transmitter is in the background.....	43
Fig. 3.8: Far view of the stage from the front of the house, taken during technical rehearsal....	46
Fig. 3.9: View once on stage, looking laterally from stage right to stage left.....	47

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## VITA

2010	Bachelor of Music, New England Conservatory of Music
2010-2012	Graduate Teaching Assistant, University of California Irvine
2012	Master of Fine Arts, University of California Irvine
2012-2018	Graduate Teaching Assistant, University of California San Diego
2013	Graduate Research Assistant, University of California San Diego
2015-2018	Associate-in-Music, University of California San Diego
2018	Doctor of Philosophy, University of California San Diego
2018-2019	Lecturer, University of California San Diego

## ABSTRACT OF THE DISSERTATION

our figures though they recur they go around: an aesthetics of recurrence articulated through a multimodal portfolio of compositions, 2015-2018

by

Kefei Kevin Zhang

Doctor of Philosophy in Music

University of California San Diego, 2018

Roger Reynolds, Chair

This document traces the evolution of my musical work of the past three years. It presents some of the interests I had developed over the course of my qualifying examinations for the PhD at the University of California San Diego, and discusses how they have affected my compositional projects. Three major pieces are included in this portfolio: 1) *while twigs make minor adjustments*, an 8-minute chamber composition for soprano and Pierrot ensemble commissioned and premiered in March 2015 by UCSD's Palimpsest Ensemble, 2) *new true mirrors, furrowed, flooded, extended quite far*, an 11-minute composition for large orchestra and treble choir with two violin soloists, written for the La Jolla Symphony and Chorus as the



recipient of their 2016-17 season's Thomas Nee Commission, and 3) my site-specific sound design installations for the *Human Body Time Machine*, an evening-length collaborative dance production performed as the UCSD Theatre & Dance Department's 2017-18 season's *gradWORKS* production.

## INTRODUCTION

During the time when I was completing my qualifying examinations as part of my advancement to PhD candidacy at the University of California San Diego in June 2016, my orientation as a composer had been one fairly strongly rooted in a concert-music tradition. Central to this mode of creation had been a convergence of a series of several related but in many ways autonomous processes: the notation of musical instructions, the preparation and rehearsal with live-human musicians and performers, and a finished-state performance to an audience in a “concert” context. These processes are, of course, long-held strongholds of the music-making process in the Western (i.e., “classical”) musical tradition, which as it happens, is also the tradition at the center of my own formal training and background as a musician.

Chapter One of this dissertation document will briefly present an earlier musical composition of mine that is representative of this orientation. In late 2014, I had the fortune of being asked by UCSD Music Professor Steven Schick to compose a new piece — *while twigs make minor adjustments* — for the department’s Palimpsest Ensemble. This request involved creating a chamber work to act as a companion piece to the composer Brian Ferneyhough’s pair of compositions *On Stellar Magnitudes* and *Etudes Transcandantales* for a concert at UCSD to be held on March 4, 2015. The writing of this new work allowed me to explore several interests that had occupied my musical mindset at the time, namely, the ineffable relationships between music and language, and the fragmentary experiences that arise in the conjunction of these two modalities. As it would be a composition for soprano and ensemble — in other words, a *song* — I was able to explore this on a literal level: via text setting. To do so, I began by creating an

original libretto of fragmented found texts, taken from a heterogenous range of sources. One of these sources was the poetry of UCSD Professor Emerita Rae Armantrout, whose line “...while twigs make minor adjustments...” from her poem “Phrasing” I included in my libretto and took as the title of my chamber composition.

*while twigs make minor adjustments* would be the last major composition I completed before progressing onward to preparations for my PhD qualifying examinations, which took place over the subsequent academic year (2015-16), and which will be briefly summarized in the second half of the chapter. These qualifying examinations eventually allowed me to reflect on and articulate some of my musical interests which, upon assessing in hindsight, had already been latent at the time that I was composing *WTMMA*. These interests included: the composing of musical canons as generative recursive behaviors, the conceptualizing of scale through metaphorical arch forms with “isomorphic” relationships, and the spaces inhabited by the presences of both music and language.

After finishing my examinations in June 2016, the project I immediately embarked upon would further extend my practice of concert-music composition onto the medium that it arguably has been most attached to historically: that of the symphonic orchestra. Just prior to starting these examinations, I was fortunate to have been offered by Professor Schick another opportunity to compose a new vocal work, this time for the La Jolla Symphony and Chorus for performance in their 2016-17 subscription season. This new piece, *new true mirrors, furrowed, flooded, extended quite far*, will be the focus of Chapter Two of this text.

I completed *NTMFFEQF* in October of 2016, and the orchestra performed it on their concert series during the weekend of December 3-4, 2016. The scale and pragmatics of

composing for this particular organization and occasion presented a number of unique idiosyncratic considerations to me. For example, Professor Schick and I agreed on a particular time length and instrument: in a 12-minute space, I would compose a piece that mirrors the unconventional orchestral instrumentation of one of the other pieces from that weekend's concert program: Igor Stravinsky's *Symphony of Psalms* for large orchestra and chorus. Taking Stravinsky's instrumentation setup as a starting point, I subtracted the low voices from its chorus, but added two violin soloists. And thus, similar to the the relationship between *WTMMA* and Ferneyhough's composition, here Maestro Schick and I created another program in which my composition served as a newer "companion piece" to an older piece from the modern classical repertory, closely mirroring its peculiar instrumentation, albeit with several alterations. I welcomed the challenge too, of writing for the idiosyncracies of a large, community ensemble, as the La Jolla Symphony and Chorus is not a professional performing organization — though its membership consists of individuals who may be professional themselves — nor is it one whose central focus is on experimental, contemporary music — though again, some of its members have extensive experience in the "new music" field (and in comparison to many other American orchestras — including many of the country's major professional symphonic organizations — the LJS&C's programming is notably more diverse and inclusive of 20th-21st century music). Because of this, an assessment of music-making within a community-serving context certainly factored into my writing of this piece. By the same vein that the expansive scale of such a medium (of a large orchestra, chorus, and soloists) allowed me a way of opportunity in the exploration of musical material, the composition also presented challenges to these pragmatics that necessitated care in navigation.

In Chapter Three, I will discuss how in very similar (but also very different!) ways, a recent series of artistic collaborations I have engaged in with the choreographer Aurora Lagattuta and video artist Maya VanderSchuit in the 2017-18 academic year also presented unique idiosyncratic boundaries of expansive spaces for musical and sonic exploration. Lagattuta — a graduate student in the Department of Theatre & Dance at UCSD — asked me to collaborate on a project for the 2017-18 IDEAS (Initiative for Digital Exploration of Arts and Sciences) season at Calit2's (California Institute for Telecommunications and Information Technology) Qualcomm Institute. A contemplation on oceanic timescapes, our improvisatory piece *CETACEA* was performed in the institute's black-box theatre on January 25, 2018, and would proceed to serve as a preliminary workshopping of ideas that would manifest on a larger scale in another subsequent interdisciplinary performance project, *The Human Body Time Machine*. A site-specific non-linear installation piece using a cast of 22 dancers to explore how the human body moves through space and time, *HBTM* was performed in and around the La Jolla Playhouse's Mandell Weiss Forum on an April 12-14, 2018 run as part of the UCSD Department of Theatre and Dance's annual gradWORKs series.

Similar to how *NTMFFEQF* exhibited generative recursive behaviors and large arch forms through a conventionally-notated concert-music orchestral score, my contributions to *HBTM* also played with repetitive and isomorphic relationships between local sound sources and larger-scale temporal form, albeit doing so not in linear concert form but in the distinctive context of acousmatic, electronic, sound-design installation. And much like how *NTMFFEQF* was a response to an opportunity in which an immense scale of quantity resource (i.e., a large number of performers) is presented along with the responsibilities to a community-serving

ensemble, the pair of dance-installation projects also juxtaposes expansive potentiality (in the form of intermedia and multimodal theatrical production) with creative considerations necessitated by collaborative dynamics (where music and sound serve as supplementary modes to, e.g., dance). This dyadic categorization of my larger-scale creative projects from my post-qualifying-exam period has served as a helpful framework for me in understanding my orientations as a composer, particularly as these orientations relate to an affinity in my creative mindset towards what I've come to articulate as an “aesthetics of recurrence.”

Finally, several separate collections of appendices are presented at the end of this dissertation document. The first two are reproductions of the musical scores for *while twigs make minor adjustments* and *new true mirrors, furrowed, flooded, extended quite far*, while the third is an audiovisual collection of documentation from the *Human Body Time Machine* project. My interests in writing this dissertation text — along with the curatorial decision to include these three specific pieces that comprise it — are in part to reflect upon my relationships with this notion of medium at the center of the compositional process, both in my embrace of the conventions of concert-music writing and, as well, in my desires to subvert them.

## CHAPTER ONE:

*while twigs make minor adjustments*

embarking towards an aesthetics of recurrence

“Lucidities, or, lines. The starry angular varieties of recurrent word and changed idea in constellation gather. On the nectarine and on the clarinet distinction casts a light, the two in turn. One has only to look at the one to think to see the other.”

- Lyn Hejinian, “A Thought is the Bride of What Thinking”

The Palimpsest Ensemble is the UCSD Department of Music’s resident contemporary music ensemble. Consisting of a roster of the department’s graduate performers with a rotating lineup of faculty music directors, Palimpsest programs several concerts per season, typically following a similar structure: at each concert, the program is anchored by an “older” composition, usually a well-known work of the contemporary/experimental chamber music repertory. Alongside this piece, a newly commissioned composition written by a current graduate composer acts as a “companion,” often using the same instrumentation, and responding to a conceptual impetus from the previous work. Hence, this is a metaphor for the act of “palimpsesting.”

In early 2014, I was fortunate to have been offered this commission for a concert scheduled in March 2015 at UCSD that would coincide with a festival celebrating the life and work of former Department of Music professor Brian Ferneyhough. This request involved composing a chamber piece to act as a companion work to Ferneyhough’s *On Stellar Magnitudes* and *Etudes Transcandantales* for a concert on that festival. When I began my research on these

two of Ferneyhough's works, I immediately looked towards his use of language in these compositions as something that I might use as a starting point in thinking about how I could respond in my own music. Ferneyhough had constructed his libretto to *On Stellar Magnitudes* first by compiling a list of names of stars, arranged alphabetically ("Aldebaran, Bellatrix," etc.). Corresponding to each star are stanzas of phrases that each begin with the same letters as the stars' names, and that consist of real, nonce, or foreign words rendered nonsensical and meaningless when collaged together. For example:

***Aldebaran***

*Alamode*  
*Lehär*  
*Did eider*  
*Braxy angary*  
*Read a nork?*

***Bellatrix***

*By exuviae - less lubrication.*  
*(And then those*  
*Repetends in*  
*Xhosa).*

***Capella***

*"Could" asiant paralysis; (elenchus: logic-*  
*Looms astir).<sup>1</sup>*

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<sup>1</sup> Excerpted libretto reproduced from the front matter of the score of Brian Ferneyhough's *On Stellar Magnitudes* (London: Peters Edition Limited 1995).



Writing in Edition Peters' introductory notes to the score of *On Stellar Magnitudes*, the music journalist Paul Griffiths recalls a conversation with Ferneyhough in which the composer commented on this treatment of language as one whose:

“purpose was not to make music that would illustrate the words in a madrigalian fashion but instead to show music as a self-sufficient language which is nevertheless rich and flexible enough to conconnections to many other ways of feeling and thinking.’ *On Stellar Magnitudes* explores further this notion of music as independent but linked to other languages, verbal and dramatic, and does so in an alarming manner, since now the range of those languages is made minute. Single words and short phrases - often further deprived of sense by being rare locutions, nonce coinages or foreign terms - are scanned by the music, as if by a telescope scanning stars.”<sup>2 3</sup>

This perhaps Dadaist approach to compiling the sung text would end up being exactly what I decided to “palimpsest over” in my responding piece, entitled *while twigs make minor adjustments*. I too became interested in a vocal music that did not merely aim to be a metaphorical illustration of a narrative dictated by its libretto. Instead, I wanted to explore it as something inextricably and ineffably linked to — and yet is still separate from — other modes of communication, such as language.

To do so, I began by compiling my own document consisted initially of 26 verses of found texts, arranged so that each began with a different letter of the alphabet, and which, once created, would function as the libretto of my piece's vocal line. While the texts themselves came from published volumes of poetry (authored by Rae Armantrout, Charles Bernstein, Jackson Mac Low, and Nora Nadjarian, all writers whom I had been reading out of personal interest around

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<sup>2</sup> Ibid.

<sup>3</sup> See also, e.g., commentary by Robin Freeman, who in “Retuning the Skies” in *Tempo* (Vol. 191, Dec. 1994), 33-37, writes of Ferneyhough addressing the problems of contemporary vocal setting in pieces such as *Etudes Transcendantales* and *On Stellar Magnitudes*, that avoid all traces of narrative, avoiding the scenario of what Ferneyhough describes as “madrigalism,” where music inevitably would just end up being musical images of what the text describes.

this time), the collaging of them was done in a somewhat arbitrary way, thus removing any traces of conventional sense or intelligibility except where by coincidence. Due to time constraints for the length of the piece, I soon realized after I began composing the score that setting all 26 initial verses would well surpass a suitable time length for the context of the concert, and thus, I ultimately cut and condensed my texts into a free-flowing form rather than as independent verses. A reproduction of the final version of the libretto follows below. (The full compilation of texts used in creating the libretto along, with full citations of their original sources are reproduced in Appendix A.)

***Anchor***

*As a word is mostly connotation...*

*Bolster. Concentrate. Dwell.*

*[We've reauthorized silence]...matter is mostly aura? A bridge between two notes  
— so that we're always "about to" or "have just."*

***Ellipse***

*Whistling up and down its forecast of a scale,  
while twigs make minor adjustments.*

*Far. Gauche. Hide. (If you can read this, you're too close.)  
could the calmed in loads*

***Interstice***

*cup for cup a keeps*

*Jagged. (jaw lower than its walk to the jukebox) Kinetic. (extra body to tier )*

*Linear. Mercurial. Normative.*

*Earned by driving mile over mile of eroded insistence.*

***Over***

*Just a few months earlier, it would have been impossible*

*Peace. Quarantine. Rag.*

*for him to imagine leaving (America poses in whose mirror?) Swell. (the department) Terse. (but that was before his life had turned into a soap opera.) Did I not pluck thee by the nose for thy speeches?*

***Unite***

*Veil. (The fear that all this will end. The fear that it won't.) Whisper. [It's London] Zoo and ten minutes to closing time.*

*They get dirty again in no time.*

*(Xenial. Yon. Zonal.)*

*What happens when they get dirty again?<sup>4</sup>*

In addition to the verses themselves, I also included separate collections of singular words that I then chose to become descriptors of music behavior. These are denoted above by their bold facing. I chose to especially privilege the five that began with vowels (ANCHOR, ELLIPSE, INTERSTICE, OVER, UNITE) to have extra formal significance, adding an element of large-scale ramifications of what may be thought of as the initial arbitrariness of the language-based starting points. As an example, the ANCHOR gesture is mapped to an ascending then descending scalular line that is introduced near the beginning of the composition and then repeatedly appears throughout:

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<sup>4</sup> This text was previously published in the program notes to Palimpsest's "The Music of Brian Ferneyhough," (UCSD Conrad Prebys Hall, March 4, 2015). [http://musicweb.ucsd.edu/concerts/concert\\_programs/2014-15/Winter%202015/20150304-WEDS7Palimpsest.pdf](http://musicweb.ucsd.edu/concerts/concert_programs/2014-15/Winter%202015/20150304-WEDS7Palimpsest.pdf).

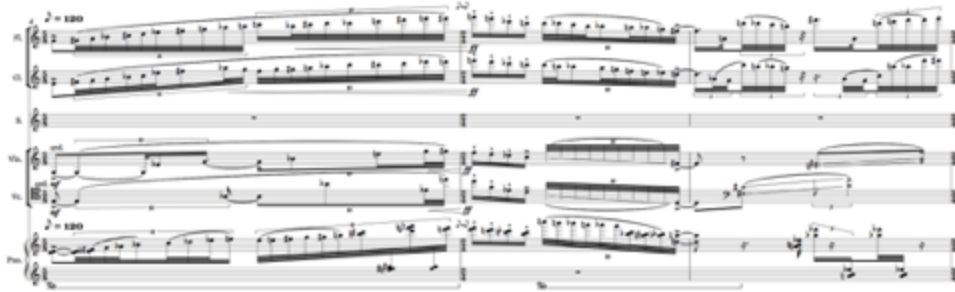


Fig. 1.1: mm. 4-6 of *while twigs make minor adjustments*

When I describe this phrase's status as an *anchoring* gesture, I mean so in an intuitive, metaphorical manner. In part, this is due to its content consisting of rather uniform scalar phrases, that is to say, successions of ordered ascending followed by descending intervallic steps. Such types of phrases are, of course, parts of the basic vocabularies of Western common-practice musical composition; hence a linguistic lingo possibly applicable here is that of a musical practice being *anchored* in such a musical vocabulary. Additionally, this phrase proceeds to reappear at various points in the composition, usually at places that could be thought of as having formal significance, such as following the "resolution" of a section, or as a transitional pivot point, or as an intermittent mini-interlude.

When this anchor bridges an overlap between otherwise contrasting musical material, it now also then alludes to the second, *elliptical* category of musical behaviors, and when it serves as an interlude between similar material, it transitions into now functioning as part of an *interstitial* category of behaviors.

Musical score for measures 77-89. The score includes parts for Flute (FL), Clarinet (Cl), Saxophone (S), Violin (Vin), Viola (Vc), and Piano (Pno). The lyrics are: "mer-i-ca pos-es in whose mir-ror?". Performance instructions include: "gliss and vib., actual changes to fingered pitch should be minimal, stagger breath changes with clarinet" for the woodwinds, and "ord." for the strings. Dynamics range from *pp* to *mf*.

Fig. 1.2: mm. 77-89, where the interjection of m. 81 functions as a pivoting point between two contrasting types of musical materials.

Musical score for measures 90-92. The score continues with the same instruments: Flute (FL), Clarinet (Cl), Saxophone (S), Violin (Vin), Viola (Vc), and Piano (Pno). The lyrics are: "Earned by driv-ing mile o-ver mile of e-rod-el in-sis-tence." Performance instructions include: "gliss and vib., actual changes to fingered pitch should be minimal, stagger breath changes with clarinet" for the woodwinds, and "ord." for the strings. Dynamics range from *ff* to *sppp*.

Fig. 1.3: continuing from m. 90, note how the anchoring gesture recurs, but the phrase that directly succeeds it in m. 92 is a direct continuation from the previous phrase from mm. 82-89

This recurrence of anchoring musical phrases would become a focal point of my creative interests that then developed over the course of the subsequent academic year. Of course, that musical phrases formally significant to a piece would often recur and repeat within it is a rather axiomatic observation: recursion is an inherent feature of the large majority of musics across many of the world's cultures, and is certainly of central import in the Western tradition.

But why, necessarily, has that been so? One plausible approach may be to consider a potential resulting effect of the process of recursion as one in which repeated exposures to an initial idea contributes to the breeding of eventual familiarity, an argument which Elizabeth Margulis explores<sup>5</sup> when she observes that, on a larger scale, repeatability is how music becomes property of communities instead of merely an individual, or of a tradition rather than a moment. As they take place in time, repetitive behaviors inherent to the medium of music make it “knowable” in the way of something that's outside of time. And yet, Margulis notes, music, as a form of entertainment, is perhaps even better suited for us to experience multiple times than other temporal media, such as films or plays or novels or video games, which in some cases may lose all “replay value” immediately after we know what happens to our main protagonist at the end of the plot, for example. Repeated listenings of music, on the contrary, can actually heighten our aesthetic reward; in music that we enjoy hearing over and over again, we don't completely lose the element of surprise even when we know what is coming (and when that what is coming). In fact, our “knowledge” can actually accrue: Margulis keenly notices that “a new piece of music is apprehended not merely with information presented across its duration, but also with information garnered from past experiences with similar music.” Music's nature “enables us to

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<sup>5</sup> in, e.g., *On Repeat* (Oxford 2014).

‘look’ at a passage as a whole, even while it’s progressing moment by moment.”<sup>6</sup> (This may partially explain the dreaded phenomena of “earworms.” It is impossible to, e.g., “know” abstractedly on what pitch and on what number in the order of notes that first occurrence of the word “little” is set to in the nursery round “Mary had a little lamb.” To do so, we must by singing through the tune from the very beginning and keep track of the words.)

Another way of approaching the original question may be to consider the importance of parallel recursive processes in language and in cognition. Recursion can certainly be thought of as very similar to repetition, as both are behaviors that involve referring back to themselves, but a way in which recursion is differentiable lies in the sense that it emphasizes a process of nesting, which gives it a much more generative potential. This concept is one that for Douglas Hofstadter is crucial in the formation of “meaning,” as he explores in, amongst other places, his seminal 1979 text *Gödel, Escher, Bach*.<sup>7</sup> <sup>8</sup> Recursion has implications on unpredictability through a notion he describes as recursive enumeration, a process in which “new things emerge from old things by fixed rules.”<sup>9</sup> <sup>10</sup> In other words, we can broadly take recursion to mean a process by

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<sup>6</sup> Ibid., 108.

<sup>7</sup> (New York: Basic Books, 1979)

<sup>8</sup> An example of a recursive process in everyday life that Hofstadter gives is when we postpone completing a task in favor of a simpler task, a task often of a similar type. Another example occurs when over the course of us listening to a radio news report, it may occur that our anchor switches us to a foreign correspondent. Now this foreign correspondent may have a tape of their local reporter interviewing someone, which then gets played. This three-level-down conversation is still relatively easy for us to keep track of (probably because the levels themselves are quite different), but we can imagine this process continuing onward indefinitely.

<sup>9</sup> *Gödel, Escher, Bach*, 52.

<sup>10</sup> For Hofstadter, this concept is analogous to formal logic systems, in which given axioms provide the start of a process of reasoning. When we are presented only with the initial axioms, we do not know what will happen (yet) until the recursive processes are engaged.

which the output of any given step in this process can be in turn somehow taken as its own next input.

One implication of interest in the musical-aesthetic context here is that we can theoretically imagine this process continuing onward for an infinite number of steps; this “infinity” is appealing to Hofstadter because it allows that from seemingly small, meaningless, arbitrary objects or structures, we eventually can generate large, meaningful, forms of potentially great aesthetic value. Certainly, this aspect is important to the realms of spoken and written languages, and parallels are easily drawn to music composition.

To me, an aesthetics of recurrence has emerged in the past three years as itself central to how I frame my own creative pursuits. During my 2016 qualifying exams, Hofstadter’s way of thinking was influential to my work primarily because his theoretical work on the phenomena of recursion placed its emphasis on these recursive processes as multimodal and ineffable, as processes that are applicable *independent of medium*. This ineffability — especially in an aesthetic sense — draws out in musical experience what I then called *desirable confusion*, an affective space that interrogates and subverts our pre-notions (as a listening audience) of what is supposed to *make sense*. In other words, this aesthetic “meaning” results out of processes which Hofstadter may call “strange loops.”<sup>11</sup> As an affective space, it is certainly an important element of just about all the music I myself find rewarding to listen to and experience,<sup>12</sup> though it may of course manifest in a multitude of ways or forms.

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<sup>11</sup> in, e.g., *I am a Strange Loop* (New York: Basic Books, 2007).

<sup>12</sup> see, e.g., my discussion on the piece *Ais* by Iannis Xenakis in “Ph.D. Qualifying Examination in Composition by Kefei Kevin Zhang, May 16, 2016,” pp. 52-53.



Of course, that music has the potential to confuse and to disorient is not a novel idea. Nor is the observation that these traits may actually be, counterintuitively, desirable. For example, David Huron has famously argued for the allure of confusion in music as something deeply nested in our biological responses to elements of surprise.<sup>13</sup> From a purely biologically standpoint, surprise is actually quite a bad thing; in the wild, it is generally undesirable and should be avoided as much as it can be. As the purpose of expectation is to enhance preparedness, surprise then represents a failure of our faculties of expectation. But consider, as examples, surprise birthday parties or peekaboo games, both of which Huron gives as examples where the sudden fear immediately following the event's onset quickly becomes laughter. Indeed, strong spikes of negative fast-track responses can in the long term produce positively-valenced appraisals, and such pivots, I would agree with him in arguing, are often of central importance to memorable and impactful musical experiences.

An aesthetics of recurrence, then, is both canonic and Canonic. In music, its ineffable mechanisms are able to be articulated by gestures that often are both generative and reducible, doing so via any number of means of repetition and self-reference, taking its own outputs as the next step's inputs. (An example of such a process may be found in one of the canons in *new true mirrors, furrowed, flooded, extended, quite far*, to be discussed in the next chapter). But it is also ever pervasive. That recursion is significant in music — at least certainly of the Western concert tradition — is, I believe, a rather axiomatic statement, as these mechanisms are part of the core basic vocabularies of broad communication. The psychologist Michael Corballis, for example, has argued that language itself is mediated through modes of recursive thought that manifest as

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<sup>13</sup> David Huron, *Sweet Anticipation: Music and the Psychology of Expectation* (Cambridge, MA: MIT Press, 2006).

two broad types: the first of these he calls mental time travel, where “imagined” episodes take place in the present or are blended with other imagined episodes, and the second of which he calls a theory of mind, or an ability to understand what is going on in the minds of others. Episodic memory creates an ability to imagine possible future events as well as a concept of the self as existing through time. Meanwhile, the natural ability to infer and understand what others are thinking/feeling is necessary to social cohesion, and thus, the real-world necessity of cohesion is what causes language to emerge out of the theory of mind.<sup>14</sup>

Ultimately, *while twigs make minor adjustments* would become a point of departure for me. It was pivotal in forefronting many musical and composition concerns which — while I had certainly explored previously — I had never placed in such close dialogue together. But even so, I consider it still a prototypical representative of my compositional orientation at that time, one firmly rooted in the chamber-music type of writing that so serves as the bread-and-butter medium of the concert-music composer.

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<sup>14</sup> Michael C. Corballis, *The Recursive Mind* (Princeton: Princeton University Press, 2011).

## CHAPTER TWO:

*new true mirrors, furrowed, flooded, extended quite far*

“The night has a thousand eyes  
And the day but one”

- Francis William Bourdillon

After I finished my qualifying examinations at UCSD in June 2016, I immediately set off on composing my next piece, another project for a performing ensemble directed by Professor Schick. This new composition was to be performed by the La Jolla Symphony and Chorus on December 3-4 of that year, as the recipient of their 2016-17 season’s Thomas Nee Commission. In terms of quantity of musicians, this would be by far the largest-scale compositional project I had ever embarked on to date. “Paired” on the concert program — in a structure similar to the Palimpsest Ensemble’s concerts — with Igor Stravinsky’s *Symphony of Psalms*, I set my piece for the exact same instrumentation of Stravinsky’s piece, one which consists of an unconventionally large orchestra of 5 flutes (with 1 doubling piccolo), 4 oboes, English horn, 3 bassoons, contrabassoon, 4 French horns, 1 piccolo trumpet, 4 trumpets, 3 trombones, tuba, timpani, bass drum, 2 pianos, harp, cellos, and basses. In addition to these instruments, I included at Maestro Schick’s suggestion two solo violin lines for the orchestra’s co-concertmasters, but used only the soprano and alto voices of the symphony’s Chorus, halving Stravinsky’s more conventional four-part SATB setup. (I frequently find myself joking with acquaintances in

hindsight that I managed to tick off in one composition every single one of classical music's old tropes of medium: a sort of *choral symphony double concerto*?)

The texts I used as the libretto for this composition came from the poems of Lyn Hejinian's 2012 volume *The Book of a Thousand Eyes*. Hejinian is commonly associated with the group of Language Poets, emergent from California, whose work often places at the forefront of its project the notion of language itself as something that is the source of experience, as opposed to a framing or translation of experience. This emphasis on the very idea of medium itself was something that I had found important at that point in time to consider in my own work as a composer of notated concert music; music, after all, is a medium so fundamentally dependent on the ineffabilities of experience.

And speaking of points in time, due to the brief distance in time between the finishing of my qualifying examinations and the composing of *new true mirrors, furrowed, flooded, extended quite far*, it was not surprising that I looked towards my recent research for creative impetus. As such, the interests that I proceeded to explore in this composition flowed out of themes I had focused on in recent analyses, particularly those of the recursion concept, of music-language relationships, and of palindromic/archaic formal structures. Of course, the intention was never to conceptualize *NTMFFEQF* as a demonstration or application of these ideas (i.e., to say, I hope to dissuade a potential framing of the relationship between my qual and this composition as a theory-then-practice one). Instead, a more useful perspective may be that of viewing this composition as a natural continuation of my pursuit of ways of musical thinking that had been interesting or productive for me at this particular junction. In the following section, I will attempt

to elaborate upon some of these “ways” as they manifest in *new true mirrors, furrowed, flooded, extended quite far*.

### The Canons:

The principal way through which I incorporated generative recursive behaviors in *NTMFFEQ* was by building the piece out of an interweaving of four interrelated musical canons, all of which are based on a descending chromatic line. That all four derive from a narrow band of original material produces an effect, I hope, in which they could be perceived not necessarily as a *series* of subsequent canons, but rather as a continuous development.

#### I. The “Mirror”

Near the opening of *NTMFFEQ*, the two violin soloists enter in a manner where the two solo voices “switch off” identical phrases — though with some displacements of rhythmic emphases — with each other. (I like to think of this as a certain kind of crossfade, an example of what one may call an “isomorphism.”)

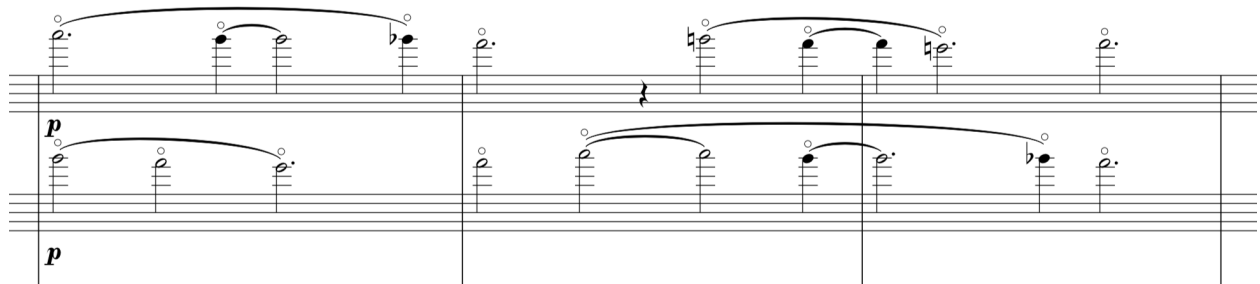


Fig. 2.1: detail of mm. 2-4 of *new true mirrors, furrowed, flooded, extended quite far*, Violin I and Violin II lines, (both excerpts located in treble clef)

This stepwise descent is an important thematic gesture that serves as a recurring motif throughout the composition. Violin I's line, a four-note scale consisting of one whole-step descent followed by two consecutive half-step descents, is repeated by Violin II beginning on the third beat of the second measure of this duet, resulting in a one-beat overlap. Meanwhile, the Violin II's line, a three-note scale consisting of a whole-step and a half-step descent followed by a half-step “cadential” return upwards, is taken up by Violin I on the fifth beat of the second measure of this phrase. This kind of role reversal is a microcosm of relationships applicable on a larger scale. A more embellished version of this expository duet occurs later in the second half of the piece, in a recapitulatory section:

The image shows a musical score for two violins, Violin I and Violin II, covering measures 125 and 126. The score is written on three staves. The top staff is Violin I, the middle staff is Violin II, and the bottom staff is a common bass line. In measure 125, Violin I plays a four-note scale: G4 (quarter), F4 (quarter), E4 (quarter), and D4 (quarter). In measure 126, Violin II enters with a three-note scale: E4 (quarter), D4 (quarter), and C4 (quarter), followed by a half-step return B3 (quarter). Simultaneously, Violin I takes up the three-note scale from Violin II: E4 (quarter), D4 (quarter), and C4 (quarter), followed by a half-step return B3 (quarter). The score includes dynamic markings 'mp' and 'ord.'.

Fig. 2.2: detail of mm. 125-126 of *NTMFFEQF*, Violin I and II

What I have been calling above a “crossfade” or “role reversal” are metaphors for the types of isomorphic behaviors crucial to many of the analyses of music I conducted in my qualifying examinations process. For example, in Hans Abrahamsen’s expansive chamber work *Schnee* (2008), these relationships manifest in how the spatial placements of the instrumental

families in his composition directly connect to how the musical material is interweaved across two stages of canonic levels: what I called at the time *antecedent* and *consequent* phrases.<sup>15</sup>

## II. The “Furrow”

The second canon is introduced by the French horns, but quickly becomes elided with sounds of other instruments in similar timbral bands.



Fig. 2.3: detail of mm. 74-80 of *NTMFFEQF*, French Horns 1-2 and 3-4. Both staves are placed in treble clef and at sounding (concert) pitch

Sharing many characteristics with the Mirror canon, the Furrow has two subjects: a Gb-F-Eb-Enat tetrachord and a concurrently sounding Gb-F-E-Eb tetrachord, whose first two notes begin identically, but whose latter two notes are reversed. When stacked on top of each other, these lines create a composite chord progression of a minor-third followed by a minor-second, as shown in the above excerpt. In the process of this canon building and expanding into the other instrumental doublings, a third voice ascends upwards out of the interlocked chords: a G#-A-B trichord played in ascending succession, initially by the trumpets.

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<sup>15</sup> Abrahamsen’s *Schnee* was a cornerstone member of the collection of twelve works I analyzed in my qualifying process. See, e.g., my discussion on pp. 28-30 of that document, “Ph.D. Qualifying Examination in Composition by Kefei Kevin Zhang, May 16, 2016.”

Fig. 2.4: detail of brass section in mm. 68-71 of *NTMFFEQF*. Horns and trumpets are contained in the top 5 staves (treble) while the trombones and tuba are in the bottom 3 (bass). All notes are sounding pitch.

In juxtaposition against these brass lines, the chorus sings a similar passage, set to the following text:

*We're unintentionally equipped to dream  
Our thoughts go around our figures  
They hold us predicting nothing though they recur*<sup>16</sup>

Fig. 2.5: detail of mm. 72-80, sopranos and altos

<sup>16</sup> Lyn Hejinian, *The Book of a Thousand Eyes* (Oakland, CA: Omnidawn, 2012), 56.



This nested musical round sung by the choir shares the same pitch content with the French horn voices of the brass canons while taking, instead of these voices' duplet rhythms, the triplet rhythms from the newly emergent trumpet countersubject. The text is set syllabically. First, it is sung by sopranos verbatim, but the subsequent canonic contrapuntal alto line displaces certain orders of these, resulting in:

*Intentionally our thoughts are unequipped  
To hold us predicting nothing around our figures  
Though they recur they go around*

Due to the fact that the soprano and alto lines of this round were offset by five half-note triplets — one short of forming an even metrical bar — these rearrangements were created, in part, to realign what otherwise may be problematic syllabic stress emphases in text setting. But I was also interested in the inherent “muddling” of layers of text that inevitably happens whenever songs are sung in a round, and I decided to do so by *actually* manipulating the placements and orders of syllabic content. A similar type of creative liberty with the poems will also be seen later in setting of the fourth canon. But first:

### III. The “Flood”

At the central point of the composition, a “climactic” moment occurs when the previous canons lead into a resolution where all instruments, except the soloists, play *tutti*. (Indeed, this is the only moment in the entire composition where this happens.) Dispersed through the entire instrumentation is a series of six descending pitches at various rhythmic speeds:

14  $\text{♩} = 45$  (Tempo I)

The image shows a detailed musical score for the woodwind section of the piece *NTMFFEQF*, specifically measures 92-95. The score is written for a full woodwind ensemble, including Flute 1-2, Flute 3-4, Piccolo, Oboe 1-2, Oboe 3-4, Clarinet in A, Bassoon 1, Bassoon 2-3, and Contrabassoon. The tempo is marked as quarter note = 45 (Tempo I). The music is characterized by complex rhythmic patterns, including triplets and sixteenth notes, and a dynamic marking of *f* (forte). The score is arranged in a standard orchestral format with multiple staves for each instrument.

Fig. 2.6: detail of mm. 92-95 of *NTMFFEQF*, woodwinds section

Formally, this phrase acts as the most important one of the composition, functioning as what I like to describe metaphorically as either a “pivot point” or as a “top of the arch.” An initial six-note phrase of Gb-F-E-D-C-Bb is reached via a conjunction of the intervallic contents of the three- and four-note scales that had constituted the prior canon subjects.

As this new melody continues, the number of notes as well as the intervallic contents of the resultant scales develop via a systematically palindromic setup. This process causes this scalular descent of notes to, itself, also descend, creating a result that may be thought of as an inverted “Shepard effect.” The initial 6-note row is repeated three times by each instrumental voice, at whatever consistent rhythmic “speed” that particular voice is assigned to. (E.g., in the excerpted passage above, the first and second flutes play in triplet speed, while the third and

fourth flutes play in sixteenth-note speed.) Then, this row is augmented with the addition of an extra note at the end — an A — forming a new 7-note row of Gb-F-E-D-C-Bb-A. This new phrase is repeated by each voice twice. Subsequently, the next phrase continues by lowering the initial start of the row from Gb to F, forming a row of F-E-D-C-Bb-A, which then is also repeated twice. This process continues, with each new iteration of the row being created by alternating the stepward-down movement of either the initial or the final pitches of the previous row. Eventually, the row reaches Bb-A-G#-F#-E-D — a transposition of the original row a minor-6th downward — which is repeated three times before the section concludes with a brief truncating of this row: an F#-E-D resolution. This entire process sounds convoluted when verbally expressed, but may be easier to communicate visualized, as such:

<b>Gb-F-E-D-C-Bb</b>	(x3)
<b>Gb-F-E-D-C-Bb-A</b>	(x2)
<b>F-E-D-C-Bb-A</b>	(x2)
<b>F-E-D-C-Bb-A-G#</b>	(x2)
<b>F-E-D-C-Bb-A-G#-F#</b>	
<b>E-D-C-Bb-A-G#-F#</b>	
<b>E-D-C-Bb-A-G#-F#-E</b>	
<b>D-C-Bb-A-G#-F#-E</b>	(x2)
<b>C-Bb-A-G#-F#-E</b>	(x2)
<b>C-Bb-A-G#-F#-E-D</b>	(x2)
<b>Bb-A-G#-F#-E-D</b>	(x3)

#### IV. The “Extend”

The final section of the piece functions in a larger formal context as a coda, at least in the sense that its musical material is largely independent, with the previous material from the composition proper having no direct or functionally causative relationship to the material inside the coda. Instead of the segmented scalular descents that have characterized much of the previous sections, here, over a harp obligato pedal F, the two-part treble choir sings a displaced lullaby:

The musical score for measures 157-160 of *NTMFFEQF* is presented in a multi-staff format. The top two staves are for the vocal parts: Soprano (S.) and Alto (A.). The Soprano part begins with the lyrics "your brain is like a web be - ing blown by wind" and the Alto part with "head your mind is like a lake be - ing splashed by rain". The harp (Hp.) part consists of a continuous, rhythmic pattern of eighth notes in the right hand and a steady bass line in the left hand, maintaining a pedal point on F. The string section (Vc. 1, Vc. 2, Cb. 1, Cb. 2) provides a harmonic accompaniment with sustained notes and light rhythmic patterns.

Fig. 2.7: detail of mm. 157-160 of *NTMFFEQF*, containing sopranos, altos, harp, and strings

In the process of setting this lullaby as a round, I had realized that Hejinian’s poem lends itself well to wordplay. I therefore took some further license by playing with subject-object substitutions and verb switches. In the end, three different permutations of the same initial source

text were made. As the voices sing each entry of the round, these permutations progress and overlap. Hejinian's original verses are reproduced below:

*your brain is like a lake  
being splashed by rain  
sleep, little baby, sleep  
the droplets spin and spread*

*your mind is like a web  
being blown by wind  
sleep, little baby, sleep  
someone's at home in your head<sup>17</sup>*

A couple of other permutations sung by the choral voices at subsequent entries are below, with the interchanges bolded:

*your brain is like a **web**  
being **blown** by **wind**  
sleep, little baby, sleep  
the droplets spin and spread*

*your mind is like a **lake**  
being **splashed** by **rain**  
sleep, little baby, sleep  
someone's at home in your head*

---

*your **mind** is like a **web**  
being **splashed** by **wind**  
sleep, little baby, sleep  
the droplets spin and spread*

---

<sup>17</sup> Ibid., 13.

*your **brain** is like a **lake**  
being **blown** by **rain**  
sleep, little baby, sleep  
someone's at home in your head*

Because this section is a coda, in terms of formal or structural significance, the lullaby at the end of *NTMFFEQF* is largely a standalone section. Indeed, I would not object to any listener who would assess its presence as even out of place. But I did find the inclusion of a musical lullaby to be thematically suitable: Hejinian's *Book of a Thousand Eyes* itself revolves around themes of night, sleep, and/or dream, and does so by very effectively using language as a medium to navigate the slipperiness of meaning and consciousness.

\* \* \* \* \*

*The Book of a Thousand Eyes* — both in its title and in its interspersed form of textual heterogeneity — is a project no doubt in reference to the legend of the storyteller Scheherazade. Departing from the dense, autobiographical, and associative prose which has characterized much of Hejinian's earlier work (as a formative member of the Language Poets) in favor of a familiar but disorienting lyricism, the text is a mode of disjointed storytelling that fundamentally experiments with the illusive experience of comprehension. For example, in reference to one of the poems ("constant change figures"), Calum Gardner writes in his 2013 review of the volume that "the experience of meaning's 'constant change' as we read the poem again and again is a

metaphor, a ‘figure’ for our ‘experience’ (defined by one of the repeating lines as ‘that sense of many things’) of life over time. We think of our lives, our time, as one phenomenon when really they are characterised by change, something embodied by the oxymoronic headwords of the poem, ‘constant change.’”<sup>18</sup>

And while the concrete musical material of the final lullaby section of *new true mirrors, furrowed, flooded, extended* may at surface be distant from its previous material, the way in which such apparent “misfits” allow for us to re-orient our relationships to what may have already been previously established is something I also find prevalent and appealing in Hejinian’s craftful poems. Indeed, the coalescence of recurring themes in her *Book of a Thousand Eyes* creates an impact on its audience that is not terribly dissimilar to my conception of the role of my interspersed musical canons; in reference to the constant reappearances of certain key phrases in Hejinian’s collection, Gardner notes that this “encourages us not to try to see the ‘thousand eyes’ as a single blazon governing the book, but to read each of the pieces as a different response to a stimulus, as a fresh pair of eyes.”<sup>19</sup>

Such an affective space is certainly a goal for me as well, in music.

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<sup>18</sup> Calum Gardner, “Perception Is Almost an End in Itself: Lyn Hejinian’s *The Book of A Thousand Eyes*,” in *The Glasgow Review of Books* (June 18, 2013) <https://glasgowreviewofbooks.com/2013/06/18/perception-is-almost-an-end-in-itself/>.

<sup>19</sup> *Ibid.*

## CHAPTER THREE:

### *The Human Body Time Machine*

“Space is not there for the eye only:  
it is not a picture; one wants to live in it.”

- El Lissitzky

As one might easily imagine, the task of setting out to compose a large composition for a combined symphonic and choral ensemble is most definitely not an act done in isolation. In fact, a great motivating factor for me when I accepted the symphony’s Nee Commission that season was the distinctively idiosyncratic nature of being able to write for a community orchestra which operates through a close association with my UCSD department and which is uniquely open to playing new works of music.

Likewise, an integral consideration for me in orientating my role as sound designer of the *Human Body Time Machine* project — my next major creative undertaking after my composition for the La Jolla Symphony and Chorus — was also a similar communal aspect. Whereas in *NTMFFEQF*, in which the receipt of such an opportunity of the scale of resource came with a responsibility to a community ensemble, in *HBTM* the opportunity of theatrical production resource also came with the responsibility of working within a collaborative creative space, where my musical contribution supplements choreographic and scenic elements.

The *Human Body Time Machine* was one of a series of collaborations I engaged in during the 2017-18 year with UCSD Department of Theatre and Dance graduate student Aurora Lagattuta. (An earlier, workshopped version of this piece will be discussed later this chapter,



while a third, durational performance version was also staged later in May 2018, subsequent to the drafting of this dissertation document.) The process of assembling the cast for *HBTM* was one in which Lagattuta opened the participation to dancers of all ages and levels; ultimately, the final cast consisted of 22 dancers, aged 18 to 76. Her vision for the piece was one that rejected the associations of “high theatre,” associations which may include but are not limited to expectations of normative appearances (of performative bodies, ages, etc.), and of performance boundaries (both spatial and temporal).

*HBTM*'s performance run was staged at the Mandell Weiss Forum, one of the centerpiece venues of UCSD's Irwin Jacobs Theatre District. It is a venue shared with the La Jolla Playhouse, the prestigious non-profit professional theatre organization that maintains a close relationship with the university's Department of Theatre & Dance. The Weiss Forum — the Jacobs District's second largest venue by seating capacity — is a 400-seat fully-trapped thrust stage theatre with a flexible proscenium. To subvert the theatrical ethos that such a venue may impose, Lagattuta had decided at the very beginning that this performance would be one set not on stage, but inside and around the entire venue's perimeters. Describing the project as “a meditative playtime for audience,” she characterizes *HBTM* as:

“immersive and exploratory in nature, the performance happens both inside, outside and around the Mandell Weiss Forum Theater. The performance communicates through material, sonic and mundane presences in a performance ecology that integrates fragments of the ‘everyday,’ virtuality, and imagination...”<sup>20</sup>

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20 Aurora Lagattuta, in “gradWORKS 2018,” UC San Diego Department of Theatre & Dance, <http://theatre.ucsd.edu/season/gradWORKS2018/index.htm>.

Given this framework for understanding the spatial aspect of this project, I felt it appropriate set my sound design component through durationally flexible installation media. In making these pieces installation-events, I had hoped, in part, to explore the recursive and self-reflective generation of sound through a special kind of temporality which resists the teleologically oriented way of listening that a concert composition necessarily forces. To do so, I decided on working with two types of affective spaces that I wanted to situate my sound world in: one where our experience of time is distorted, and one where certain perceptual thresholds of ours are blurred.

Through the use of audio manipulation techniques, I was able to explore the metaphor of temporal distortion on an actual, physical level: with digital time-stretching. As an acousmatic piece, my soundscape for *HBTM* consisted of a pre-recorded sample library of sounds that I had previously collected for a prior workshop version of this piece that was initially performed in January 2018. That month, Lagattuta, UCSD Department of Visual Arts graduate student Maya VanderSchuit, and I collaborated together on the creation of an improvisatory multimedia work, *CETACEA*, created as part of the Qualcomm Institute's Initiative for Digital Exploration of Arts and Sciences (IDEAS) performance series, held at the institute's Calit2 Theater. In the process of creating the sound design for that previous work, I assembled a number of water-related field recordings as well as "found sounds" and studio tracks of piano, clarinet, and string instruments. This library of pre-recorded sounds I created would then also proceed to serve as my palette of source materials to create the sound designs for *HBTM*. With digital recordings, I was able to conduct numerous non-destructive editing experiments in order to obtain results that I felt aesthetically and conceptually appropriate for the project.

One of the techniques which I utilized frequently was, of course, playback speed manipulation. To do so, I employed Paul Nasca's open-source algorithm for extreme time stretching. His algorithm may be applied as a plug-in effect to any number of the music industry's digital audio workstation softwares. For example, implemented into the program "Paul's Extreme Sound Stretch" (colloquially referred to in the industry as *Paulstretch*) in C++ and Python languages, the algorithm is packaged as a plug-in for the open-source Audacity software.

Nasca's diagram below demonstrates the digital sample's flow from its original source into the stretched result by undergoing a series of sampling segmentation, fast Fourier transformations (FFT), randomization, inverted fast Fourier transformations (IFFT), and overlaps.

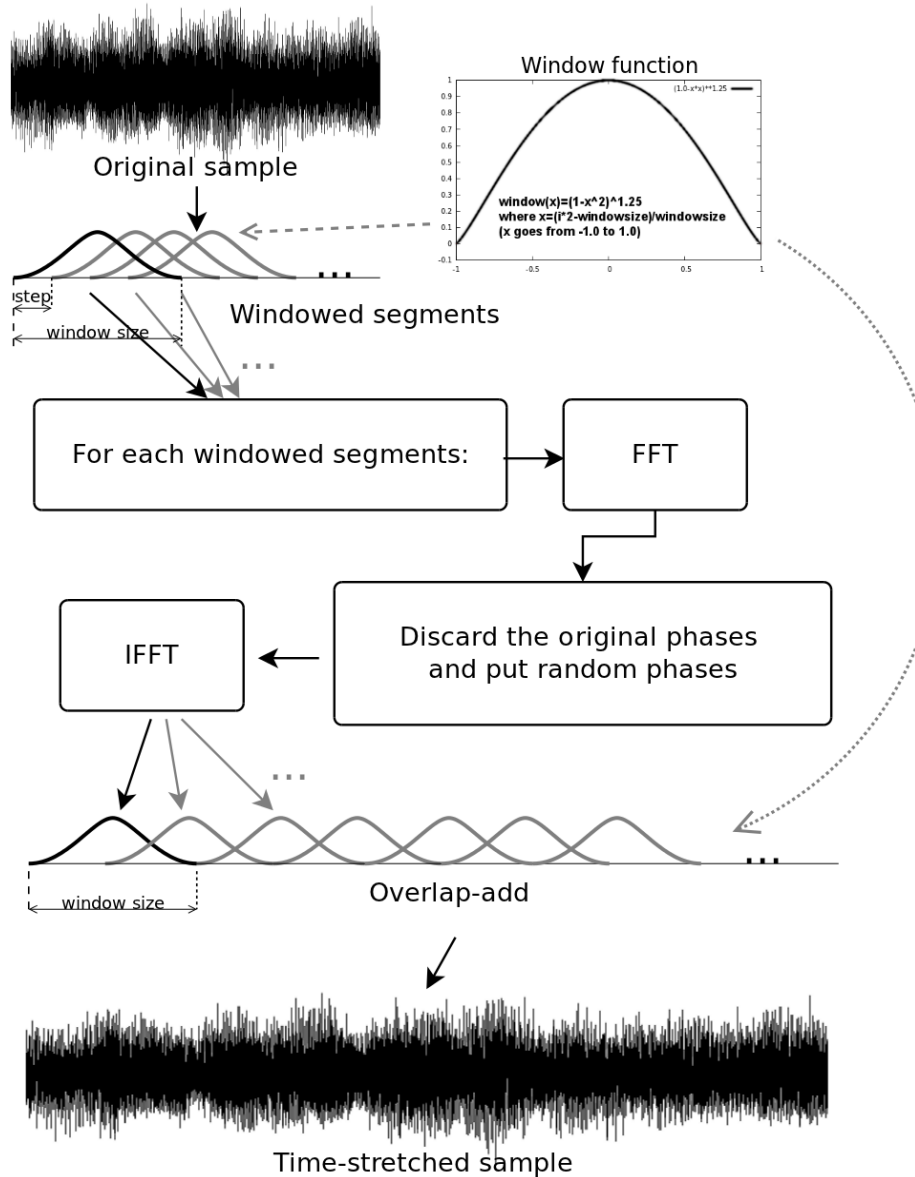


Fig. 3.1: PaulStretch steps.<sup>21</sup>

In addition to this physical and literal manipulation of sound, another aspect I wished to explore in approaching my sound design to *HBTM* was that of experimenting with psychoacoustic perceptual thresholds. As sound is fundamentally a temporal medium, much of

<sup>21</sup> Paul Nasca, "Algorithms created by me," <http://www.paulnasca.com/algorithms-created-by-me>.

how we perceive it is obviously subject to the dynamics of how it travels through time. And so, once again, the metaphorical inspiration for the work as an exploration of time travel had a more literal implication on my role as one of its creators. I wanted to design a space where psychoacoustic concepts such as just-noticeable differences and critical bands had experiential bearing on the resultant work.

The subsequent section presents a summary of how these concepts are explored in the individual, site-specific components of the entire *Human Body Time Machine* project.

### **The sound-design components:**

In all, four separate sound installations were created for *HBTM*. Below, I will summarize each, in the approximate order of likely encounter by an audience member. (When they receive their tickets for the performance, in lieu of a conventional playbill, they are given a schematic map of the performance space. They are largely left to their own freedoms in navigating this performance, with the map as a guide.)

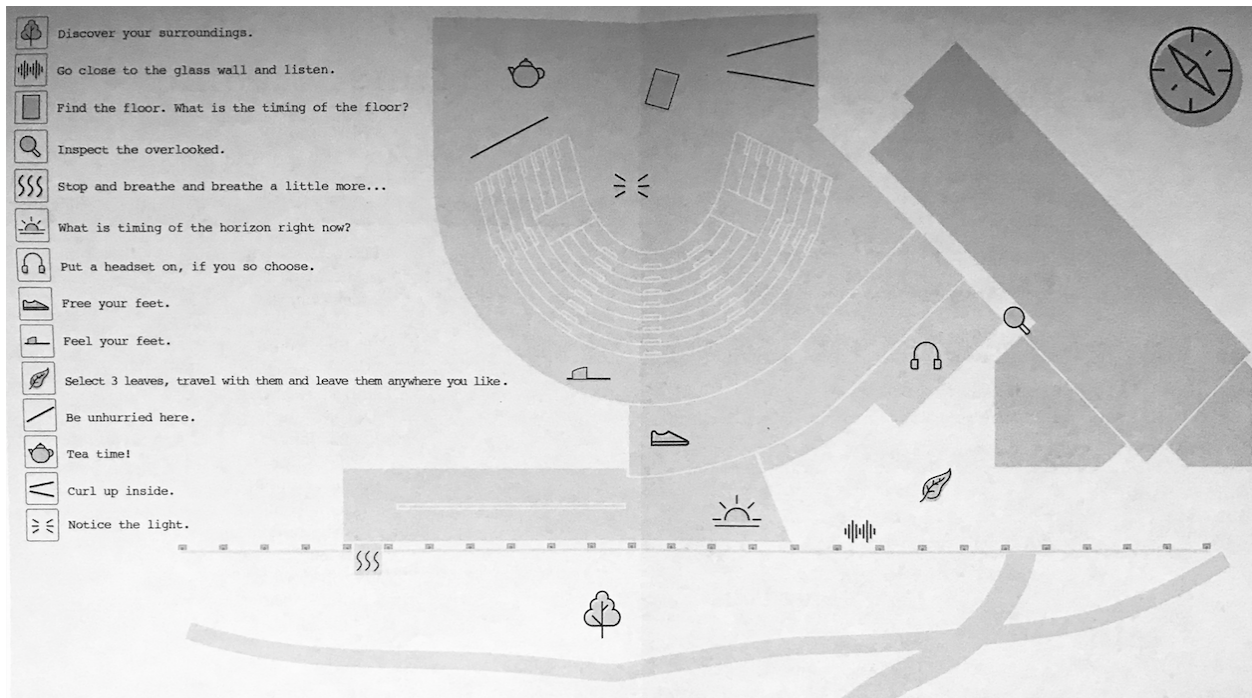


Fig. 3.2: Detail of map of Weiss Forum space given to audiences in their program booklet. Full reproduction as well as technical blueprints can be consulted in Appendix A.

## I. The Glass Wall

On the approach walking up to the Mandell Weiss Forum venue, a 270-foot glass sculpture is permanently installed. (This is denoted by the long horizontal plane at the bottom of the map above.) Designed by architect Antoine Predock, this 13-foot high mirrored glass stands detached from the Forum, flanked by an eucalyptus grove on its exterior side and by the Forum's courtyard space on the interior.



Fig. 3.3: View of Predock's wall from the interior of the Forum's courtyard.

Depending on the ambient light conditions of the time of day, the opacity of this sculpture's visibility changes, functioning as either a reflective glass or a two-way glass. The start time of *HBTM* was set with this dynamic in mind; as audience members arrive with dimming daylight, the dance occurs on the mirrored wall, but as the sun sets, the dancers begin moving away from it, and into the theater. As this happens, the wall loses its reflectivity and fades into its surrounding environment.





Fig. 3.4: Close view of a mounted speaker.

I immediately knew from the onset that I wanted to make Predock’s wall a major feature of my sound design. In order to metaphorically parallel this reflectivity, I had two outdoor speakers installed along its length. A stereo pair of Yamaha NS-AW390 speakers were mounted at two locations, both on the inside edge of the wall and both pointed towards the glass itself. Into them, I fed audio signals consisted of time-stretched loops of sweeping sine and square wave envelopes, processed with EQ adjustments and reverberation. The “shimmering” metallic nature of the sound was then reinforced by the physical glass material which it then bounced off. The loops were also set to be out of phase between the two speakers, creating an antiphonal



crossfade with occasional interference beating at close sonic frequencies. Due to the relatively large physical distance between these speakers, the “levels” of this crossfade are such that the listeners can manually “balance” it themselves, by walking between the speakers along the path of the glass (all while watching the dance unfold around them).

Additionally, recordings of leaves crumbling were also periodically interspersed. These sounds are faded in to an EQ level so as to sound as part of the natural soundscape of the performance, as piles of leaves had been collected and stationed as part of the scenic design and choreographic elements of the piece.

## II. Transduced Objects

As the audience members walk through the courtyard space, they head towards a two-story ramp that will eventually lead them up to the theater’s audience entrance (which itself is actually located on the second floor). Halfway up this balcony, at its end point where it makes its 180-degree turn, a small awning is located, protruding into the plane of the glass wall. A scenic set element is installed here, consisting of an antique cabinet table with several objects on it, encouraging dancers and audience members to hover and interact.



Fig. 3.5: Far view of the balcony protrusion. Note the glass wall on the peripheries.



Fig. 3.6: Close view of cabinet taken during technical rehearsal.

Through strategically placed small transducer speakers inside this drawer and on the metallic edges of its shelves, I played back the same looped signal from the glass wall here, but once again, also on a slight delay. Due to sheer difference in power between these two sound systems, this delayed transduced sound had not been audible back when the audience members were still in the courtyard, while conversely, the original sound source from the glass in the courtyard would still be faintly audible while standing here at the far end of the ramp. And thus, the effect is that a third, hidden, “crossfade zone” emerges at this nook in the balcony, to be subtly discovered only when the listener reaches this area.



### III. Headset Balcony

Considering that audience-performance interactivity is a major conceptual element of *HBTM*, one way in which I hoped to play with this sonically was through a private-communal dichotomy of experience. To do so, at the very end of the balcony ramp, I installed a station of the La Jolla Playhouse's infrared wireless headsets.



Fig. 3.7: View of headset stations from the balcony. The headsets themselves are in the foreground and the infrared audio transmitter is in the background. Note that the glass wall at the other end of the courtyard is visible in the distance.

On the foreground of the picture above, the headsets are located on a table for audience members to pick up and put on. Meanwhile, in the far end of the balcony, a table is set up with an

audio source and two infrared transmitters that cover the entire surface area, so that these audience members may walk around as they wish without losing reception. As they lean over and look down, they will see the dancers down in the courtyard. Similar to the situation in component III., here I took into consideration that there would be sound leak from the glass wall at this location, and so I designed an audio track for these headsets that also used material from those of the wall area as a background layer.

But the primary sound layer of this station was a spoken recording of a script I made with Lagattuta narrating. The content of the script was assembled from instructions for the piece's dance choreography. In March 2018, I had attended a rehearsal for this project, and there I created a transcription of the verbal instructions Lagattuta gave to the dancers. Later, I compiled these various instructions into several lists of prompts, each characterized by the nature of the particular instruction. These general characteristics included directions (e.g., "Look around." or "Shift your attention."), permissions ("Let your gaze traverse the space."), and questions ("How can we get there in our own time?"). I then sat down with Lagattuta and made several studio recordings — some practiced and/or scripted, some improvised — of readings of these lines, and used these subsequently edited recordings as part of the soundtrack of the headset station. In particular, I especially chose those prompts that were more internal or metaphorical, as opposed to those that necessitated outward, physical performance.<sup>22</sup>

Hence, when audience members arrive to this balcony and put on a pair of headsets, they in effect are receiving the very same choreographic instructions that the dancers had at some point previously also received. And thus — even if they aren't conscious of this — these

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<sup>22</sup> These lists of prompts are presented in Appendix C.

audience members have now *become* a part of the dance. The donning of the headsets, which causes an auditory mix of the sounds from the wall and from the native headset track, then is an act I conceptualize as one which blurs the boundaries between the private and the communal, and the performer and the audience.

#### IV. The Stage

When the audience members eventually enter the auditorium from this second floor balcony, they will encounter an immersive thrust stage, the entire range of which is covered via a quadraphonic surround setup consisted of four suspended Meyer UPA-1P speakers powered by two Meyer 650P subwoofers.<sup>23</sup> Once inside the theater, they (and the dancers) walk down the ramps from the front of the house and on to this stage, where the remaining length of the performance will then occur.

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<sup>23</sup> See Appendix C for sound design ground plan drawings.



Fig. 3.8: Far view of the stage from the front of the house, taken during technical rehearsal.





Fig. 3.9: View once on stage, looking laterally from stage right to stage left.

This being the only segment of the project to take place in an inside, “controlled” acoustic location, I knew that I wanted to design this fourth component to take advantage of the quieter setting. All of the sound sources consisted of materials with low-frequency fundamentals. In part, this was to experiment with the approximate 20 Hz. frequency threshold where sustained audible pitch becomes infrasonic individual pulsing, and vice versa. I recorded two initial groups of sounds: an F1 plucked on an electric bass (the low F was chosen in opposition to the low open E because I wanted to keep the complex inharmonic spectrum created when the string is stopped by a finger), and stopped-pizzicato hammered piano notes with fundamental frequencies under



65 Herz (or C1). These recordings were then digitally transposed to other neighboring frequencies, thus maintaining the shapes of their complex harmonic spectra while altering their fundamentals. Loops of these occasional soundings notes, with varying gaps in duration between them, were played back over the course of this installation. Several extreme time-stretched versions of these recordings were also made, they too at various speeds so as to create differences in their frequency spectra. These were layered together and played back as continuous drone envelopes, dispersed over extended durations of time through a diagonal crossfade spatialization pattern. (E.g., an envelope may begin as a pan from one corner to its opposite corner, and while this envelope reaches its amplitude peak, the other, opposing pair begins the same process.)

Except for the upper harmonic partials of the bass and piano instruments and any digital time-stretching artifacts, all the sounds in this fourth section were of the sub 65-Hertz range. In all, one complete cycle of these layers in this quadraphonic installation takes about 42 minutes before they loop back into phase again. (Though as an installation I conceive this and the other three previous components as theoretically having no fixed duration.)

\* \* \* \* \*

Overall, my goals with these four installations, both as individual stand-alone installations and also as a combined set of interrelated pieces, were to probe sonically some of the questions that Lagattuta set out to explore in its choreography: “At its core, the *Human Body Time Machine* is an experiment. The work is curious. How separate are time and space?...How

does a shift in one's relationship with their surroundings transform their experience of time, place and self? And then how does that shift occur again and again and again throughout the passing of time?"<sup>24</sup>

Through an emphasis on site specificity, I situated my work with sound in dialogue with the spatial and physical settings in which it is immersed. Of course, as sound is a fundamentally psychoacoustic phenomenon, these concerns are of concern to any musical undertaking, but are especially heightened in contexts such as this. The elements of recurrence and repetition manifest literally, with both, the possibilities of physical revisitations of sites within a performance, as well as the transference of sonic material across these sites' locations. And of course, as there is no one definitive vantage point from which to inhabit *HBTM*, my hope is that my four installations together provide an openness for audience members themselves to author their own experiences.

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<sup>24</sup> Aurora Lagattuta, in "gradWORKS 2018," *UC San Diego Department of Theatre & Dance*, <http://theatre.ucsd.edu/season/gradWORKS2018/index.htm>.

## CONCLUSION

Through the above summaries of these three projects, I hope I have presented a sensible way of seeing my development as a composer and sound artist over the past three or so years. *while twigs make minor adjustments* continued an ongoing interest of mine in text setting that had been developing since I was still in my MFA program at UC Irvine. (It was there that I spent much of my time creating as my thesis project an electroacoustic chamber opera set to an absurdist text.) *new true mirrors, furrowed, flooded, extended quite far* took this even further — to a supersized ensemble — before *Human Body Time Machine* embarked on a decidedly significant departure from this mode of musical creation. Even though as individual pieces they ostensibly are quite contrasting in their medium specificities — the concert-music pieces which use conventional Western common-practice notation are arguably antithetical in many ways to the acousmatic electronic sound installations — they ultimately share in common what I believe to be many of the same core recurring interests of mine.

Attempts to articulate music-language relationships have been immensely pervasive within the contemporary music-composition discourse, and I certainly lay zero claims to any significant rupture here. What I do generally find, however, in my own personal outlook is that I tend to shy away from any direct mappings between how we make sense of the two modalities, in favor of a more *ineffable* relationship in which moments of comprehension arise not out of teleological thought, but of perhaps — to borrow from Hofstadter — “strange loops.” And of course, I know of no composer who necessarily enjoys writing *about* their music; to evaluate one’s own creative work through the critical lens of hindsight, then to form and articulate honest

and meaningful narratives about the trajectories of their direction, and finally to put these assessments into a mode of textual writing which will, for better or for worse, automatically carry presumptions of authority, is a daunting sequence of tasks. To any potential future reader of this text, I feel a touch of gratitude that you have taken an interest in learning about my work, however the context for the circumstance may have arisen.

When I think back of the composer who entered the graduate program at UCSD in 2012, I find many of the directions I have since gone in to have been somewhat predictable, while just as many have been surprises. I know that, as someone originally trained as a classical musician from an early age, the communicating of musical ideas through the conventions of Western notation and the conceiving of it as something heard linearly in a concert hall have always been axiomatic acts at the center of my musical practice. But the decision to commit much of my most recent attention to working with ideas of site specificity — such as in the *Human Body Time Machine* installations — was a conscious one, and was of major importance in experimenting with my compositional orientations.

When I attempt to predict any future directions of my work with certainty, I of course can claim no authoritative knowledge, but what I ultimately hope is a clear takeaway from this text is that the interstices between music and language, the fragmentary experiences that arise in the liminal spaces between these modalities, and their perceptual thresholds of proportion and duration, are all constructs which I find to be integrally part of the infinitely ineffable experientiality of music that makes it so worthwhile a pursuit.

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## APPENDIX A

*while twigs make minor adjustments*

(Armantrout, "Phrasing," *Up to Speed*)

=====  
**ANCHOR**

As a word is  
mostly connotation,

matter is mostly  
aura?

(Armantrout, "A Resemblance," in *Versed*)  
=====

**Binary (Bolster)**

[We've reauthorized silence]  
a bridge  
between two notes—

so that we're always  
"about to" or  
"have just."

(Armantrout, "En route," in *Up to Speed*)

**Cancellation (Concentrated)**

could the calmed in loads  
cup for cup a keeps  
jaw lower than its walk to the jukebox  
extra body to tier

(Inman, "Colloam")

**Djinn (Dwelling)**

Did I not pluck thee by the nose for thy speeches?

(MacLow, "Various Meanings")  
=====

**ELLIPSE**

Earned by driving mile over mile of eroded insistence.

(Bernstein, "Sentences My Father Used")  
=====

**Funeral (Far)**

The fear  
that all *this*  
will end.

The fear  
that it won't.

(Armantrout, "Prayers," in *Money Shot*)

**G-/ (Gauche)**

Grammar is black  
Syntax is starch  
Reverend X  
Reverend Y

(Di Palma, "The Bed")

**Human (Hidden)**

"How do you know so much about me?"

"I have not been frogging all these years for nothing."

(Murakami, "super-frog saves tokyo," in *after the quake*)

=====  
**INTERSTICE**

"If you can read this,  
you're too close."

America poses  
in whose mirror?

(Armantrout, "This is," in *Money Shot*)  
=====

**Joglars (Jagged)**

Just a few months earlier, it would have been impossible for him to imagine leaving the department, but that was before his life had turned into a soap opera, before the earth had opened around him and swallowed him up.

(Auster, "The Music of Chance," 8)

**Keep Writing (Kinetic)**

Kindling and stumbling

(Howe, *Pythagorean Silence*)

**Lalaland (Linear)**

LEVEL also leads to a circle—"plants Ireland"—  
two below "beverage" one below "prehistoric".

(Darragh, "'Oran' to 'ordain' for J," in *On the Corner to Off the Corner*)

**Minimum Sum (Mercurial)**

Mozart creates a universe  
out of pleasantries.

"How is everything  
for you today?"

If *that*  
had happened, we say,



all this  
would not have been —

like “having been”  
were a lasting thing.

(Armantrout, “Vehicles,” in *Versed*)

### **Ninety-Six Tears (Normative)**

Nascent floursings detail our eyes

Never mind.

(Davies, “Shared Sentences”)

=====

## **OVER**

On with the story

(Barth, *On with the story*)

=====

### **Pythagorean Silence (Peaceful)**

Perhaps the mass coma had already started by then.

(Murakami, *Kafka on the Shores*, 101)

### **QU (Quarantined)**

Quick, before you die,  
describe

the exact shade  
of this hotel carpet.

(Armantrout, “Exact,” in *Money Shot*)

### **Reversible (Ragged)**

Reading, we are allowed to follow someone else’s train of thought as it starts off for an imaginary place. This train has been produced for us—or rather materialized and extended until it is almost nothing like the ephemeral realizations with which we’re familiar.

(Armantrout, “Imaginary Places,” in *Up to Speed*)

### **Sage’s Secret (Swelling)**

Sometimes fate is like a small sandstorm.  
The sandstorm draws closer. It really is going to swallow me up.

(Murakami, *Kafka on the shore*, 5)

### **To Make a Dadaist Poem (Terse)**

Tenons bon, nous les vieux.  
qu’est-ce qu’une guerre, qu’est-ce?

(Tzara, "Yao" in *Decouverte des arts dits primitifs*)

=====

**UNITE**

Unfortunately this is a very busy time  
in which too much is noticeable

(Heijinian, "13. Determinism," in *Redo*)

=====

**Vagueness is personal! (Veiled)**

Voltaire the upholstery  
sunshine and a damp wind  
over dead leaves

(Di Palma, "VI," in *Planh*)

**Writing is an aid to memory (Whispered)**

whistling up and down  
its forecast  
of a scale

while twigs make  
minor adjustments

"I'm in between two states  
and can't be interrupted.

(Armantrout, "Phrasing," in *Up to Speed*)

**Xanadu (Xenial)**

Exaggerate the ending.

(Dreyer, "Tomoka")

**"yeah" to "yill" for "W" (Yon)**

You can choose one for life  
not exactly misunderstanding obeisance  
inherent in subtraction from the crowd.

(Davies, "Shared Sentences")

**Zoo (Zonal)**

[It's London] Zoo and ten minutes to closing time.

They get dirty again in no time. What happens when they get dirty again?

(Nadjarian, "Zoo")

***while twigs make minor adjustments***

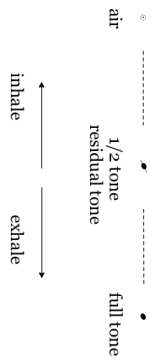
for soprano and ensemble

2015

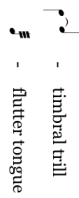
Kevin Zhang

## NOTATION KEY

### BREATH



### WINDS



Flute:

- ◊ ↗ - jet whistle
- ◊ - whistle/whisper tone

- ∩ - whistle tone harmonics sweep over fingered fundamental

Clarinet:

- † (\*\*\*) - bite reed (+ screech tremolo)

### VOICE



- † - unvoiced plosive consonants (substitute "r" for "d"s) always *sfz*

- ↓ / ↓ - "sss" hiss / half-whistle

- ♯ - rolled R

- tr* - trill between two notes

- ⋯ - tremolo on same note

- ⋈ - wide vibrato / tremolo around note

### STRINGS

- ord. - *ordinario*
- (m)/s.t./p. - *(molto)/sul tasto/ponticello*
- c.l.t./b.) - *col legno (tratto/battuto)*
- 1/2/c.l. - sideways bowing with both wood and stick

- ♯ - thrown bow

- ↑ ↓ - highest/lowest note

- † - finger nail gliss

- Z - bow noise only (by muting strings with hand)

- ⊥ - bow noise only (by pressureless bowing)

### PIANO

- ⊥ - white key cluster

The score is written at sounding pitch, except for the piccolo, which sounds one octave higher.

Instrumentation note: Flute doubles piccolo, Clarinet doubles bass clarinet.

Duration: approximately 10 minutes

while twigs make minor adjustments

(2015)  
for soprano and ensemble  
Kevin Zhang

The musical score is arranged in two systems. The top system includes parts for Flute, Clarinet in Bb, Soprano, Violin, Violoncello, and Piano. The bottom system includes parts for Flute, Clarinet in Bb, Soprano, Violin, Violoncello, and Piano. The score is written in 2/4 time and features a variety of musical notations, including dynamics (mf, pp, f, ff), articulation (accents, slurs), and performance instructions (e.g., 'm.s.t.', '5 m.s.t.', '8m...'). The tempo is marked as quarter note = 40 in the top system and quarter note = 120 in the bottom system. The score is a complex piece of contemporary music with intricate rhythmic patterns and dynamic contrasts.

This page contains two systems of a musical score for a chamber ensemble. The instruments are Flute I (Fl.), Clarinet (Cl.), Saxophone (S.), Violin (Vln.), Viola (Vc.), and Piano (Pno.).

**Top System:**

- Fl. I:** Features a melodic line with a *pp* dynamic marking and a *mf* marking at the end.
- Cl.:** Plays a rhythmic accompaniment with a *pp* dynamic marking.
- S.:** Includes a section marked *pp* and a section marked *mf* with a wavy line indicating a tremolo effect.
- Vln.:** Features a melodic line with a *pp* dynamic marking.
- Vc.:** Features a melodic line with a *pp* dynamic marking.
- Pno.:** Provides a rhythmic accompaniment with a *pp* dynamic marking.

**Bottom System:**

- Fl. I:** Features a melodic line with a *spp* dynamic marking.
- Cl.:** Plays a rhythmic accompaniment with a *spp* dynamic marking.
- S.:** Features a melodic line with a *pp* dynamic marking.
- Vln.:** Features a melodic line with a *pp* dynamic marking.
- Vc.:** Features a melodic line with a *pp* dynamic marking.
- Pno.:** Provides a rhythmic accompaniment with a *pp* dynamic marking.

The score includes various musical notations such as slurs, ties, and dynamic markings. The bottom system concludes with a *mf* dynamic marking and a section marked (S).

Musical score for a symphony with vocal soloist. The score includes parts for Flute I (Fl.), Clarinet I (Cl.), Violin (Vln.), Viola (Vc.), Cello (C.), Double Bass (Cb.), Piano (Pno.), and a vocal soloist (S.).

The vocal line includes the lyrics: "most - by con - no - ta - tion".

Performance markings include:

- mf* (mezzo-forte)
- ff* (fortissimo)
- p* (piano)
- pp* (pianissimo)
- outl.* (outlet)
- word* (vocal line)

The score is written in a common time signature (C) and features complex rhythmic patterns, including triplets and sixteenth notes.

Fl. I 21  
 Cl. 20  
 S.  
 Vn.  
 Vc.  
 Pno.

ma - tier is mod - esty au - ra.

*pp*  
*sm*



29  
 Fl. *ff*  
 Cl.  
 S.  
 Vln.  
 Vc.  
 Pno.

breath tones over fingered notes  
 allowing occasional sounded/whistle tones

breath tones over fingered notes  
 allowing occasional sounded tones

*mf*

*p*

*mf*

decrease

Diagram illustrating fingerings for notes (D, E, F, G, A, B, C, D, E, F, G, A, B, C) across five lines of a piano keyboard. The notes are labeled as D4, E4, F4, G4, A4, B4, C5, D5, E5, F5, G5, A5, B5, and C6. The diagram shows various fingering patterns (e.g., 1, 2, 3, 4, 5) for each note across the five lines.

37

Breath force to general contour of line  
allowing occasional forms of musical forms  
Bridges between notes  
allowing occasional musical forms

mp  $\sim$  3

Fl.  $\sim$  3

Cl.  $\sim$  3

Vn.  $\sim$  3

Vc.  $\sim$  3

Pno.  $\sim$  3

S  
If you can read this, you're too close.

Bass Clarinet  $\sim$  3

Piccob  $\sim$  3

$\text{♩} = 72$

s.t. hat.  $\text{pp}$

s.p.  $\text{pp}$

s.t.  $\text{pp}$

500

38

Breath force to general contour of line  
allowing occasional forms of musical forms  
Bridges between notes  
allowing occasional musical forms

Fl.  $\sim$  3

Cl.  $\sim$  3

Vn.  $\sim$  3

Vc.  $\sim$  3

Pno.  $\sim$  3

S  
you can read this, you're too close.

$\text{pp}$

$\text{ppp}$

$\text{pp}$

500



*64*  $\text{♩} = 100$

*65*  $\text{♩} = 60$

*66*

*67*

*68*

*69*

Fl. I. *mp*

B. Cl. *mp*

S. *mp* *mer-i-ca* *pos-est* *in whose* *mir-ror?*

Vln. *p*

Vcl. *p*

Pro. *ppp*

Fl. I. *ppp*

Cl. *ppp* *Charinet in Bb.*

S. *p*

Vln. *ovrl.* *ppp*

Vcl. *ppp*

Pro. *ppp*

320 *Sost.*

gliss and vibr., certain changes to fingered pitch should be minimal

gliss and vibr., certain changes to fingered pitch should be minimal, suggest breath changes with fermat

could be calmed in handcup for cups - a keepsaw low - er than - its walk to the juke - box ext - ra bo - dy to tier

90

Fl. *f*

Cl. *ff*

S. *ff*

Vln. *mf* *ord.*

Vc. *mf* *ord.*

Pno. *ff*

Just a few months ago - driving mile over mile of road - in silence.

97

Fl. *f*

Cl. *ff*

S. *ff*

Vln. *mf* *ord.*

Vc. *mf* *ord.*

Pno. *ff*

Just a few months ago - driving mile over mile of road - in silence.

107

Fl. *mp*

Cl. *mp*

S. *f*  
la - ter would have been im - pos - si - ble for him to im - a - gine leav - ing the dep - art - ment

Vln. *f*

Vc. *f*

Pno. *f*

108

Fl. *f*

Cl. *f*

S. *f*  
But that was be - fore his - life had turned in - to a so - called per a

Vln. *f*

Vc. *f*

Pno. *f*

118

Fl. *ppp*

Cl. *ppp*

S. *ppp*

Vln. *ppp*

Vc. *ppp*

Pno. *ppp*

119

120

121

122

112

Fl. *mp*

Cl. *mp*

S. *mp*

Vln. *mp*

Vc. *mp*

Pno. *mp*

113

114

115

116

117

118

119

120

To Proc.



Musical score for measures 227-230. The score includes parts for Piccolo, Clarinet, Soprano, Violin, Viola, and Piano. Dynamics range from *p* (piano) to *f* (forte). Performance markings include accents, slurs, and articulations like "ord." and "c.l.t.". A "Did" line is present for the Soprano part.

Musical score for measures 231-250. The score includes parts for Piccolo, Clarinet, Soprano, Violin, Viola, and Piano. Dynamics range from *s.p.p.p.* (pianissimo) to *f* (forte). Performance markings include accents, slurs, and articulations like "s.p.", "s.p.p.", "s.p.p.p.", "ord.", and "c.l.t.". A "Did" line is present for the Soprano part. The instruction "to Flute" is at the bottom.

Musical score for measures 195-200. The score includes parts for Soprano (S), Violin (Vln.), Viola (Vc.), Piano (Pno.), Clarinet (Cl.), Piccolo (Picc.), and Recorder (Rec.). The lyrics are: "ten - min - utes to clos - (on) - don zoo. What lamp pens". Performance markings include "p", "pp", "s.p.", and "and". Measure numbers 195, 199, and 200 are indicated. Vertical arrows point to specific measures, with durations of 12", 15", and 15" marked below the staves.

523

Flute *pppp*

Pr. *pppp*

B. Cl. *pppp*

S. when they get *pppp* dir(R) (d)(R) (d)(R) (d)(R) by (a)

Vn.

Vc.

Pno.

524

Flute *pppp*

Pr. *pppp*

B. Cl. *pppp*

S. when they get *pppp* dir(R) (d)(R) (d)(R) (d)(R) by (a)

Vn.

Vc.

Pno.

m.s.t. *pppp*

525

Flute *pppp*

Pr. *pppp*

B. Cl. *pppp*

S. when they get *pppp* dir(R) (d)(R) (d)(R) (d)(R) by (a)

Vn.

Vc.

Pno.

m.s.t. *pppp*

20"

20"

20"

## APPENDIX B

***new true mirrors, furrowed, flooded, extended quite far***

for orchestra, choir, and soloists

2016

Kevin Zhang

### Instruments:

4 Flutes	4 French Horns in F	Timpani
1 Piccolo	4 Trumpets in C	Bass Drum
4 Oboes	1 Piccolo Trumpet in D	Harp
1 English Horn in F	2 Trombones	2 Pianos
3 Bassoons	1 Bass Trombone	2 Solo Violins
1 Contrabassoon	1 Tuba	Cellos and Basses

### Vocalists:

Solo Soprano  
Sopranos  
Altos

The score is notated in C at sounding pitch, excepting standard octave transpositions.

Approximate Duration: 11' 30"

### Texts by Lyn Hejinian:

1.

One hears music and outcries  
which no one else hears  
in this voluntary solitude  
consuming thousands of sights

And sleep which so much helps  
breaks out into events  
in moments to spend everything,  
each thing as it might be

2.

I want to wake with the thought in its slips  
I wonder if it can be taught and lie awake to think  
I see that consciously I slide

We're unintentionally equipped to dream  
Our thoughts go around our figures  
They hold us predicting nothing though they recur

3.

your brain is like a lake  
being splashed by rain  
sleep, little baby, sleep  
the droplets spin and spread

your mind is like a web  
being blown by wind  
sleep, little baby, sleep  
someone's at home in your head

*new true mirrors, fowered, flooded, extended quite far*  
for orchestra, choir, and soloists  
Kevin Zhang

$\text{♩} = 45$  (Tempo D)

Flutes 1-2  
Flutes 3-4  
Piccolo  
Oboes 1-2  
Oboes 3-4  
Cor Anglais  
Bassoon 1  
Bassoons 2-3  
Contrabassoon  
Horns in F 1-2  
Horns in F 3-4  
Piccolo Trumpet in D  
Trumpets in C 1-2  
Trumpets in C 3-4  
Trombones 1-2  
Bass Trombone  
Tuba  
Timpani  
Bass Drum  
Sopranos  
Altos

$\text{♩} = 45$  (Tempo D)

Harp  
Piano 1  
Piano 2  
Solo Violin 1  
Solo Violin 2  
Cellos 1  
Cellos 2  
Contrabasses 1  
Contrabasses 2

$\text{♩} = 60$  (Tempo II)  $\text{♩} = 45$

Fl. 1-2  
Fl. 3-4  
Picc.  
Ob. 1-2  
Ob. 3-4  
C. A.  
Bsn. 1  
Bsn. 2-3  
Cbn.  
Hn. 1-2  
Hn. 3-4  
Picc. Tpt.  
C Tpt. 1-2  
C Tpt. 3-4  
Tbn. 1-2  
B. Tbn.  
Tbn.  
Timp.  
B. D.  
S.  
A.  
Hp.  
Pno. 1  
Pno. 2  
S. Vln. 1  
S. Vln. 2  
Vc. 1  
Vc. 2  
Cb. 1  
Cb. 2

*con sord.*  
*pp*

*p*

*p*

*nolo*  
*pp*

One hears ma - sic and out - cries

$\text{♩} = 60$  (Tempo II)  $\text{♩} = 45$



7/4 = 60

Fl. 1-2  
Fl. 3-4  
Picc.

Ob. 1-2  
Ob. 3-4  
C. A.  
Bsn. 1  
Bsn. 2-3  
Cbn.

Hr. 1-2  
Hr. 3-4  
Picc. Tpt.  
C Tpt. 1-2  
C Tpt. 3-4  
Tbn. 1-2  
B. Tbn.  
Tbn.

Timp.  
B. D.

S.  
A.

that no - one else hears  
One hears mu - sic and out - cries

One hears mu - sic and out - cries

7/4 = 60

Hp.  
Pno. 1  
Pno. 2  
S. Vln. 1  
S. Vln. 2  
Vc. 1  
Vc. 2  
Cb. 1  
Cb. 2

Fl. 1-4 *tutti* *f* *mf*  
 Fl. 3-4 *tutti* *f* *mf*  
 Picc. *f* *mf*  
 Ob. 1-4 *f* *mf*  
 Ob. 3-4 *f* *mf*  
 C. A.  
 Bsn. 1 *mf*  
 Bsn. 2-3 *mf*  
 Cbn.  
 Hn. 1-2  
 Hn. 3-4  
 Picc. Tpt. *sen. sord.* *mf*  
 CTpt. 1-2 *tutti* *mf*  
 CTpt. 3-4 *tutti* *mf*  
 Tbn. 1-2 *tutti* *mf*  
 B. Tbn. *mf*  
 Tbn. *mf*  
 Timp. *mf*  
 B. D.  
 S. that no - - one else hears in this vo - - lun -  
 A. that no - - one else hears  
 Hp. (D: E)  
 Pno. 1  
 Pno. 2  
 S. Vln. 1  
 S. Vln. 2  
 Ve. 1 *pizz.* *mf*  
 Ve. 2 *pizz.* *mf*  
 Cb. 1 *pizz.* *mf*  
 Cb. 2 *pizz.* *mf*

Fl. 1-2  
Fl. 3-4  
Picc.  
Ob. 1-2  
Ob. 3-4  
C. A.  
Bsn. 1  
Bsn. 2-3  
Cbssn.  
Hn. 1-2  
Hn. 3-4  
Picc. Tpt.  
C Tpt. 1-2  
C Tpt. 3-4  
Tbn. 1-2  
B. Tbn.  
Tbn.  
Timp.  
B. D.  
S.  
A.  
Hp.  
Pno. 1  
Pno. 2  
S. Vln. 1  
S. Vln. 2  
Vc. 1  
Vc. 2  
Cb. 1  
Cb. 2

tar - y so - li - tude. con - sum - ing thou - sands of sights  
con - sum - ing thou - sands of sights con - sum - ing thou - sands of sights

33

Fl. 1-2  
Fl. 3-4  
Picc.  
Ob. 1-2  
Ob. 3-4  
C. A.  
Bsn. 1  
Bsn. 2-3  
Cbn.  
Hn. 1-2  
Hn. 3-4  
Picc. Tpt.  
C Tpt. 1-2  
C Tpt. 3-4  
Tbn. 1-2  
B. Tbn.  
Tbn.  
Timp.  
B. D.  
S.  
A.  
Hp.  
Pno. 1  
Pno. 2  
S. Vln. 1  
S. Vln. 2  
Vc. 1  
Vc. 2  
Cb. 1  
Cb. 2

*mf* *sim.* *mf* *sim.* *mf* *mf* *mf*

I want to wake with the thought in its slips and lie a - wake with the thought to...

won - der if it can be... taught and lie a - wake

Fl. 1-2  
 Fl. 3-4  
 Picc.  
 Ob. 1-2  
 Ob. 3-4  
 C. A.  
 Bsn. 1  
 Bsn. 2-3  
 Cbsn.  
 Hn. 1-2  
 Hn. 3-4  
 Picc. Tpt.  
 C Tpt. 1-2  
 C Tpt. 3-4  
 Tbn. 1-2  
 B. Tbn.  
 Tbn.  
 Timp.  
 B. D.  
 S.  
 A.  
 Hp.  
 Pno. 1  
 Pno. 2  
 S. Vln. 1  
 S. Vln. 2  
 Vc. 1  
 Vc. 2  
 Cb. 1  
 Cb. 2

think I see that con - scious - ly I slide\_\_\_\_  
 and lie a - wake with the thought to think I see I see that con - scious - ly I slide\_\_\_\_

♩ = 120 (Tempo II)

Fl. 1-2  
Fl. 3-4  
Picc.  
Ob. 1-2  
Ob. 3-4  
C. A.  
Bsn. 1  
Bsn. 2-3  
Cbn.  
Hn. 1-2  
Hn. 3-4  
Picc. Tpt.  
C Tpt. 1-2  
C Tpt. 3-4  
Tbn. 1-2  
B. Tbn.  
Tba.  
Timp.  
B. D.  
S.  
A.  
Hp.  
Pro. 1  
Pro. 2  
S. Vln. 1  
S. Vln. 2  
Vc. 1  
Vc. 2  
Cb. 1  
Cb. 2

♩ = 120 (Tempo II)

53  $\frac{4}{4}$   $\text{♩} = 75$

Fl. 1-2  
Fl. 3-4  
Picc.  
Ob. 1-2  
Ob. 3-4  
C. A.  
Bsn. 1  
Bsn. 2-3  
Cbsn.

Hr. 1-2  
Hr. 3-4  
Picc. Tpt.  
C Tpt. 1-2  
C Tpt. 3-4  
Tbn. 1-2  
B. Tbn.  
Tbn.  
Timp.  
B. D.  
S.  
A.

$\frac{4}{4}$   $\text{♩} = 75$

Hp.  
Pno. 1  
Pno. 2

S. Vln. 1  
S. Vln. 2  
Vc. 1  
Vc. 2  
Cb. 1  
Cb. 2

25

Fl. 1-2  
Fl. 3-4  
Picc.  
Ob. 1-2  
Ob. 3-4  
C. A.  
Bsn. 1  
Bsn. 2-3  
Cbn.

Hr. 1-2  
Hr. 3-4  
Picc. Tpt.  
C Tpt. 1-2  
C Tpt. 3-4  
Tbn. 1-2  
B. Tbn.  
Tba.  
Timp.  
B. D.

S.  
A.

Hp.  
Pno. 1  
Pno. 2

S. Vln. 1  
S. Vln. 2  
V. 1  
V. 2  
Cb. 1  
Cb. 2

*p* *cresc.* *tutti*

We're un - in - ten - tion - al - ly eq - uipped to dream Our thoughts go a - round our fig - ures They hold us pre - dict ing

*p* *cresc.* *tutti*

int - ent - ion - al - ly our thoughts are un - eq - uipped to hold us pred - ict - ing noth - ing a - round



$\text{♩} = 90$   
 $\frac{6}{4}$

Fl. 1-2 *p*  
 Fl. 3-4 *p*  
 Picc.  
 Ob. 1-2  
 Ob. 3-4  
 C. A.  
 Bsn. 1 *p*  
 Bsn. 2-3 *p*  
 Cbn.  
 Hn. 1-2 *mf*  
 Hn. 3-4 *mf*  
 Picc. Tpt. *mf*  
 C Tpt. 1-2 *tutti*  
 C Tpt. 3-4 *tutti*  
 Tbn. 1-2  
 B. Tbn. *mf*  
 Tba. *mf*  
 Timp.  
 B. D.  
 S. *mf*  
 A. *mf*  
 Hp.  
 Pro. 1  
 Pro. 2  
 S. Vln. 1 *mf*  
 S. Vln. 2 *mf*  
 V. 1 *mf*  
 V. 2 *mf*  
 Cb. 1  
 Cb. 2

no - - thing though they re - cur  
 our fig - ures though they rec - ur they go a - round

$\text{♩} = 90$   
 $\frac{6}{4}$

*sub. pp cresc.*  
*sub. pp cresc.*

86

Fl. 1-2 *mp*

Fl. 3-4 *mp*

Picc. *p*

Ob. 1-2 *mp*

Ob. 3-4 *mp*

C. A.

Bsn. 1

Bsn. 2-3

Chsn.

Hn. 1-2

Hn. 3-4

Picc. Tpt.

C Tpt. 1-2

C Tpt. 3-4

Tbn. 1-2

B. Tbn.

Tba.

Timp.

B. D.

S.

A.

Hp.

Pno. 1

Pno. 2

S. Vln. 1 *mf* *crac.*

S. Vln. 2 *p* *crac.*

Vc. 1

Vc. 2

Cb. 1

Cb. 2

3

*mp*

*mf* *crac.*

*mf* *crac.*

*mp*

Fl. 1-2  
Fl. 3-4  
Picc.  
Ob. 1-2  
Ob. 3-4  
C. A.  
Bsn. 1  
Bsn. 2-3  
Chbn.  
Hn. 1-2  
Hn. 3-4  
Picc. Tpt.  
C Tpt. 1-2  
C Tpt. 3-4  
Tbn. 1-2  
B. Tbn.  
Tbn.  
Timp.  
B. D.  
S.  
A.  
Hp.  
Pno. 1  
Pno. 2  
S. Vln. 1  
S. Vln. 2  
Vc. 1  
Vc. 2  
Cb. 1  
Cb. 2

$\text{♩} = 45$  (Tempo I)

Fl. 1-2  
Fl. 3-4  
Picc.  
Ob. 1-2  
Ob. 3-4  
C. A.  
Bsn. 1  
Bsn. 2-3  
Cbsn.  
Hn. 1-2  
Hn. 3-4  
Pcc. Tpt.  
C Tpt. 1-2  
C Tpt. 3-4  
Tbn. 1-2  
B. Tbn.  
Tbn.  
Timp.  
B. D.  
S.  
A.  
 $\text{♩} = 45$  (Tempo I)  
Hp.  
Pno. 1  
Pno. 2  
S. Vln. 1  
S. Vln. 2  
Vc. 1  
Vc. 2  
Cb. 1  
Cb. 2

This page of a musical score contains the following instruments and parts:

- Flute 1-2 (Fl. 1-2)
- Flute 3-4 (Fl. 3-4)
- Piccolo (Picc.)
- Oboe 1-2 (Ob. 1-2)
- Oboe 3-4 (Ob. 3-4)
- Clarinet in A (C.A.)
- Bassoon 1 (Bsn. 1)
- Bassoon 2-3 (Bsn. 2-3)
- Contrabassoon (Cbass.)
- Horn 1-2 (Hn. 1-2)
- Horn 3-4 (Hn. 3-4)
- Piccolo Trumpet (Picc. Tpt.)
- Trumpet 1-2 (C Tpt. 1-2)
- Trumpet 3-4 (C Tpt. 3-4)
- Trombone 1-2 (Tbn. 1-2)
- Bass Trombone (B. Tbn.)
- Tuba (Tba.)
- Timpani (Timp.)
- Bass Drum (B. D.)
- Snare Drum (S.)
- Alto Drum (A.)
- Harp (Hp.)
- Piano 1 (Pno. 1)
- Piano 2 (Pno. 2)
- Violin 1 (S. Vln. 1)
- Violin 2 (S. Vln. 2)
- Viola 1 (Vc. 1)
- Viola 2 (Vc. 2)
- Violoncello 1 (Cb. 1)
- Violoncello 2 (Cb. 2)

This page of a musical score contains the following parts and staves:

- Fl. 1-2 (Flute 1 and 2)
- Fl. 3-4 (Flute 3 and 4)
- Picc. (Piccolo)
- Ob. 1-2 (Oboe 1 and 2)
- Ob. 3-4 (Oboe 3 and 4)
- C. A. (Clarinete Alto)
- Bsn. 1 (Bassoon 1)
- Bsn. 2-3 (Bassoon 2 and 3)
- Chbn. (Contrabassoon)
- Hn. 1-2 (Horn 1 and 2)
- Hn. 3-4 (Horn 3 and 4)
- Picc. Tpt. (Piccolo Trumpet)
- C Tpt. 1-2 (Trumpet C 1 and 2)
- C Tpt. 3-4 (Trumpet C 3 and 4)
- Tbn. 1-2 (Trombone 1 and 2)
- B. Tbn. (Baritone Trombone)
- Tba. (Tuba)
- Timp. (Timpani)
- B. D. (Bass Drum)
- S. (Snare Drum)
- A. (Cymbal)
- Hp. (Harp)
- Pro. 1 (Percussion 1)
- Pro. 2 (Percussion 2)
- S. Vln. 1 (Violin 1)
- S. Vln. 2 (Violin 2)
- Vc. 1 (Viola 1)
- Vc. 2 (Viola 2)
- Ch. 1 (Cello 1)
- Ch. 2 (Cello 2)

Fl. 1-2  
Fl. 3-4  
Picc.  
Ob. 1-2  
Ob. 3-4  
C.A.  
Bsn. 1  
Bsn. 2-3  
Chbn.  
Hrn. 1-2  
Hrn. 3-4  
Picc. Tpt.  
C Tpt. 1-2  
C Tpt. 3-4  
Tbn. 1-2  
B. Tbn.  
Tba.  
Timp.  
B. D.  
S.  
A.  
Hp.  
Pro. 1  
Pro. 2  
S. Vln. 1  
S. Vln. 2  
Vc. 1  
Vc. 2  
Cb. 1  
Cb. 2

110

Fl. 1-2  
Fl. 3-4  
Picc.  
Ob. 1-2  
Ob. 3-4  
C. A.  
Bsn. 1  
Bsn. 2-3  
Chbn.  
Hrn. 1-2  
Hrn. 3-4  
Picc. Tpt.  
C Tpt. 1-2  
C Tpt. 3-4  
Tbn. 1-2  
B. Tbn.  
Tba.  
Timp.  
B. D.  
S.  
A.  
Hp.  
Pno. 1  
Pno. 2  
S. Vln. 1  
S. Vln. 2  
V. 1  
V. 2  
Ch. 1  
Ch. 2



This page of a musical score contains the following instruments and parts:

- Fl. 1-2
- Fl. 3-4
- Picc.
- Ob. 1-2
- Ob. 3-4
- C. A.
- Bsn. 1
- Bsn. 2-3
- Chbn.
- Hn. 1-2
- Hn. 3-4
- Picc. Tpt.
- C Tpt. 1-2
- C Tpt. 3-4
- Tbn. 1-2
- B. Tbn.
- Tbn.
- Temp.
- B. D.
- S.
- A.
- Hp.
- Pno. 1
- Pno. 2
- S. Vln. 1
- S. Vln. 2
- Vc. 1
- Vc. 2
- Cb. 1
- Cb. 2

The score is written in a standard musical notation with various clefs and time signatures. It includes dynamic markings and articulation symbols. The page is numbered 96 at the bottom.

$\text{♩} = 45$  (Tempo I)

Hr. 1-2

Fl. 3-4

Picc.

Ob. 1-2

Ob. 3-4

C. A.

Bsn. 1

Bsn. 2-3

Clasn.

Hrn. 1-2

Hrn. 3-4

Picc. Tpt.

C Tpt. 1-2

C Tpt. 3-4

Tbn. 1-2

B. Tbn.

Tba.

Timp.

B. D.

S.

A.

*p*

And sleep which so much helps

Hp.

Prno. 1

Prno. 2

*mp*

*pp*

S. Vln. 1

S. Vln. 2

Vc. 1

Vc. 2

Cb. 1

Cb. 2

*pp*

*pp*

*pp*

420

Fl. 1-2  $\frac{7}{4}$   $\frac{6}{4}$   $\frac{7}{4}$   $\frac{6}{4}$

Fl. 3-4  $p$

Picc.

Ob. 1-2

Ob. 3-4

C. A.

Bsn. 1

Bsn. 2-3

Chsn.

Hr. 1-2

Hr. 3-4

Picc. Tpt.

C Tpt. 1-2

C Tpt. 3-4

Tbn. 1-2

B. Tbn.

Tbn.

Timp.

B. D.

S. *breaks out in-to ev-ents in mom-ents to spend eve-ry-thing*

A.

Hp.  $\frac{7}{4}$   $\frac{6}{4}$   $\frac{7}{4}$   $\frac{6}{4}$

Pno. 1  $pp$

Pno. 2  $p$   $mp$

S. Vln. 1 *ord.*  $mp$

S. Vln. 2  $mp$

Vc. 1

Vc. 2

Cb. 1

Cb. 2

Fl. 1-2 *p*  
 Fl. 3-4 *p*  
 Picc.  
 Ob. 1-2  
 Ob. 3-4  
 C. A.  
 Bsn. 1  
 Bsn. 2-3  
 Cbsn.  
 Hn. 1-2  
 Hn. 3-4  
 Picc. Tpt.  
 C Tpt. 1-2  
 C Tpt. 3-4  
 Tbn. 1-2  
 B. Tbn.  
 Tbn.  
 Tmp.  
 B. D.  
 S.  
 A.  
 Hp.  
 Pno. 1 *p* *mp*  
 Pno. 2 *pp* *mp*  
 S. Vln. 1  
 S. Vln. 2  
 Vc. 1  
 Vc. 2  
 Cb. 1  
 Cb. 2

each thing as it might be

♩ = ♩ = 45 (Tempo I)

130

Fl. 1-2  
Fl. 3-4  
Picc.  
Ob. 1-2  
Ob. 3-4  
C. A.  
Bsn. 1  
Bsn. 2-3  
Cbn.

mp  
mp  
mp  
mp  
mp  
mp  
mp  
mp  
mp

ppp  
ppp  
ppp  
ppp  
ppp  
ppp  
ppp  
ppp  
ppp

Hrn. 1-2  
Hrn. 3-4  
Picc. Tpt.  
C Tpt. 1-2  
C Tpt. 3-4  
Tbn. 1-2  
B. Tbn.  
Tbn.  
Timp.  
B. D.  
S.  
A.

Hp.

ppp  
ppp

S. Vln. 1  
S. Vln. 2  
Vc. 1  
Vc. 2  
Cb. 1  
Cb. 2

245

S. *p*  
your brain is like a lake be - ing splashed by rain sleep lit - le ba - by sleep the drop - lets spin and spread

A.

Hp.

Vc. 1 *pizz.*

Vc. 2 *pizz. p*

Cb. 1 *pizz. p*

Cb. 2 *pizz. p*

252

S. *p*  
your mind is like a web be - ing blown by wind sleep lit - le ba - by sleep some - one's at home in your

A.

Hp.

Vc. 1

Vc. 2

Cb. 1

Cb. 2

257

S. *p*  
your brain is like a web be - ing blown by wind sleep lit - le ba - by sleep the drop - lets

A. *p*  
head your mind is like a lake be - ing splashed by rain sleep lit - le ba - by sleep

Hp.

Vc. 1

Vc. 2

Cb. 1

Cb. 2

263

S. *p*  
spin and spread your mind is like a web be - ing splashed by wind sleep lit - le ba - by

A. *p*  
some - one's at home in your head your brain is like a lake be - ing blown by rain sleep lit - le ba - by

Hp.

Vc. 1

Vc. 2

Cb. 1

Cb. 2

269

S. *p*  
sleep the drop - lets spin and spread

A. *p*  
sleep some - one's at home in your head.

Hp.

Vc. 1

Vc. 2















Cb. 1

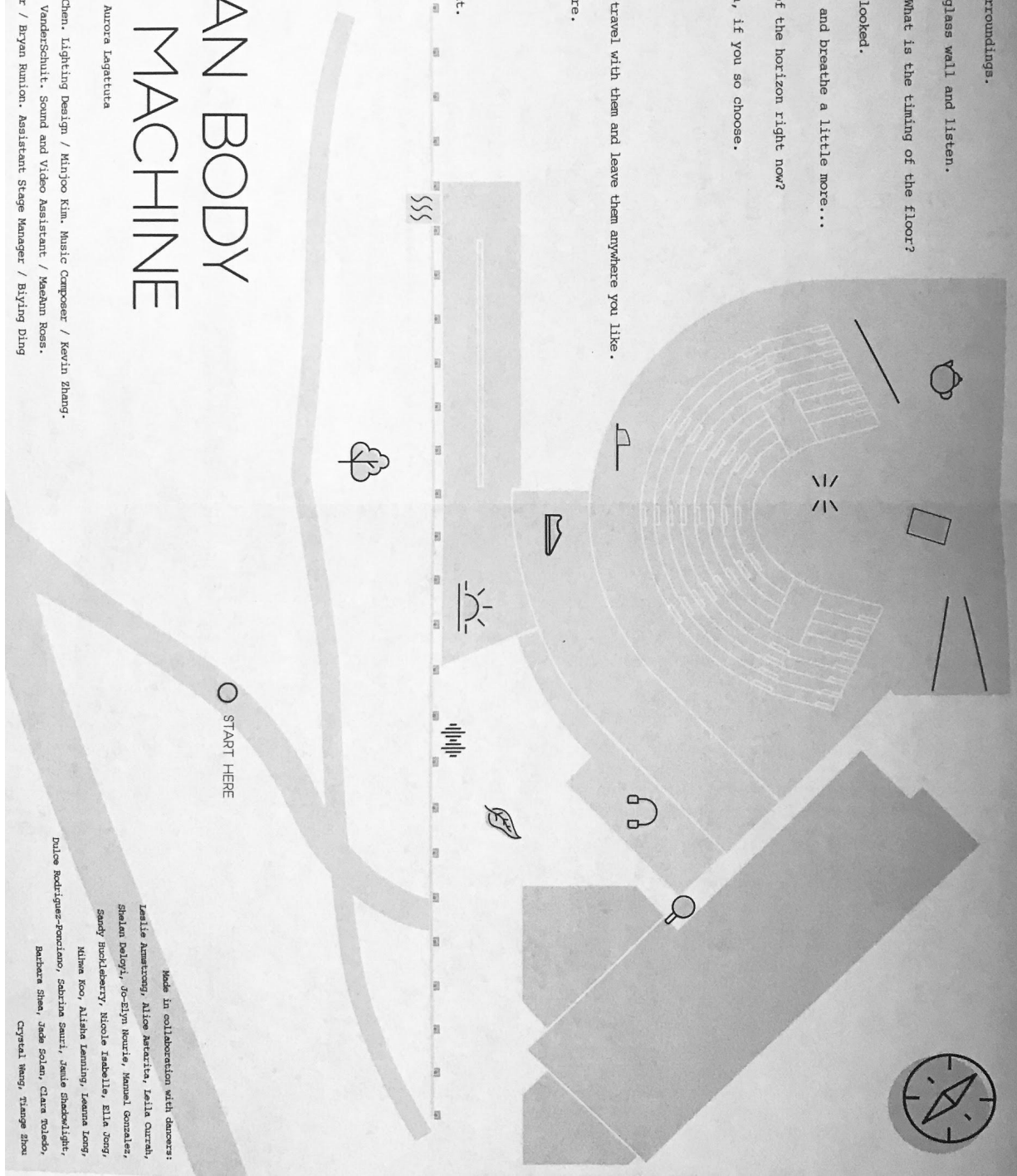
Cb. 2

## APPENDIX C

The archival performance photographs of *Human Body Time Machine* in this appendix were taken by Maya VanderSchuit. The playbill map and the scenic design technical drawings were created by Hsi-An Chen. The projection and sound design technical drawings were created by MaeAnn Ross. The choreography prompts were collected from a transcript of a rehearsal session for the project during March of 2018.



-  Discover your surroundings.
-  Go close to the glass wall and listen.
-  Find the floor. What is the timing of the floor?
-  Inspect the overlooked.
-  Stop and breathe and breathe a little more...
-  What is timing of the horizon right now?
-  Put a headset on, if you so choose.
-  Free your feet.
-  Feel your feet.
-  Select 3 leaves, travel with them and leave them anywhere you like.
-  Be unhurried here.
-  Tea time!
-  Curl up inside.
-  Notice the light.



# HUMAN BODY TIME MACHINE

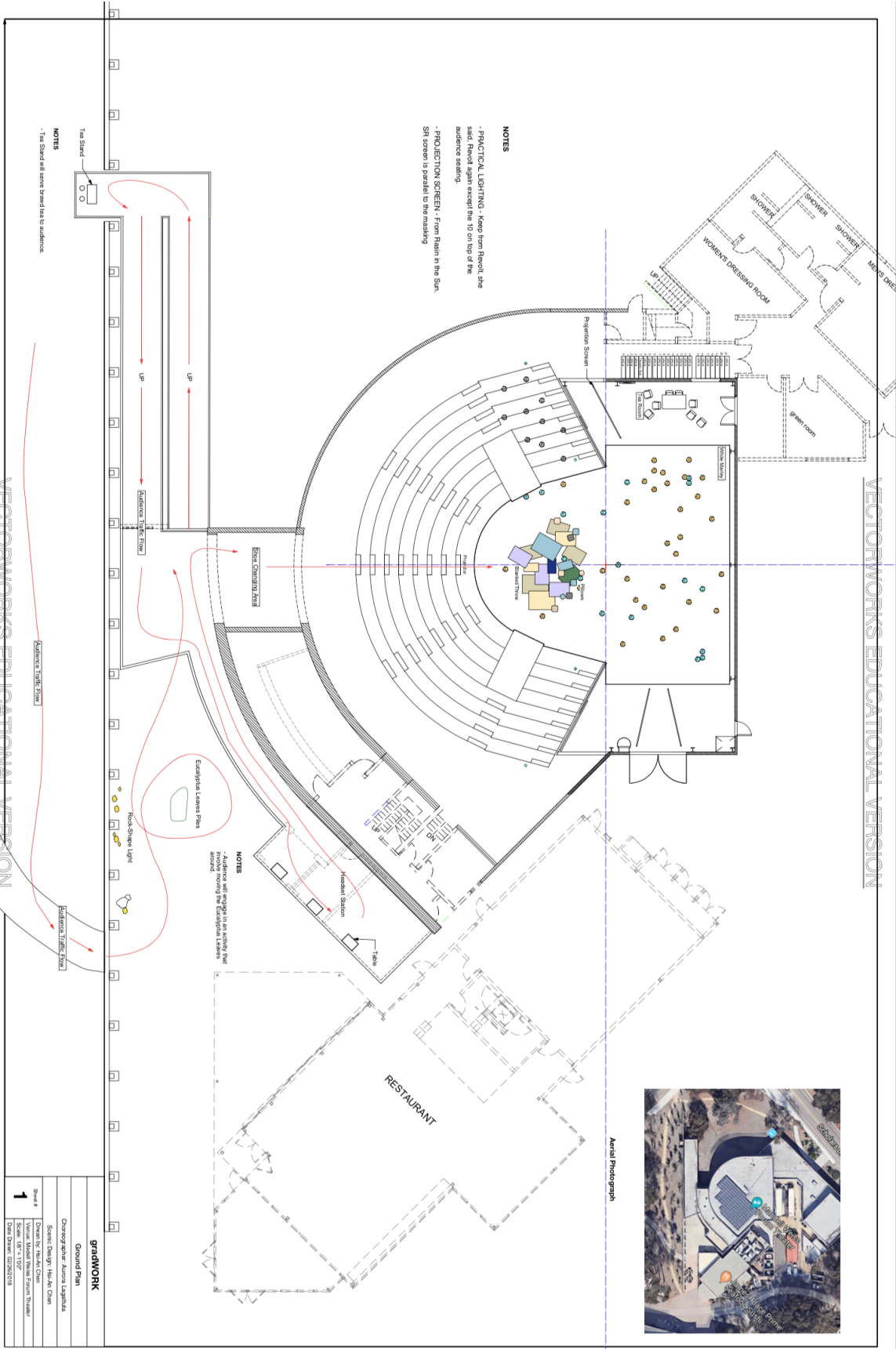
Created and Directed by Aurora Isgettura

Scenic Design / Hsi-An Chen, Lighting Design / Minjoo Kim, Music Composer / Kevin Zhang,  
 Projector Design / Maya Vanderschulte, Sound and Video Assistant / Meahm Ross,  
 Production Stage Manager / Bryan Runlan, Assistant Stage Manager / Biying Ding

○ START HERE

Made in collaboration with dancers:

Iselle Amstrong, Ailee Asfarika, Leila Curran,  
 Shalan Dalgic, So-Eun Hwang, Manuel Gonzalez,  
 Sandy Inoueberry, Nicole Kaskelle, Ella Jung,  
 Milva Koo, Alina Leming, Leanna Long,  
 Dulce Rodriguez-Torales, Sabrina Sami, Janie Shadylight,  
 Barbara Shee, Jade Solari, Clara Toledo,  
 Crystal Wang, Tiange Zhou



**NOTES**  
 - The Stand will have 3 rows face to audience

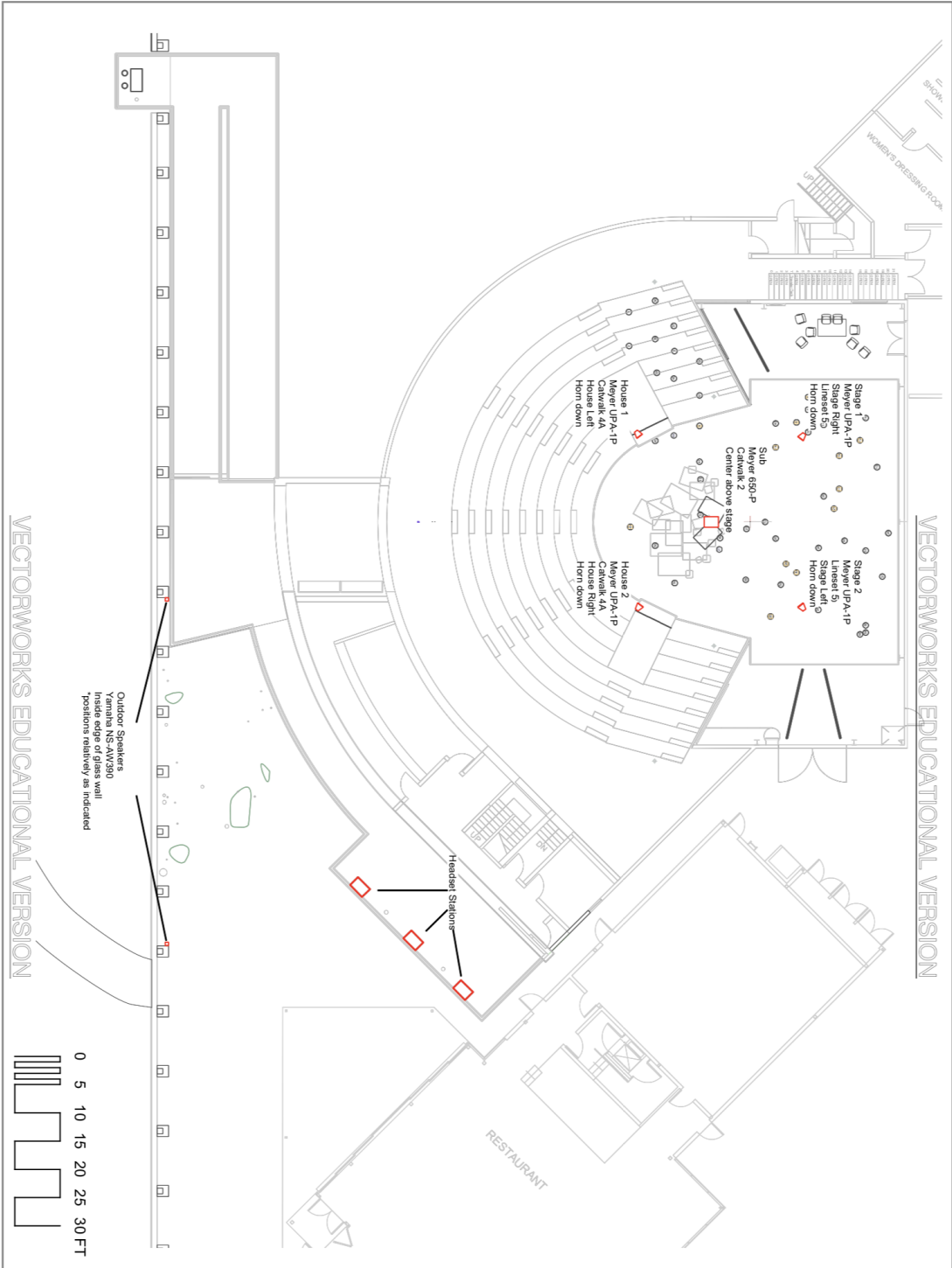
**NOTES**  
 - PRACTICAL LIGHTING - Keep from Beant, site said. Revolt again except the in on top of the audience seating.  
 - PROJECTION SCREEN - From Rain in the Sun. SR screen is parallel to the masking

**NOTES**  
 Audience will register in the activity hall around the electrical leaves

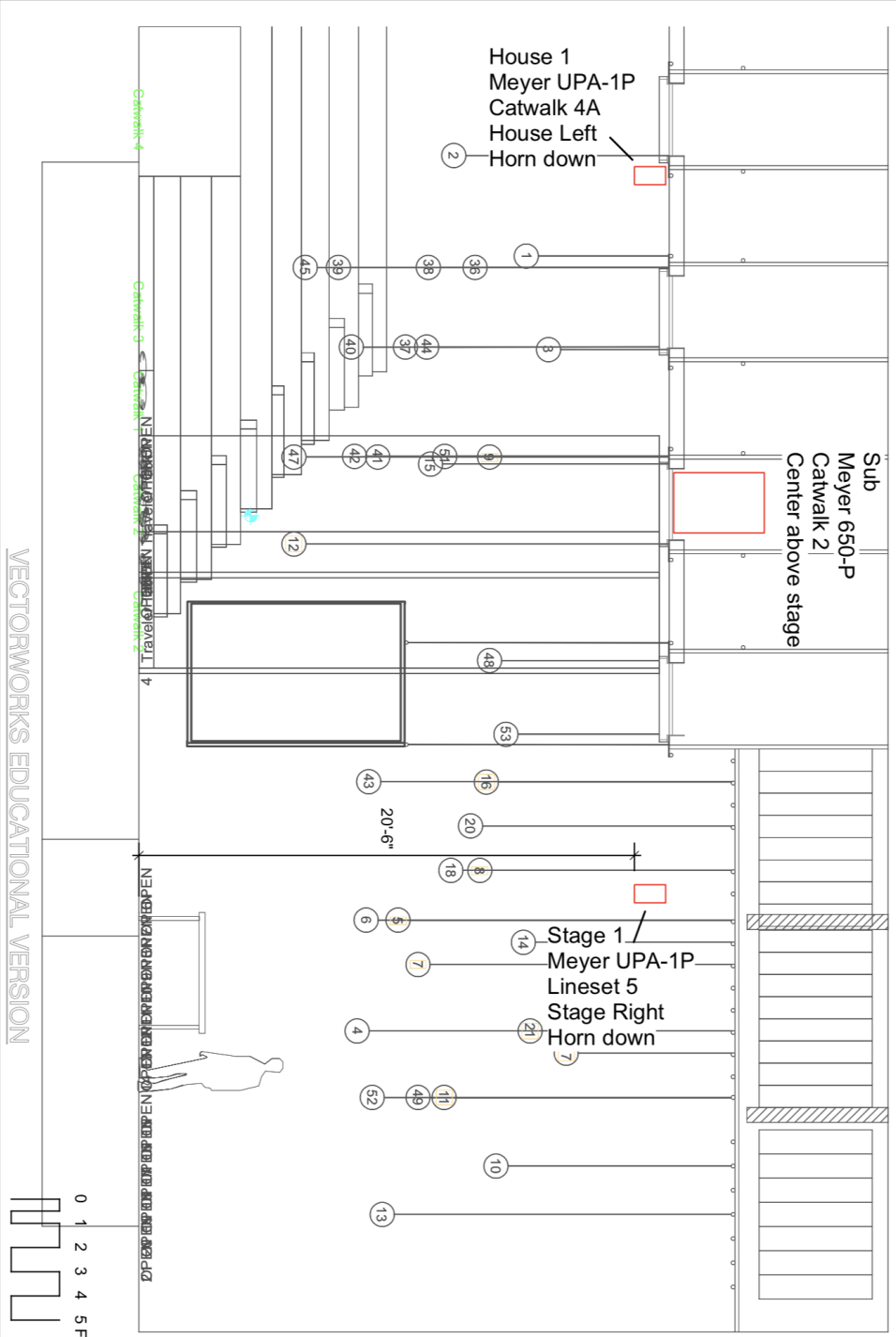


Aerial Photograph

<b>GROUNDWORK</b>	
Ground Plan	
Designer: Anna Laguarda	
Sketch Design: Heidi Chan	
Drawn by: Heidi Chan	
Scale: 3/8" = 1'-0"	
Date: 02/20/2018	
<b>1</b>	DATE DRAWN: 02/20/2018



DESIGNER : Kevin Zhang
ASST. DESIGNER : Maedann Ross
CHOREOGRAPHER : Aurora Lag
VENUE : UC San Diego Forum Theatre
<b>HUMAN BODY TIME MACHINE</b>
SOUND GROUND PLAN
SHT
<b>1</b>
OF 6
SCALE : 0'-1/16" = 1'-0"
LAST EDIT : 3.26.18
<b>THEATRESPACE</b>



DESIGNER : Kevin Zhang

ASST. DESIGNER : MaeAnn Ross

CHOREOGRAPHER : Aurora Lag

VENUE : UC San Diego Forum Theatre

HUMAN BODY TIME MACHINE

SOUND HOUSE LEFT SECTION

SHIT

2

OF 6

SCALE : 0'-1/4" = 1'-0"

LAST EDIT : 3/26/18



## CHOREOGRAPHY PROMPTS FOR HEADSET INSTRUCTIONS

### DIRECTIONS

Breathe.  
Observe.  
Gaze.  
Listen.  
Look.  
Look out.  
Look up.  
Look around.  
Notice your body.  
Notice the perimeter of your body.  
Notice how your body is still.  
Notice how your body is moving.  
Notice how your body is still and moving.  
Shift your attention.  
Shift your gaze.  
Shift your form.  
Shift your audition.  
Shift your awareness.  
Shift your energy.  
Keep your edges soft.  
Keep your gaze directed.  
Keep looking.  
Keep hearing.  
See the light of the space.  
See the architecture of the space.  
See the light of the bodies.  
See the architecture of the bodies.  
Close your eyes.

### PERMISSIONS

Give yourself permission to be here.  
Let your gaze come to rest.  
Let your vision adjust.  
Let your audition adjust.  
Let your form be.  
Let your energy shift.  
Let your edges be soft.  
Let your gaze traverse the space.  
Let your audition traverse the space.

### (PERMISSIONS CONT.)

Allow yourself to be seen.  
Allow yourself to be heard.  
Allow yourself to be here.  
Allow your form to traverse the space.  
Allow your edges to be soft.  
Allow your gaze to wander.  
Allow yourself to crackle.  
Allow yourself to grin.  
Allow yourself to yawn.  
Invite the residue of the space in.  
Invite the residue of the bodies in.

### QUESTIONS

How can vision nourish us?  
How can audition nourish us?  
How can our forms nourish us?  
How can our energies nourish us?  
How can our bodies be still?  
How can our bodies be moving?  
How can our bodies be still and moving?  
How can we search?  
How can we get there in our own time.  
How can our energies be witnessed.

### MISCELLANEOUS

We are just searching.  
We don't have to get it correct.  
Be in the process of figuring it out.  
Keep seeing the whole space.  
Get there in your own time.  
See the other bodies















